The Nunavut Arctic College and the mobilization of Inuit Qaujimajatuqangit in Nunavut research: A systematic review of research literature (1996-2022)

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Executive summary

Chapter 1. Introduction

This literature review surveys peer-reviewed and grey literature including books, scholarly articles, and other products of Nunavut research conducted between 1996 and 2022. This review was done to provide a description, summary, and evaluation of these works to answer two important questions:

> Q1. How does the Nunavut Arctic College and the Nunavut Research Institute participate in, facilitate, or otherwise actualize research in Nunavut?
> Q2. How is Inuit Qaujimajatuqangit represented, engaged, or mobilized in Nunavut research?

This report is intended to serve the Nunavut Artic College (NAC) and the Nunavut Research institute (NRI), as they continue to 1) improve research and research practices, as well as 2) advance Inuit ways of knowing, expertise, and ethics in research and how research is used.

We chose a systematic approach to this literature review because They tend to be orderly and transparent, and therefore reliable and repeatable. That is, by tracking every step of the process, the process can be reproduced. The outcomes can then be understood in relation to the process, peer reviewed, and verified. The range and size of this systematic literature review make it the first of its kind in Nunavut. However, we acknowledge that it will best serve as a platform for future research collaborators and Nunavummiut scholars.

The term ‘Inuit Qaujimajatuqangit’ is reported to come from the 1998 Nunavut Traditional Knowledge Conference/Committee meeting. Participants discussed how the term ‘Traditional knowledge’ was insufficient to describe all parts of Inuit ways of knowing, expertise, and values. ‘Inuit Qaujimajatuqangit’ was suggested as a term that could be used to include values, worldview, language, social organization, knowledge, life-skills, perceptions, and expectations. The term can now be found in research literature from all around the world, but there is still a lot of disagreement on what it means exactly.

The Nunavut Arctic College is mandated to advance education and training in Nunavut based on the needs and best interests of Nunavummiut. The Nunavut Research Institute operates as a division of the college and is guided by the college’s core values - strong communities, cultural appropriateness, partnerships, quality, access, responsiveness, and life-long learning. The NRI is responsible for licensing research under the Nunavut Scientists Act and also offers guidance and supports to researchers in all stages of research. In addition, the NRI connects Nunavummiut and those research partners and policy makers that seek to address the needs and concerns of Nunavummiut.

The North by North project is a study led by the NAC in partnership with Memorial University and funded from ArcticNet. The purpose of the study is to explain the NAC’s involvement in research and the ways in which Inuit Qaujimajatuqangit and Western Science are brought together in the research. This systematic literature review is only one of four parts of the North by North project. Each part promotes Inuit involvement in research and research practices. This literature review was completed by a team of five Inuit research scholars with support from

representative from the Nunavut Artic College, the Nunavut Research Institute, And Memorial University of Newfoundland and Labrador.

Chapter 2. Methods

The literature used for this review was identified through scholarly databases, contacts with research authors, websites, and reference lists. We used a combination of applications/software and manual searches to locate, sort, and scan the material. Each record was coded according to how our search terms appeared in the record.

Coding allowed us to categorize the records based on how they may or may not be used to answer our research questions. Descriptive statistics were used to summarize and describe the dataset and identify relationships between codes. We also conducted an in-depth analysis of the ways that 'Inuit Qaujimajatuqangit' was used in the corpus. While maintaining the rigors of a methodical review, we also tracked instances where Inuit Qaujimajatuqangit guided our review of the material.

Chapter 3. Findings

Section 3a. We examined the Nunavut research literature for indications of how NAC/NRI as an institution is involved in research. We found the NRI's role as research regulator to be the most prominent one expressed in the literature. However, the literature also indicates how the NAC and NRI facilitate research processes through its research infrastructure and the provision of several essential support services. The NAC and NRI also have a substantial role as the purveyors of Intellectual resources and are directly involved in the dissemination and mobilization of research outcomes. In addition, the research literature also makes clear NAC/NRI's direct role in leading/conducting research and increasing capacity among Nunavummiut research collaborators.

Section 3b. We also examined the Nunavut research records that contained the term 'Inuit Qaujimajatuqangit' and identified 41 themes that enabled us to detail how 'Inuit Qaujimajatuqangit' is represented, engaged, or mobilized in Nunavut research. Several of these themes specified how Inuit Qaujimajatuqangit is brought into research and research processes. We gathered representative examples that speak to the various desires to incorporate IQ into research and the necessary accommodations being made within existing Western structures and institutions. These examples illustrate how researchers mobilize IQ and Western approaches to research by either building on points of convergence or by holding them separately. Finally, they show how the meaningful application of IQ can change research focus and outcomes. Specific instances are further discussed, as they demonstrate that, given NAC/NRI's direct and indirect involvement in research and education in Nunavut, Nunavut institutional research has become a more viable pathway for the transmission of Inuit Qaujimajatuqangit.

The Nunavut research literature shows an important shift over time. Since 1996, Inuit ways of knowing, expertise, and ethics in research and research mobilization have been gradually displacing harmful practices. Although the NAC/NRI's roles are

underrepresented, the literature tethers this transition to the NAC/NRI's involvement in education and research. Combined with the ongoing efforts of the Nunavut government, licensing authorities, research collaborators, communities, and institutional partners, the NAC/NRI's involvement has increased the potential of the Nunavut institutional research literature to become a viable pathway for the transmission of Inuit Qaujimajatuqangit. Our review of the literature links the mobilization of IQ in research to a growing confidence in research practices and outcomes among Nunavummiut, and a body of research literature that appears to be preparing for the complexities of Inuit Qaujimajatuqangit.

Chapter 4. Recommendations

We examined the Nunavut research literature for indications of how NAC/NRI is involved in research, as well as how 'Inuit Qaujimajatuqangit' is represented, engaged, or mobilized in Nunavut research. Our analysis allowed us to detail a direct relationship between these two areas of interest. We were also able to identify several prominent features of the Nunavut research literature that we attribute to this relationship. We provided recommendations based on findings associated with our examination of the relationship between NAC/NRI and the mobilization of Inuit Qaujimajatuqangit in Nunavut research literature. They are offered to further actioning this relationship and extend the NAC/NRI's role in advancing Inuit ways of knowing, expertise, and ethics in research and education.

Chapter 5. Discussion/Conclusion

We conclude the report with a discussion of the research literature's capability to supplement existing knowledge(s), correct problematic narratives, or otherwise inform understanding in the academy and beyond. Our experience with the literature was overall positive and we attribute this to the NAC/NRI's involvement in research and the efforts of Nunavut research collaborators. Although the ongoing legacy of colonialism needs to continue to be discussed, the mobilization of IQ in research has contributed to a growing confidence in research practices and outcomes among Nunavummiut. This has resulted in a body of research literature that appears to be preparing for the complexities of Inuit Qaujimajatuqangit.

Chapter 1. Introduction

Content

1. Purpose and Rationale

This systematic literature review surveys peer-reviewed and grey literature including books, scholarly articles, and other products of research conducted in relation to Nunavut and Nunavummiut between 1996 and 2022. The purpose of this review is to provide a description, summary, and critical evaluation of these works in relation to two interconnected areas of interest:

> Q1. How does the Nunavut Arctic College and the Nunavut Research Institute participate in, facilitate, or otherwise actualize research in Nunavut?
> Q2. How is Inuit Qaujimajatuqangit represented, engaged, or mobilized in Nunavut institutional research, where institutional research means research conducted by or in conjunction with schools, institutes, colleges, and universities?

These areas of interests emerge in the context of the Nunavut Artic College and the Nunavut Research Institute's continued commitment to the development/extension of Nunavut institutional research and research practices, as well as the advancement of Inuit ways of knowing, expertise, and ethics in research and research mobilization.

There are several types of literature reviews, each with distinct benefits. Most will allow reviewers to:

- Discover what research has been done regarding a particular topic,
- Discover who has been doing the research,
- Synthesize what existing research tells us about a particular topic (make conclusions),
- Provide context for (often by identifying gaps or tensions in the literature) further study, policy development, or changes in practice, and
- Establish competency in a focus area.

We elected for a systematic approach to this literature review to produce these results and results that extend beyond the capabilities of other review types. Systematic Literature reviews employ a structured and methodical approach to locating, organizing, and synthesizing information. They tend to be orderly and transparent, and therefore reliable and repeatable. That is, by tracking every step of the process, the process can be reproduced. The outcomes can then be understood in relation to the process, peer reviewed, and verified. Systematic Literature reviews also allow reviewers to:

- Reduce some forms of bias,
- Respond to clearly defined research questions,
- produce manageable, generalizable, mobilizable, and/or extendable findings, and
- Develop expertise in the focus area.

Furthermore, systematic literature reviews tend to be the 'gold standard' of stand-alone reviews because their processes and findings can be cited with confidence (Munn, Stern, Aromataris, Lockwood, & Jordan, 2018). The scope and magnitude of this systematic literature review make it the first of its kind in Nunavut. However, it was actualized in a way to best serve as a platform for future research collaborators and Nunavummiut scholars.

2. Inuit Qaujimajatuqangit

The origin of the term 'Inuit Qaujimajatuqangit' is frequently attributed to the 1998 Nunavut Traditional Knowledge Conference/Committee meeting (Arnakak, 2002; Lévesque, 2014; Peletz-Bohbot, 2019). The term was proposed by the Nunavut Social Development Council following discussions on how to move past the limitations of using 'Inuit Traditional knowledge' in discussions of contemporary realities (Arnakak, 2002; Peletz-Bohbot, 2019). Stevenson (2014) adds, "…in 1998 Qaujimajatuqangit was coined to encompass all aspects of traditional Inuit culture including values, worldview, language, social organization, knowledge, life-skills, perceptions and expectations" (p. 181). The term can now be found in the materials associated with government, education, social policy, research, service delivery, industry, entertainment, and much more. It is prominent in Nunavut but also appears in outputs associated with research conducted in other parts of the world. The term's dispersion is only slightly more varied than its many interpretations. Although not easily defined, Inuit Qaujimajatuqangit can be described from many perspectives.

3. Nunavut Arctic College and the Nunavut Research Institute

> "Lifelong Learning… in the Arctic… for the Arctic" (Nunavut Arctic College, 2022; p. 7).

As a public agency of the Government of Nunavut, the Nunavut Arctic College's (NAC) mandate is to provide adult and post-secondary education in response to the needs of Nunavummiut. The NAC currently offers diploma and certificate programs, as well as bachelor's level degree programs that are conferred by the NAC's university partners (NAC, 2015 as cited in Wiseman and Kreuger, 2019). The NAC employs "approximately 278 staff" (p. 7) in its operation of 5 campuses and more than 20 Community Learning Centers through Nunavut.

The NAC espouses several core principles that serve as "guideposts to create a learning-centered institution that reflects Inuit values, beliefs, and knowledge" (Nunavut Arctic College, 2022, p. 8). In following these principles, the NAC:

> Respects and honours Inuit languages and culture; Involves Elders as an integral part of the College life; Promotes an understanding of Inuit culture and languages; Values students' connections to family and community; Prepares students for meaningful careers and healthy lives; Places the well-being of students first and provides a strong caring network of support; Promotes learning as a positive life-changing experience, involving the whole person - body- mind - spirit; Encourages the personal, professional, and academic development of all students and staff; Engages students as active participants in all aspects of learning and evaluation; and, Ensures our graduates meet national standards (Nunavut Arctic College, 2022, p. 9).

The mandate of the Nunavut Research Institute is to develop, facilitate, and promote scientific research as a resource for the well being of people in Nunavut (NRI, 2021). "Institute services are guided by the core values of Nunavut Arctic College - strong communities, cultural

appropriateness, partnerships, quality, access, responsiveness and life-long learning. The Nunavut Research Institute places emphasis on brokering northern-based research, which is linked to community needs, and making greater use of traditional knowledge in research projects" (NRI, 1997).

The origins of the Nunavut Arctic College and the Nunavut Research Institute have interconnected roots in the evolution of Inuit adult education in Nunavut (Landers, 2017). Kennedy Dalseg (2015) indicates that adult education has had a relatively positive history in Northern Canada given an early response to colonialism's influence on education. There was a significant shift in the 1970s that saw movement away from the 1960s federal governmental agenda of a "guided democracy" that fixated on a federal vision of learning and how "communities should develop" (Kennedy Dalseg, 2015, p. 113). This change involved "a project of 'self-determining democracy' in which a new generation of adult educators, including a small but increasing number of Inuit educators, saw a critical relationship between adult education, Inuit self-determination, and the development of imaginative and innovative communities" (Kennedy Dalseg, 2015, p. 113). This cumulated in "a 'made-in-the-North' system of policies and programs that would reflect the particular needs and objectives of the people" (p. 114).

Landers (2017) reports that adult schooling was initially set up as a "community-based adult education system with full-time community adult educators in most communities across the NWT [Northwest Territories], including an Adult Vocational Training Centre in Nunavut, established in 1968" (p. n.a.). Following recommendations from the report *Learning, Tradition and Change in the Northwest Territories* (1982), the Government of Northwest Territories (GNWT) established an Arctic College that for higher secondary Grades 11-12, [t]hat included vocational training and trades, with some limited continuing education options […] in Yellowknife, Fort Smith and Iqaluit. In 1981, Thebacha College was also formed, changing its name to the Arctic College in 1984" (Landers, 2017, p. n.a.).

Further change came in 1986 when GNWT legislation introduced the Arctic College Act, which "provided for the establishment of Arctic College as a post-secondary education institution operating autonomously, but accountable to the NWT government" (Landers, 2017, p. n.a.). In 1994, Bill 7 (An Act to Amend the Arctic College Act) spurred the split of Arctic College into two distinct institutions: Aurora College (for the NWT) and the Nunavut Arctic College (for the soon to be territory of Nunavut) (Acadia & Fjellestad, 2020). On January 1st, 1995, the Nunavut Artic College was officiated under the Nunavut Arctic college Act. "Thus, the NAC was set up as part of the Greater Northwest Territories […] Continuing Education Policy, promoting adult basic and remedial education through what were the forerunners of the Community Learning Centres (CLCs) which would become dotted around Nunavut communities" (Landers, 2017, p. n.a.).

The Nunavut Research Institute has early roots in the Science Institute of the Northwest Territories (SINT). The Department of Indian and Northern Affairs established field laboratories in Igloolik in 1975 and in Iqaluit in 1978 to support marine research. The SINT assumed operations of these laboratories in 1984, four years after its inception by the Government of the Northwest Territories. The SINT was initially charged with administering research licensing on behalf of the Minister responsible for the NWT Scientists Act, but also assumed an advisory role for the territorial government (in matters related to technology and science).

In 1995 (in conjunction with Bill 7), the SINT was divided into eastern and western operations. That is, the responsibility for licensing and reporting held by the SINT was split when the Arctic

College divided into the Aurora Institute and the Nunavut Arctic College (Acadia & Fjellestad, 2020). Thus, the eastern branch of the SINT was amalgamated with the Nunavut Arctic College to become the Nunavut Research Institute (Mclean, 1997). This amalgamation now conferred significant research gatekeeping authority in Nunavut to an entity (e.g., Nunavut Arctic College) with an Inuit Board of Governors, strong grounding in Inuit values and ethics, and a mandate to advance Inuit needs, aspirations, and priorities for education and research. For example, the College now assumed responsibility for developing and approving license application guidelines and forms, for developing review criteria and procedures (including deciding whether to approve or deny a request for a license), for determining the reporting requirements for license holders, as well as for establishing standards and procedures for community consultation in the licensing process. Similarly, the College became the agency tasked with permit enforcement, including monitoring the conduct of licensed researchers and addressing issues of research misconduct or other infractions of the Scientists Act. This new role added considerable administrative burden to the but marked a vital step toward the Inuit governance of research within Nunavut and movement toward research self-determination and sovereignty.

Today, the Nunavut Research Institute is not only responsible for licensing research in accordance with the Nunavut Scientists Act (see below). As NAC's science division, the NRI works to develop NAC's institutional research capacity by supporting a variety of in-house research and Inuit knowledge documentation initiatives led by faculty, students, and staff. The NRI also facilitates research dissemination activities and works with educational partners to offer hands-on science outreach and skills development opportunities to Nunavummiut youth. The NRI also offers guidance and supports to researchers in all stages of research. In addition, the NRI acts as a transmission belt between Nunavummiut and the research partners and policy makers that seek to address identified needs and concerns, as well as a clearinghouse for Nunavut research information (processes and outcomes).

4. The regulation of research in Nunavut

Research activities in Nunavut require authorization from one of several regulatory bodies. The nature and location of the research activities determine which regulatory body or bodies are responsible for authorizing the research (see *Appendix 1. Nunavut licensing authorities* for a summary of regulatory bodies authorizing various types of research in Nunavut). Nunavut's Scientists Act specifically pertains to scientific research activities in the social, health, land, or physical/natural research disciplines[1] (NRI, 2021). The act is a territorial law and states that,

> "No person shall carry on scientific research in or based on Nunavut, or collect specimens in Nunavut for use in scientific research, unless: (a) he or she is the holder of a licence issued under this Act; or (b) the research consists solely of archaeological work for which a permit has been issued under the subsection 51(1) of the Nunavut Act (Canada)." (R.S.N.W.T. 1988, c.S-4: 2)

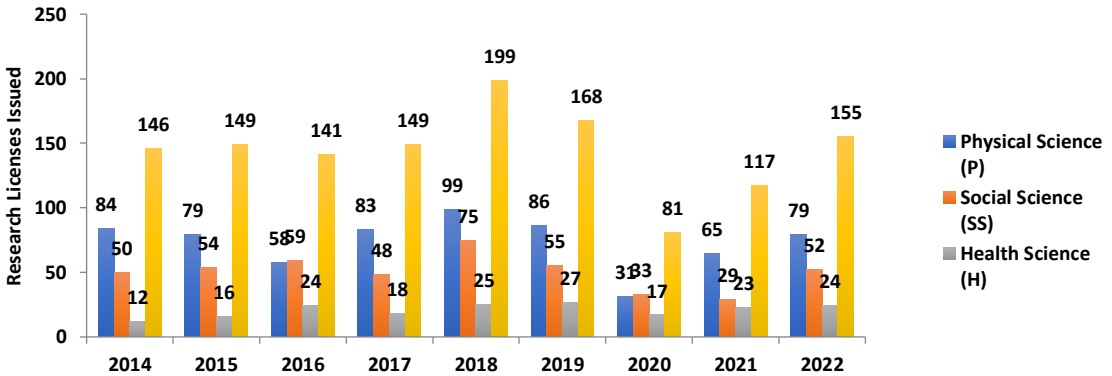
[1] Archaeological and wildlife research activities are not administered under the Nunavut Scientists Act, however multi-disciplinary research projects can require licensing from more than one research licensing agency (NRI, 2021). For instance, research activities associated with archeology/paleontology and wildlife require the authorization of the Nunavut Department of Culture Elders, Language and Youth, and the Nunavut Department of Environment's Wildlife Management Division respectively. However, when these studies include a Traditional knowledge component in the research, then a Nunavut scientific research license is also required.

The act is administered by Nunavut's Science Advisor, who has defined research as "the systematic collection, analysis, and interpretation of information to discover, confirm, or interpret facts about the world, to advance knowledge and discover or establish principles" (NRI, 2021). Since 1996, the Nunavut Research Institute (NRI) has facilitated a standardised application and review process for those who intend to conduct research under the authority of the Nunavut Scientists Act. Nunavut's Science Advisor, who also serves as the Director of Innovation and Research for Nunavut Arctic College, mandates a two-phase review process to determine whether any proposed research "could be injurious to or unduly interfere with the natural or social environment of Nunavut" (NRI, 2021). The first phase involves an internal review by the Science Advisor to assess the merit/quality, feasibility, safety, and ethical integrity of the proposed research. The subsequent phase involves consultation with any government departments or representative agencies that may be impacted by a proposed research project. The NRI typically consults with municipal councils, hunters and trappers organizations, district education authorities, regional Inuit associations, Nunavut Tunngavik Incorporated (NTI), Government of Nunavut departments and agencies, and community interest groups (e.g., local research committees) in phase 2 of the licensing process. Formally documented community consent (permission) is typically required before a research license is issued under the Nunavut Scientists Act and, depending on the nature of the research, a research project may require regulatory authorizations in addition to licensing (e.g., environmental impact screening by the Nunavut Impact Review Board, a permit from a regional Inuit Association to conduct research on Inuit owned lands, land use conformity review by the Nunavut Planning Commission, etc.).

The Nunavut Research Institute may issue a registration certificate in place of a standard license when proposed research is associated with an existing research program or project led by a Nunavut based organization, provided that the proposed research presents minimal risk to Nunavummiut and the environment. Jamal Shirley, Director, Innovation and Research at the Nunavut Research Institute, conveyed that "[t]he registration certificates issued by the NRI are essentially research licenses which are issued without the full review required for standard licenses" (Shirley, 2022; personal communication). Researchers are typically directed to register a project after consulting with NRI's Science Advisor or during the first phase of the licensing application process.

The Nunavut research institute typically licences more than a 150 research projects a year (see figure 1 below), with the majority of licenses issued for projects in the physical/natural sciences.

Figure 1. Research Licences Issued by NRI: 2014-2022*



There are several instances whereby licensing may not be required under the Scientists Act. These are generally linked to organizational studies and other data gathering activities that support program and service planning, delivery, and evaluation (e.g., quality improvement studies, community consultations, feasibility studies etc.). Other licensing exemptions include such research and data gathering activities as high school and undergraduate science and research projects (excluding some honours thesis research); studies based entirely on existing publicly available information (e.g. systematic literature reviews); educational field schools (unless a purpose of the field school is to collect data that will be used to produce academic publications); adventure travel and tourism (expeditions); licensed prospecting and mineral exploration; routine sampling/testing of water, soil, and air as required under regulatory authorizations (e.g. monitoring programs for mining waste effluent discharge); journalism (including radio and print media, photojournalism or film documentaries); opinion polls; research design and project planning (e.g. travel to Nunavut to conduct community consultations for the purpose of developing and designing a research program).

NRI licensed research projects are typically conducted by researchers affiliated with Canadian and international universities. Descriptions of past and in progress research projects can be found in NRI research compendiums located at https://www.nri.nu.ca/research-compendiums. A descriptive review of trends in NRI licensed research for the period from 2004 to 2019 is available at: Research Trends in Nunavut | StraightUpNorth.ca

5. A NAC Case Study in Nunavut Institutional Research

The NAC Case Study Project is a multifaceted program led by the Nunavut Arctic College in partnership with Memorial University and funded by ArcticNet's North by North Program. The purpose of the study is to explicate the college's involvement in research and the ways in which Inuit Qaujimajatuqangit and Western Science are brought together to improve research and research outcomes.

The actualization North by North program involves four interconnected research projects.

- *Tuqqutausimajuviniit Angiramut Utiqtut* (Home from the Archives) is an archive digitalization project that mobilizes digital technology to bring Nunavut's official archives (currently held outside the territory in Gatineau) to all Nunavut Communities. This project relies on grounded theory and Participatory Action Research methods to generate and respond to the questions and expectations of communities.

- *Community vision for The Igloolik Oral History Project Revitalization* (IOHP) is a re-examination of the direction, purpose, and accessibility of the collection to inform an inquiry into how the IOHP can align with current community-based needs and address community-based questions and ethical expectations. The project uses Participatory Action Research and community-based decision-making approach to produce 'ground up' outcomes.

- *The NAC systematic Literature Review,* this study, is a survey of Nunavut research literature (1996-2022) that provides a descriptive analysis of these works in response to the interests of the program. A systematic approach is used to produce a structured, verifiable, and repeatable review that in turn generated a 'living' data set that can be updated, as well as extended in future research projects.

• The final leg of the program involves engaging Nunavut communities with archival materials specific to their families and ancestors. Cataloguing practices (including naming, categorizing, attribution, and access) that align with community needs and values will be emergent from community-based interactions with archival material.

The outcomes of this suite of projects reflect Inuit and northern standards and epistemologies as a function of growing Inuit representation in research governance. These outcomes represent advancement in Inuit self-determination and capacity in research and, therefore, a movement toward the potential synergies of Western Sciences and the many Inuit-specific systems of knowledge production.

6. Our team

This literature review was conducted by a team of five Inuit research scholars from Nunavut, Nunavik, and Nunatsiavut. We each brought and shared our experience as early and not so early career researchers operating from the intersecting points of our values, desires, and lived experience. We relied on each others' skills, talents, and insights as we moved forward together. We recognised that what we were able to do together as a group of 5 fully surpassed what any of us could do individually with five times the time. This involved things like managing challenges with collective resources, being open to each other and making decisions together, and being mutually invested in the potential outcomes of our study. We have each expressed our respective gratitude over the course of this review, as we saw this as an opportunity to contribute in what has been meaningful work within a larger project; the outcomes and implications of which serve to advance Inuit ways of knowing in education and research.

Our team:

Tapisa Kilabuk is an Inuk woman from the Qikiqtaaluk region of Nunavut. Tapisa's Inuit identity is honoured through her anaana (mother) Jeannie, her anaanatsiaq (Grandmother) Maata, and her great grandmother and namesake Pitseolala. Since leaving her home community of Iqaluit in 1997, she lived in Nova Scotia, the birthplace of her father, a settler descendant from Ireland & Eastern Europe. Since 2008, she has called Mohkinstis, Calgary, the Traditional Territory of Treaty 7 her home. Tapisa loves working along with the Indigenous community to promote healing and advocacy. Presently, Tapisa is in her second-year student at the University of Calgary majoring in International Indigenous Studies. In her role as a Research Assistant, she is a part of a team of researchers conducting research under the Nunavut Research Institute's North by North Research Program. A few of her accomplishments include learning Inuktitut, revitalizing her right to traditional Inuit women tattoos and practicing traditional parenting with her husband and three children.

Darlene Jacque is from Postville, Nunatsiavut. Much of her Inuk identity is attached to her homeland and community. While she acknowledges white setter linages along with her Inuit heritage, her worldview is very much centered on Inuit collective values of respect, growth and holistic relationships with family, community, and Land.

This project has provided Darlene with the opportunity to work alongside of other Inuit from Inuit Nunangat who see the importance of including Inuit values and beliefs in all areas of collaboration. This has proven to be a very enriching, rewarding and fulfilling experience for her. It is Darlene's hope that this project will inspire other Inuit to build unto their own research capabilities to help support Inuit self-determination and Inuit well-being.

Tuttu Hunter grew up in Hopedale, Nunatsiavut until she was a teenager, then shortly after moved to Happy Valley-Goose Bay with her extended family. Where she lived most of her life. She had begun her Bachelor of Social Work through Laurentian University, however, when she was offered this position, she put it on hold as she currently works two jobs. She received her Bachelor of Community Studies degree from Cape Breton University and has been working with the Nunatsiavut Government ever since.

Working with this project has given Tuttu a lot of growth, insight, and learning both personally and professionally.

Christine Qillasiq Lussier is an Inuk woman who is affiliated to the Northern Village of Kuujjuaraapik, although her ties are to Salluit, Nunavik. She is currently studying Inuit oral history at Concordia University in Tio'tiá:ke/Montréal, exploring the life history of her anaanatsiaq and the history of Salluit. She is interested in community engagement, working with youths, studying and promoting Indigenous and Inuit-specific epistemologies and methodologies in academia and research. She aims to center Inuit authors, filmmakers, voices, and perspectives to learn about Inuit issues through an Inuk lens.

Ilitannamek. My name is **Edward Allen** (atitsiaga), and I am Kallunangajuk; a person of blended Inuit and settler ancestry from Nunatsiavut. I participated in the project while I was a visitor on the ancestral homelands of the Beotuk. It has been a privilege to work with this research team and I am privileged to be able to do this work. I also study the historic and contemporary relationship between Land and wellness as captured in the ideologies of Nunatsiavut Inuit. I hope to learn about the practices that inform Land-Based Therapy and detail those practices pursuant to the values and interests of Inuit. KujaliKattavunga, ikajuttaugama.

7. Acknowledgements

We would like to graciously acknowledge Jamal Shirley of the Nunavut Research Institute and Max Liboiron of Memorial University of NL. Their direction, feedback, and logistical support made this work possible. This work was actualized with support from Brittany Schaefer and the Civic Laboratory for Environmental Action Research (CLEAR), financial administration support from the department of Financial and Administrative Services (FAS) at Memorial University, and administration support from Lynn Murphy and Pamela Murphy in the Department of Geography at Memorial University. We would also like to graciously acknowledge ArcticNet, a Network of Centres of Excellence Canada, who funded this project through the North by North program. Finally, we wish acknowledge the Nunavut Arctic College, the Nunavut Research Institute, and all Nunavut research collaborators past, present, and future. Their combined enduring efforts have changed the trajectory of research and education in Nunavut.

Chapter 2. Methods

Content

1. Introduction

This literature review surveys peer reviewed and grey literature including books, scholarly articles, and other research outputs to provide a descriptive analysis of these works as they relate to two specified research questions. We utilize a systematic approach to produce a structured, orderly, and transparent review that is verifiable by peer review and replication. In documenting every step of our process, we are confident that the process can be reproduced to yield the same outcome. While literature reviews are by nature focused on previously produced materials, a systematic review is also future oriented. That is, the reliability and repeatability of a systematic literature review allowed us to produce a 'living' data set (corpus and description) that can be updated or extended in future research projects (see DOI: 10.5281/zenodo.8344781).

Our systematic process involved first identifying our corpus from scholarly databases and research authors, websites, and reference lists using a combination of applications/software and manual searches. We then subjected the corpus to three rounds of progressive scanning. The first scan allowed us to detect and resolve translation errors between applications/software and remove duplicates. The second was a full text scan in which we collected contextual information regarding the appearance of our terms. This scan also allowed us to further differentiate records as products of Nunavut institutional research versus other forms of research. In the third round of scanning, we created and assigned one or more labels that describes the context(s) in which our search terms (NRI/NAC and IQ) appeared in the record. 101 labels were created through an ongoing consultation process among the research team. These labels then served as values for coding and facilitated categorization of research records based on how they may or may not be mobilized to address our research questions.

Literature reviews are considered secondary research that do not require authorization under the Nunavut Scientists Act or from any of our affiliated institutions, as the data already exists That is, we are not collecting or generating new data as is the case in 'primary research'.

2. Identifying the corpus

Record identification began with a survey of scholarly databases. Our search parameters allowed us to identify 11,145 records from six databases. After removing duplicates, we extracted 6,696 records that served as our base corpus. A preliminary scan of the base corpus

allowed us to rectify software translation errors in the data, remove previously unidentified duplicates, and set apart unidentifiable records and records identified in error. We then made two attempts to solicit assistance from NRI research license holders in identifying further records. 216 responses allowed us to add 787 previously unidentified records to our base corpus. 14 records were identified as a result of a search of NAC/NRI's website or a Google search for items published by NAC/NRI, and these were added after license holder contact attempts were finalized. Our second scan of the base corpus included a reference list search. Records identified from these searches were gathered in a separate document along with any items discovered while in pursuit of identified articles (unintentional finds). Reference list finds and unintentional finds were compared to the base corpus at the end of the second scan and 33 previously unidentified records were added. The methods resulted in a final corpus of 3,681 research texts.

Sources of research records

1. Databases containing scholarly material
2. Contact with NRI research license holders
3. Website searches for items published by NAC/NRI
4. Reference list searches and unintentional finds

1. Databases containing scholarly material.

Scholarly databases with considerable reach (number of accessible records) and range (coverage across disciplines and publishers) where selected with the intention of identifying and detailing a comprehensive corpus of literature for this review (1-3). Two search strings were originally developed, with a third added after the full text scan, to initiate the record identification process and align corpus composition with the research scope and the preliminary research questions:

- What is the nature of NRI/NAC involvement in Nunavut research since 1995?
- How is Inuit Qaujimajatuqangit presented, represented, utilized, mobilized, etc. in the identified literature?

To maximize capture, strings were entered with the broadest search criteria as each individual database would allow (i.e., All fields, Entire document, etc.). Results were exported from each database as RIS files and later imported into Covidence©, a systematic review software that facilitates record screening and data extraction. Covidence© was chosen specifically for its utility in removing duplicate records from extensive datasets. Summary tables are presented in Appendix 3: *Search string record totals by database*, and database descriptions and expanded results can be found in Appendix 2: *Database Descriptions and Expanded Results*.

Table 1. *Combined record totals for all search string 1, 2, and 3.*

String	String total
"Nunavut Arctic College" OR "Nunavut Research Institute"	4,470
"Inuit Qaujimajatuqangit"	3,103
"Nunavummi Qaujisaqtulirijikkut"	6
Duplicates removed:	1,261
Total records identified for further screening:	6,318

2. Records yielded from NRI research license holders

The Nunavut research Institute has been licensing research projects under the Nunavut Scientists Act since 1995. The NRI's licencing database holds the descriptive and demographic information[2] associated with research licenses issued since 2003. The information includes the name, affiliation, and contact email of the principal investigator (PI)/license holder for each license granted. At the time of this study, the licensing database did not contain information about any research publications or other materials that were produced from research conducted in association with NRI licensed research projects.[3]

In the interest of identifying additional literature for this review, an attempt was made to contact each PI listed in the licensing database using their respective email contact information. A generic message was sent to each of 1,038 recipients in December 2021 (see Appendix 3: Initial message(s) sent to Primary investigators). There were 118 responses to this message as of 2022-02-17. These responses allowed the addition of 459 new records to the existing corpus. The approximately 11% response rate exceeded our expectations, as we understand that email addresses are often associated with an institution or agency affiliation, and that these affiliations can change during an investigators' career.

Given the response rate and yield of the initial contact attempt, we made a second attempt to contact license holders through the professional networking site LinkedIn©. We were able to locate the LinkedIn© profiles for nearly 48% of the PI/license holders who we had not managed to establish contact with in our first attempt. Each of these folks were sent a short message (see Appendix 3: Initial message(s) sent to Primary investigators) that was composed according to the character allowance of LinkedIn's© messaging system. There were 98 responses to this message before the final preparation of this report. These responses allowed the addition of 328 previously unidentified records to the existing corpus.

3. Website searches for items published by NAC/NRI

Searches of publisher websites yielded 51 previously unidentified records (see Table 2) that were then added to the corpus.

[2] Expanded descriptions of research licensed by the Nunavut Research Institute can be found in their annual research compendiums available at https://www.nri.nu.ca/research-compendiums. Research compendiums for years not represented in the licensing database (2002, 2001, 1999, 1998, and 1997) are also available here.

[3] The titles of individual projects as listed in the licensing database have proven to be less useful in identifying relevant records. As research questions and processes evolve through the course of a research project, and because a single project can produce multiple products, products of licensed projects do not consistently retain the title under which the application was made. A PI's biography or list of publications, when available, can be a source of comparative information in which potential products can be loosely identified by content and date. But still, we were unable to attribute these records to licensed projects with any great confidence without some indication in the record or confirmation by the research applicant.

Table 2. *Records yielded from a search of NAC/NRI published materials*.

Source	New records identified
nacmedia.ca	17
nri.nu.ca	26
49thshelf.com	4
www.nri.nu.ca/research-compendiums	4

4. Reference list searches and unintentional finds

Fourteen previously unidentified records were found in reference lists, bibliographies, and indexes during our full-text digital scan of the corpus (see below). Any reference/citation found containing the phrase *Nunavut Arctic College*, *Nunavut Research Institute*, or *Inuit Qaujimajatuqangit* was recorded in a designated document kept by each team member. Similarly, any items discovered while in pursuit of identified articles (unintentional finds) were recorded in a subsection of the same document. Reference list finds and unintentional finds were compared to the base corpus at the end of the full-text digital scan and 33 previously unidentified records were added to the corpus.

3. Preliminary scan and corrective edits

The 6,318 unique records identified from scholarly databases were initially held in Covidence©. Regrettably, Covidence© did not support the direct import of additional records from some of the other data management platforms/programs utilized in our record identification processes. For this reason, we created a dataset for this review by importing our base corpus into a Microsoft Excel© spreadsheet. As inaccuracies and deficiencies in the dataset became apparent following the importation process, the dataset needed to be reviewed and revised prior to systematic analysis. Our preliminary scan allowed us to detect and resolve translation errors between applications/software and also remove duplicates not previously recognized by Covidence©.

The dataset was scanned for irregular characters that suggested data conversions errors between programs or platforms with incompatible encoding. When such characters were found in a record, that record was compared to its corresponding item in Covidence© or, when necessary, to the original database search results. The inconsistent characters were then replaced so that our data was consistent with the source data. Some errors could be associated with non-alphabetic characters or with characters used in other-than-English languages.

Commonalities among conversion errors allowed for irregular characters to be replaced using the ‘Find’ and ‘Replace with’ editing function of Excel©. Uncommon conversion errors required manual correction. Regrettably, 48 records contained irreparable conversion errors to the extent that rendered them unidentifiable. These records were removed from the corpus.

Deficiencies in the dataset also became apparent following the importation process. Records that appeared to have fragmented or incomplete information were compared to their corresponding items in Covidence© or, when necessary, to the original database search results. The fragmented or incomplete data was then augmented so that it matched the source data. Regrettably, as 14 records did not contain enough information to link it to the source data or identify it with a Google search, they were removed from the corpus.

As translation errors were rectified during the preliminary scan, it became apparent that there were duplicate records that were not previously excluded. 137 additional duplicates were manually removed as they were identified.

4. Full-text scanning

A systematic full-text scan of each record in the corpus allowed us to identify and collect contextual information for each appearance of our search terms (see Appendix 4. *Methods: Steps for digital scanning* for the instructions/fuller description of the steps).

Corpus records were distributed to 5 of our 6 team members in sections of 100 to 300 items at a time. Team members sought full-text digital access to each record by conducting title searches using Google Scholar© or their respective institution's library search engine. If unsuccessful, they attempted a general Google© search for the record or utilized the item's Digital Object Identifier (DOI) number when available (www.doi.org). If a scannable version of the full-text record could not be located, or was located but inaccessible due to a paywall or other barrier, then the specifics were noted in the corresponding row of the corpus spreadsheet.

Once a scannable full-text item was located, researchers conducted a digital scan for the phrases *Nunavut Arctic College*, *Nunavut Research Institute,* and *Inuit Qaujimajatuqangit* using 'Ctrl + F' or a similar search function. As these phrases can also appear as acronyms in some documents (usually in brackets following the full phrase early in the text), a full-text scan for *NAC***,** *NRI, and/or IQ* was also conducted when acronyms were observed.

For each appearance, the page number (when available) and a section of text (2 -3 sentences) surrounding each phrase was recorded in a corresponding cell of the spreadsheet (i.e., NAC, P 265: "quoted text."). Quotation marks were placed around any text copied directly from the record. Notes/comments of the reviewer were not entered with quotation marks (see Appendix 6: *Screening note instructions* for the reviewer's guide to making notes during screening). In instances where each phrase appeared more than 3 times in a record's text (apart from reference lists), 'multiple mentions' was instead recorded in the corresponding cell. 'Multiple mentions' were later replaced with the respective contextual information provided the record was not first excluded from further analysis (see Appendix 5: *Refining the corpus).*

During the full-text scanning phase, the corresponding descriptive information for each record in our spreadsheet was confirmed or supplemented when possible. This included:

A. The full name of the author(s)
B. The record's abstract
C. The year of publication
D. The item's Digital Object Identifier (DOI) number or an alternative identifier
E. The record's citation in the format recommended by the American Psychological Association (APA)

At the same time, the title and abstract of each record were visually scanned for any information that would indicate that it was outside the focus of our study.

Interrater reliability measure for full text scanning

A semi-random comparison of the data collected during the full-text digital scanning phase was used to assess interrater reliability.

Records were distributed to 5 of our 6 team members in sections of 100 to 300 items following the same sequence as they appeared in the main corpus. Items (N: </=10) at the beginning or the end of each section overlapped with adjacent sections (e.g., one team member was given a section with items numbered 923 to 1,023 on the main list while another team member was given a section with items 1,013 to 1,113). These items were compared for consistency before their respective sections were re-entered into the main corpus. The overlapping of sections continued until 250 of the items (4.4%) appeared in two separate sections.

Our dataset was organized so that each reviewer could enter or augment data in a total of 11 cells for each record. The data entered in 5 of these cells were reviewed during the comparison. These cells were associated with the identification of search terms in the record, the context of the terms when found, and the presence of any exclusionary criteria. The comparison revealed an error rate of 0.3% (4/1,250). Four inconsistencies were identified and corrected during this comparison. One inconsistency occurred because the data was entered into an adjacent cell in the excel sheet. Another occurred as a result of a document being inaccurately translated from French to English. The two other inconsistencies found could not be definitively attributed to any cause.

The team was very pleased with this outcome, as we felt it confirmed the advantage of a systematic approach and affirmed the method's potential for repeatability. We also appreciated that given the place and nature of these inconsistencies, any remaining errors would likely be identified and corrected in subsequent scans.

5. Refining the corpus

Our examination of the corpus was progressive in that each successive scan required a deeper level of engagement with the literature. This provided more detailed information in which we were able to assess the relevancy of a record in respect to our research questions. Records were separated from the main corpus (and held in separate datasheets) when they were determined to be misidentified or unrelated to our area of inquiry, or inaccessible for further analysis (see Appendix 6: Refining the corpus).

6. Data coding

Full-text scanning was followed by a data coding phase where we assigned one or more descriptive labels that characterized the various context(s) in which our search terms (NRI/NAC and IQ) appeared in the record (see Appendix 7: *Coding Instructions* for a full description of the steps). These labels then served as values for coding and facilitated the categorization of records according to how they may or may not be mobilized to address our research questions.

Corpus records were distributed to 4 of our 6 team members in sections of 100 to 300 items at a time. For each record, we reviewed the text that was collected during the full text scanning phase (i.e., the 2-3 sentences surrounding each appearance of the search term(s) in the record). One or more descriptive labels or codes were assigned to the text to contextualize each appearance of our search terms. When the context was not clear from the selection of text, reviewers returned to the original record to further read around the terms and import additional information when necessary. A list of descriptive labels/codes was created collaboratively using a shared document. A short list of 6 codes was initially formulated from our prior experience with the literature. Reviewers were instructed to create a new code in any case where an existing code did not aptly or accurately detail the context. Each new code and description were added to the shared list which grew to total 122 codes; however, we later collapsed several that were

redundant (see details below) for a final list of 101 codes [13 exclusionary codes, 5 logistical codes, 9 codes related to various aspects of research licensing, 44 codes related to support provided by NAC/NRI, and 30 other contextual codes] (see Appendix 8: *Expanded descriptions of codes and samples* for details).

Our team sought to be as descriptive as possible by using as many labels as necessary, as using too few was thought to result in a loss of specificity and, therefore, valuable contextual information. Codes were entered in green when the individual reviewer was confident that the code adequately and accurately reflected the contextual information. If the reviewer wasn't confident, the code was entered in black. Black codes were reevaluated by a second or third reviewer as necessary until they were changed to green. Challenging examples were discussed during team meetings and codes for these were determined by consensus.

The terms NAC and NRI appeared in contexts that were readily discernible and easily coded. The only challenge was addressing the potentially conflated language used to describe research authorization (permit, approval, permission, etc.). We determined that when potentially conflated terms were present, that we would default to the code "Licensed' if they appeared with a NRI license number or in cases where we otherwise confirmed the record as a product of a NRI license research project. Such as in the case: "Field work was supported by a Nunavut Research Institute permit (license number: 02 027 13R-M) issued to SDS" (Ota, Mamet, Muller, Lamb, Dhillon, Peak, & Siciliano, 2020; p11).[4] The term 'Inuit Qaujimajatuqangit' appeared in several easily discernible contexts, as well as several that were more complex and therefore ambiguous (i.e., conceptual, theoretical, or methodological discussions).

Data coding was followed by an interrater reliability check during our proofing phase. All codes were reviewed for consistency and accuracy by one or more other reviewers. Inconsistencies and errors were identified, recorded, and amended [N=59; 12 codes were added, and another 32 codes were changed due to incorrect notation. 6 codes were identified as erroneous and amended. 3 records were over coded (e.g., a reviewer coded an entire book as opposed to the relevant chapter) and 6 records were under coded (e.g., a reviewer coded a context as ACK as opposed to what was being acknowledged)].

During the coding process, we continued to separate items that were recognised as:

- not research related or typically considered a direct product of research,
- items that identified research products but were not the research products themselves, and
- items that were recognised as NNIR (Not Nunavut Institutional Research).

Following the coding process, the items remaining in the corpus fit one of the following groupings:

- Confirmed products of NRI licenced research projects,[5]

[4] The American Psychological Association 7th edition guidelines for in text citations recommend that 'et al.' be used in instances of three or more authors. However, in our efforts to increase the recognition of research collaborators, we have instead elected to list all authors (further discuss in chapter 4.2).

[5] Research licensing was confirmed when author(s) disclosed NRI licensing in the text, when they identified the record in a communication with our research team, or when we were able to confidently pair a record to a licensed research project in NRI's licensing database.

- Unconfirmed but presumed products of NRI licenced research projects[6],
- Confirmed or unconfirmed, but inaccessible for further analysis
- Other items where NAC/NRI/IQ was only mentioned in the text's cited items
- Items not previously separated or excluded.

The final corpus (N=3,681) analysed for this review consisted of confirmed products of NRI licenced research projects, unconfirmed but presumed products of NRI licenced research projects, and items not previously separated or excluded (see Appendix 9: *Flow Chart-Identified records to final corpus*).

7. Statistical analysis of contextual codes

Descriptive statistics were used to summarize and describe the dataset and identify relationships between codes. Data associated with the final corpus (3,681 records) was first imported into Google Sheets© from an Excel© spreadsheet. Any remaining inconsistencies in spelling or capitalization of codes were rectified. The associated data for each record was then grouped to facilitate analysis and interpretation of the data. This included adding columns for each type of code (with 0-1 values) and additional columns for meta-data.

8. Analysis of descriptive terminology

As we began to engage with the research literature, it became apparent that 'Inuit Qaujimajatuqangit' is described with some diversity between records. This observation prompted us to track informative, unique, or otherwise notable explanations of IQ during our coding phase. A closer examination of the language found in a total of 82 'notable descriptions' led to the identification of several common terms and phrases used to communicate, embody, or explain Inuit Qaujimajatuqangit. The common terms and phrases that were indicative of a shared concept or construct were then clustered together. Several of these concepts/constructs are presented under the underived Inuktitut terms with which they correlate and given summary descriptions.

9. Qualitative contextual analysis

We conducted an in-depth analysis of the ways that 'Inuit Qaujimajatuqangit' was used in the corpus. The search term 'Inuit Qaujimajatuqangit' appeared in 1,385 of the 3,681 records in our final corpus. The contextual information associated with each appearance of the term was reviewed (along with the records citation and any corresponding notes of the previous reviewer) and then exported to one or more shared documents. Following several consultation meetings amongst the team, 41 themes were identified and then clustered into 10 larger categories. Our team selected clusters based on our personal interest in the specific content. We re-reviewed the information within the themes and then selected and summarized examples that we determined were representative of the themes. Summaries were exchanged among the team for review and then amalgamated into a larger document. The larger document was redistributed among the team for consensus approval.

[6] Research licensing was presumed based on other indications (e.g., the mention of supports that are typically only available to NRI authorized researchers).

10. Systematic review in a framework Inuit Qaujimajatuqangit

What may make this systematic literature review unique is that our team of Inuit research scholars were also tasked with identifying how Inuit Qaujimajatuqangit guided our review of the material. That is, while maintaining the rigors of a methodical review, we remained cognisant of how our work was guided by the intangible or unseen concepts of Inuit Qaujimajatuqangit and how these impacted our actions and other tangible aspects of this project. We agreed that the principles, values, and laws that are embodied in Inuit Qaujimajatuqangit provided a framework for us to work and live by throughout this project. We tracked instances where we felt guided by Inuit Qaujimajatuqangit; and these instances were ultimately shown to be additive to the process.

For instance, by acting in a way that fosters good spirits, community, and care, we hoped to align with others working toward a common, solution-focused future. Our efforts to facilitate community among researchers included:

- Operating with an assumed rapport
- Taking time to respond to every message; responding with language and a tone that communicates inclusivity, mutuality, and gratitude.
- Otherwise engaging with people as if they have made, or have the potential to make, important contributions to Nunavut research.
- Investing in reciprocal relations: we included abstracts, citations, and links in our data sheet to facilitate access and citing potential, as we understand that citations are a currency for academic researchers.

11. Limitations

We identified two limitations of our methods that may bear on this study's findings. They are our reliance on software to translate other-than-English records and our inability to locate or access all identified records.

We recognize that our reliance on Google translate© may have caused us to misinterpret documents written in languages that we were not fluent in. We did keep the original title of any translated document in our dataset for two reasons:

- so that readers might find the document in its original format in any case where the translation is questionable, and
- to show respect for an author's language of choice, as we appreciate the potential harm that can come when the original language is disregarded.

> "The language in which knowledge is conveyed is critical to the understanding of the knowledge that is conveyed because of the shared relationships between people speaking the language." (Healy & Tagak, 2014, p5)

Information request responses from NRI research license holders allowed us to add 957 previously unidentified to the corpus. Regrettably, we were unable to locate or access 173 (17.8%) of these items. The reasons for this include:

- the record was not accessible through any of the licenses possessed by Memorial university, the University of Alberta, Concordia University, or affiliated institutions,
- the record exists as an unpublished or forthcoming (in press) work. Unpublished work might include poster presentations, papers presented at conferences (i.e., there is a record of a poster being presented or a paper being presented at a conference, but not

the poster or paper itself), or papers that were written but were not submitted for publication, etc.,
- the record is not available online (no digital copy) and a physical copy was not available at a proximal repository,
- the only known link to the records no longer functioned or the host no longer displayed the record, or
- the record was requested from the author, publisher, library, etc., but did not arrive in time to be included in this study.

We were also unable to locate or access 163 of the records identified via database searches, reference list searches, or that were found unintentionally. The reasons for this include those listed above or that the document was updated or revised and only the newer edition existed.

Chapter 3. Findings

We conducted a systematic review of the Nunavut research literature (1996-2022) in response to two interconnected areas of interest:

> Q1. How does the Nunavut Arctic College and the Nunavut Research Institute participate in, facilitate, or otherwise actualize research in Nunavut.
> Q2. How is Inuit Qaujimajatuqangit represented, engaged, or mobilized in Nunavut institutional research?

Our analysis of the literature allowed us to conclude that the NAC/NRI actualizes research in Nunavut both directly and indirectly. Although the means are becoming more frequently detailed, the literature does not offer a comprehensive summary to date. Our analysis also allowed us to conclude that Inuit Qaujimajatuqangit is represented within a range of understandings in the Nunavut research literature. Inuit Qaujimajatuqangit has been engaged or mobilized in all parts of research to increase Inuit involvement, inform outcomes, and even change research processes. The Nunavut Arctic College and the Nunavut Research Institute have been instrumental in advancing Inuit Qaujimajatuqangit in research and mobilizing research findings in ways that are meaningful in community, academia, and beyond.

Section 3A. How does the Nunavut Arctic College and the Nunavut Research Institute participate in, facilitate, or otherwise actualize research in Nunavut?

Contents

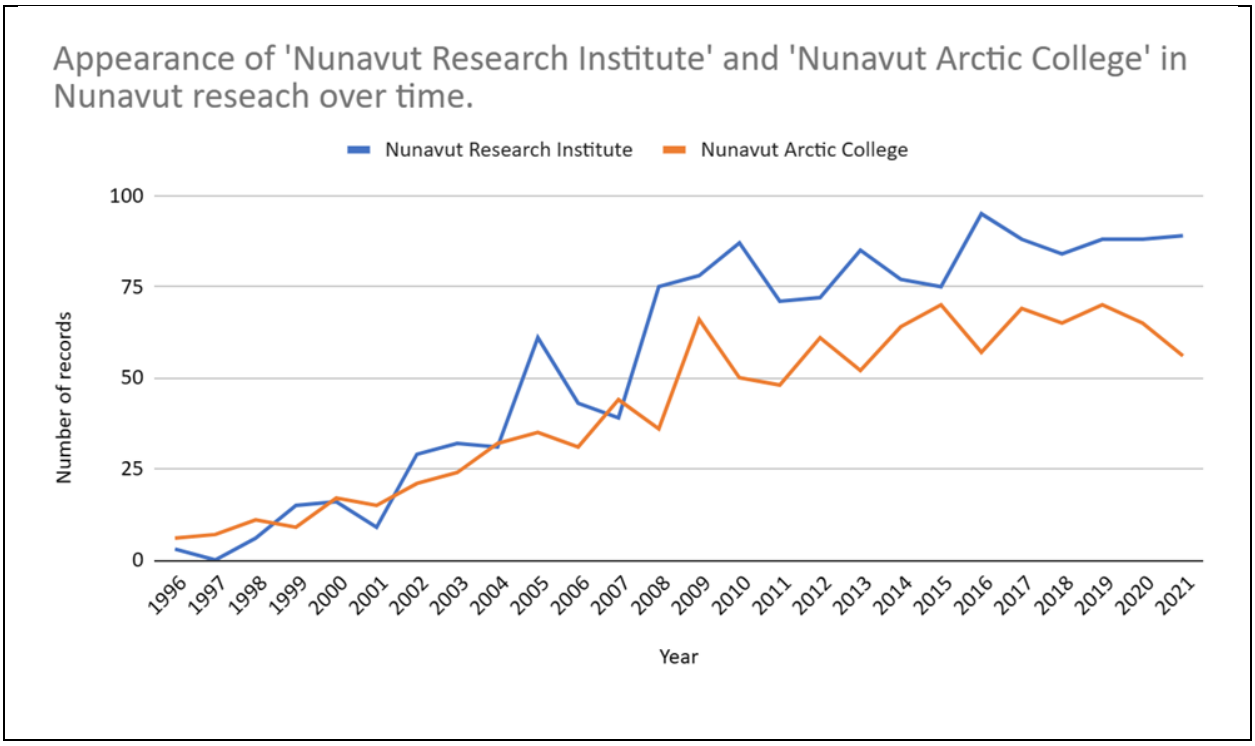
1. Introduction

We examined the Nunavut research literature for indications of how NAC/NRI as an institution is involved in research. We found that NRI's role as research regulator was the most prominent one expressed. However, the literature also indicates how the NAC and NRI facilitate research processes through its research infrastructure and the provision of several essential support services. The NAC and NRI also have a substantial role as the purveyors of Intellectual resources and are directly involved in the dissemination and mobilization of research outcomes. In addition, the research literature also makes clear NAC/NRI's direct role in leading/conducting research and increasing capacity among Nunavummiut research collaborators.

Although the NAC/NRI have several direct and indirect roles in the actualization of research in Nunavut, their participation and contribution to research is notably underreported in research outputs and is therefore underrepresented by the literature. For example, although the NRI reviews and authorizes all research conducted under the Nunavut Scientists Act, only half (50.4%) of the records that were confirmed to be products of NRI licensed research projects

(n=1,583) stated so in their articles. This percentage drops to 38.5% if we also include records we presume to be licensed. Furthermore, Figure 2 shows that the appearance of the terms 'Nunavut Arctic College' and 'Nunavut Research Institute' in Nunavut research is increasing over time, yet only 61.5% of the final corpus (of research conducted in or on Nunavut) contain either or both terms in any context[7]. In examining this 61.5%, we were able to disentangle the many of the essential roles, responsibilities, and relations that NAC/NRI has with research and research processes in Nunavut.

Figure 2. *The appearance of 'NRI' and 'NAC' in Nunavut research (1996-2021).*



2. The Nunavut Research Institute's role in research regulation

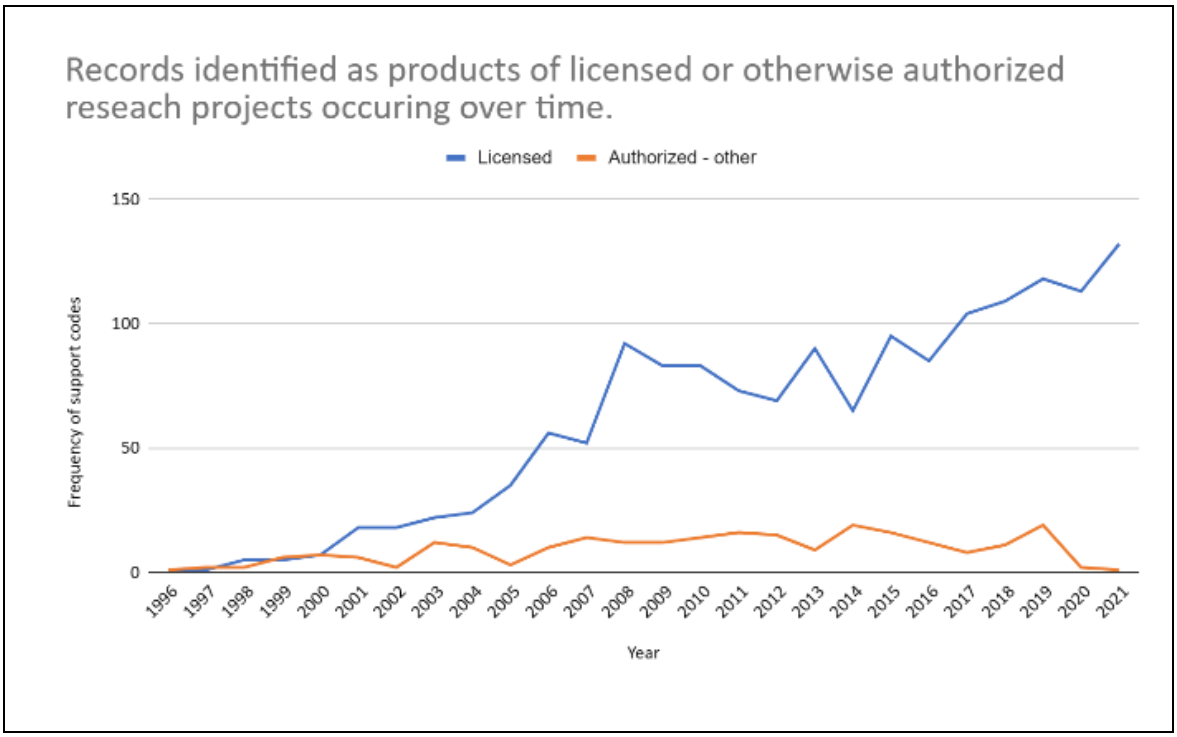
The surveyed literature substantiates the NRI's role as research regulator through the administration of the Nunavut Scientists Act. Our analysis allowed us to identify seven variations of research authorization from the Nunavut research literature, each requiring different levels of NRI involvement:

- General licensing
- NRI licensed social science research activities linked to Archeological and Wildlife research
- Registration of a research project
- License exemptions
- Permits
- Approvals or permission

[7] Of the 1,583 records that were confirmed to be products of licensed research projects, 16.4% (259/1,583) mention 'Nunavut Arctic College' and 45.4% (718/1,583) mention 'Nunavut Research Institute'.

43.0% (n=1,583) of the records in our final corpus (N=3,681) were confirmed as products of licensed research projects, while 244 records described some other form of authorization in their text. In Figure 3, the occurrence of records associated with the general licensing process (n=1,583) is compared to the combination of the 6 other variations of authorization (n=244).

Figure 3. *Records identified as products of licensed or otherwise authorized research products occurring of time.*



Examples of records associated with NRI licenced social science projects associated with archaeological and wildlife research can be found in the corpus. These records signal the inclusion of Inuit Traditional knowledge in archaeological and wildlife research (see footnote p. 9). The records we identified were published between 2012 to 2020 and most were published in years 2018 and 2020.

Daoust (2020) provides an example of how other licensing authorities mobilize Inuit Qaujimajatuqangit and how it is changing conceptions used by researchers:

"Under the Nunavut Wildlife Act, one of the guiding principles of Inuit Qaujimajatuqangit [“the way of knowing that encompasses the past, present, and future of Inuit experiences and values, principles, skills, and beliefs that have evolved over time” (Sudlovenick, 2019)] affirms that “People are stewards of the environment and must treat all of nature holistically and with respect, because humans, wildlife and habitat are inter-connected” (Nunavut, 2012). In this context, so-called subsistence hunting becomes much more than simply collecting food from the environment. It is a means of sustaining and enhancing social and cultural relationships and promoting shared responsibilities for the well-being of a community of people (Freeman, 2018; Wenzel, 1995)" (p. 285).

We found 17 records in which authors indicate that their associated research project was registered with the Nunavut Research Institute. McGregor (2017) provides an informative example:

> "I also consulted with the Nunavut Research Institute concerning the need to secure a research license. They recommended I "register" the research—which I did—rather than license it, because it takes place within an existing education program. This meant advising them of my research plans, rather than seeking approval on those plans from their stakeholders" (p. 13).

We also found 14 records in which authors indicate NRI licensing exceptions. For example, Aylward, Abu-Zahra, & Giles (2015) explain,

> "Our research received ethics approval from our university's Research Ethics Board. The Nunavut Research Institute confirmed that a Nunavut Research License was not required since none of our research was actually conducted by the researchers in Nunavut, and since only some of our interviewees were based in Nunavut at the time of our research" (p. 558).

We found 193 records in which authors indicate that the obtained permits, approvals, or permission. We found that the language used to describe the different types or stages of authorization in these records is sometimes conflated. This made it difficult to determine the actual extent of adherence to research regulations in some articles. For example, we concluded that the term 'permitting' was not a reliable indicator of authorization because the term was used in cases where 'permit(s)' were obtained as well as in cases where 'permission' was obtained. For example, one article might state: 'we thank the NRI for permitting us to do research,' while another article might state 'we thank the community of Resolute Bay for permitting us to do research.' In addition, an article could accurately state that they 'received permission to conduct research' having obtained community consent (permission) without having proceeded any further in the NRI's licensing process. The ambiguous connotations associated with terms like 'permission,' 'permitting,' or 'permitted' may lead to the assumption that the research adheres to the appropriate regulations even in cases where research was not fully compliant or formally approved.

3. NAC and NRI as the facilitators of Nunavut research

The role of research regulator (through administering the Scientists Act) is one of several functions that NRI has in the actualization of research in Nunavut. The NAC and NRI's roles in facilitating research through the provision of support, consultation, funding, community outreach, and many other endeavors is regularly acknowledged in the Nunavut research literature.

Research authors' acknowledgements, whether in the acknowledge section or elsewhere in the text, proved to be a valuable source of information to describe many of the ways that NAC/NRI facilitate research and research processes. In 105 cases, acknowledgements were non-specific such as

> Southern-based researchers must surmount many hurdles when conducting research in the North. The Canadian Polar Commission (2014) describes several including, "establishing and maintaining relationships with communities; satisfying an array of permitting, research licensing and funding agency requirements; incorporating traditional knowledge; and securing adequate funding for all stages of the research process including consultation and dissemination of findings with Northern communities" (p. 27).

in Bordin (2002): “I express also my gratitude to Susan Sammons of Nunavut Arctic College (Inuit Studies Program) and Mary Ellen Thomas of the Nunavut Research Institute" (p. 66). However, in 545 records the authors indicate the type and/or quality of NAC/NRI’s facilitation activities. We identified 40 types of supports from the 545 records that acknowledged the NAC/NRI’s research infrastructure or services. ‘Logistic support’ and ‘field support’ (or a combination of the two, i.e., ‘field logistics’) was acknowledged most frequently.

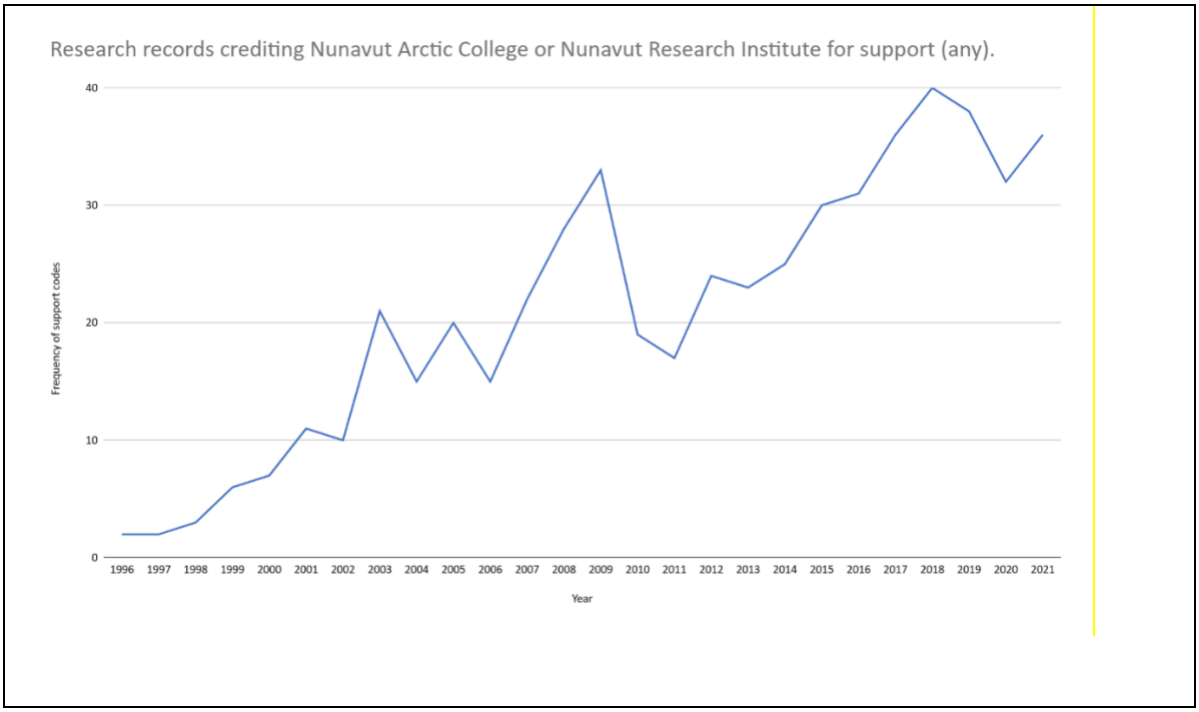
The Nunavut Arctic College and the Nunavut research Institute have been credited with providing a variety of supports and resources described in the literature as:

- Funding, sponsorship, financial support, or the administration of research funds,
- research planning support, licensing application support, or support in obtaining permits,
- support in the form of oversight, advice, layout and design, review support,
- research promotion support, survey distribution support, and support with coordination,
- field access support, field training, provision of equipment, assistance with data collection, and lab work support,
- support with meetings, office resources, office support, or administrative support, workspaces,
- support with securing accommodations, storage/data storage, and research infrastructure,
- moral support, personal support, inspiration and enthusiasm,
- support with transportation, transit, travel, or airfare,
- technical support, translation, communication support, and
- general support (scholarly support, case study support, research facilitation, cooperation, or unspecified research support.

Table 3. *Counts of records crediting the Nunavut Arctic College or the Nunavut Research institute for support (any type).*

NAC or NRI	Support (Any)
NAC	75
NRI	369
NAC and NRI	101

Figure 4. *Research records crediting the Nunavut Arctic College or the Nunavut Research institute for support (any type) over time.*



The research literature shows that the actualization of research (whether licensed by the NRI or approved by other regulatory bodies) can be dependent on NAC/NRI's research infrastructure, supports, and/or input provided by NAC/NRI staff. In addition, we found that the actualization of many research projects that specifically address Inuit priority areas have been dependent on funding administered by NRI. Examples that specify the essential quality of NAC/NRI facilitation role include:

"The work could not have been undertaken without the generous logistic support provided by the Polar Continental Shelf Project (Natural Resources Canada), Parks Canada (notably Ross Glenfield, Park Manager, Quttinirpaaq National Park), the Grise Fiord Hunters and Trappers Association, and the Nunavut Research Institute (notably Rick Armstrong)" (Arbour, Hardie, & Hutchings, 2011, p. 28).

"None of this work would have been possible without the logistic support of the Polar Continental Shelf Project of Natural Resources Canada and the Nunavut Research Institute, as well as the financial support of Environment Canada" (Gaston & Woo, 2008, p. 94).

"Vital research support was provided by Billy Ukutak, Luke Suluk, Jamie Bell, Eric Anoee, Nunavut Arctic College, The Arviat Heritage Society, the Arviat Film Society, Shirley Tagalik, and Joe Karetak" (Dawson, 2016, p.1).

4. NAC/NRI as purveyors of Intellectual resources

The research literature shows that NAC/NRI advances research in Nunavut through their provision of intellectual resources, including research articles, reports, books, guides, video, and other published works. We found that 21.6% (n=794) of the surveyed research literature is informed by NRI/NAC published/associated materials, as indicated by the appearance of this material in the cited works of research records. In addition, 164 (4.5%) records in our final

corpus detailed one or more NAC/NRI intellectual resource to support their premise, argument, or findings.

Several of the intellectual resources produced/published by the Nunavut Arctic College and the Nunavut Research Institute have been instrumental in the development of research projects and have informed research practices and processes in Nunavut. The guide 'Negotiating Research Relationships with Inuit Communities: A Guide for Researchers' (ITK and NRI, 2006, 2007) was found to be well represented within the 21.6% of the records informed by the NAC/NRI's intellectual resources. The NAC's 'Interviewing Inuit Elders' series was also among the most cited of NAC/NRI's intellectual resources. Volumes in this series were well represented in the 164 records that detailed NAC/NRI intellectual resources.

Laugrand & Oosten (2018) speak to the impact of NAC/NRI produced material: "The Nunavut Arctic College publications constitute a transition from the transfer of knowledge in an oral tradition, to the transfer of knowledge in a literate tradition" (p. 96). Moreover, 450 of the records initially identified through scholarly searches reported on research that was conducted outside of Nunavut. Although outside the scope of this review, these records did contain at least one of our search terms. This suggests a significant uptake of NAC/NRI related materials (and/or materials mentioning 'Inuit Qaujimajatuqangit') outside of Nunavut. Given the dialectical spelling of 'Inuit Qaujimajatuqangit' found in this research conducted outside of Nunavut, we infer that the representation of IQ originating in Nunavut is informing how Inuit knowledges and values are being articulated elsewhere. In this way, the documents published by NAC, NRI, NG, and other Nunavut-based organizations are increasingly important for uptake of Inuit Qaujimajatuqangit.

The NAC/NRI is also credited for facilitating access to intellectual resources published or produced by others. For example, some records indicate that author(s) had accessed the NRI's repositories and archival resources during the course of their research. For instance, McElroy (2007) shares: "The staff of the Nunavut Research Institute has helped me secure community permissions and research licenses over the last fifteen years, and they have given access to their library and other resources" (p. n.a.) and "…I discovered many resources, including excellent library and museum collections, archives at the Nunavut Research Institute, and elders who ..." (p. 84).

5. The dissemination and mobilization of research outcomes

The NAC/NRI facilitates the dissemination and uptake of research findings emerging from Nunavut and beyond. For example, we found 22 records that explicitly stated that NAC/NRI was involved in the dissemination of research project results or outcomes. Møller (2011) and Davis (1999) show how the NAC/NRI utilizes its internal infrastructure and/or networks to disseminate research information.

"In Greenland this project description was made public through a website accessible to the general public. In Nunavut information about the project was made available through the website of the Nunavut Research Institute" (Møller, 2011; p. 109).

"Public dissemination of the research findings is an important part of the research process. Final copies of this thesis will be given to the Nunavut Research Institute where it will be made available to the HTOs of both Clyde River and Broughton Island, the Arctic College at Broughton Island, the Nunavut Wildlife Management Board (NWMB), and the polar bear biologist at the Department of Renewable Resources, GNWT" (Davis, 1999; pp. 22-23).

In addition, the cited works in the NAC/NRI's intellectual resources and in the outputs of NAC/NRI led research suggest that NAC/NRI mobilizes research findings from a variety of disciplines and sectors in the development of their resources, programs, and projects. The cited works also indicate uptake of findings gathered from various sources of local knowledge, Inuit Traditional knowledge, Inuit ecological knowledge, and community perspectives.

6. NAC/NRI's direct role in leading/conducting research

The NAC/NRI's direct role in leading/conducting research was indicated by the research literature in several ways. We found instances of institutional authorship of research works or authorship by NAC/NRI affiliated staff. We found other instances were the NAC/NRI conducted research in partnership with external institutions or otherwise made contributions in research processes.

> Dale (2009) offers a typical example of how NAC/NRI staff contributions inform context, processes, interpretation, and/or outcomes: "Mary Ellen Thomas, Manager and Research Liaison with the Nunavut Research Institute, notes that 'a lot of people [researchers] say they are going to include IQ, but they don't know how and they don't have the skills, so they end up not doing it' (Pers. Comm., 2007)" (p. 71).

Our final corpus included 36 items that explicitly stated that they were authored or published/copyrighted by the Nunavut Arctic College or the Nunavut Research Institute. Another 66 items were authored by a person affiliated with the NAC/NRI at the time of the publication. This count should be considered as under-representative however, as author affiliation is not consistently disclosed in research records. Furthermore, 155 records were found to cite the NAC/NRI as a contributor, collaborator, or partner in the research conducted. 161 records were found to reference that the NAC/NRI or NAC/NRI staff contributed to research by way of participating in interviews or through consultation, or other communications.

NAC/NRI representatives/staff contributions to research are not limited to research licensed under the Nunavut Scientist Act. The NAC/NRI has established, maintains, or otherwise participates in several vast networks of research collaborators through which it champions ethical and inclusive research. Jamal Shirley, Director, Innovation and Research at the Nunavut Research Institute, confirms "… that NAC/NRI has been engaged in research licensed by regulatory bodies other than the NRI: examples of other licensing authorities could include DFO, Parks Canada, the Government of Nunavut (Department of Environment)" (Pers. Comm., 2022). This is indicated in the corpus in examples where research authors acknowledge the NAC/NRI as having as having a direct or indirect role in research projects not licensed under the Nunavut Scientists Act.

7. Increasing capacity among Nunavummiut researcher collaborators

The NAC/NRI provides opportunities for students and other community members to learn about, collaborate in, or otherwise champion research in Nunavut. For instance, 31 records were found to mention the NAC or NRI as the location where information/knowledge was exchanged. 55 records indicated that NAC students contributed to research in a variety of ways (i.e., as informants, in processing samples, in co-creating research approaches, and more).

NRI encourages research license applicants to include a 'community capacity building' effort in the design of their research project. We found evidence of this in 14 records in which the authors explicitly stated that opportunities to increase community capacity for research were provided during the course of their research.

Section 3b. How is Inuit Qaujimajatuqangit represented, engaged, or mobilized in Nunavut institutional research?

Contents

We examined the common terminology used in the 82 informative, unique, or otherwise notable descriptions of IQ that we during the course of our review (see Appendix 11: Notable descriptions/definitions). Although Inuit Qaujimajatuqangit is notoriously hard to define (McCall, 2014), considering these shared terms made it possible to link many different descriptions and definitions.

> Former Nunavut Premier Paul Okalik (2007) explains, "By using Inuit concepts expressed in Inuktitut, we have ensured that future land management decisions must be interpreted through the prism of Inuit Qaujimajatuqangit" (p. 17). Okalik's (2007) prism analogy conveys that Inuit Qaujimajatuqangit is a multifaceted notion that can be examined, analyzed, and implemented in myriad ways and spaces.

By understanding that IQ can be discussed, engaged, or applied in many ways and spaces, we were able to see the collective literature as a medium that provides a broad spectrum of meaning as opposed to a consistent definition. Our analysis of descriptive terminology helped us to better detail the prism of Inuit Qaujimajatuqangit along eight conceptual grouping (see Appendix 14: The Prism of Inuit Qaujimajatuqangit).

1. Introduction

We examined the 1,384 of 3,681 (36.6%) corpus records that contained the term 'Inuit Qaujimajatuqangit' and identified 41 themes that enabled us to detail how 'Inuit Qaujimajatuqangit' is represented, engaged, or mobilized in Nunavut research. Several of these themes indicate the research focus areas in which 'Inuit Qaujimajatuqangit' tends to appear, while others identify the prominent discourses that span these research focus areas. Several

more themes characterize the nature of IQ's application in institutional contexts, while others specify how Inuit Qaujimajatuqangit is brought into research and research processes.

In this section, we share examples of how Inuit Qaujimajatuqangit guides research choices, methods selection, and solution focused interpretation of the findings (for more on the appearance and prominent discourses of IQ in the literature, see Appendix 13). These examples represent the larger conversations or themes in the survey literature and were selected among others for their descriptive quality, insights, or impact. These examples speak to the various desires to incorporate IQ into research and the necessary accommodations being made within existing Western structures and institutions. They show how researchers either build on points of convergence between IQ and Western knowledge or navigate the space between the two knowledge systems. Finally, they show how the meaningful application of IQ can change research focus and outcomes. Specific instances are further discussed, as they demonstrate that, given NAC/NRI's direct and indirect involvement in research and education in Nunavut, Nunavut institutional research has become a more viable pathway for the transmission of Inuit Qaujimajatuqangit.

2. Desires to use Inuit Qaujimajatuqangit in research

Many research collaborators share a desire to include Inuit Qaujimajatuqangit in research and research processes. The research literature shows that, although this desire emerges from differing ambitions, it is typically satisfied by the increased representation of Inuit in research and the perpetuation of Inuit knowledges, values, and perspectives. Nunavut research authors including Aporta (2004) speak to the desire of incorporating IQ into research from the perspective of Nunavut elders and hunters. Elders and hunters, who raise concern over the lack of the younger generations' essential environmental knowledge, see research and the documenting of wayfinding techniques, orienting practices, and Land knowledge as a potential path for incorporating IQ into formal education. Responding to the expressed desire to develop new ways of teaching Traditional knowledge and practices, Aporta explains that their project "…developed as a result of concrete community concerns, regarding the loss or deterioration of some aspects of IQ that have been used since time immemorial" (Aporta, 2004; p. 340). Additionally, Diane Obed's 2017 study of Land as pedagogy in an Inuit-centered educational future, speaks to the desire to incorporate IQ in both content and process. Obed (2017) demonstrates that studies guided by a process of relationship building specific to the principles of IQ enable "us as Inuit to tell stories from our own worldviews while also honing and demonstrating our inherent competencies" (Obed, 2017; p. 4).

Omura (2013) suggests that before the mid-twentieth century IQ was "admired" by "the dominant Western society as excellent practical knowledge" but it was also "regarded as the product of "primitive," irrational thought, that is, a type of pre-science or superstition, inferior to modern science" (p. 3). Nevertheless, "since the 1980s" there has been a shift in perspective which is partly attributed to "anthropological studies" providing evidence that "IQ is comparable in accuracy and validity to modern science" (p. 3).

In speaking to the perspectives of southern ethnographers, Van Den Scott (2012) suggests a different desire for incorporating Inuit ways of knowing into research. Van Den Scott (2012) advises that pre-existing tensions caused by the historic devaluation of Inuit ways of knowing can be inadvertently reinforced when southern knowledge systems are overtly privileged in research approaches.

As notions of southern superiority (even when inadvertent) can reproduce harmful ethnographer/participant dynamics that obscure data, ethnographers look for meaningful ways to incorporate Inuit ways of knowing while not appropriating them.

Gearheard & Shirley (2007) characterize the relationship between Inuit and researchers: "In some parts of the Canadian Arctic, local Inuit refer to researchers as 'siksiks' - 'ground squirrels' in Inuktitut. For many northern communities, researchers and siksiks seem to share similar characteristics: they appear suddenly, usually in the summer months, scurry around on the tundra doing who knows-what, and then disappear just as quickly without anyone's knowing exactly what they were up to. Sometimes siksik is used in a friendly, joking manner. Other times the nickname expresses negative feelings toward researchers: a mistrust that stems from a history of non-communication, miscommunication, and misunderstanding" (p. 63).

Andrew Morrison (2017) found that this desire was "the most challenging aspect of [his] project" to satisfy. He states "[m]y intention was to find the right qualitative methodology and employ an approach that fulfilled all necessary research obligations and ethics protocols according to both Qallunaat (settler) and Inuit research specificities" (p. 26).

He further relates, while "this research does not claim to be rooted in an Inuit driven research paradigm […], it strives to embody a respectful, reciprocal relational approach derived from collaborative research done by and with Indigenous scholars" (p. 26).

"A relational paradigm begins with the relationships between people as an important aspect of a research framework and employs an inclusive approach, rather than rejection"
(Healy & Tagak, 2014, p. 5).

3. IQ and change within Western dominated structures

Research in Nunavut has a problematic past and the residue of past research bears on how research is conducted today. The literature shows that Inuit confidence in research increases with meaningful opportunities to participate. Yet, these opportunities are bound to Western-dominated structures, and this continues to bear on research processes and outcomes. Work is being done from within these structures to increase Inuit self-determination in research. The literature links the work of incorporating Inuit Qaujimajatuqangit in research with the progressive elimination of harmful research practices.

Inuit Tapiriit Kanatami (2018) reports that,

> The relationship between Inuit and the research community is replete with examples of exploitation and racism. Research has largely functioned as a tool of colonialism, with the earliest scientific forays into Inuit Nunangat serving as precursors for the expansion of Canadian sovereignty and the dehumanization of Inuit (p. 5).

They add that Inuit were considered “objects of study or bystanders” (p. 5) in past research and the “legacy has had [a] lasting impact on Inuit and it continues to be reflected in current approaches to research governance, funding, policies, and practices. (Inuit Tapiriit Kanatani, 2018, p. 5).

In general, “Inuit (…) have varied and conflicting views about the relevance and value of scientific research” (ITK and NRI, 2007, p. 2). ITK and NRI (2007) maintain that Inuit are not typically opposed to “pure scientific research” when given “the opportunity to share their valuable knowledge and to assist scientists in designing and conducting scientific studies (even if the phenomena under investigation are not of immediate local relevance)” (p. 2). Research can then be seen as a “valuable tool” to aid “public wellbeing, generate wealth, and to advance knowledge (for the benefit of communities and society at large)” (p. 2). It also has the potential to be used as a “tool to support community advocacy and empowerment (i.e., providing scientific evidence to support community claims in the national and international arenas)” (p. 2). It is therefore imperative that Inuit communities get the opportunity to participate in research in ethical and culturally appropriate ways.

Southern research approaches that are considered ethical and respectful of Inuit communities tend to endorse collaborative methodologies, engage communities under ethical guidelines, and respect community and social relations (Stern & Stevenson, 2006; Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik, 2019). However, these approaches do not account for all concerns. For example, Healy & Tagak (2014) advise that although community-based participatory methods recognize the role of community in research, they “still [hold] the Western scientific worldview above others” (p. 1). This leaves some community contributors fearing their data will be filtered through a culturally incongruent worldview and rendered insignificant (Jacobson, Manseau, Mouland, Brown, Nakashuk, Etooangat, Nakashuk, Siivola, Kaki, Kapik, Evic, Kennianak, & Koonelieusee, 2016). As cultural bias can also result in misinterpretations of data, wholly Inuit methodologies are considered ideal for research involving Inuit (Tagalik, 2012; Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik, 2019). While examples in the literature suggest that this is more than just a possibility (see page 40 for more), the consensus remains that the process must start in Western structures and institutions.

Healy & Tagak (2014) identify three Inutitut terms that describe behavior reflexive of one’s intention to ‘do good’. First, from McGrath (2004), Pittiarniq is the notion of doing good or being good, well, or kind. McGrath (2004) holds that this equates to both technical and moral excellence. Second, inuuqatigiittiarniq is a term related to the concept of being respectful of others. Third, pittiajusuringgirniq uulijalimanik, a term shared by Shirley Tagalik of Arviat, conveys how being humble and respectful, and not setting yourself above others, helped Inuit to maintain a balance in their relationships (Tagalik, 2013). Like most IQ concepts and values, these behavioral terms are representative of a relational epistemology, one that draw us “to relational forms of knowing” (Healy & Tagak, 2014; p. 3).Healy & Tagak (2014) suggests that “without knowledge or experience of Inuit societal values, researchers from outside of the culture and epistemology often interpret doing/being good (ethics) based on their own worldviews and assumptions about what ‘good’ is” (Healy & Tagak, 2014, p. 9).

In an offering of methodological considerations for educational historians teaching in the north, McGregor (2015) shares Historian Robin Jarvis Brownlie’s (2009) position, "…that a large part of the reluctance in academic history to integrate Indigenous knowledge can be attributed to an

attachment to rational foundationalism and normative epistemologies connected to Euro-western and Enlightenment frameworks" (McGregor, 2015; p. 123). Examples found in our corpus demonstrate that the works of individuals, communities, and organizations have worked on such fixed positions and are pointing Nunavut institutional research toward IQ centered research methodologies. Many of these examples (discussed below) arise from building on points of convergence, navigating the space in between IQ and Western knowledges, and the direct application of IQ in research.

4. Building on points of convergence between IQ and Western knowledge

The Nunavut research literature shows that opportunities for Inuit participation in research are made more meaningful when methods that are conducive to both Nunavummiut and southern collaborators are considered. Conducive methods are often identified when collaborators seek points of convergence or parallels between values or ways of doing/being/knowing, examples of which can be drawn from the literature (for further discussion on efforts to 'bridge' IQ and Western science, see Appendix 13).

Healy & Tagak (2014) convey that, "In relational epistemology, stories are shared, not collected. Interviews are conversations conducted in a natural, comfortable setting" (p. 7). Garakani & Peter (2016) adopted a relational approach to identify parallels between the values of participatory research and the principles of IQ. These parallels allowed them, as "non-Aboriginal" (p. 455) researchers, to foster compliance with IQ. Among other impacts, this approach gave rise to specific considerations of the relevance and perceived benefits of the research, as well as in the selection of other mutually conducive methods that enabled trust building, informed consent, and voluntary inclusivity.

Researchers are also selecting methods that are more conducive to how information is typically exchanged in Inuit society. For example, Kelley (2009) found that semi-directed conversational interviews enable more in-depth discussion than materials like questionnaires and are therefore seen as a particularly effective means of gathering information from Inuit knowledge bearers. While the topic is typically introduced by the knowledge seeker in semi-directed interviews, the absence of a fixed protocol allows the direction and the scope of the conversation to be determined by the knowledge bearer. Kelley (2009) found that interview guides containing general questions or topical prompts were particularly effective for soliciting IQ on ice conditions and related topics, especially when interviews were conducted without time limits. Desjardins (2017) confirms that he was able to incorporate local perspective and IQ in his study of food Security, climate change, and the zooarchaeology of neo-Inuit sea-mammal hunting "…through informal interactions with area hunters and elders, as well as through a small number of firsthand semi-structured, open-ended interviews with elders…" (Desjardins, 2017; p. 3).

Inuit research collaborators, even when in the interviewee role, often express IQ in both the content and process of their responses. For instance, McDonald (2011) offers an example of IQ in the content of interviewee responses: “Not surprisingly, within the interviews, many respondents formulated their perspectives of solar, wind and hydropower from their […] strong knowledge of their land and natural resources” (p. 50). Dunning (2014) provides examples of IQ is engaged in the process of responding. She states that not one of her interviewees spoke with authority or from an expert position. Dunning explains that making one’s self stand out above others “does not better the purpose and harmony within the group” (p. 75). Therefore, when knowledge bearers begin their replies with a humble ‘I don’t know”, they are enacting Piliriqatigiingniq (working together for a common purpose). Dunning (2014) also reports that her interviewees never spoke beyond their own experience, and therefore never assumed ownership of anyone’s experience but your own. This left room for family members or community to speak for themselves and enabled the conditions for aajiiqatigiingniq (consensus decision making).

5. Navigating the space between IQ and Western knowledge

Cautions regarding the potential harm associated with the integration of IQ and Western methods of research are expressed in the literature. In response to these concerns, some research collaborators take an approach whereby IQ and Western knowledge is kept in tension. They then seek to create knowledge from a middle ground; the space in between two distinct systems.

The Nunavut Literacy Council (2004) provides an example of an established theme in the literature (Higgins, 2010); that is, the idea that ‘marrying’ Inuit knowledge and modern scientific activities produces a synergy expressed as richer and more accurate research results. However, Jacobson, Manseau, Mouland, Brown, Nakashuk, Etooangat, Nakashuk, Siivola, Kaki, Kapik, Evic, Kennianak, & Jacobson, Manseau, Mouland, Brown, Nakashuk, Etooangat, Nakashuk, Siivola, Kaki, Kapik, Evic, Kennianak, & Koonelieusee, (2016) summarize a concerning on the integration of Western and Indigenous knowledges. They remind us of the historic tendency for one party to dominate the terms of engagement, which often results in the de-contextualization of Indigenous knowledge from the world views in which they generate. This leads to the proposition that we allow space for these knowledges to be held in tension.

Higgins (2010) describes Iqaluit as both rich in Inuit Qaujimajatuqangit, and as the research hub of the north, rich in Western scientific knowledge. Iqaluit is therefore the ideal location to further the ongoing intercultural dialogue between these bodies of knowledge. “The dialectic of being rooted in [IQ] on the one hand, and on the other hand needing to adapt to modern day challenges” (p. 7) is ongoing for the upcoming generation who often feel stuck between two worldviews (Anang, Gottlieb, Putulik, Iguptak, & Gordon, 2021). Higgins (2010) draws on critical theorist Homi Kharshedji Bhabha’s (1994) concept of “third space” and suggests that a teaching-learning space “where the contribution of both worldviews is respected and acknowledged” (p. 98) is a viable way forward. It was from such a space that Ikaarvik youth researchers created the concept of ScIQ (pronounced sī-kyoo) to describe a “more functional middle ground between science and IQ” (Ikaarvik, 2018; p. 6). ScIQ represents a “…balance between the tools, technologies and methods of science, and the knowledge, customs and values of Inuit Qaujimajatuqangit” (Ikaarvik, 2018; p. 6). In the interest of helping researchers and northern communities find that balance, Ikaarvik youth researchers “came up with 41 specific recommendations of actions that can be taken before, during and after a research

project" (Ikaarvik, 2018; p. 2). These recommendations are grounded in Inuit societal values, and each serves as an example of how IQ can be operationalized as protocols to meet the individual needs of “both communities and scientists" (Ikaarvik, 2018; p. 2).

6. Application: IQ changes research focus and outcomes

Ikaarvik, (2018) states that, “…truly incorporating IQ into research means conducting research in a way that is guided by these principles, not simply using Inuit Knowledge as data…” (p. 4). We have selected two instances from the growing list of examples found in Nunavut research literature that show how the meaningful inclusion and application of Inuit Qaujimajatuqangit can change the focus and outcomes of research work. The first instance represents inclusion in the research work of institutions and the second represents application in the research work of individuals.

At the request of the Department of Fisheries and Oceans, the Canadian Science Advisory Secretariat (CSAS) conducted a literature review as part of a state of knowledge assessment for the North Water Polynya. Published scientific documents, reports, and peer reviewed journals were reviewed along with any published documents containing IQ and regional hunter/user knowledge. The resulting report provided several concrete examples of how the inclusion of Traditional knowledge, local knowledge, or Inuit Qaujimajatuqangit (TK/LK/IQ) bears on outcomes. For instance, in considering insights from TK/LK/IQ, it was concluded that humans have been an integral part of the local ecosystem for at least 4,000 years, and hunters have belonged to the food web long before the area was described in Western science. It was therefore determined that local, rights-based hunting/harvesting should only be considered a stressor to an Ecologically and Biologically Significant Area (EBSA) if the persisting local-level regulation is obstructed. From this broader perspective, the focus shifted to commercial fishing/harvesting as a potential stressor, and the effects of commercial harvests on local or community-based harvests was identified as a knowledge gap. It was ultimately concluded that, because “knowledge gaps can be filled with IQ” (p. 23), and IQ can inform decision-making and management decisions, more work needs to be done around collecting TK/LK/IQ from knowledge bearers (DFO, 2021).

Nunavummiut researcher Norma Jean Mary Dunning (2014) explains "[m]y research is framed through the methodological use of Inuit Qaujimajatuqangit or IQ” (p. 20). Dunning (2014) animates four elements of IQ, “each of which are fluid but complete” (p. 20). to bring equilibrium and understanding to the Canadian Eskimo Identification system through the process of Tukitaaqtuq, meaning “they explain to one another, they reach understanding, receive explanation from the past” (Government of Nunavut, 2000 as quoted in Dunning, 2014; p. 20). Dunning (2014) elaborates on how Piliriqatigiingniq encouraged a dialogue between two dichotomous groups “to gain a better, fuller, and unprejudiced understanding” (p. 21); how Qanuqtuurungnarniq drove the project to completion by means that were out of the initial scope of the project; and how her work remained accountable to “the issuers of the disks and those who wore them” (p. 20) as a function of Pijitsirarniq. She explains how Aajiiqatigiingniq brought together many voices for a new, shared understanding.

Dunning offers a more detailed itemization of her use of IQ in her research processes in her 2019 doctoral dissertation. Dunning (2019) states:

> For the purposes of my study I used the following elements of IQ: Innuqatigiitsiarniq, is a component of IQ that concerns respecting others. Respect is what we must carry in all

> our interactions. Respect continues beyond a face-to-face conversation. Tunnganarniq is being open and welcoming. I am this way in all of my dealings, and being this way helped me to understand the subjects whom interviewed. I did not present any barriers to them through my body language, or facial expressions or in the way I dressed or spoke. I was never better than or less than the Inuit that I had the good fortune to interview. Pijitsirniq is the concept of serving that Inuit use at all times. What I must always remember is that I am serving my people, I am not interrogating or forming a research work that will be shaped by me. I am doing work on the behalf of others, not myself. Piliriqatigiingniq is working together for a common cause. It is a component of IQ that is reliant on aajiqatgiingniq or consensus in decision making. I did not create or complete a work, without understanding that I was working with other Inuit students in not only kinship but collectively for the common good of all Inuit, and that this could not be achieved without consensus. The components of respect, kindness, serving, working together, and consensus are the basics of IQ. They are the elements that have been passed down to Inuit as survival techniques and remain necessary in our modern lives. I was raised in a home where I was taught to never put myself first (pijitsirniq). I was raised to respect all physical things, and to view each item in the world around me as containing and carrying a spirit (avatittingnik karnatsianiq). I was never forced to sit and learn something alongside either my Mother or Father (pilimaksarniq – skill & knowledge gathering), but I was expected to learn the basic life skills necessary to me when I left home. The house I grew up in was a house that welcomed everyone, regardless of what time of day or night it was (tunnganarniq), and it was a house where I was taught to never react through angry confrontation (innuqatgiitsiarniq – respecting others). I carried the understandings and ways of my mother into my work because she would expect it, as do all my ancestors (p. 80-81).

7. Aajiiqatigiingniq: the principle most frequently activated in Nunavut research

Aajiiqatigiingniq, as a principle of Inuit Qauajimajatuqangit, "...is generally considered an approach to building community scale consensus and is central to Inuit notions of wellness in the context of community harmony (Karetak & Tester, 2017; p.11 in Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik, 2019; p. 2). Aajiiqatigiingniq, when expressed as research method, is an IQ principle from which many inclusive approaches to knowledge creation have emerged. The Nunavut research literature shows that Aajiiqatigiingniq-based approaches have the unique propensity to simultaneously activate several interconnected Inuit Qaujimajatuqangit concepts. These approaches are advancing in the literature and both conceptual and pragmatic examples are available.

Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019) explain that "…research and inquiry involve(s) a systematic search for knowledge and ways to reflect that knowledge to effect new understanding" (p. 4). Generally defined, consensus building seeks points of agreement and solidarity within that understanding. Aajiiqatigiingniq, as a consensus building process is however also concerned with the emergence of truth and solutions that will improve collective well-being (Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik, 2019). Characteristics of the Aajiiqatigiingniq process that they identified in their analysis include:

> "(1) an ultimate focus on individual and community well-being; (2) a systematic approach that successively adds members, increasing group size and authority (i.e., parents followed by extended family followed by elders followed, ultimately, by the inclusion of a shaman/respected healer), until consensus is achieved; (3) a requirement of respectful communication; (4) a reliance on narrative discourse; (5) a participant subject position that situates group members as personally engaged within the consensus healing process; and (6) a meeting style that appears structurally informal and unrestricted by time limits" (Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik, 2019; p. 7).

Cherba, Russell, Ruttan, & Tabish (2021) activate several of these concepts to engage communities in a way that facilitated the co-development of a shared evaluation tool for health and wellness outcomes. Cherba, Russell, Ruttan, & Tabish (2021) "built on community and team members' knowledge and priorities" (p. 3) by coming together "through a set of shared values and goals that were set out from the beginning of the project" (p. 3). They activated five key Inuit concepts that enabled the consensus-based decision-making process: "Piliqatigiinniq (working together for the common good), Pittiarniq (being good, kind, or ethical), Inuuqatigiittiarniq (being respectful of others), Unikkaaqatigiinniq (storytelling and the power and meaning of story), and Iqqaumaqatigiinniq (ideas or thoughts may come into one understanding" (p. 5).

Henri, Carter, SPMC, APMC, Ljubicic, Smith, & Johnston (2020) explain how their research was guided by Aajiiqatigiingniq from inception through to dissemination. They explain that this was a direct result of mobilizing four core beliefs of Aajiiqatigiingniq: "(1) respectful and open communication; (2) planning, advice and support; (3) focus on the common good and meeting the needs; and (4) restoring harmony and peace" (P. n. a.). Several pragmatic examples are also available in the literature, including Snow & Tootoo's (2021) application of Aajiiqatigiingniq in research design. In recognizing that, in Inuit society, individuals are intrinsically tied to communities through IQ values, they designed their project in such a way as to ensure youth research collaborators worked together rather than individually. By doing so, Snow & Tootoo (2021) inset the relational dynamic that was necessary to conduct Aajiiqatigiingniq around how youth define what it means to be Inummarik and Inuit in today's world" (Snow & Tootoo, 2021; p. 10).

8. Research models/frameworks rooted Inuit Qaujimajatuqangit

The Nunavut research literature shows how many research collaborators are responding to the desire to incorporate Inuit Qaujimajatuqangit into Nunavut research and research processes. When done in a meaningful way, incorporating IQ has profound effects on the focus of research, the outcomes, and the mutuality of benefits among research collaborators. As a consequence, several Inuit Qaujimajatuqangit concepts and principles continue to gain momentum in the Nunavut institutional research. In addition, there are several research models and frameworks that are directly emergent from the concepts and principles of IQ. These models represent more than 'opportunities to participate'; they represent self-determination in research, and they are increasing the potential of the Nunavut institutional research literature to become an additional pathway for the transmission of IQ. Three prominent examples are given brief summaries below: a consensus driven participatory action research framework, the Qaggiq Model, and the Sikumiut Model.

Consensus driven participatory action research

Morris (2016) provides an example of group consensus and the co-creation of a research approach. In this instance, Inuit youth, Elders, and a non-Indigenous researcher were partnered by the non-profit organization Pauktuutit. Together, they developed a research framework to further examine Inuit youth violence prevention and health promotion on social media. Their framework manifested as a participatory action research process derived from Inuit Qaujimajatuqangit and driven by IQ's guiding principles.

The framework encourages accountability among the research collaborators and the relationships made throughout the research project (Morris, 2016), and provides an operative example of how each of eight IQ principles can be enacted to guide research processes. Morris (2016) conveys that, "Hopefully, this article has provided a roadmap that academics can use to work in partnership with Inuit organizations by means of a participatory action research methodology that engages Inuit from the beginning to the end of the research process and beyond" (p. 123).

The Qaggiq Model

The Qaggiq model, developed by Janet Tamalik McGrath in collaboration with Inuk Elder Mariano Aupilarjuk, is a conceptual framework rooted in Inuit values and the desire for Inuit knowledge renewal. The model is presented in the metaphorical form of the Qaggiq (large communal igluk) as the qaggiq is commonly seen as a place where listening is important and expected, where Inuktut knowledge is revitalized, and where relationships and skills are developed in the interest of harmony.

McGrath's articulation of the Inuktut worldview in the space of the Qaggiq invites readers to understand the significance of gaining experience as a means of knowing. The model emphasizes the concept of sannginiqarajarniq aturnikkut ("vitality through engagement") and proposes that personhood, peoplehood, and livelihood can be strengthened through continuous engagement with community, homeland, language, stories, and culture. this reinforces relational practices of reciprocity, just relations with the land, and knowledge renewal across generations. The Qaggiq Model also provides a framework for researchers to engage in relational accountability according to Inuit context and values.

The Sikumiut Model

Wilson, Bell, Arreak, Koonoo, Angnatsiak, & Ljubicic (2020) observe that, "Efforts to date have not advanced Indigenous participation, capacity building and knowledge in Arctic environmental science in Canada because Arctic environmental science has yet to acknowledge, or truly practice decolonizing research" (p. 127). In response to such concerns, the Sikumiut model, a cross cultural research approach, was developed with the following six goals in mind: "1) support Inuit self-determination in research, 2) embrace Inuit decision making, 3) prioritize community-based research needs, 4) develop Inuit specific values for research; 5) strengthen Inuit youth capacity, and 6)

change the role of nonindigenous research partners" (Wilson, Arreak, Itulu, Sikumiut Community Management Committee, Ljubicic, & Bell, 2021; p. 531).

The Sikumiut Model reflects a decolonizing methodology based on Nunavut's Inuit societal values and Inuit Qaujimajatuqangit. "The Sikumiut model shows how having Inuit in decision making positions ensured Inuit data ownership, accessibility, and control over how their Inuit Qaujimajatuqangit is documented, communicated, and respected for its own scientific merit" (Wilson, Bell, Arreak, Koonoo, Angnatsiak, & Ljubicic, 2020; p. 127).

9. The NAC/NRI and transmission of Inuit Qaujimajatuqangit

The Nunavut research literature shows an important shift over time. Since 1996, Inuit ways of knowing, expertise, and ethics in research and research mobilization have been gradually displacing harmful practices. Although the NAC/NRI's roles are underrepresented, the literature tethers this transition to the NAC/NRI's involvement in education and research. Combined with the ongoing efforts of the Nunavut government, licensing authorities, research collaborators, communities, and institutional partners, the NAC/NRI's involvement has increased the potential of the Nunavut institutional research literature to become a viable pathway for the transmission of Inuit Qaujimajatuqangit.

The NRI, "as a gate-keeping institution" (p. 30), is adhering to the rigors of scientific investigation set by southern institutions while simultaneously advancing Inuit ways of knowing, expertise, and knowledge in research (van den Scott, 2012). In the interest of protecting cultural identity and cultural knowledge systems against devaluation or appropriation by researchers, the NRI adopted a seemingly Western model of research licensing. Van den Scott (2012) cites van den Hoonaard (2002) who calls into question the idea of using a Euro-centric ethics process to grant research licenses for northern research. But initiating with a Western model facilitates two important consequences:

Held (2020) cites Beeman-Cadwallader, Quigley, & Yazzie-Mintz (2012) in iterating that "It is an all-encompassing effort to create a new social order and, as such, necessitates the collaboration of the colonizer and the colonized (p. 2). Held (2020) explains the need for unrelenting focus, innovative approaches, and allied partnerships as key in this process.

1) the Western framework provides a familiar and therefore workable access point for academically trained researchers looking to conduct research in the north. This allows research (largely conducted by southern collaborators) to continue as the NRI and other research regulators progressively eliminate harmful research practices while simultaneously incorporating standards that centre Inuit ethics and priorities, and

2) the NRI is able to maintain the acceptance and confidence of southern academic institutions that support NRI's authority in administering the Nunavut Scientists Act. With this authority, NRI has been able to use the licensing process as "a vital tool for the […] stewardship of one knowledge system in interaction with another knowledge system" (van den Scott, 2012; p. 30).

This contributes to the progressive elimination of harmful research practices and continued incorporation of protocols that centre Inuit ethics in research planning and activities. For example, in the widely cited 'Negotiating Research Relationships with Inuit Communities: A

Guide for Researchers', ITK & NRI (2007) insists that the cursory inclusion of local expertise in the proposals of prospective researchers, including token references to traditional knowledge, will be deemed profoundly inadequate. The Nunavut institutional research literature is consequently rich with examples of how Inuit Qaujimajatuqangit has been incorporated or integrated in research processes ranging from research planning, resource allocation, design, methodologies, methods, interpretation, to knowledge dissemination.

Figure 5 shows that the appearance of Inuit Qaujimajatuqangit in the surveyed literature has increased since the NRI had become responsible for authorizing research.

Figure 5. *The appearance of 'Inuit Qaujimajatuqangit' in Nunavut research over time.*

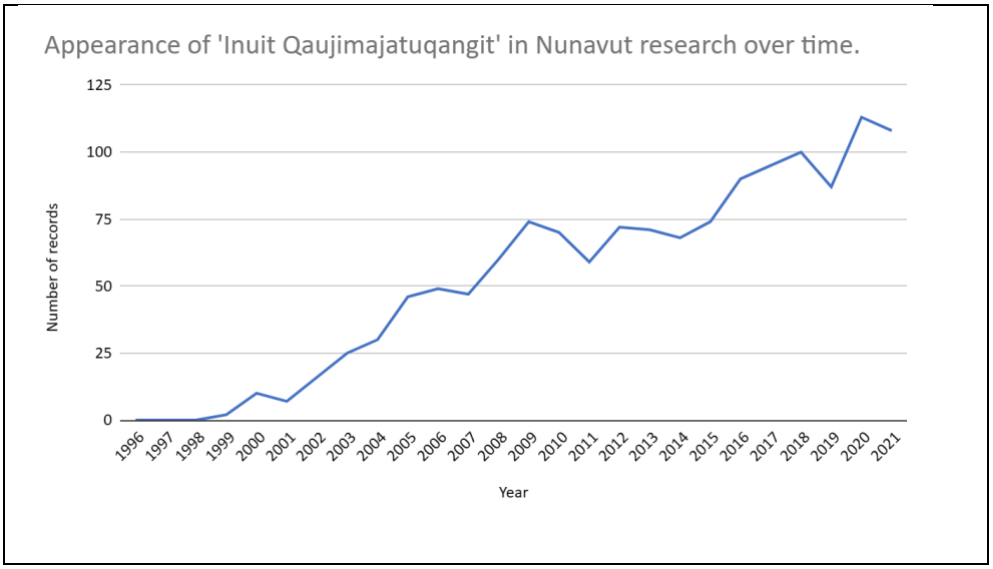
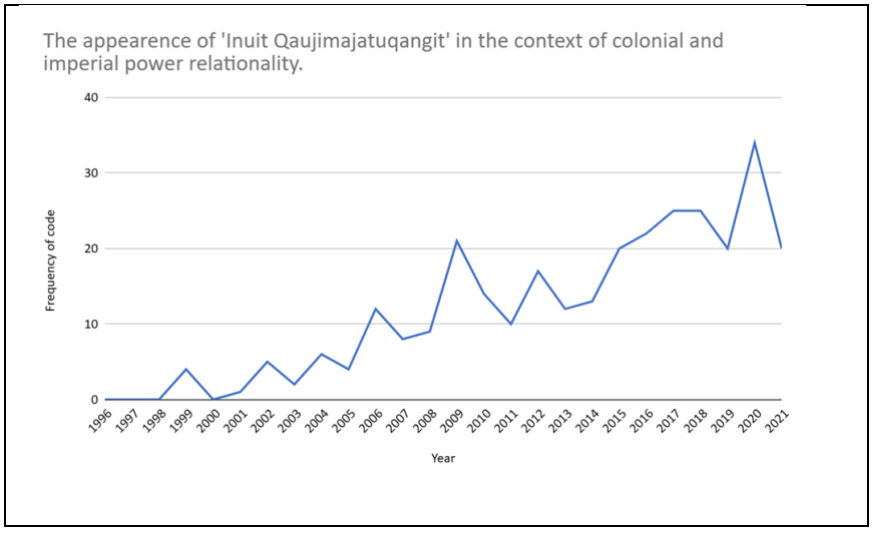


Figure 6 shows an increase in the appearance of 'Inuit Qaujimajatuqangit' in discourses of anti-colonialism/de-colonialism since 1996.

Figure 6. *The appearance of 'Inuit Qaujimajatuqangit' in the context of colonial and imperial power relationality.*



The appearance of Inuit Qaujimajatuqangit in Nunavut research is dependent on more than research regulation. As described above, the NAC/NRI works with other licensing authorities, governments, institutional partners, research collaborators, and communities, to champion Inuit ethics and research priorities through several roles. Since 1996, IQ has gained momentum in the Nunavut research literature in both content and application. The advancement of Inuit ways of knowing, expertise, and ethics in research and research mobilization has made the Nunavut research literature an increasingly viable pathway for the transmission of Inuit Qaujimajatuqangit.

Chapter 4. Recommendation

Contents

1. Introduction

We examined the Nunavut research literature for indications of how NAC/NRI is involved in research, as well as how 'Inuit Qaujimajatuqangit' is represented, engaged, or mobilized in Nunavut research. Our analysis allowed us to detail a direct relationship between these two areas of interest. We were also able to identify several prominent features of the Nunavut research literature that we attribute to this relationship.

The following recommendations are based on findings associated with our examination of the relationship between NAC/NRI and the mobilization of Inuit Qaujimajatuqangit in Nunavut research literature. They are offered here as considerations for further actioning this relationship to extend the NAC/NRI's role in advancing Inuit ways of knowing, expertise, and ethics in research and education.

2. Augmenting citational practices

The literature demonstrates that community members, visitors, and/or people interested from afar have taken the initiative to learn about or even act on the systems of knowledge that Nunavummiut have worked hard to maintain; the systems that allow Inuit to make meaning of and important contribution to our shared world. Each record therefore represents an effort of researcher(s) and research collaborators to contribute to knowledge creation and the advancement of existing understandings.

From a holistic perspective, we see each person that contributes to the progression of research in Nunavut as valuable. One of the ways that we chose to acknowledge this was by, whenever possible, including their names. This involved replacing the ellipses found in many citations with the missing names. While this practice may have slowed our data

Daborn (2017) speaks to the utility of citational practices: "Utilizing Indigenous Studies methodologies requires that I centre Inuit knowledge, interrogate colonial power, uphold Inuit sovereignty, provide benefit to my community research partners, and the most effective way I have been able to meet these requirements is through citational practices that are accountable to the Kugaaruk community members who have contributed knowledge and theory to my research" (p. 30).

entry processes, and does require more space in written outputs, we found it was necessary to enact Tunnganarniq and Inuuqatigiitsiarniq.

Recommendation 1

Negotiating Research Relationships with Inuit Communities: A Guide for Researchers (ITK and NRI, 2006) encourages research authors give credit to research collaborators "…in an appropriate format for academic journals or other publications" (p. 9). The NAC/NRI could extend this sentiment by discouraging the use of abbreviated citations (e.g., 'et al.' or '…') in NAC/NRI published materials and in other research outputs that are not subject to the parameters of outside publishers (e.g., reports, posters, websites and media, and some theses). This practice, and other suggested below, could be explained in a supplement to the guide or be considered for inclusion in a future version.

We also recognise that citations are currency in academia. It is important to us because we feel it is important to the researchers and research collaborators who we intend to build and maintain community with.

3. Advancing familiarity with 'Inuit Qaujimajatuqangit'

The Nunavut research literature shows that research collaborators have a range of familiarity with Inuit Qaujimajatuqangit concepts. In an apparent effort to facilitate engagement with Inuit Qaujimajatuqangit principles, pronunciation guides have been made available to help those with limited fluency in Inuktitut (see example from Table 4). In some formats, like interactive web pages for example, written pronunciation guides can be linked to spoken examples. The provision of learning aids demonstrates regard for new learners and pronunciation guides like these invite more English-speaking participants into meaningful discourses.

Table 4. *Phonetic pronunciation for Inuit Qaujimajatuqangit principles (adapted from Bentham, 2016).*

Term	Pronunciation	Meaning
Inuit Qaujimajatuqangit	khow-yee-ma-yat-too-khan-geet	
Inuuqatigiitsiarniq	ee-nu-oo-kha-tee-geet-see-are-neek	Concept of Respecting Others
Tunnganarniq	tune-ng-an-are-neek	Concept of Being Open
Pijitsirarniq	pee-yit-seer-ar-neek	Concept of Serving
Aajiiqatigiingniq	ah-yee-kha-tee-gee-ning-neek	Consensus-Decision Making
Pilimmaksarniq	pee-lee-eem-mack-sar-neek	Acquisition
Qanuqtuurungnarniq	kha-new-kht-too-rue-ng-are-neek	Concept of Being Resourceful to Solve Problems
Piliriqatigiingniq	pee-lee-ree-kha-tee-gee-ing-neek	Concept of Collaborative Relationships or Working Together for a Common Purpose
Avatimik Kamattiarniq	ah-va-tee-meek Ka-mat-tee-are-neek	Concept of Environmental Stewardship

Furthermore, guides that segment words into their units of meaning may create an additional learning opportunity for people less fluent in Inuktitut. Inuktitut is a descriptive language that contains far less idioms and irregularities than typically found in English. Thus, a breakdown of conceptual words could help people to understand where the words stem from and how they accumulate to represent specific meanings (see Table 5).

Table 5. *Phrasing breakdown of Qaujimajatuqangit (adapted from Stern and Stevenson, 2006, pg. 101).*

Breakdown	Meaning
QAUJI	means to find out
QAUJIMA	means to know
QAUJIMAJAQ	means what or that which is known
QAUJIMAJATUQAQ	means something which has been known for a long time
Inuit QAUJIMAJATUQANGIT	means something that Inuit have known for a long time

Regrettably, the practice of abbreviating 'Inuit Qaujimajatuqangit' may hinder the exposure necessary to become familiar with phrase adequately enough to differentiate its many forms (see Appendix 13 for further information.

Recommendation 2

The NAC/NRI could encourage the practice of including a phonetic pronunciation by the first appearance of an Inuktitut term within texts. This practice could be modeled by the NAC/NRI and/or recommended in a supplement to the guide for researchers. Similarly, the NAC/NRI could encourage authors to rely less on the abbreviated form of Inuit Qaujimajatuqangit.

4. Encouraging the disclosure of research authorization in Nunavut research literature

The disclosure of licensing is not a consistent practice of Nunavut research authors. Given that the authorization of at least one of the listed regulatory bodies (see Appendix 1 for a list of Nunavut licensing authorities) is necessary to conduct primary scientific research in Nunavut (NRI, 2021), we reason that the vast majority of the surveyed records should be based on research that was licensed or was conducted under permit or permission. Yet only 1,827 (49.6%) records make reference to licensing, permits, or permission. This indicates that:

-the inclusion of this information is not a priority for authors/publishers,
-much of the research conducted in Nunavut is of the type that is exempt from the licensing requirements of all existing regulatory bodies, or
-there is research conducted without the authorization of a regulatory body.

The NAC/NRI's participation and contribution to research is significantly underreported, and therefore underrepresented by the research literature. As stated previously, we estimate that the final corpus may have doubled in size had the NRI been more consistently acknowledged in the products of NRI licensed research projects. We confidently conclude (from our analysis and from information available elsewhere) that there are significant roles that both the NAC and the NRI have in actualizing research in Nunavut that are not fully represented in the surveyed

research literature. The Nunavut research literature must therefore be supplemented with other sources of information for a comprehensive summary of NAC/NRI's research involvement.

5. Solidifying the relationship between licensing and Inuit Qaujimajatuqangit

Recommendation 3

The NRI could amend their reporting requirements for license holders to include the expectation that all products of research conducted under the Nunavut Scientists Act should make clear reference to the type of research authorization received.

Many research records disclose NRI licensing within the text of the document. In other cases, we were able to confirm or infer licensing with secondary information found elsewhere. When we examined the relationship between licensing and the occurrence of 'Inuit Qaujimajatuqangit' in the records, we found that licensing was not a positive indicator of IQ. That is, 37.6 % (n=1,385) of all records in the entire corpus contained 'Inuit Qaujimajatuqangit', while 19.5% (n=400) of the NRI license research products contained 'Inuit Qaujimajatuqangit'

The research literature offers examples of the challenges associated with the application of IQ in established practices. It could be argued that Inuit Qaujimajatuqangit may not be appropriate/applicable in all manner of studies. However, licensing could become a positive indicator of the appearance of IQ if research authors were encouraged to report on (even briefly) why IQ was not applied to the research. This practice would advance Inuit Qaujimajatuqangit in research while, at the same time, facilitating a basic level of competency of Inuit Qaujimajatuqangit among license holders. It would also serve as feedback that research regulators could use to respond to the specific challenges identified by researchers (i.e., 'we weren't confident enough' or 'couldn't get consultants', or 'the material wasn't available or articulated at the time of the study').

Recommendation 4

To increase the appearance of Inuit Qaujimajatuqangit in Nunavut-based research, the NRI could amend their reporting requirements to include the expectation that licence holders provide a statement regarding how IQ was considered in their research.

6. Resolving conflated terms in the Nunavut research literature

As we began engaging with the surveyed literature, we found ourselves asking, 'Is Inuit Qaujimajatuqangit Traditional knowledge? Is it Traditional ecological knowledge? Is it Indigenous knowledge, Inuit knowledge, local knowledge, cultural knowledge, or Inuit societal knowledge?' We recognized that one of the challenges associated with understanding the complexities of Inuit Qaujimajatuqangit may come from the tendency to qualify it with one of many English phrases meant to encapsulate its meaning in short form. While seemingly efficient, these 'taglines' may tender 'Inuit Qaujimajatuqangit' as an umbrella term under which many concepts can become conflated. We understand why Weber (2013) defines 'Indigenous knowledge' cautiously, given that many terms are used in the literature to either specify or

generalize knowledge and knowledge systems. For example, Traditional knowledge, Traditional ecological knowledge, local knowledge, Inuit knowledge, Inuit societal knowledge, and Inuit Qaujimajatuqangit are among terms that are seemingly used interchangeably in some records and more categorically in others. The context in which these terms appear may offer clues to the level of specificity implied, but not definitively in most examples. The risk associated with conflating the meaning/connotation of these terms is two-fold:

1. if the specificity represented in each of these terms is degraded then they will be less adequate for nuancing larger discourses, and
2. this can lead to, as Tester and Irniq (2009) remind us, an over emphasis of those aspects of Inuit Qaujimajatuqangit that are most compatible with Western science (like Traditional ecological knowledge for example).

Kourantidou, Hoover and Bailey (2020) take care to detail their use of 'Inuit knowledge' so that it is not reduced to a one-dimensional concept:

"Recognizing the complexity and diversity embedded in Inuit ways of knowing, and IQ as a multi-faceted worldview, our use of the term IK [Inuit Knowledge] is meant to go beyond just empirical understandings of the marine environment to encompass multiple dimensions of the Inuit knowledge system that may span from biophysical to cultural elements of their understanding and may include different types of observations, information, and data, as well as ways to interact with the natural environment and with others" (p. 281).

We understand that clearly differentiating the terms that specify the different forms, eras, components, levels, and attributes of IQ will allow for a better characterization of IQ and its complexities.

Recommendation 5

Researchers should be encouraged to further differentiate between terms like Traditional ecological knowledge, Traditional knowledge, Indigenous knowledge, Inuit knowledge, local knowledge, cultural knowledge, and Inuit societal knowledge. Examples of how these phrases characterize different forms, components, levels, attributes of Inuit Qaujimajatuqangit could be compiled from the existing literature and provided as a supplement to *Negotiating Research Relationships with Inuit Communities: A Guide for Researchers* (ITK and NRI, 2006).

There are several instances were research authors take care to detail their use of commonly conflated terms (e.g., Kourantidou, Hoover, & Bailey (2020), Peletz-Bohbot (2019), and Tomaselli (2018)).

Peletz-Bohbot (2019) takes care to differentiate between commonly conflated terms: "I also use the term local knowledge to refer to the traditional and contemporary knowledge of resource-users and community members who do not necessarily identify as Inuit or Indigenous. I borrow from Tomaselli et al., (2018) who define local knowledge as the "local body of knowledge, not associated with aboriginal ethnicity, but characterized by both historical and contemporary knowledge acquired through extensive observation of the environment and its species" (p.338).

We also found that concepts that are commonly associated as components of Inuit Qaujimajatuqangit can be discussed without direct reference to IQ. For example, Cherba, Russell, Ruttan, & Tabish (2021) discuss Aajiqatigiingniq and the development of an evaluation tool for health and wellness outcomes. While the article does not mention Inuit Qaujimajatuqangit by name, the principle of "Aajiqatigiingniq" as translated "moving forward through discussion and consensus" (Ferrazzi et al., 2019 as cited in Cherba et al., 2021, p.5) is central to the conceptualization of the evaluation process they present for land-based programs. They also discuss the centrality of other IQ concepts including, "Piliqatigiinniq (working together for the common good), Pittiarniq (being good, kind, or ethical), Inuuqatigiittiarniq (being respectful of others), Unikkaaqatigiinniq (storytelling and the power and meaning of story), and Iqqaumaqatigiinniq (ideas or thoughts may come into one understanding" (p. 5).

Because 1) 'Inuit knowledge', 'Traditional knowledge' and other terms are commonly used interchangeably with Inuit Qaujimajatuqangit, and because 2) concepts commonly associated with IQ can appear in the literature with out the formal designation of 'Inuit Qaujimajatuqangit', there may be additional relevant resources to that of what was found for this review. That is, we may have not uncovered a number of records that discuss what is arguably IQ but have not used 'Inuit Qaujimajatuqangit' as a representative term.

Recommendation 6
Any NAC/NRI administered extension of this review should utilize additional search strings developed from terms commonly associated with Inuit Qaujimajatuqangit. Records identified using these search strings can be compared to the corpus to further identify records and further expand the corpus.

7. Operationalizing Inuit Qaujimajatuqangit concepts

In a practical sense, operationalizing concepts means discussing ideas in a way that allows them to be enacted in practice (i.e., making concepts actionable in the pursuit of desired outcomes). Operationalizing concepts brings into consideration the values that ideas represent or communicate, and links them to an effect. The literature shows that despite some fundamental differences in values and ideology, there is a desire bring IQ and Western science together in research. The challenges associated with doing so may reflect the challenges associated with operationalizing IQ.

The research literature does present a compelling argument for the incommensurability of Inuit Qaujimajatuqangit and Western science. This, in large part, is a function of how distinct views of how knowledge is acquired, and of reality itself, amount to disparities in values and ways of being/doing/knowing (Wilson, 2008; Omura, 2013; Healy & Tagak, 2014). There are however many intersecting points in interests and desires. The literature shows that some Inuit and Western methods utilized in the pursuit of these interests and desires can be complementary or used in tandem. There is an extensive body of evidence in the literature that suggests that when complementary methods are utilized in research, they more often result in an expanded understanding for all collaborators.

The literature demonstrates that there have been challenges associated with reaching consensus on a standard definition of Inuit Qaujimajatuqangit. This may be because Inuit Qaujimajatuqangit is regularly used as an umbrella term to characterize many extremely complex understandings of Inuit experience and the resulting perspectives and knowledges. The literature also suggests that many of the concepts that appear under the umbrella of Inuit

Qaujimajatuqangit are more amenable to a consistent definition. This may be because consensus on practical concepts may be more attainable than consensus on theoretical concepts. For instance, there appears to be little inconsistency in descriptions of the guiding principles of IQ across records. Therefore, the operationalization of practical concepts that are reliably described may be much more plausible.

Operationalizing more concepts associated with Inuit practical knowledge may reveal more methods that may be complementary, or that can be used in tandem, with Western scientific approaches. This may even encourage bridging higher up the conceptual ladder. But ethical researchers must refrain from attempts to integrate Inuit Qaujimajatuqangit and Western knowledge systems in meta-level discourse, as this has been shown to ultimately separate Inuit Qaujimajatuqangit from that which creates and recreates it, thereby making it susceptible to appropriation, corruption, or consumption by dominant narratives.

Recommendation 7

The NAC/NRI's should invest in efforts to define and operationalize Inuit Qaujimajatuqangit concepts, not the entirety of Inuit Qaujimajatuqangit. Furthermore, the emphasises should be placed on articulating Inuit practical knowledge concepts so that complementary research practices can be readily identified by those research collaborators who seek to bring together IQ and Western science in Nunavut research. For example, additional considerations could be given to concepts already appearing in the literature (see Appendix 11: Important Inuit Concepts appearing in research). As these concepts become further expressed or defined, a running list of examples of how each concept has been applied or mobilized in research (or other Western-dominated contexts) could be held as a resource for future collaborators.

8. Expressing operationalized IQ concepts as protocols and procedures

This is a reasoned approach, but the absence of a concrete, consistent, or operative definition of Inuit Qaujimajatuqangit has consequences for researchers, as well as educators, politicians, social workers, and others seeking to mobilize IQ in largely Western contexts like policy-driven institutions.

Most research collaborators and government employees in Nunavut have come from the south (Johnston, 2011), where people tend to be familiar with systems that appreciate formalized and standardized procedures (Furgal, Powell, & Myers, 2005). These procedures are ultimately grounded in conceptual frameworks that individual workers may or may not be acquainted with. However, they can often produce policy-driven outcomes by defaulting to established protocols and procedures.

Despite its diverse meanings, Inuit Qaujimajatuqangit is commonly considered to come from lived experience and life-long learning in relation to other Inuit. It is therefore unreasonable to expect that workers from the south will adequately grasp Inuit Qaujimajatuqangit or its practical application from onboarding training and the associated materials. However, a robust and explicitly stated protocols and procedures manual may expedite policy-driven outcomes as workers develop their working knowledge of Inuit Qaujimajatuqangit.

Recommendation 8

When paired with applicable practices, operationalized IQ concepts could be iterated in the form of protocols and procedures (e.g., Inuuqatigiitsiarniq citing protocol: replace ellipses found in citations with authors' names). The NAC/NRI could detail these protocols and procedures in a supplement to *Negotiating Research Relationships with Inuit Communities: A Guide for Researchers* (ITK and NRI, 2006). Given that research informs policy in Nunavut institutions and that Nunavut research authors tend to reiterate descriptions of IQ from only a few common sources (e.g., the IQ principles that are articulated by the Nunavut Government are often reiterated word for word in research literature), the supplement' potential to increase the uptake and application of IQ is far reaching.

9. Differentiating Inuit research methodologies

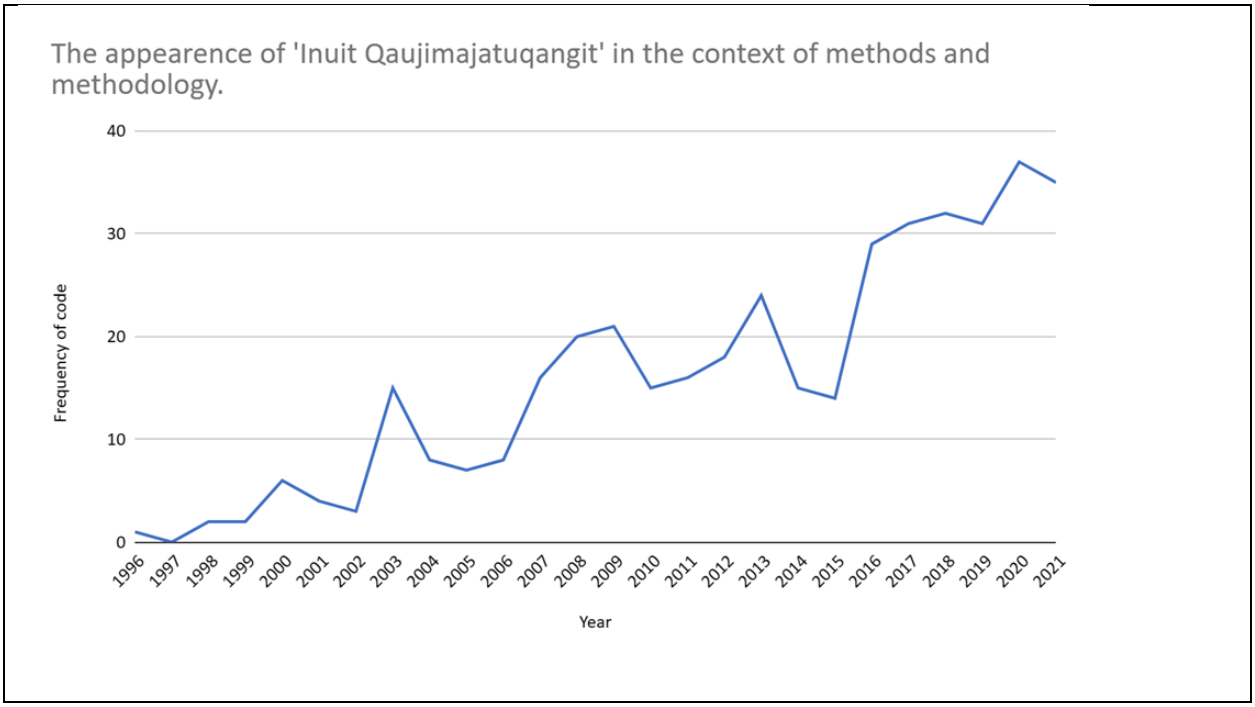
ITK (2016a) has advocated that Inuit-specific research is a fundamental need both for Inuit self-determination, their quality of life, and as rights-holders under Inuit land claims. Inuit-driven research approaches, such as Piliriqatigiinniq (Healy and Tagak, 2014), Tukisivallialiqtakka (Price 2007), the Qaggiq Model (McGrath 2018) and the Sikimiut model (Wilson, Bell, Arreak, Koonoo, Angnatsiak, & Ljubicic, 2020), highlight the methods associated with Inuit-specific, solution-focused methodologies. Inuit methodologies and methods do appear to share some of the general features associated with the broader 'Indigenous' research methodologies and methods, including:

- Inuit research is grounded in relational accountability according to Inuit cultural norms and values;
- Inuit research approaches are being revitalized in a modern context in response to the ongoing effects of colonialism;
- Inuit research process advance decolonization and self-determination by reclaiming Inuit ways and decision-making power; and
- Inuit Qaujimajatuqangit is distinct, it is fundamentally and philosophically unique, and as such it cannot be completely integrated into Western science. It must be recognized on its own merit.

However, Inuit-specific methodologies and methods move well beyond these shared general characteristics and a well articulated Inuit-specific methodologies/methods resource would reduce conflation with other Indigenous approaches and methods (for instance, circle models that attend to being by its emotional, physical, spiritual, and mental aspects).

During this review, we identified 415 records in which 'Inuit Qaujimajatuqangit' was discussed in the context of research methods and/or methodologies. Figure 7 shows how the appearance of 'Inuit Qaujimajatuqangit' in the context of methodologies/methods has increased in Nunavut research over time.

Figure 7. *The appearance of 'Inuit Qaujimajatuqangit' in the context of methods and Methodology*.



Given the considerable amount of material available in these 415 records, we are confident that an Inuit-specific methodologies/methods resource could be developed. Such a resource would serve as a conduit from those research collaborators that have mobilized Inuit Qaujimajatuqangit in research pursuits to those that still struggle to do so. This resource would also expediate the uptake of IQ and therefore serve NAC/NRI's continued commitment to advance Inuit Qaujimajatuqangit in research and research processes.

Recommendation 9

The NAC/NRI should administer an extension of this review that includes a methodical summary of Inuit Qaujimajatuqangit as it appears in the context of methods/methodologies. The NAC/NRI could then host this summary in a public domain as a living document that can be supplemented with forth coming examples.

Recommendation 10

NAC/NRI should offer incentives or prioritize existing incentives for research projects that prioritize Inuit Qaujimajatuqangit methodologies and methods. These incentives might include operating grants (or in-kind support through NAC/NRI's infrastructure/services), or grants for informants honorariums, translation services, knowledge dissemination, or fees associated with open access publishing.

Recommendation 11

A layman summary of Inuit-specific research approaches should be produced and made publicly available, starting with the following models:

- The Piliriqatigiinniq Community Health Research Model (Healy and Tagak. 2014)
- The model (Wilson, 2020)
- Qaggiq model (McGrath 2018)
- Tukisivallialiqtakka (Price 2007)

10. Improving access to Nunavut research records

Information request responses from NRI research license holders allowed us to add 957 previously unidentified to the corpus. Regrettably, we were unable to locate or access 173 (17.8%) of these items. We were also unable to locate or access 163 of the records identified via database searches, reference list searches, or found unintentionally. This means that an amount equivalent to nearly 10% (LBL=173; other not located = 163) of the final corpus was inaccessible to a team of five researchers who are affiliated with three institutions. While we were able to utilize record previews (like through Google Books© for instance) to get drive this number down to 10%, this was far less than ideal, as these previews offered only fragments of text. Our review of the abstracts of inaccessible texts (when found) left us disappointed, as we recognized several records within this 10% that would have surely informed our review.

Accessibility could be improved by these ascending recommendations:

- The NAC/NRI should encourage the digitalization of all publications.
- The NAC/NRI could encourage research authors to publish products of NRI licensed research projects in open access formats. The NRI could establish a fund that assists research authors with the article processing charges associated with open access publishing.
- The NRI could purchase the copyrights for potentially generative articles and re-release them as open access texts for the sake of greater dissemination.
- Forthcoming NAC and NRI published materials that can not be offered in open formats should be marketed with the intension that fee-for-use will be limited to, for example, 5-10 years.
- As NAC/NRI publications can be subject to Inuit ethics and Inuit peer review process, significant investment should be made into NAC/NRI's existing publishing capacity. For example, NAC/NRI could assume a directing role in a Nunavut-based multidisciplinary research periodical that tracks outcomes from NRI research compendiums among other things.

We initially intended on conducting a *comprehensive* systematic review to capture essentially all the relevant literature. However, we found that much the material exists in such a way that is not amendable to conventional searches (does not appear in typical repositories or does not contain the expected identifiers).

Recommendation 12
The NAC/NRI could format the final corpus so that it can be hosted in a public web domain. Links to the corpus could be advertised widely and be accompanied by messaging that encourages research collaborator to respond with suggested additions or to further confirm existing records. Additional records could be added as they are produced or identified. This would require a NRI representative to receive and input records as they become available.

11. Increasing consumable research outputs

Research outputs are typically written for academic audiences. The NRI recognizes that this may limit the dissemination of research findings in a way that excludes some research collaborators and the general public (ITK and NRI, 2007). The NRI recommends a combination of several methods to facilitate the communication of research findings back to the people involved in research. While these methods are effective, many do not produce a permanent record that is widely consumable.

The NRI does publish an annual research compendium containing summaries of ongoing research projects. As these summaries are of projects that have yet to be actualized, they do not speak to research findings. However, license holders are required to submit a final report to the NRI (a 500 to 1,000-word, non-technical summary describing the research activities, the data collected, and the research findings) as a condition of authorization.

Recommendation 13
The NRI should maintain an online public repository that make these final research summaries widely available.

Chapter 5. Discussion/Conclusion

What the research literature says is important because academic discourses rely on academic research records, and these discourses inform/influence policy making, power relations, collective behavior, and more. Therefore, what is included in the literature can either supplement existing knowledge(s), correct problematic narratives, or otherwise inform understanding in the academy and beyond.

Our experience with the literature was overall positive. This may be because we narrowed our corpus to Nunavut research records published between 1996 and 2023, in where most research is expected to have been given consideration with in the NRI's licensing processes. Given the nature of our research questions and our methods, our deepest reads were of records associated with NAC/NRI and the meaningful application of Inuit Qaujimajatuqangit. We recognise that the views, beliefs, or knowledge of all Inuit could not possibly be represented by any body of literature, especially considering that most publications are authored by non-Inuit, however the amount of applicable literature found here exceeded our expectations.

We were also excited to see several place-based, interactive, or expressive research methods emerging in the Nunavut research literature. As these methods surpassed standardized interviews, questionnaires, and surveys in their capacity to reflect Inuit experience, we felt that they will ultimately disrupt any notion of 'technical' or 'scientific' studies as polar to those that mobilize Inuit Qaujimajatuqangit.

We appreciated when research authors socially positioned themselves in relation to their work or were otherwise reflexive in their research practices. For example, some research authors acknowledged coming from the south and explained that they came to know the community/place they worked by embracing the customs of Nunavummiut and Inuit culture. They also discussed how this may have influenced participant reactions, comments, or involvement. For us, this contributed to our felt confidence in their research outcomes. We also appreciated the respect shown by research authors who recognized individuals from the community who helped them with their project. In the same sense, we appreciated when the Land was acknowledged as a living contributor to the study (for instance, when the Thelon River is described as a teacher to Inuit).

Regrettably, we did encounter some comparisons made in the literature that were less productive. Although there is evidence that suggests that "IQ is comparable in accuracy and validity to modern science" (Omura, 2013; p.3), IQ was sporadically described in a manner (perhaps unintentionally) that implied that it was less complex or less involved than Western scientific knowledge. For us, this signals a need for further discussions on the ongoing legacy of colonialism. We know that, had Inuit knowledge systems not been displaced, the complexity of Inuit Qaujimajatuqangit would be measured in orders of magnitude. With this, Inuit knowledge renewal and investing in Inuit Qaujimajatuqangit to revitalize Inuit ways of doing, being, and knowing is not a form of 'romanticism'. The collective Nunavut research literature links the NAC/NRI's involvement in research to the mobilization of IQ in research. Our review of the literature links the mobilization of IQ in research to a growing confidence in research practices and outcomes among Nunavummiut, and a body of research literature that appears to be preparing for the complexities of Inuit Qaujimajatuqangit.

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Appendix 1. Nunavut licensing authorities: Regulatory bodies research licensing in Nunavut. Summary information from 'Obtaining a Research License under Nunavut's Scientists Act: A Guide for Applicants' (NRI, 2021).

Discipline/research area	Regulatory body	Authorizing act	description (info taken from NRI, 2021)
Terrestrial wildlife (including plants, insects, and animals) and Birds	Nunavut Department of Environment	Nunavut Wildlife Act	A Wildlife Research License is required for studies of terrestrial wildlife (including plants, insects, and animals), Polar Bears, and birds, issued by the Nunavut Department of Environment, under the Nunavut Wildlife Act. For more information contact: Wildlife Research Section Department of Environment Box 209, Igloolik, NU, X0A 0L0 Tel: (867) 934-2178 Email: wildlife_research@gov.nu.ca
Migratory Birds	Canadian Wildlife Service	Migratory Birds Convention Act	Any research involving migratory birds requires a Scientific Permit issued under section 4 and 19 of the Migratory Bird Regulations C.R.C. c. 1035 pursuant to section 12 of the Migratory Birds Convention Act. For more information contact: Canadian Wildlife Service, Northern Region Email: ec.cwspermitnorth-nordpermisscf.ec@canada.ca
Migratory Bird Sanctuary in Nunavut	Canadian Wildlife Service	Migratory Birds Convention Act	A Migratory Bird Sanctuary Permit is needed for any research activities in a Migratory Bird Sanctuary in Nunavut. This permit is issued by the Canadian Wildlife Service under section 9 of the Migratory Bird Sanctuary Regulations, C.R.C., c. 1036 made pursuant to section 12 of the Migratory Birds Convention Act. For more information contact: Canadian Wildlife Service, Northern Region Email: ec.cwspermitnorth-nordpermisscf.ec@canada.ca
Wildlife species at risk		Species At Risk Act (SARA)	

Marine mammals, fish, and fish habitat (including aquatic plants)	Department of Fisheries and Oceans	Federal Fisheries Act	A License to collect fish for scientific purposes is required for studies of marine/freshwater mammals, fish, invertebrates, and fish habitat (including aquatic plants), issued by the Department of Fisheries and Oceans, under the Federal Fisheries Act. For more information contact: DFO Area Licensing Administrator for Nunavut Telephone: (867) 979-8005 E-mail: XCA-NUpermit@dfo-mpo.gc.ca
Archeology and Paleontology	Nunavut Department of Culture Elders, Language and Youth	Archaeological Sites Regulations of the Nunavut Act	Archeology and Paleontology research requires a permit issued by Nunavut Department of Culture Elders, Language and Youth under the Archaeological Sites Regulations of the Nunavut Act. For more information contact: Chief Archaeologist, Department of Culture, Igloolik, NU Telephone (867) 975-2046 E-mail: cleypermits@gov.nu.ca
National Parks	Parks Canada	National Parks Act	A National Parks research permit for any research activities in a national park in Nunavut, issued by Parks Canada under the National Parks Act. For more information contact: Parks Canada, Nunavut Field Unit Email: Nunavut.Research@pc.gc.ca
Air, Land, Water, and/or People	Nunavut Arctic College	Nunavut Scientists Act	

Field research activities may require additional regulatory authorizations. Depending on their nature and location in which field research activities are conducted, field research may require:

- review by the Nunavut Planning Commission (NPC) to determine whether a project require screening by NIRB and to assess conformity to regional land use plans (contact the Nunavut Planning Commission),
- a land use permit from AANDC for projects on Federal Crown Lands that exceed a specified number of person days of fieldwork (Contact the AANDC Lands Division),
- authorization from the Nunavut Water Board to use water and/or deposit wastes in the field during the course of a research project
- permission from a regional Inuit association to access or use Inuit Owned Lands to conduct research,
- permits to build or install permanent research infrastructure, or
- screening by the Nunavut Impact Review Board to assess social and environmental impacts or proposed research activities.

Appendix 2. Database Descriptions and Expanded Results

Scopus

https://www.elsevier.com/en-in/solutions/scopus reports that Scopus is the largest abstract and citation database of peer-reviewed literature (including scientific journals, books, and conference proceedings) in the fields of science, technology, medicine, social sciences, and arts and humanities. Scopus facilitates access to approximately 78,000,000 articles, publications, datasets, preprints, and other records from over 20,500 titles from over 5,000 international publishers.

- 2021-11-07: *All fields* search using string: “Nunavut Arctic College” OR “Nunavut Research Institute” yielded 91 records.
- 2021-11-15: *All fields* search using string: "Inuit Qaujimajatuqangit" yielded 331 records
- 2022-03-02: All fields search using string: "Nunavummi Qaujisaqtulirijikkut " yielded 0 records

Web of Science Core Collection

Web of Science Core Collection is a multidisciplinary database provided by Clarivate Analytics. It facilitates access to approximately 171,000,000 articles, publications, datasets, preprints, and other subscription products, such as Social Science Citation Index, Science Citation Index, Biological Abstracts & The Zoological Record.

- 2021-11-07: *All fields* search using string: “Nunavut Arctic College” OR “Nunavut Research Institute” yielded 257 records.
- 2021-11-15: *All fields* search using string: "Inuit Qaujimajatuqangit" yielded 31 records.
- 2022-03-02: *All fields* search using string: "Nunavummi Qaujisaqtulirijikkut " yielded 7 records

BASE

BASE: Bielefeld Academic Search Engine is a multidisciplinary database provided by Bielefeld University. BASE facilitates access to metadata for approximately 260 million documents from more than 8,000 content providers.

- *2021-11-07: Entire Document* search using string: “Nunavut Arctic College” yielded 63 records.
- *2021-11-07: Entire Document* search using string: “Nunavut Research Institute” yielded 17 records.
- 2021-11-15: *Entire Document* search using string: "Inuit Qaujimajatuqangit" yielded 128 records.
- 2022-03-02: *Entire Document* search using string: "Nunavummi Qaujisaqtulirijikkut " yielded 0 records

Dimensions

Dimensions is a comprehensive database that links grants (>5.9m), datasets (>10.9m), and clinical trials (>674k) to patents (>140.7m), publications (>122.5m), and policy documents (>743k).

- 2021-11-15: *Full data* search using string: “Nunavut Arctic College” OR “Nunavut Research Institute” yielded 1895 publications, 26 policy documents, and 14 grants. Policy documents and grants are only viewable with an organizational subscription not available at NAC or MUN.
- 2021-11-15: *Full data* search using string: "Inuit Qaujimajatuqangit" yielded 1229 publications, 17 policy documents, 4 datasets, and 25 grants. Policy documents, datasets, and grants are only viewable with an organizational subscription not available at NAC or MUN.
- 2022-03-02: *Full data* search using string: "Nunavummi Qaujisaqtulirijikkut" yielded 31 publications.

OneSearch

OneSearch is Memorial University library’s resource discovery and navigation tool. The library’s physical holdings and online subscriptions, as well as many resources beyond these, can be identified using this tool.

- 2021-11-08: *All fields* search using string: “Nunavut Arctic College” OR “Nunavut Research Institute” yielded 1111 records, *Expand Results Beyond MUN Libraries* yielded 1598 records. The first **1048** were available (due to limitations on access, perhaps a glitch. MUN librarians are looking into this). This would be a great resource, as it produces records of a number of different types. But it is limited by a glitch?
- 2021-11-15: *All fields* search using string: "Inuit Qaujimajatuqangit" yielded 539 records, *Expand Results Beyond MUN Libraries* yielded 806 records.
- 2022-03-02: *All fields* search using string: "Nunavummi Qaujisaqtulirijikkut" yielded 19 records.

Google Scholar

Google Scholar is a multidisciplinary academic database and search engine with access to approximately 390 million records. Google Scholar searches were conducted using Publish or Perish©, a software program that retrieves and analyzes academic citations from Google Scholar and several popular databases. Publish or Perish© was used to facilitate the wholesale section and exportation of search results (to a maximum of 1000 records per export).

- 2021-11-15: *Keyword* search (no citations, no patents) using string: “Nunavut Research Institute” with publication dates inclusive of 1995-2013 yielded 870 records.
- 2021-11-15: *Keyword* search (no citations, no patents) using string: “Nunavut Research Institute” with publication dates inclusive of 2014-2021 yielded 800 records.
- 2021-11-15: *Keyword* search (no citations, no patents) using string: “Nunavut Arctic College” with publication dates inclusive of 1995-2013 yielded 851 records.
- 2021-11-15: *Keyword* search (no citations, no patents) using string: “Nunavut Arctic College” with publication dates inclusive of 2014-2021 yielded 804 records.
- 2021-11-16: *Keyword* search (no citations, no patents) using string: "Inuit Qaujimajatuqangit" with publication dates inclusive of 1995-2013 yielded 890 records.
- 2021-11-16: *Keyword* search (no citations, no patents) using string: "Inuit Qaujimajatuqangit" with publication dates inclusive of 2014-2021 yielded 930 records.

- 2022-03-02: *Keyword* search (no citations, no patents) using string: “Nunavummi Qaujisaqtulirijikkut” yielded 47 records.

Appendix 3. Search string record totals by database

Table 1. *Record totals per database (String 1).*

String: “Nunavut Arctic College” OR “Nunavut Research Institute”	
Source	# of records
Scopus	91
Web of Science Core Collection	257
BASE	80
Dimensions	1895
OneSearch	1048
Google Scholar	3325
Total:	6696
Duplicates removed:	2226
String total:	4470

Table 2. *Record totals per database (String 2).*

String: "Inuit Qaujimajatuqangit"	
Source	# of records
Scopus	331
Web of Science Core Collection	31
BASE	128
Dimensions	1229
OneSearch	806
Google Scholar	1820
Total:	4345
Duplicates removed:	1242
String total:	3103

Table 3. *Record totals per database (String 3).*

String: "Nunavummi Qaujisaqtulirijikkut"	
Source	# of records
Scopus	0
Web of Science Core Collection	7
BASE	0
Dimensions	31
OneSearch	19
Google Scholar	47
Total:	104
Duplicates of string 1 & 2:	98
String total:	6

Table 4. *Combined record totals for string 1, 2, and 3.*

String	String total
“Nunavut Arctic College” OR “Nunavut Research Institute”	4470
"Inuit Qaujimajatuqangit"	3103
“Nunavummi Qaujisaqtulirijikkut”	6
Duplicates removed:	1261
Total records identified for further screening:	6318

Appendix 4. Initial message(s) sent to Primary investigators.

Initial Email

Good morning, I hope this message finds you well.

The Nunavut Research Institute is currently reviewing the Nunavut Licensing Database with the intention of identifying any published or forthcoming articles/materials associated with each research project. Your help in this regard would be greatly appreciated, as we intend to produce a searchable database that recognizes all the research conducted in region.

We would be very thankful if you could please email edward.allen@arcticcollege.com to confirm the names or identifiers of any related publications or materials associated with the Nunavut Research Institute license(s)* that you received.

If you have any questions or would like to discuss this request further, please contact me from the information provided below.

Thanking you in advance,

Edward Allen, PhD Candidate

edward.allen@arcticcollege.com

(709) 325-3533

*Please know that you may receive additional emails if you received more than one NRI license. Thank you for your understanding. Your time in this regard is very appreciated, as we want to produce a comprehensive database that recognizes the work of each and every research project.

Follow up message via LinkedIn©

The Nunavut Research Institute is updating its database. We would like to include any research articles that came from the licenses that you received. Can we connect so that I can provide more info, or otherwise can please you email edward.allen@arcticcollege.com with the names of articles? Thanks.

Appendix 5. Methods: Steps for digital scanning

Steps for full-text digital scanning

1. **Locate a scannable copy of the record online:** Copy enough of the record title to locate the record in Google Scholar© or through your institution's online library catalogue. If the record can not be located, try a general search in Google© or through the item's Digital Object Identifier (DOI) number if available (www.doi.org). If the item still can not be located, then make note of the specific barrier in column 'O' (Notes) and highlight the text in red. If the record can be located, but the full text in inaccessible due a paywall or other barrier, or if the record is accessible but can not be digitally scanned then, make note of the specific condition in column 'O' (Notes) and highlight the text in red.
2. **Scan the full text of the item for exact phrases:** Using the Ctrl F function (or other search function on your device), conduct a digital full text scan of the item for the following phrases:
    a. *Nunavut Arctic College*
    b. *Nunavut Research Institute*

    These phrases may also appear as acronyms in some documents. Usually, the acronym will appear in brackets following the full phrase early in the text. If the acronyms appear, then conduct a full text scan for *NAC* and *NRI***.**
3. **Make note of the context in which these phrases appear in the record:**
    a. If the phrases *Nunavut Arctic College* or *Nunavut Research Institute* (or *NAC* or *NRI* if applicable) do not appear in the document, then write 'No' in the corresponding cell of column 'Q' (NAC or NRI).
    b. If the phrase *Nunavut Arctic College* appears then write 'NAC' in the same cell. If the phrase *Nunavut Research Institute* appears then write 'NRI' in the cell and if both terms appear then write 'NAC and NRI' in the cell of column 'Q' (NAC or NRI).
    c. Make note of the context in which the phrases appear in the document in Colum 'S' (Notes).
        i. If either or both phrases only appear in the record's reference list or bibliography, then write 'NAC: Only in references' and/or 'NRI: Only in references' in column 'S'.
    d. If either or both phrases appear elsewhere in the record, then make note of the page number of where it appears (when available) and then copy the text surrounding the phrase (2 -3 sentences) and paste it into column 'S' (i.e., P 265: "We would like to thank the Nunavut Research Institute for granting us license to conduct this research."). remember to place quotation marks around any part copied directly from the text. Do this for each appearance, however in cases where each phrase appears more than 3 times in the record's text, then write 'NAC: Multiple mentions' and/or 'NRI: Multiple mentions" respectively.
    e. If either of the phrases appear in both the text and the refence list, then include 'NAC: also in references' and/or 'NRI: also in references" next to the notes from step 3d.

4. **Scan the full text for *Inuit Qaujimajatuqangit*:** Using the Ctrl F function (or other search function on your device), conduct a digital full text scan of the item for the phrase *Inuit Qaujimajatuqangit*. Inuit Qaujimajatuqangit may also be mentioned using the acronym *IQ*. Usually, the acronym will appear in brackets following the full phrase early in the text. If the acronym appears, then conduct a full text scan for *IQ*.
5. **Make note of the context in which the phrase *Inuit Qaujimajatuqangit* (and *IQ* if applicable) appears in the record**:
    a. If the phrase does not appear in the document, then write 'No' in the corresponding cell of column 'T' (IQ).
    b. If the phrase appears then write 'Yes' in the same cell.
    c. Make note of the context in which the phrase appears in the document in Colum 'S' (Notes).
    d. If the phrase only appears in the record's reference list or bibliography, then write 'IQ: Only in references' in column 'S'.
    e. If the phrase appears elsewhere in the record, then make note of the page number of where it appears (when available) and then copy the text surrounding the phrase (2 -3 sentences) and paste it into column 'S' (i.e., P 14: "This study incorporated the principles of Inuit Qaujimajatuqangit. Inuit Qaujimajatuqangit refers to…"). remember to place quotation marks around any part copied directly from the text. Do this for each appearance, however in cases where the phrase appears more than 3 times in the record's text, then write 'IQ: Multiple mentions.'
    f. If the phrase appears in both the text and the refence list, then include 'IQ: also in references' next to the notes from step 5e.
6. If none of the phrases *Nunavut Arctic College, Nunavut Research Institute*, or *Inuit Qaujimajatuqangit* appear in the record, then first test the search function with a visible word in the text. If the search function is operational, then write 'terms not found' in the corresponding cell of column 'O' (Notes) and highlight the words in red.
7. If you have written 'NAC', 'NRI', or 'NAC and NRI' in column 'Q' after conducting the full text digital scan then proceed to the step 8. **However**, if you have written 'No' in column 'Q' or if you have written 'NAC', 'NRI', or 'NAC and NRI' in column 'Q' but you have noted that any appearance of the phrases is limited to the reference lists or bibliography of the record, then proceed to the next record.
8. When the following information is **readily** available and not already recorded in our spreadsheet, then copy and paste the information into the corresponding cells:
    a. The correct title of the article in column 'A' (Title). This may be necessary if there are spelling or grammatical errors in the title as a result of translation errors between programs or platforms (i.e., title contains inappropriate characters, appears in all capital letters, etc.).
    b. The full name of the authors in column 'B' (Authors). The authors' last name(s) should always appear first followed by their given names and multiple authors should be separated by semi-colons.
    c. The record's abstract in column 'C' (Abstract). You will have to do a quick scan of the cell, as quite often this field is not automatically populated or the information that appears is incorrect, segmented, or contains inappropriate characters.
    d. The year of publication in column 'D' (Published Year).
    e. The item's Digital Object Identifier (DOI) number in column 'K' (DOI).

f. The record's citation in the format recommended by the American Psychological Association (APA) in column 'W' (APA Citation).

9. When the scan and data entry is complete, then continue with the next record. If, however, you encounter any barriers that hinder your scan or data extraction (i.e., record is not available in English, the record must be accessed physically at the library, etc.), then make note of the circumstances in column 'O' (Notes) and highlight the words in red before moving on to the next record.

Appendix 6. Refining the corpus

Records were separated from the main corpus (and held in separate datasheets) when they were determined to be misidentified or unrelated to our area of inquiry, or inaccessible for further analysis. The criteria that excluded records from additional consideration are detailed below. Any record may have been excluded by more than one of these criteria, but given the scope of this review, items were separated by the criteria that which was discovered first.

Criteria

Misidentified results, duplicates, and unresolvable translation errors were separated from the main corpus.

Records identified through scholarly databases typically exist as single items in larger assemblages of collected works such as in articles in journals or chapters in books. We found that 191 number of database results did not contain any of our search terms. We attributed this to a generality in the operation of the databases' search function that caused the databases to mistakenly identify records that were subsections of larger documents, where the terms appeared outside the identified record (elsewhere in the larger document or on a hosting webpage for example). In this circumstance, the records that did not contain our terms were designated with the exclusionary code ALD. The articles in the larger document that did contain our terms were added to an 'unintentional finds' list for later consideration.

We relied on the Covidence© deduplication feature to remove 4,827 duplicates among the 11,1145 records identified from scholarly databases. Following the pre-screening editing phase, 462 additional duplicates were revealed and coded as 'DUP' for removal.

The majority of these (N=325) existed as distinct but corresponding records such as the case when a book chapter appeared as one record and the larger book appeared as another record. In instances where our search terms were confined to one chapter of a book, then the record associated with the individual chapter was retained while the record associated with the larger book was coded as 'DUP' and removed from the corpus. If the terms were found in more than one chapter, then the record associated with the larger document was given additional consideration.

We found deficiencies in the dataset in the form of fragmented or incomplete records. We recognized these deficiencies as stemming from unresolvable translation errors between data management platforms/programs. When a record did not contain enough information to link it to its corresponding item in Covidence© or to the original database search results, or to identify it with a Google search, then it was coded as 'NEI' (Not Enough Information) and removed from the corpus (N= 48).

Other Documents that were Not Located

We were unable to locate or access every record identified unintentionally or through database searches or reference list searches. ODNL (Other Documents Not Located) was assigned to records when:

- the record exists as an unpublished or forthcoming (in press) work that has not yet been made available,

- the record was not accessible through any of the licenses possessed by Memorial university, the University of Alberta, Concordia University, or affiliated institutions,
- the record was requested from the author, publisher, library, etc., but did not arrive in time to be included in this study,
- the only known link to the records no longer functioned or the host no longer displayed the record,
- the document was updated or revised and only the newer edition existed, or
- the record was not identifiable given unresolvable software translation errors.

Tertiary sources that were not selected for further analysis in this review.

Tertiary sources tend to compile, organize, or otherwise repackage information from other sources. They are not typically credited to an author, but rather a publisher. Examples of tertiary sources include publisher catalogues, abstracts and indexes, manuscript reports, and textbooks and encyclopedias.

Tertiary sources were not selected for further analysis in this review, as they are seldomly direct products of research and, as they do not maintain the credibility of the original research, are not generally accepted as scholarly.

Encyclopedia entries can be a source of background and/or general information on an array of topics, however the credibility of encyclopedias as a source of reliable information largely depends on the review standards of their respective publishers. As the publishers of encyclopedias tend to rely on an editorial board for content review, as opposed to engaging in a peer review process, there continues to be debate on whether encyclopaedia entries should be cited in scholarly writing.
Online encyclopedias services, like Wikipedia for example, present additional concerns regarding the credibility and reliability of information. For instance, although Wikipedia entries often cite scholarly material, the information presented can not be reliability associated to the cited material because it is commonly subject to user edits and/or is susceptible to the undetectable manipulation of the contents. Encyclopaedia/ Wikipedia entries, when identified, were not selected for further analysis in this review (N=533).

Manuscript reports and lists of abstracts typically contain summaries of research that are grouped according to discipline, publisher, institution affiliation, or funding. Similarly, conference agendas and reports of conference proceedings typically contained abstracts or other short summaries of research (published or forthcoming) that were presented during conferences, colloquiums, or other organized events. These types of documents prove to be excellent sources of 'unintentional finds' but because they typically consist of only short accounts of research papers or forthcoming research projects, they were not selected for further analysis in this review.

Records that were about books and authors were not selected for further consideration in this review.

Our database search results contained notices of '*books received'*. These records constituent announcements that libraries or other repositories circulate when they add a new publication to their physical collections. As these 'books received' notices sometimes contain one or more of our search strings, several (N=?) were identified in our database search results.

Book reviews tend to provide descriptive information, along with the opinions of the reviewer, that is intended to help inform a reader's decision to read the book being reviewed. Book

reviews can be authored by anyone who has interest in a publication, but publishers do tend to pay established reviewers to review their publications. ‘Scholarly’ reviews of books or research works tend to be written by experts in the field who may or may not critique a publication’s accuracy or offer counter arguments or additional considerations to points made in the publication. Scholarly reviews are also frequently commissioned by publishers and may or may not be subject to a peer-review like that of scholarly research papers.

‘Books received’ notices and book reviews prove to be excellent sources of ‘unintentional finds’ but because they are not direct products of research, and do not necessarily retain the credibility of the research materials they report on, they were not selected for further analysis in this review.

Our database search results also contained several records that we designated as ‘about the authors’. For instance, we found stand-alone bibliographies or biographies of NAC/NRI affiliated research authors or authors that were recognized for their work in Inuit Qaujimajatuqangit related research. Obituaries and records in memoriam (N=17) were also found among our database search results. These typically acknowledged the passing of NAC/NRI staff or an affiliated research author. Like ‘books received’ notices and book reviews, records about the about research authors can also be an additional source of ‘unintentional finds’, but because they are not direct products of research in themselves, they were not selected for further analysis.

Some other secondary sources that were not selected for further analysis in this review.

Our terms often appeared in press releases, announcements, bulletins, and other similar forms. As these types of records do bring Inuit Qaujimajatuqangit into discussion, they are sometimes cited in reports, research articles, or other academic papers. For instance, in 2000, Knowledge Bearer Jaypetee Arnakak shared some robust descriptions of Inuit Qaujimajatuqangit in an issue of Nunatsiaq News, a newspaper of record for Nunavut and the Nunavik territory of Quebec. Insights from this news article were recounted in a report prepared by Educational Consultant Shirley Tagalik (2010) to contextualize Tagalik’s discussion on the role of Indigenous knowledge in supporting wellness in Inuit communities in Nunavut. This report is cited frequently in records produced from Nunavut institutional research projects. Although they did prove to be a great source for ‘Unintentional Finds’, we did not select items like news releases for further analysis, as these sources may describe research, they are not direct products of the research itself.

We also identified items were not research-related (like course syllabi and class materials). These items were not selected for further review, as they were not considered direct products of research in themselves.

Records of research conducted elsewhere were not selected for further review.

Our database searches also identified records that were direct products of research, but that the research was not conducted in or in relation to Nunavut. These records did contain our search terms in referenced material or comparative discussions, but the topic of analysis and the location of the study definitively excluded it from being Nunavut Institutional research. For instance, the term ‘Inuit Qaujimajatuqangit’ appears in research papers summarizing studies conducted in other Inuit territories, in the south, and around the world. Because research conducted elsewhere was not specifically relevant to our research questions, the associated records were not selected for further analysis.

Wildlife or archaeology research records that were not licensed by the NRI were not selected for further review.

Wildlife and archaeology research activities are authorized by regulatory bodies that administer respective Acts (see Appendix 1. Nunavut licensing authorities). The NRI does provide licenses to wildlife or archaeological research projects (in addition to their respective authorities) if they involve Traditional Inuit Knowledge for example. As wildlife and archeology research not licenced under the Nunavut Scientists Act were not within the scope of this review, they were not selected for further examination.

Partial records were not considered for further analysis in this review.

Our terms often appeared in items that we considered partial records, including items that only contained abstracts or appendixes. These items were compared to the records from which they were segmented and then replaced with the full record when possible. Items that represented conceptions of future research and did not have an associated text were not selected for further review.

Appendix 7. Screening note instructions

When to make a note during screening

We are at the point now where we are starting to recognize things about the records as we scan them. If we can make notes as we go, then we could potentially save ourselves a bunch of time in this round or the next round. The following cases are not meant to create additional steps for us to follow, but rather something more like, 'if you notice something as your scanning, make a note of it to make it easier for us later.' The following are some examples where you could make notes. Keep in mind though that each of you are developing expertise as we go, and you may find that something could be noted that is not in the following list. If your gut tells you its important, then its probably important.

Cases where you could make a note **after scanning**:

1. When the article/record appears in larger document (i.e., a chapter in book, a paper in conference proceedings, etc.) with terms appearing elsewhere in the larger document, not in the part we are searching, then write 'terms in larger document' in column O. This would be in addition to what ever is in column O already (don't delete info unless you are replacing it with more specific/accurate information). This will save us time in the next round.
2. Wildlife or archaeology research is not licensed by NRI. Although almost everything falls under the jurisdiction of NRI and the Nunavut Scientists Act, wildlife and archaeology studies have their own licensing bodies. NAC and NRI still helps these types of researchers in significant ways, but we will be putting wildlife and archaeology papers in a separate category to answer specific questions. If you notice that the paper is a wildlife study or archaeology study, then label them as such in column O after you finish scanning. This would be in addition to what ever is in column O already (don't delete info unless you are replacing it with more specific/accurate information). This will save us time in the next round.
3. Mentions NRI/NAC in the research paper but in a significant way. These ones will require some judgement on your part, but there have been many records that include our terms in ways that may not be important to our questions. I came across one where the only mention was something like, 'Our study was conducted at the community center, which is between the RCMP building and the Nunavut Arctic College. When instances like this are found, then the record will likely not be included in our final analysis. If you notice that our terms are being used in insignificant ways, then label them as such in column O after you finish scanning. This would be in addition to what ever is in column O already (don't delete info unless you are replacing it with more specific/accurate information). This will save us time in the next round.
4. Referenced IQ but research conducted in/on/re: other Inuit/Indigenous territory. IQ is an umbrella term that is being used more broadly as time goes on. IQ is often mentioned in studies conducted in Nunatsiavut, Nunavik, Inuvialuit, and even Greenland and the south. If you notice that the study mentions IQ but is obviously about somewhere outside of Nunavut, then make a note in column O after you finish scanning. This would be in addition to what ever is in column O already (don't delete info unless you are replacing it with more specific/accurate information). This will save us time in the next round.

Cases where you can skip over a record after making a note:

1. When its author related, not research related. ‘About the authors’ pieces, ‘Bibliographies’, ‘biographies’, and ‘Obituaries’ may be about researchers that have done research in Nunavut, but they are not typically about the research in itself. If you are able to identify one of these as you scan, then put the corresponding label in column O and move on to the next one. We won’t be using these, so the sooner you recognize a record as one you can make a note in column O and move on. This is in addition to what ever is in column O already (don’t delete info unless you are replacing it with more specific/accurate information). This will save you time in this round. **[Please keep in mind that an author’s affiliation (where they work/study) is sometimes provided under their name in journals and papers. This is important, as research staff at NAC and NRI participate directly in research. Please don’t skip these ones!]**
2. Sometimes our records are lists of other records. Such is the case when you see lists of abstracts, a survey of periodicals, some appendixes, etc. Although these can be a great source for ‘Random Finds’, we won’t be using these in our final analysis. If you are able to identify one of these as you scan, then put the corresponding label in column O and move on to the next one. The sooner you recognize a record as one you can make a note in column O and move on. This would be in addition to what ever is in column O already (don’t delete info unless you are replacing it with more specific/accurate information). This will save you time in this round.
3. Articles about books. Often libraries will send out a notice when they get a new book and these notices will show up in our list. Also, book reviews are quite common. Again, these can be a great source for ‘Random Finds’, but we won’t be using ‘Books Received’ or ‘Book Reviews’ in our final analysis. If you are able to identify one of these as you scan, then put the corresponding label in column O and move on to the next one. This will save you time in this round.
4. News Releases and not research related items. Our terms will often come up in press releases, announcements, bulletins, etc. These may at times provide information about research, but typically not the research itself. Although these can be a great source for ‘Random Finds’, we won’t be using these in our final analysis. If you are able to identify one of these as you scan, then put the corresponding label in column O and move on to the next one. The sooner you recognize a record as one you can make a note in column O and move on. This would be in addition to what ever is in column O already (don’t delete info unless you are replacing it with more specific/accurate information). This will save you time in this round.
5. Wikipedia / Encyclopaedia entries. These types of records are not typically considered scholarly, even when they are based on scholarly materials. If you are able to identify one of these as you scan, then put the corresponding label in column O and move on to the next one. We won’t be using these, so the sooner you recognize a record as one you can make a note in column O and move on. This is in addition to what ever is in column O already (don’t delete info unless you are replacing it with more specific/accurate information). This will save you time in this round.

Please remember that this is not meant to be an extra step. This is a ‘if you notice as you go’ kinda thing that will actually reduce the number of steps later on. Thank you for all the great work you are doing. I feel like we have an excellent team.

Appendix 8. Coding steps.

Overview:

- The first round of scanning allowed us to detect and resolve translation errors between applications/software and remove duplicates not previously removed by the software.
- The second round of scanning was the full text digital scan in which we sought contextual info regarding our terms.
- In the third round of scanning, we created and assigned one or more labels that describe the context(s) in which our search terms (NRI/NAC and IQ) appeared in the record. These labels then served as values for coding and later categorization into subsets based on how records may or may not be mobilized to address our research questions. 101 labels were created through an ongoing consultation process among the research team. We used a shared document that allowed us to add new labels when appropriate or to use existing labels when fitting. Procedure for the third round of scanning included the following:

1. Scan the title and abstract of each record for information that could cause the record to be excluded from our study. If exclusionary information is found, choose a label from the shared document under section: 'Labels that exclude the document from consideration' that best describes the information found and enter it into the corresponding cell in row O. Then proceed to the next record. If no exclusionary information is found, proceed to step two.
2. The information extracted during the full-text digital scan appears in column S and V. Read the contents of each cell and assign a label(s) that describes the context in which the terms appear in the record. The label(s) are to be entered into the respective columns R (for NAC and NRI) or U (for IQ). You may pick from the shared list of labels, however if no label aptly or accurately describes the context, then create a more appropriate label and add it to the shared list along with a description. Multiple labels should be separated by a semicolon. [note: the objective is to be as descriptive as possible. Therefore, we want as many labels as necessary. Using too few labels will result in a loss of specificity and, therefore, valuable information.
3. You will occasionally find license numbers or other indications of licensing in column S. License numbers typically follow one of two formats (i.e., 03 069 12R-M or 0306912R-M), however licensing may just be indicated by the text (i.e., "We thank the NRI for licensing our study"). When the license number appears first in the cell (i.e., 03 069 12R-M; P 41: "Access Prior to beginning the process of…"), this means that the record has already been associated with a specific project in the licensing Database. If the license number doesn't appear first, or is indicated by text, then this means that it has yet to associate with the licensing database. In all instances where the license number does not appear first or licensing is indicated otherwise, please highlight the cell in orange.
4. When you feel you have adequately labeled the context(s), highlight the cell in green and move on to the next record. Do not highlight the cell otherwise. We will return to unhighlighted cells later to resolve concerns.

Special note: When you find info on IQ that you feel is important to share with the team (i.e., info re application of IQ principles, insights or good descriptions, etc.) copy and paste it into the shared document on IQ.

Appendix 9. Code descriptions and examples of coded text.

General codes

AA/CA (Affiliated Author, Contributing Author): Records were coded as **AA/CA** when it was found that the author(s) or co-author(s) were affiliated with NAC/NRI.

ACK (Acknowledgement): Records were coded as **ACK** when it was found that NAC/NRI or NAC/NRI staff were thanked or mentioned in an acknowledgement section of a record. In instances where the author(s) specify what they thank/acknowledge NAC/NRI for, the recorded was instead coded according to what was specified. For example, if quoted "we want to thank NRI for the logistical support", we gave the source a **LS** code. To facilitate later sorting, **AO** (Acknowledgement Only) replaced **ACK** is cases where no additional codes applied.	
Coded Examples	Citation
P66: " I express also my gratitude to Susan Sammons of Nunavut Arctic College (Inuit Studies Program) and Mary Ellen Thomas of the Nunavut Research Institute."	Bordin, G. (2002). La nuit inuit. Éléments de réflexion. Etudes Inuit, 26(1), 45–70.
P119: "I extend sincere thanks to the Inullariit Elders Society (Igloolik, NU) and the staff of Nunavut Arctic College's Oral History Project in Igloolik—in particular, the late Leah Otak."	Desjardins, S. (2017). A Change of Subject: Perspectivism and Multinaturalism in Inuit Depictions of Interspecies Transformation. Etudes Inuit, 41(1-2), 101–124.
P9: "The authors sincerely thank the Hunters and Trappers Association of Resolute Bay for their support, the Nunavut Research Institute, and we especially appreciate the excellent logistical and financial support provided by the Polar Continental Shelf Program (PCSP-NRCan) in Resolute, Nunavut."	Yergeau, E., Michel, C., Tremblay, J., Niemi, A., King, T. L., Wyglinski, J., Lee, K. & Greer, C. W. (2017). Metagenomic survey of the taxonomic and functional microbial communities of seawater and sea ice from the Canadian Arctic. Scientific reports, 7(1), 1-10.

AR (Archival Resources): Records were coded with **AR** when it was found that the author(s) had accessed the NAC/NRI archival resources during the course of their research.	
Coded Examples	Citation
PX: "The staff of the Nunavut Research Institute has helped me secure community permissions and research licenses over the last fifteen years, and they have given access to their library and other resources. I especially thank the Executive ..." and P84: "We remained in Iqaluit and house-sat for them. During this short visit I discovered many resources, including excellent library and museum collections, archives at the Nunavut Research Institute, and elders who ..."	McElroy, A. (2007). Nunavut generations: Change and continuity in Canadian Inuit communities. Waveland Press.
P118: "I was also quite fortunate to receive permission to examine the materials housed within the library of the Nunavut Arctic College's Oral History Project (OHP). The OHP has an incredible wealth of books on the history of Igloolik, Inuit culture and language, and even the expansion of the Internet and other new media in Nunavut."	Young, JC. 2017. Encounters Across Difference: The Digital Geographies of Inuit, the Arctic, and Environmental Management. Dissertation. Department of Geography, University of Washington.

AU (Author): Records were coded with **AU** when it was found NAC or NRI was listed as author.
Coded Examples
ITK and NRI. (2006). Negotiating Research Relationships with Inuit Communities: A Guide for Researchers. Scot Nickels, Jamal Shirley, and Gita Laidler (eds). Inuit Tapiriit Kanatami and Nunavut Research Institute: Ottawa and Iqaluit. 25 pp.
Nunavut Research Institute (2015). Addressing Data Need in Nunavut for Monitoring and Mapping Vulnerable Water Supplies: A Collaborative Approach in Support of Measures to be Taken Under the Nunavut Climate Change Adaptation Plan. Polar Data Catalogue, Canadian Cryospheric Information Network. Available at

https://nwtdiscoveryportal.enr.gov.nt.ca/geoportal/catalog/search/resource/details.page?uuid=%7B08E5CA26-B391-4A40-B3B4-736E3D21C285%7D.

BCC (Building Community Capacity): Records were coded with **BCC** when it was found that opportunities to increase community capacity for research were provided during the course of the research.	
Coded Examples	Citation
pg 69: "During our work in Cambridge Bay, we will also employ student assistants from Nunavut Arctic College's Environmental Technology Program. By involving these students we will be building the capacity of Inuit scientists to lead and participate in future Arctic research activities. "	Urban, E. (2017). SCOR Proceedings, Volume 52. Report of the XXXIII SCOR General Meeting.
P62: "As one of our main objectives is to develop a community-based biomonitoring program within small Arctic towns, some samples were identified by local personnel, including students enrolled in the Environmental Technology Program at Nunavut Arctic College, Iqaluit."	Medeiros, A. S., Luszczek, C. E., Shirley, J., & Quinlan, R. (2011). Benthic biomonitoring in Arctic tundra streams: a community-based approach in Iqaluit, Nunavut, Canada. Arctic, 59-72.

BIC (Background Info/Context): Records were coded with **BIC** when it was found that they provided contextual information on the background or history of NAC/NRI or IQ.	
Coded Examples	Citation
P383: In 1998, a Nunavut working group introduced the concept of Inuit Qaujimajatuqangit (literally translated as "that which has long been known to Inuit"), noting its holistic character: "the Inuktitut term encompasses [...] the notion of Inuit knowledge [of the workings of humans, nature, and animals}, social and cultural values, practices, beliefs, language and world view" (Fienup-Riordan 1999; Laugrand 2002; Wenzel 1999; Working Group on Traditional Knowledge 1998, 5).	Crate, S. (2009). Anthropologists Engaging in Climate Change Education and Outreach: Curating Thin Ice—Inuit Traditions within a Changing Environment, In Crate, S. & Nuttall, M. (Eds) Anthropology and Climate Change (1st Edition, 380-393). Routledge.
P114: "After one awareness in Canada of this state of affairs in the 1970s, guides ethics for research in the North with the Inuit have emerged thanks to researchers of southern Canada. In addition, in order to provide a framework for these research projects carried out on the Inuit in Nunavut, the Nunavut Research Institute was created."	Delaunay, M. (2021). Internet dans l'Arctique canadien, enjeu de Soft Power pour l'État fédéral et les Inuit. Science politique. Université Paris-Saclay. Français. ⟨NNT : 2021UPASU012⟩. ⟨tel-03599610⟩
P16: "In 1995, Arctic College was divided into Aurora College (western N.W.T.) and Nunavut Arctic College."	McLean, S. (1997). Objectifying and naturalizing individuality: A study of adult education in the Canadian Arctic. Canadian Journal of Sociology/Cahiers Canadiens de Sociologie, 1-29.

BM (Brief Mention): The code **BM** was used to indicate instances where the terms were mentioned as an aside or in passing (i.e., mentioned briefly while talking about something else) or in a context that did not warrant further coding.	
Coded Examples	Citation
Pvii: "For weeks at a time our only reminder of the world outside Coats Island is the daily flight from London-Calgary which passes over us about mid-day. In the past the faint radio voice emanating from the Nunavut Research Institute and its predecessor, the DIAND Iqaluit Laboratory was a daily link to the outside, but since we got a satellite phone it has been our choice to call out, rather than a daily routine."	Ferguson, S., Loseto, L. L., & Mallory, M. L. (2010). A Little Less Arctic Top Predators in the World's Largest Northern Inland Sea, Hudson Bay. Springer Netherlands.
P23: "In town, there is a church, a health station with two nurses, a power plant, a gas station, a municipal garage, a daycare, a small playground, a school, a community gym, two grocery stores, one eight room hotel, a Community Learning centre (satellite campus of Nunavut Arctic college), and a visitor's centre for summer traffic from cruise ships and campers travelling through Katannalik Park."	Kennedy, J. (2001). Annie Tikivik, Mary Korgak, and Surusimitug Michael. Public, (21).

P47: "The new Nunavut Justice Centre is designed to be a facility that will provide much needed community meeting space, with the main courtroom also accommodating ceremonies, lectures and council meetings (Daley, 2004). Although the location is removed from the central area of the city, it is now located in a developing area close to Nunavut Arctic College."	Anderson, A., & Stratton, M. (2008). The civil justice system and the public: justice for Nunavummiut: partnerships for solutions : final report. Canadian Forum on Civil Justice.

CI (Contact Information): Records were coded with **CI** when it was found that the terms appeared in association with NAC/NRI contact information.

CNR (Contribution to Nunavut Research): Records were coded with **CNR** when it was found that materials produced by NAC/NRI or NAC/NRI undertakings were utilized to support a researcher's premise, argument, or findings within a record.

Coded Examples	Citation
P15: Google translate©: "The sources used here consist of data classics of Inuit ethnography (the work of Boas and Rasmussen) as well as numerous testimonies from elders collected since 1997, within the framework of various activities, research conducted with Nunavut Arctic College and local elder associations."	Laugrand, F. (2006). Angakkuuniq» et «ilisiiqsiniq: Réflexions préliminaires sur l'agression chamanique chez les Inuit du Nord canadien. Civilisations, 55, 13–33.
P18: "In this way, modern or recent stories (unikkaat) differ significantly from the concept of unikkaaqtuat. Unikkaaqtuat is defined by the Nunavut Arctic College oral history program as "very old stories" and according to Dorais "is a legend or a myth (Inuit do not distinguish between the two) considered to have happened a very long time ago."	Payne, C., Greenhorn, B., Kigjugalik Webster, D., and Williamson, C. eds. (2022). Atiqput: Inuit Oral History and Project Naming. Montreal: McGill Queens University Press.
P170: "The document Negotiating Research Relationships with Inuit Communities (ITK and NRI, 2007), prepared for Inuit Tapiriit Kanatami and Nunavut Research Institute, states that while many Inuit see value in science and are open to collaboration, there are a host of interlinking issues that give cause for concern such as…"	Vardy, M. (2015). The Social Reorganization of Polar Science: Responding to Cryospheric Change in the International Polar Year 2007-2008 and Beyond. Queen's University (Canada).

CON (Contact): Records were coded with **CON** when it was found that the researcher(s) had made contact with NAC or NRI in the course of their research.

Coded Examples	Citation
P56: "In order to seek permission to collect samples in Nunavut and to explain the project in person to scientific staff and community leaders, I visited both the Nunavut Research Institute in Iqaluit and the community of Cambridge Bay."	Palsson, G. (2016). Nature, culture and society: anthropological perspectives on life. Cambridge University Press.
P455: "These contacts included City of Iqaluit planning staff, the Amarok Hunters and Trappers Association, the Nunavut Research Institute, the Government of Nunavut Department of Environment, the Canada-Nunavut Geoscience Office, and individual residents."	Hatcher, S. V., & Forbes, D. L. (2015). Exposure to coastal hazards in a rapidly expanding northern urban centre, Iqaluit, Nunavut. Arctic, 453-471.

COS (Community Outreach Support): Records were coded with **COS** when it was found that NAC or NRI was said to help identify or recruit participants (by making community contacts on behalf of project, facilitating introductions, or by placing posters around the community).

Coded Examples	Citation
P3: "Workshop participants were purposively recruited following guidance from the Nunavut collaborator and using word-of-mouth, a government public service announcement, a	Ferrazzi, P., Christie, P., Jalovcic, D., Tagalik, S., & Grogan, A. (2018). Reciprocal Inuit and Western research training: facilitating research capacity and community agency in Arctic research partnerships.

presentation at the Arviat high school and an advertisement on the Nunavut Research Institute website."	International journal of circumpolar health, 77(1), 1425581.
P42: "The Nunavut Research Institute and the Aurora Research Institute also deserve credit for the programs because, through them, communities are contacted and scientific permits awarded."	Johnston, M. (2014) Quantifying the Properties of Hummocked Multi-year Ice: Two Measurement Seasons, OCRE-TR-2013-039, Technical Report by National Research Council Canada, Ottawa, Canada, 21 January 2014, 69 p.
Pxxii: "…Silattuqsarvik (Nunavut Arctic College) in Iqaluit, for their efficient and friendly support during my stay in Iqaluit in April 2000; thanks to them, I had an opportunity to meet several informants belonging to different generations."	Bordin, G. (2003). Analytical lexicon of human anatomy (Vol. 6). Peeters Publishers.

CP (Contributor/Collaborator): Records were coded with **CP** when it was found that NAC/NRI was stated as a contributor, collaborator, or partner in research.	
Coded Examples	Citation
P85: "Cybercartographic atlases are designed to facilitate direct community contribution, as illustrated by the current development of three Indigenous community-based cybercartographic atlases: the Atlas of Arctic Bay, in collaboration with Nunavut Arctic College; the Kitikmeot Place Name Atlas, in collaboration with the Kitikmeot Heritage Society; and the Living Atlas of Indigenous Perspectives and Knowledge in the Great Lakes Region, presented in this article."	Caquard, S., Pyne, S., Igloliorte, H., Mierins, K., Hayes, A., & Taylor, D. R. F. (2009). A "Living" Atlas for Geospatial Storytelling: The Cybercartographic Atlas of Indigenous Perspectives and Knowledge of the Great Lakes Region. Cartographica, 44(2), 83–100.
P860: "The compound was named imaqobactin, in reference to the Inuktitut word for sea or ocean (imaq) and in acknowledgment of the partnership between the Kerr laboratory and Nunavut Tunngavik Inc. and the Nunavut Research Institute (NRI)."	Robertson, A. W., McCarville, N. G., MacIntyre, L. W., Correa, H., Haltli, B., Marchbank, D. H., & Kerr, R. G. (2018). Isolation of imaqobactin, an amphiphilic siderophore from the arctic marine bacterium Variovorax species RKJM285. Journal of natural products, 81(4), 858-865.
Piii: "This research has been a collaborative project that expands multiple institutions and includes people from the University of Ottawa, Health Canada, University of Montreal, Costa Rica's Universidad Nacional, Université du Québec à Montréal and the Nunavut Research Institute."	Black, P. L. (2011). Interactions of Dietary Antioxidants and Methylmercury on Health Outcomes and Toxicodynamics: Evidence from Developmental Rat Model Studies and Human Epidemiology. University of Ottawa (Canada).

CRC (Contribute to Research/Conclusion): Records were coded with **CRC** when it was found that NAC/NRI or NAC/NRI staff contributed to research by way of participating in interviews or through consultation, or other communications.	
Coded Examples	Citation
P194: "According to Eric Corneau, former dean of Nunavut Arctic College, the amount of bandwidth the government purchases per year depends on financing: "It is budget based."	Yunes, E. E. (2019). Decolonizing Nunavut's Art Market. Doctoral Dissertation. York University.
P71: "Mary Ellen Thomas, Manager and Research Liaison with the Nunavut Research Institute, notes that 'a lot of people [researchers] say they are going to include IQ, but they don't know how and they don't have the skills, so they end up not doing it' (Pers. Comm., 2007)."	Dale, A. T. (2009). Inuit Qaujimajatuqangit and adaptive co-management: A case study of narwhal co-management in Arctic Bay, Nunavut. Theses and Dissertations (Comprehensive). 931.
P75: "…in our consultations, particularly in regard to our discussions with the Nunavut Research Institute and the Aurora Research Institutes Territorial Licensing Agencies, it has become apparent that there are no cases where a research project has been denied or stopped, because a community felt codes	Nickels, S., & Knotsch, C. (2011). Inuit perspectives on research ethics: The work of Inuit Nipingit. Études/Inuit/Studies, 35(1-2), 57-81.

were broken, despite hearing many examples where communities felt that this was the case."	
P5: "The president of the Nunavut Arctic College, Joe Adla Kunuk, claims this pan-Arctic collaboration is of significant importance because "[t]he similarities between our land here and their land, and our spoken language in Inuktitut and Greenlandic means it will be an easier transition for students, not like going to Vancouver or Toronto" (Zeheri, 2016), referring to cultural and environmental similarities between Nunavut and Greenland."	Huppert, V., & Chuffart, R. (2017). Collaboration across the Arctic: A tool of regionalization or simple pragmatism. Arctic yearbook.

DAS (Data Analysis Site): Records were coded with **DAS** when it was found that NAC or NRI was identified as a site where the researcher(s) analyzed their data or samples.	
Coded Examples	Citation
P59: "Water samples were analyzed in the laboratory at the Nunavut Research Institute for water temperature, salinity, turbidity, dissolved oxygen, and pH."	Leontowich, K. (2004). A study of the benthic faunal distribution in the subtidal zone of Turton Bay, Igloolik Island, Nunavut. Faculty of Graduate Studies and Research, University of Regina.
P852: "Carcasses were frozen immediately, dissected at the Nunavut Arctic College (Provencher et al., 2013), and all gastro-intestinal tracts were subsequently shipped to the National Wildlife Research Center in Ottawa for parasitological examination."	Provencher, J. F., Forbes, M. R., Mallory, M. L., Wilson, S., & Gilchrist, H. G. (2017). Anti-parasite treatment, but not mercury burdens, influence nesting propensity dependent on arrival time or body condition in a marine bird. Science of the Total Environment, 575, 849-857.
P951: "Liver samples from both study regions were collected for chemical analysis during dissections at the Nunavut Arctic College in Iqaluit (Provencher et al., 2013), homogenized, stored at -40 °C, and used in this study."	Lu, Z., De Silva, A. O., Provencher, J. F., Mallory, M. L., Kirk, J. L., Houde, M., ... & Muir, D. C. (2019). Occurrence of substituted diphenylamine antioxidants and benzotriazole UV stabilizers in Arctic seabirds and seals. Science of the Total Environment, 663, 950-957.

DCS (Data Collection Site): Records were coded with **DCS** when it was found that NAC/NRI was identified as the site(s) where research data was collected.	
Coded Examples	Citation
P37: " Rainfall samples were collected on July 2, 4, 12, 25 and 19 August 2013 in a rain collector located at the Nunavut Research Institute premises in Iqaluit (Figure 3.1)."	Kjikjerkovska, E. (2016). Long-term hydroclimatic change and interannual variability in water sources, Apex River (Iqaluit), Baffin Island, Nunavut. ProQuest Dissertations Publishing.
P6: "Monitored data from the Nunavut Arctic College grid-tied PV system in Iqaluit was used to verify the accuracy of PV Toolbox weather, PV array, and inverter models (see Figure 3 for system configuration in PV Toolbox). This system has a 3.2 kW PV array mounted on a wall facing 30° west of south."	Sheriff, F., Turcotte, D., & Ross, M. (2003, August). PVTOOLBOX: A Comprehensive Set of PV System Components for the Matlab/Simulink Environment. In Proceedings of the 2003 Conference of the Solar Energy Society of Canada Inc., Kingston, Ontario, Canada, August 18 to (Vol. 20).
P3: "Recruitment of participants reflected purposeful sampling. Interviews were generally held in community organisation facilities, government offices, at the Nunavut Research Institute, and on occasion in peoples' homes."	Ferrazzi, P., & Krupa, T. (2018). Remoteness and its impact on the potential for mental health initiatives in criminal courts in Nunavut, Canada. International journal of circumpolar health, 77(1), 1541700.

DEF/DES (Definition/Description): When NAC/NRI or Inuit Qaujimajatuqangit was defined or described within a record, the record was coded as **DEF/DEF**. A qualifier was included in brackets: **(B)** for a brief definition or description and **(M)** and **(D)** for moderate and detailed respectively.

DISS (Dissemination): Records were coded with **DISS** when it was found that NAC/NRI was identified as being involved in the dissemination of research project results or outcomes.	
Coded Examples	Citation
P109: "In Greenland this project description was made public through a website accessible to the general public. In Nunavut information about the project was made available through the website of the Nunavut Research Institute."	Møller, H. (2011). "You need to be double cultured to function here": toward an anthropology of Inuit nursing in Greenland and Nunavut. Doctoral Dissertation, University of Alberta.
P22-23: "Public dissemination of the research findings is an important part of the research process. Final copies of this thesis will be given to the Nunavut Research Institute where it will be made available to the HTOs of both Clyde River and Broughton Island, the Arctic College at Broughton Island, the Nunavut Wildlife Management Board (NWMB), and the polar bear biologist at the Department of Renewable Resources, GNWT."	Davis, C. (1999). A case study of polar bear co-management in the eastern Canadian Arctic [Master's thesis, University of Saskatchewan].
P40: "Findings were also discussed with individual community members and students attending the medical interpreting program at Nunavut Arctic College whom the author taught."	Møller, H. (2010). Tuberculosis and colonialism: current tales about tuberculosis and colonialism in Nunavut. International Journal of Indigenous Health, 6(1), 38-48.

DOP (Description of Program): Records were coded with **DOP** when it was found that descriptive information related to a NAC program, offering, or initiative appeared in a record.	
Coded Examples	Citation
P19: "In response to the feasibility study, the Government of Nunavut Department of Health and the Nunavut Arctic College then launched a 16-month Community Therapy Assistant (CTA) program in 2009 to train local Nunavut community members to work as support personnel to work with all four rehabilitation disciplines (OT, PT, audiology and SLP)."	Achtemichuk, M. (2021). Adult Occupational Therapy and Physiotherapy Services in the Kivalliq Region of Nunavut: Feasibility of Mapping the Client Journey. [Masters Thesis, University of Manitoba].
P19: "The Nunavut Arctic College (with five campuses throughout the North) offers a variety of postsecondary programs for Inuit students. These courses include, but are not limited to, Adult Basic Education, Apprenticeship Carpentry, Bachelor of Science in Arctic Nursing, Computer Systems Technician, Culinary Arts, Goldsmithing, Early Childhood Education, and Nunavut Teacher Education."	Preston, J. P. (2016). Education for Aboriginal peoples in Canada: An overview of four realms of success. Diaspora, Indigenous, and Minority Education, 10(1), 14-27.
P147: "The NAC is providing a full-time Early Childhood Education Diploma program (2-year program) in Pond Inlet during the 2015- 17 academic period. The Pirurvik preschool is an extension of the Arctic College ECE training by providing a location and learning environment for the NAC practicum requirements."	Pearson, L. (2016). Inuit Early Child Care Centres. Canadian Journal of Children's Rights / Revue Canadienne Des Droits Des Enfants, 3(1), 142–148.

DSECT (Dissection): Records were coded with **DSECT** when it was found that NAC/NRI assisted with dissecting study samples. When dissections were said to be done by NAC students, **DSECT** was replaced by **DSECT(SP)** (Student Participation).	
Coded Examples	Citation
Pviii: "I am extremely grateful to Guy Savard, Stacey Robinson and the students from Nunavut Arctic College for assistance with the many bird dissections. This work would not have been possible without their expertise, willingness and enthusiasm."	Provencher, J. (2010). Seabirds as indicators of change in the eastern Canadian Arctic (Doctoral dissertation).
P1483: "Many thanks to the Environmental Technology Program (ETP) students at the Nunavut Arctic College (NAC) in Iqaluit, Nunavut for their assistance with bird dissections for this project."	Provencher, J. F., Vermaire, J. C., Avery-Gomm, S., Braune, B. M., & Mallory, M. L. (2018). Garbage in guano? Microplastic debris found in faecal precursors of seabirds known to ingest plastics.

	Science of the Total Environment, 644, 1477-1484.
P242: "Thank you to all of the Nunavut Arctic College Environmental Technology Program students from 2007 to 2011 for their dissection skills and enthusiasm."	Provencher, J. F., McEwan, M., Mallory, M. L., Braune, B. M., Carpenter, J., Harms, N. J., Savard, G., & Gilchrist, H. G. (2013). How Wildlife Research Can Be Used to Promote Wider Community Participation in the North. Arctic, 66(2), 237–243.

FTRS (Future Steps): Records were coded with **FTRS** when it was found that the search terms (NRI/NAC/IQ) were included in recommendations or in sections that projected future research outcomes.

Coded Examples	Citation
P388: "I believe that reintegration of Inuit justice initiatives, which seek to respect Inuit Qaujimajatuqangit (i.e., traditional knowledge) while supporting both victims' and offenders' needs, may begin to address such negative, thematic content. As suggested by the participant groups, I recommend that intervention and prevention strategies seek to integrate Inuit tradition within existing Western-based correctional practices."	Burkhardt, K. J. (2004). Crime, cultural reintegration and community healing: Narratives of an Inuit community (Nunavut). Electronic Theses and Dissertations. 1581.
P92: "Another important area which should be examined more is finding linkages between traditional knowledge or lQ and scientific knowledge; both knowledge systems have unique and invaluable information which would be beneficial to future communication on contaminants. ln addition to this, incorporating The two systems would undoubtedly improve the reception and comprehension of contaminants communication."	Clifford-Peña, J. (2009). Human perceptions, comprehension and awareness of contaminants in Sanikiluaq (Master's thesis).
P105: "The Department of Education and Nunavut Arctic College are working on several important professional development initiatives, but even with more funding it would be challenging to move any faster because for such programs to be effective they need experienced facilitators who have in-depth knowledge of northern education."	McGregor, H. E. (2013). Situating Nunavut education with indigenous education in Canada. Canadian Journal of Education, 36(2), 87-118.

IBIB (Bibliography/Biographies): When NAC/NRI or IQ was found in the bibliography/biographies section of a record, the record was coded as **IBIB**. Records that were bibliography/biographies were coded as **BIB** (see below).

IMM (Interpretative Methods/Methodology): When it was found that the author(s) mentioned or discussed concepts related to anticolonialism or decolonization, the record was coded as **IMM**. This included approaches that were supportive of IQ or consistent with IQ principles, but not directly/deliberately identified by researcher as such.

Coded Examples	Citation
P11: "The main philosophies behind systems theory, which see the individual in the context of their relationships, align with Inuit culture. Allowing and encouraging Inuit clients to engage with their families and communities when coping with difficulties would reconnect these clients with their cultural values."	Brooker, A. L. (2018). Counselling within Inuit systems in Canada's north. Canadian Journal of Counselling and Psychotherapy, 52(1).
P232: "The task of decolonization presents Inuit – and qallunaat – educators with many questions. How might Inuit children, living in remote areas with severe climate conditions, be prepared for modern life while at the same time affirming and reclaiming traditional values?"	Russell, J. (2006). Inuit student teachers' agency, positioning and symbolic action: reflections from a qallunaat on music teaching in the Canadian Arctic. International Journal of Music Education, 24(3), 231-242.
P10: "An extremely complex cultural shift is underway (Henze & Vanett, 1993), and, although Inuit still hold values distinct from Euro-Canadian values (Inuit Qaujimajatuqanginnut [IQ] Task Force, 2002), Inuit culture has been under a massive assault by EuroCanadians for many years. This has	Berger, P., & Epp, J. R. (2006). Practices against Culture that" Work" in Nunavut Schools: Problematizing two common practices. McGill Journal of

sometimes led to alienation and confusion, a divide between elders and youth (Minor, 1992; Reimer, 1996), and changes in some Inuit values (Stairs, 1992); in deciding whether a practice is compatible with "Inuit culture," a relevant question is, which culture (Henze & Vanett, 1993)?"	Education/Revue des sciences de l'éducation de McGill, 41(1).

PB (Published By): When NAC/NRI was listed as publisher of a record, the record was coded with **PB**.

Reference: When NAC/NRI/IQ appeared in the reference list or bibliography of a record, the record was coded as **Reference**. When no other codes were attributed to a record, then **Reference** was replaced with **RLO** (Reference List Only) to facilitate sorting.

SiteD (Site of Dissemination): Records were coded with **SiteD** when it was found that NAC or NRI was mentioned as the location where information/knowledge was exchanged.

Coded Examples	Citation
P558: "Agiaq, of Igloolik, told students at Nunavut Arctic College how one of her granddaughters was once mysteriously eaten by a wolverine: Her clothing was tom to shreds. It was found quite a distance from the place where we actually lived. I think that she was dragged away by some wolverine-like thing. Qavvigaarjuit are wolverines.	Laugrand, F. (2017). How Inuit in the Canadian North perceive the wolverine: From past to present. Etudes Inuit. Inuit studies, 41(1/2), 243-263.
p.56 : "The case of Tungilik who gave a detailed account of his practice of shamanism to students of the Nunavut Arctic College seems significant to us: When people discovered that I was an angakkuq [a shaman], they made me a belt out of white caribou skin."	Laugrand, F. B., & Oosten, J. G. (2008). De menus objets pour une grande cause: Le rapatriement des miniatures chez les Inuit. Les Cahiers du CIÉRA, 49.
P384: "Elder Nutaraq, for example, suggested to students of Nunavut Arctic College that the disappearance of the right snow conditions for igloo building is associated with changes in lifestyle. He thought that the preference of hunters for readily available hunting cabins and ownership thereof would make them unreasonably impatient (silaittuq, "lacking sila")."	Crate, S. (2009). Anthropologists Engaging in Climate Change Education and Outreach: Curating Thin Ice—Inuit Traditions within a Changing Environment, In Crate, S. & Nuttall, M. (Eds) Anthropology and Climate Change (1st Edition, 380-393). Routledge.

SP (Student Participation): Records were coded with **SP** when it was found that students were involved in the research. When students were mentions in the context of dissecting samples then **DSECT(SP)** replaced **SP.**

Coded Examples	Citation
P56: "The site was visited by students of Nunavut Arctic College and the Nunavut Research Institute to check the integrity of the station and collect data on snow thickness, density, and grain size as well as time series records of ice thickness."	Hanesiak, J., Stewart, R., Taylor, P., Moore, K., Barber, D., McBean, G., Strapp, W., Wolde, M., Goodson, R., Hudson, E., Hudak, D., Scott, J., Liu, G., Gilligan, J., Biswas, S., Desjardins, D., Dyck, R., Fargey, S., Field, R., Gascon, G., Gordon, M., Greene, H., Hay, C., Henson, W., Hochheim, K., Laplante, A., Martin, R., Melzer, M. A., & Zhang, S. (2010). Storm Studies in the Arctic (STAR), Bulletin of the American Meteorological Society, 91(1), 47-68.
P94: "In both communities, Inuktitut-speaking researchers collected data, all of them students or staff from the Iqaluit campus of Nunavut Arctic College."	Dorais, L. J., & Sammons, S. (2000). Discourse and identity in the Baffin Region. Arctic Anthropology, 92-110.
Pvii: "I would like to thank the many students who have worked on this project; Alannah Kataluk-Primeau (Inuit Field Research Asistant), Jessica Laplante (Vanier College), Meagan McCloskey (Carleton University), Terry Noah (Inuit Field Research Asistant), Joanna Panipak (Inuit Field Research Asistant), Victoria Puntinski	Provencher, J. (2016). Mercury and marine birds in Arctic Canada: pathways, effects, and interactions in a model species. (Doctoral dissertation, Carleton University).

(Carleton University), Maxim Rivest (University of Ottawa), the Environmental Technology Program students at the Nunavut Arctic College (NAC) from 2011 to 2014, and the Fur Production and Design students at the NAC in 2011."	

TA (Topic of Analysis): Records were coded with TA when it was found that NAC/NRI or IQ was a keyword or mentioned in the title or abstract.

TK (Traditional knowledge mentioned): For much of the corpus, records were coded with TK when it was found that Traditional knowledge or Inuit Traditional knowledge was mentioned.

Codes related to licensing.

A – NRI (Archeology but with NRI license): When an archeological or paleontological research record that also required a Nunavut scientific research license was found, the record was coded with **A-NRI**.

AOLic (Author has Other Licences): Records that made no mention of NRI licensing but were authored or coauthored by known NRI license holders were given the code **AOLic** to convey that the record may be a product of a licensed research. In instances where AOLic coded records paired to a licensed research project accordining to topic and chronology, the record's code was amended to **Licensed**.

Coded Examples	License(s) held by author
Aporta, C., & Higgs, E. (2005). Satellite culture: global positioning systems, Inuit wayfinding, and the need for a new account of technology. Current anthropology, 46(5), 729-753.	Aporta, Claudio: 01 020 08R-M and 0102607N-M; Inuit Sea Ice Use and Occupancy Use Project (ISIUOP) (2007-2008)
Berger, P. & Ross Epp, J. (2005). "There's No Book and There's No Guide": The Expressed Needs of Qallunaat Educators in Nunavut. Brock Education, 15(1), 1–14.	Berger, Paul: 0100106N-A; Educational Strength in One Nunavut Community, and Inuit Visions for the Future of Schooling (2006)

AP (Approval or Permission): Records were coded with **AP** when it was found that NRI/NAC, communities, or research participants were identified as providing approval, permission, or consent to proceed with research.

Coded Examples	Citation
P296: "We thank the communities of Resolute Bay and Grise Fiord, Nunavut, and the Nunavut Research Institute for allowing this work to be undertaken in Sverdrup Pass."	Breen, K., & Lévesque, E. (2008). The influence of biological soil crusts on soil characteristics along a High Arctic glacier foreland, Nunavut, Canada. Arctic, Antarctic, and Alpine Research, 40(2), 287-297.
P226: This research was carried out with the support and authorization of the Nunavut Research Institute."	van den Scott, L.-J. (2009). Cancelled, aborted, late, mechanical: The vagaries of air travel in Arviat, Nunavut, Canada. In The Cultures of Alternative Mobilities: Routes Less Travelled (pp. 211–226).
P 15: "The Polar Continental Shelf Project (Natural Resources Canada) provided logistic support for field work in the Canadian Arctic, and the Nunavut Research Institute and the community of Resolute Bay gave permission to conduct research on the Devon Ice Cap."	Gray, L., Burgess, D., Copland, L., Dunse, T., Langley, K., & Moholdt, G. (2016). Improved processing and calibration of the interferometric mode of the CryoSat radar altimeter allows height measurements of supraglacial lakes in west Greenland. The Cryosphere Discuss., doi:10.5194/tc-2016-277.

LBL (Licensed but not located): We were unable to locate or access every record that was confirmed by NRI license holders as products of licensed research projects. The reasons for this include:

-the record exists as an unpublished or forthcoming (in press) work that has not yet been made available,
-the record was not accessible through any of the licenses possessed by Memorial university, the University of Alberta, Concordia University, or affiliated institutions,
-the record was requested from the author, publisher, library, etc., but did not arrive in time to be included in this study,
-the only known link to the records no longer functioned or the host no longer displayed the record, or
-The document was updated or revised and only the newer edition existed.

Licensed: Records that were confirmed as products of NRI licensed research projects were coded as **Licensed**. Confirmation came in one of 3 forms: Licensing was stated in the record, an author identified the record as a product of a licensed research project, or an exact match was made to information contained in NRI's licensing database. To facilitate sorting, **Licensed** was replaced by **LO** (Licensed Only) in cases where no other codes were given to a record.

NLR: (No licensed required): **NLR** was assigned to a record when it stated that researcher(s) had a license exemption or otherwise did not need to participate in NRI's licensing process given the type of research, methods used, or the subject covered.

Coded Examples	Citation
P5-6: "Since the project was evaluation-based, it was exempt from licensing through the Nunavut Research Institute, Aurora Research Institute, and Yukon Research Institute."	Cherba, M., Russell, L., Ruttan, J., & Tabish, T. (2021). An Aajiiqatigiingniq (consensus) process to develop an evaluation tool for health and wellness outcomes of land-based programs in the Canadian North. Journal of Indigenous Wellbeing, 6(3).
P77: "I also confirmed with the Nunavut Research Institute that additional ethical review by the Institute was not required in order to complete interviews with employees and representatives of the Government of Nunavut and the Nunavut Impact Review Board."	Manning, S. (2021). Centring Community: New Pathways in Resource Extraction Policy Processes (Doctoral dissertation).
P249: "Inuit Nunangat research exemptions were granted by the Nunavut Research Institute and Nunavik Research Centre as research did not take place on territorial lands."	MacNeil, S., Hoover, C., Ostertag, J., Yumagulova, L., & Glithero, L. D. (2021). Coming to Terms with Ocean Literacy. Canadian Journal of Environmental Education (CJEE), 24(1), 233-252.

PMT (Permit): When a record stateed that an NRI permit was issued to the researcher(s) in the course of the research, the record was coded as PMT.

Coded Examples	Citation
P20: "Over the years, field work in the Canadian Arctic was conducted under permits issued by the Nunavut Research Institute (NRI) and the Nunavut Government (D. Stenton, J. Ross).	Eberle, J. J., & Greenwood, D. R. (2012). Life at the top of the greenhouse Eocene world—A review of the Eocene flora and vertebrate fauna from Canada's High Arctic. Bulletin, 124(1-2), 3-23.
P150: "The crew of S/V Kakivaq and Arctic Kingdom Polar Expeditions are thanked for logistical support in the Hudson Bay, and the Nunavut Research Institute, Qikiqtani Inuit Association, and CLEY are thanked for permits allowing scientific research on Inuit-owned lands."	Dodd, M. S., Papineau, D., She, Z., Fogel, M. L., Nederbragt, S., & Pirajno, F. (2018). Organic remains in late Palaeoproterozoic granular iron formations and implications for the origin of granules. Precambrian Research, 310, 133-152.
P1: "The research was conducted under permits granted from the Nunavut Research Institute and Parks Canada."	Lachapelle, P. R., McCool, S. F., & Watson, A. E. (2005). Auyuittuq and Quttinirpaaq National Parks summer 2004 visitor experience study. University of Montana.

REG (Registered): When the terms were mentioned in the context of the research being registered with NRI, the record was coded as **REG**.

Coded Examples	Citation
P42: "Ethics approval was received from the McGill Institutional Review Board of the Faculty of Medicine under IRB Study Number: A09-M71-05A. The Nunavut Research Institute provided registered ethics approval."	Matta, C. A. (2011). Radio drama: a pilot project for nutritional health communication in Inuit communities. McGill University (Canada).
P105(FN): "Typically any university-based research in Nunavut requires a license from the Nunavut Research Institute. In this case, with the Government of Nunavut as a partner and funder, a license was not required but the project was registered with the Nunavut Research Institute."	Daley, K. (2013). A qualitative case study of relationships between public health and municipal drinking water and wastewater in Coral Harbour, Nunavut [Mathers Thesis, Dalhousie University].
P95: "The study was registered with the Nunavut Research Institute according to the protocols that exist in Nunavut."	Healey, G. K., Noah, J., & Mearns, C. (2016). The Eight Ujarait (Rocks) model: Supporting Inuit adolescent mental health with an intervention model based on Inuit ways of knowing. International Journal of Indigenous Health, 11(1), 92-110.

W - NRI (Wildlife but with NRI license): When a wildlife research record that also required a Nunavut scientific research license was found, the record was coded with **A-NRI**.

Codes related to support.

COMS (Communication support): Records were coded with **COMS** when it was found that the author(s) acknowledged NAC/NRI for communication support.

Coded Examples	Citation
P155: "Logistical support and radio contact provided by the Iqaluit Research Centre (Nunavut Research Institute)"	Scott, D. J. (1997). Geology, U–Pb, and Pb–Pb geochronology of the Lake Harbour area, southern Baffin Island: implications for the Paleoproterozoic tectonic evolution of northeastern Laurentia. Canadian Journal of Earth Sciences, 34(2), 140-155.
P808: “We appreciate the logistical and communication support provided by the staff at the Iqaluit Research Centre, Science Institute of the Northwest Territories (currently the Nunavut Research Institute)…”	Miller, G. H., Mode, W. N., Wolfe, A. P., Sauer, P. E., Bennike, O., Forman, S. L., Short, S.K., & Stafford Jr, T. W. (1999). Stratified interglacial lacustrine sediments from Baffin Island, Arctic Canada: chronology and paleoenvironmental implications. Quaternary Science Reviews, 18(6), 789-810.

DC (Data Collection): Records were coded with **DC** when it was found that the author(s) acknowledged assistance from NRI or NAC in the collection of research data.

Coded Examples	Citation
P60: “We also acknowledge the Nunavut Research Institute and Nunavut Tunngavik Inc. for assistance with collections and permission to collect sediment samples.”	Grunwald, A., Cartmell, C., & Kerr, R. G. (2021). Auyuittuqamides A–D, Cyclic Decapeptides from Sesquicillium microsporum RKAG 186 Isolated from Frobisher Bay Sediment. Journal of Natural Products (Washington, D.C.), 84(1), 56–60.
P70: “Ford et al. (2009) observed significant trends to later freezeup over Turton Bay near Igloolik over the 1969-2006 with data from the CIS Digital Archive and local data collected by the Nunavut Research Institute (NRI) (1985-2006).”	Brown, R., Barrette, C., Brown, L., Chaumont, D., Grenier, P., Howell, S., & Sharp, M. (2018). Climate variability, trends and projected change. From Science to Policy in the Eastern Canadian Arctic: An Integrated Regional Impact Study (IRIS) of Climate Change and Moderization. ArcticNet, Quebec City, 560 pp, 55.
68: "Rick Armstrong from the Nunavut Research Institute (NRI) is greatly acknowledged for on-site support at Iqaluit and sampling precipitation."	Narancic, B., Pienitz, R., Chapligin, B., Meyer, H., Francus, P., & Guilbault, J. P. (2017). Chapitre 2: Postglacial Environmental Succession of Nettilling Lake (Baffin Island, Canadian Arctic) Inferred From Biogeochemical and Microfossil Proxies. Indicateurs géochimiques et biologiques des

	changements environnementaux dans les lacs de l'Arctique canadien de l'Est, 27.

EQ (Equipment): Records were coded with **EQ** when it was found that researchers used NRI/NAC equipment to collect or analyze data.	
Coded Examples	Citation
P24: "Thanks to J. Carpenter and the Nunavut Arctic College Environmental Training Programme for field camp instruction and equipment use."	Spares, A. D., Stokesbury, M. J. W., Dadswell, M. J., O'Dor, R. K., & Dick, T. A. (2015). Residency and movement patterns of Arctic charr Salvelinus alpinus relative to major estuaries. Journal of Fish Biology, 86(6), 1754-1780.
P886: "The authors thank the Nunavut Department of Environment, who provided the Wildlife Research Permit (WL- 2018–059, WL-2019-062); the Nunavut Research Institute (NRI), which issued the Scientific Research License (#01 031 19R-M); Mary Ellen Thomas for help with the laboratory components of this research and the use of the Hg analyzer; the NRI for providing logistics support to ensure successful field sampling activities; and Dr. Marc Amyot for help with the MeHg speciation and to the Northern Scientific Training Program for providing the funding for this project. "	Bergin, R., Koch, I., Rutter, A., Shirley, J., & Zeeb, B. (2021). Evaluating mercury concentrations in edible plant and fungi species in the Canadian Arctic environment (Vol. 50, No. 4, pp. 877-888).

FACC (Field Access): Records were coded with **FASS** when it was found that the author(s) stated that NRI provided access to or assistance in accessing the field.	
Coded Examples	Citation
P10: "We thank the Qikiqtani Inuit and the Nunavut Research Institute for access to the field site (Nunavut Research Institute license no. 01 019-16N-A)."	Gorbey, D. B., Thomas, E. K., Crump, S. E., Hollister, K. V., Raynolds, M. K., Raberg, J. H., ... & Miller, G. H. (2021). Southern Baffin Island mean annual precipitation isotopes modulated by summer and autumn moisture source changes during the past 5800 years. Journal of Quaternary Science.
P8: "Acknowledgements: We thank the Nunavut Research Institute and the Inuit of Clyde River for assistance and access to the Baffin Island field sites."	Young, N. E., Schweinsberg, A. D., Briner, J. P., & Schaefer, J. M. (2015). Glacier maxima in Baffin Bay during the Medieval Warm Period coeval with Norse settlement. Science advances, 1(11), e1500806.
P148: "VECO Polar Resources provided logistical support of field work, and the Nunavut Research Institute (Nunavummi Qaujisaqtulirijikkut) helped with logistics in Iqaluit and granted access to the field site."	Axford, Y., Briner, J. P., Francis, D. R., Miller, G. H., Walker, I. R., & Wolfe, A. P. (2011). Chironomids record terrestrial temperature changes throughout Arctic interglacials of the past 200,000 yr. Bulletin, 123(7-8), 1275-1287.

F$Admin (Funds Administered by NRI): Records were coded with **F$Admin** when it was found that external research funding was administered by NRI.	
Coded Examples	Citation
Piii: "Funding for this research comes through Irving Shipbuilding administered through the Nunavut Research Institute."	Thiessen, B. M. (2019). Understanding Arctic shipping impacts and mitigation: Impact assessment as a tool for knowledge brokerage (Doctoral dissertation, University of Saskatchewan).
P4: "July, 2003 – Signed a contribution agreement with Environment Canada authorizing the transfer of funds to Nunavut Research Institute to carry out various project activities"	Shirley, J. (2005). Peterhead Inlet Invertebrate Inventory: Towards an Index of Biological Integrity for small Arctic streams, Nunavut Research Institute.

F$** (Financial Support/Funding/Sponsor) : Records were coded with **F$ when it was found that NAC/NRI provided financial support, funding, or sponsorship of the research.	
Coded Examples	Citation
p.xiii: “I am grateful for financial support from the Nunavut Research Institute, Irving Shipbuilding, Social Sciences and Humanities Research Council, and the Northern Scientific Training Program.”	Peletz-Bohbot, N. (2019). Gaps in marine baseline data and the role of Inuit knowledge in the Nunavut impact assessment process (Doctoral dissertation, University of British Columbia).
P236: "This research was supported by funding from Irving Shipbuilding Inc, the Nunavut Research Institute, the Northern Scientific Training Program, and Polar Knowledge Canada.”	Thiessen, B. Noble, B. and Hanna, K. 2020. Analysis of impact assessment practice and mitigation for shipping activity in the eastern Canadian Arctic. Arctic, 73(2): 141-277.
P119: "The second trip, in August 2011, brought GCRC researchers to Iqaluit, Nunavut, during a research methodology workshop (designed especially for Arctic community residents) sponsored by the Nunavut Arctic College (NAC).	Browne, T. D. L., & Ljubicic, G. J. (2014). Considerations for informed consent in the context of online, interactive, atlas creation. In Modern Cartography Series (Vol. 5, pp. 263-278). Academic Press.

FLS (Field Logistic Support): Records were coded with **FLS** when it was found that NAC or NRI was acknowledged for providing field logistics or field coordination.	
Coded Examples	Citation
P346: “We thank A. Wolfe, J. Andrews, J. Briner, and Y. Axford for comments on the manuscript; P. Clark and G. Denton for formal reviews; M. Caffee and R. Finkel for accelerator mass spectrometer measurements; Nunavummi Qaujisaqtulirijikkut (Nunavut Research Institute) for permits and field logistics; and the Alivaktuk family for excellent guiding.”	Kaplan, M. R., Miller, G. H., & Steig, E. J. (2001). Low-gradient outlet glaciers (ice streams?) drained the Laurentide ice sheet. Geology, 29(4), 343-346.
P231: "We thank the Nunavut Research Institute and the people of Clyde River, particularly J. Qillaq and J. Hainnu, for assistance with field logistics. J. T. Andrews, J. Landvik, Y. Axford and R. Coulthard provided stimulating discussions on the deglaciation history of Baffin Island. J. T. Andrews, L. Farmer, W. F. Manley and T. Pfeffer commented on an earlier form of this manuscript.	Briner, J. P., Overeem, I., Miller, G., & Finkel, R. (2007). The deglaciation of Clyde Inlet, northeastern Baffin Island, Arctic Canada. Journal of Quaternary Science, 22(3), 223-232.
P838: “We thank J. T. Andrews, P. R. Bierman, N. F. Humphrey, M. R. Kaplan, and S. J. Lehman for comments on the manuscript, P. E. Sauer for the base map, T. W. Stafford, Jr., J. R. Southon, M. W. Caffee, and R. C. Finkel for AMS measurements, and Nunavummi Qaujisaqtulirijikkut (Nunavut Research Institute) for permits and field logistics.”	Steig, E. J., Wolfe, A. P., & Miller, G. H. (1998). Wisconsinan refugia and the glacial history of eastern Baffin Island, Arctic Canada: coupled evidence from cosmogenic isotopes and lake sediments. Geology, 26(9), 835-838.

FS (Field Support): Records were coded with **FS** when it was found that NAC or NRI was acknowledged for providing undetailed ‘field support’ or ‘support in the field’.	
Coded Examples	Citation
P68: "We would also like to thank Rick Armstrong (Nunavut Research Institute, Iqaluit), Denis Sarrazin (CEN) and Steve Lodge (United Helicopters of Newfoundland) for their assistance in the field."	Narancic, B., Pienitz, R., Chapligin, B., Meyer, H., Francus, P., & Guilbault, J. P. (2017). Chapitre 2: Postglacial Environmental Succession of Nettilling Lake (Baffin Island, Canadian Arctic) Inferred From Biogeochemical and Microfossil Proxies. Indicateurs géochimiques et biologiques des changements environnementaux dans les lacs de l’Arctique canadien de l’Est, 27.
P71: "Fieldwork assistance and support were provided by the staff of the Nunavut Research Institute, Nunavut Arctic College, Milissa Elliott, Andrew Dunford, and Roger Ell."	Medeiros, A. S., Luszczek, C. E., Shirley, J., & Quinlan, R. (2011). Benthic biomonitoring in Arctic tundra streams:

	a community-based approach in Iqaluit, Nunavut, Canada. Arctic, 59-72.
P11: “Field work was supported by a Nunavut Research Institute permit (license number: 02 027 13R-M) issued to SDS.”	Ota, M., Mamet, S. D., Muller, A. L., Lamb, E. G., Dhillon, G., Peak, D., & Siciliano, S. D. (2020). Could Cryoturbic Diapirs Be Key for Understanding Ecological Feedbacks to Climate Change in High Arctic Polar Deserts?. Journal of Geophysical Research: Biogeosciences, 125(3), e2019JG005263.

LAPS (Licensing application support): Records were coded with **LAPS** when it was found that NRI provided support with the licensing process.	
Coded Examples	Citation
P89: "Thank you to the research participants who generously offered their time, knowledge and resources, making this project possible; and to Dr. Frances Abele for providing mentorship and guidance, as well as Mary Ellen Thomas and Mosha Cote of the Nunavut Research Institute for their support in licensing this research."	Crump, M. (2016). Public Engagement and the Nunavut Roundtable for Poverty Reduction: Attempting to Understand Nunavut’s Poverty Reduction Strategy. Northern Review, (42), 69-96.
Pvii: "I would like to thank the Nunavut Research Institute (Iqaluit, Nunavut) and the communities of Grise Fiord and Resolute Bay, Nunavut, for assistance in the scientific licensing process and interest in this research.”	Tomkins, J. D. (2008). Sedimentology and paleoenvironmental indicators in a High Arctic meromictic lake. Kingston, Canada: Queen's University.
P12: “The Aurora Research institute, Northwest Territories; Gwich’in Renewable Resource Board, Inuvik, Northwest Territories; Yellowknife Dene First Nations, Northwest Territories; Department of Energy, Mines and Resources, Yukon; Lupin Gold Mine, Nunavut; Nunavut Research Institute, Nunavut; helped us in obtaining research licenses.”	Chen, W., Blain, D., Li, J., Fraser, R., Zhang, Y., Leblanc, S., Koehler, K., Olthof, I., Wang, J., & McGovern, M. (2009). Estimating carbon release caused by land use changes over Canada’s north during 1985–1990 and 1990–2000 using satellite Earth observation. Journal of Geophysical Research, 114(G1), G01017–n/a.

LS (Logistical Support): Records were coded with **LS** when it was found that NAC/NRI provided logistic support other that was not specified as related to work conducted in the field.	
Coded Examples	Citation
P942: “None of this work would have been possible without the logistic support of the Polar Continental Shelf Project of Natural Resources Canada and the Nunavut Research Institute…”	Gaston, A. J., & Woo, K. (2008). Razorbills (Alca torda) follow subarctic prey into the Canadian Arctic: colonization results from climate change?. The Auk, 125(4), 939-942.
P578: "The Nunavut Research Institute and PCSP, as well as the Amarok and Pangnirtung Hunters and Trappers Organizations, provided critical Arctic logistic support."	Hardie, D. C., & Hutchings, J. A. (2015). Cannibalistic growth polyphenism in Atlantic cod. Evolutionary Ecology Research, 16(7), 569-580.
P28 "The work could not have been undertaken without the generous logistic support provided by the Polar Continental Shelf Project (Natural Resources Canada), Parks Canada (notably Ross Glenfield, Park Manager, Quttinirpaaq National Park), the Grise Fiord Hunters and Trappers Association, and the Nunavut Research Institute (notably Rick Armstrong…”	Arbour, J. H., Hardie, D. C., & Hutchings, J. A. (2011). Morphometric and genetic analyses of two sympatric morphs of Arctic char (Salvelinus alpinus) in the Canadian High Arctic. Canadian Journal of Zoology, 89(1), 19-30.

LW (Lab Work Support): Records were coded with **LW** when it was found that NAC/NRI or NAC/NRI staff assisted with lab work.	
Coded Examples	Citation

Pxviii: " Thank you to Jamal Shirley of the Nunavut Research Institute (NRI) for kindly offering lab assistance."	Hayward, J. (2013). Treatment performance assessment and modeling of a natural tundra wetland receiving municipal wastewater (Doctoral dissertation).
"Special thanks to the Nunavut Research Institute as well as Tristan Goulden, Andrew Sinclair, Erin Mentink, Justine Lywood, Mark Greenwood, Jenny Hayward, Evan Bridson-Pateman, Kiley Daley, Joanna Poltarowicz, Yannan Huang, Jessica LeNoble, Meggie Letman, Kira Krumhansl, Amy Jackson, and Amy McClintock for laboratory and field assistance."	Huang, Y., Hansen, L. T., Ragush, C. M., & Jamieson, R. C. (2018). Disinfection and removal of human pathogenic bacteria in arctic waste stabilization ponds. Environmental Science and Pollution Research, 25(33), 32881-32893.

PMTS: (Permit support): Records were coded with **PMTS** when it was found that the author(s) acknowledged that NAC/NRI provided assistance in permitting research.	
Coded Examples	Citation
P13: "The Nunavut Research Institute is gratefully acknowledged for assistance with permitting."	Hahn, K. and Turner, E.C., 2013. Deep-water carbonate mound lithofacies, Borden Basin (Mesoproterozoic; NU). Geological Survey of Canada, Current Research, v 2013-11, 14 p.
"Thank-you to the patient Nunavut Research Institute staff who provided practical advice, assistance and guidance through the Nunavut research permitting process."	Siivola, D. (2022). Indigenous Knowledge in Protected Area Management: Adaptation, Sustainability and Opportunities in the Circumpolar North. [University of the Sunshine Coast, Queensland].
P1020: " We also acknowledge the support by the authorities in Svalbard (Sysselmannen, Svalbard Science Forum) and in Nunavut (Nunavut Research Institute, Nunavut Water Board, Nunavut Planning Commission, Parks Canada) during the organization of the expeditions and the permitting processes, and the Polar Continental Shelf Programme (PCSP) for the logistical support of the expeditions in the Canadian Arctic."	Piepjohn, K., von Gosen, W. & Tessensohn, F. (2016): The Eurekan deformation in the Arctic: an outline. – Journal of the Geological Society, 173, 1007-1024.

RF (Research Facilitation): Records were coded with **RF** when it was found that research the author(s) stated that NAC/NRI facilitated their research (general statement).	
Coded Examples	Citation
P134: "We thank the Danish Polar Research Center and the Nunavut Research Institute for facilitating our research in Cambridge Bay and Greenland."	Helgason, A., Pálsson, G., Pedersen, H. S., Angulalik, E., Gunnarsdóttir, E. D., Yngvadóttir, B., & Stefánsson, K. (2006). mtDNA variation in Inuit populations of Greenland and Canada: migration history and population structure. American Journal of Physical Anthropology: The Official Publication of the American Association of Physical Anthropologists, 130(1), 123-134.
P559: "Finally, I thank the Nunavut Research Institute and the Danish Polar Research Center for facilitating my stay and work in Nunavut and Greenland, the numerous people…"	Palsson, G. (2008). Genomic anthropology: coming in from the cold?. Current Anthropology, 49(4), 545-568.
P31: "This paper is a contribution to the Loch Vale Watershed Long-term Ecological Research and Monitoring Program. Research in the Canadian Arctic was facilitated by the Nunavut Research Institute (Nunavummi Qaujisaqtulirijikkut)."	Wolfe, A. P., Hobbs, W. O., Birks, H. H., Briner, J. P., Holmgren, S. U., Ingólfsson, Ó., Kaushal, S. S., Miller, G. H., Pagani, M., Saros, J. E., & Vinebrooke, R. D. (2013). Stratigraphic expressions of the Holocene–Anthropocene transition revealed in sediments from remote lakes. Earth-Science Reviews, 116, 17–34.

RS (Research Support): Records were coded with **RS** when it was found that the author(s) made undetailed statements about receiving research support from NAC/NRI.	
Coded Examples	Citation
P118: “Research support for this study was provided by the Nunavut Research Institute, Additional logistical support was provided by the Canada-Nunavut Geoscience Office.”	Chiasson-Poirier, G., Franssen, J., Fortier, D., Prince, A., Tremblay, T., Lafrenière, M., Shirley, J. & Lamoureux, S. (2016). Methodological approach to characterize flow paths and water sources during the active-layer thaw period, Niaqunguk River watershed, Iqaluit, Baffin Island, Nunavut. Canada-Nunavut Geoscience Office, Summary of Activities 2016.
P139: "Research support has been provided by ArcticNet, Natural Resources Canada, Infrastructure Canada, Aurora Research Institute, and the Nunavut Research Institute."	Catto, N. R., & Parewick, K. (2008). Hazard and vulnerability assessment and adaptive planning: mutual and multilateral community–researcher communication, Arctic Canada. Geological Society, London, Special Publications, 305(1), 123-140.
P1: "Vital research support was provided by Billy Ukutak, Luke Suluk, Jamie Bell, Eric Anoee, Nunavut Arctic College, The Arviat Heritage Society, the Arviat Film Society, Shirley Tagalik, and Joe Karetak."	Dawson, P. (2016). The Design and Development of Digital Return Platforms for Northern Indigenous Heritage. THE SOCIAL SCIENCES, 10, 13.

RVSUP (Review support): Records were coded with **RVSUP** when it was found that NAC/NRI staff were credited for being part of the review process for the research.	
Coded Examples	Citation
P34: "For the Qikiqtaaluk (Nunavut, Inuktitut) names were validated by the interpreters from Nunavut Arctic College during the reviewing process for the book based on the core interviews (Gérin-Lajoie et al. 2016)."	Boulanger-Lapointe, N. (2017). Importance of berries in the Inuit biocultural system: A multidisciplinary investigation in the Canadian North. University of British Columbia, Vancouver, BC.
P27: “"The author acknowledges… her second reader, Jamal Shirley… for their support.”	Keenan, E., Fanning, L. M., & Milley, C. (2018). Mobilizing Inuit Qaujimajatuqangit in narwhal management through community empowerment: a case study in Naujaat, Nunavut. Arctic, 71(1), 27-39.
P11: "This research was supported by the Nunavut Research Institute Scientific Research License 0200406R-M."	p.11: "This research was supported by the Nunavut Research Institute Scientific Research License 0200406R-M"

SPT(unspecified) (Support unspecified by author): When it was found that that the author(s) reported having received support (undetailed) from NAC/NRI, the records were coded with **SPT(unspecified).**	
Coded Examples	Citation
P15: "The Igloolik Research Centre (Nunavut Research Institute) provided considerable support during most of this research."	Aporta, C. (2009). The trail as home: Inuit and their pan-Arctic network of routes. Human Ecology, 37(2), 131-146.
P226: "This research was carried out with the support and authorization of the Nunavut Research Institute."	Van den Scott, L. (2016). Cancelled, Aborted, Late, Mechanical: The Vagaries of Air Travel in Arviat, Nunavut, Canada. In The Cultures of Alternative Mobilities (pp. 231-246). Routledge.
P65: "The Nanivara Project would like to thank the Nunavut Arctic College, First Air, Calm Air, and the Social Sciences and Humanities Research Council (SSHRC) for their support.”	Johnston, P., Stoller, M., & Tester, F. (2018). Institutional barriers to community-based research: Learning from the Nunavut, Nanivara Project. Critical Social Work, 19(1).

SPT(A): Records were coded with **SPT(A)** when it was found that the author(s) reported that they had accessed accommodations through NAC/NRI or NAC/NRI staff during their research.	
Coded Examples	Citation
P17: "Thanks to Rick Armstrong of the Nunavut Research Institute for arranging accommodation while we were in Iqaluit…"	Smith, P. A., & Gaston, A. J. (2008). Seabird Research at Digges Island and Vicinity, 25 July–17 August, 2008. Environment Canada National Wildlife Research Centre, Carleton University.
PVIII: "Thank you also to the Nunavut Research Institute (particularly Mary Ellen Thomas and Rick Armstrong) for the support and for providing an accommodation during the six days I was stranded in Iqaluit on my way to Panniqtuuq."	Schoeppner, L. (2020). The Inuit Circumpolar Council–Agent of Peacemaking for Inuit in Nunavut and Greenland. (Doctorial Dissertation, University of Manitoba).
permit; P295: "We thank Dr. John MacDonald at the Igloolik Research Centre and Brad Parker at Igloolik Outdoor Adventures for excellent accommodations, moral support, and interest in the project."	Cosens, S. E., & Blouw, A. (2003). Size-and age-class segregation of bowhead whales summering in northern Foxe Basin: a photogrammetric analysis. Marine Mammal Science, 19(2), 284-296.

Storage: When the author(s) reported that they accessed storage through NAC/NRI, then the record was code with **STOR** (general or unspecified storage) or **DStor** (Data Storage).	
Coded Examples	Citation
P52: "All originals (and transcripts) are stored at the Community Learning Centre (Nunavut Arctic College) to ensure community access to these materials."	Laidler, G. J., & Elee, P. (2008). Human geographies of sea ice: freeze/thaw processes around Cape Dorset, Nunavut, Canada. Polar Record, 44(1), 51-76.
P3: "After completing the analysis, all digital recordings will be kept as a historic document in Nunavut Research Institute in Iqaluit, with a second copy to be stored in the Naujaat Hamlet office.	Anang, P., Naujaat Elder, E. H., Gordon, E., Gottlieb, N., & Bronson, M. (2019). Building on strengths in Naujaat: the process of engaging Inuit youth in suicide prevention. International journal of circumpolar health, 78(2), 1508321.
P22: "Accommodation and storage in Iqaluit were provided by the Nunavut Research Institute."	Gaston, T., Woo, K., Provencher, J., Elliot, K., & Smith, P. (2010). Seabird Research on Coats Island Nunavut, 2009. Environment Canada, Ottawa.

TS (Technical Support): Records were coded with **TS** when it was found that the author(s) had reported receiving technical support from NAC/NRI.	
Coded Examples	Citation
P16: "Vital logistical and technical support for this project was provided by the Nunavut Research Institute (J.Shirley and R.Armstrong) and by the Canada-Nunavut Geoscience Office (T.Tremblay)."	Chiasson-Poirier, G., Franssen, J., Lafrenière, M. J., Fortier, D., & Lamoureux, S. F. (2020). Seasonal evolution of active layer thaw depth and hillslope-stream connectivity in a permafrost watershed. Water Resources Research, 56(1), e2019WR025828.
P2: "The authors appreciate the technical and general in-kind support provided by… Nunavut Arctic College, Nunavut Research Institute…"	Carter, N.A., Dawson, J., Knopp, J., Joyce, J., Weber, M., Kochanowicz, Z., and Mussells, O. (2018). Arctic Corridors and Northern Voices: governing marine transportation in the Canadian Arctic (Cambridge Bay, Nunavut community report). Ottawa: University of Ottawa.
P3: "We also thank the Nunavut Research Institute and the Polar Continental Shelf Project for technical and logistical support."	Lee, P., Cockell, C. S., Marinova, M. M., McKay, C. P., & Rice Jr, J. W. (2001). Snow and ice melt flow features on Devon Island, nunavut, Arctic Canada as possible analogs for recent slope flow features on mars. Scientific and Technical Aerospace Reports, 39.

WS (Workspace): When the author(s) of a record acknowledge that NAC/NRI provided workspace, the record was coded as **WS**.	
Coded Examples	Citation
P8: "We also thank Polar Knowledge Canada (POLAR) and Nunavut Arctic College for laboratory space and field logistics support."	Manning, C. C., Preston, V. L., Jones, S. F., Michel, A. P., Nicholson, D. P., Duke, P. J., ... & Tortell, P. D. (2020). River inflow dominates methane emissions in an Arctic coastal system. Geophysical Research Letters, 47(10).
P201: "Thank you to the Clyde River RCMP for providing warm workspace and to the Nunavut Arctic College for much needed meeting space."	Johns, A. (2010). Inuit sea ice terminology in Nunavut and Nunatsiavut. In SIKU: Knowing Our Ice (pp. 401-412). Springer, Dordrecht.
Pvii: "I have been incredibly fortunate over the years to get to know all the wonderful members of the Nunavut Research Institute. Thank you for sharing your space, tea, and photocopier with me and for the warm welcome that always makes me feel right at home.	Bunce, A. (2016). Gender and the human dimensions of climate change: global discourse and local perspectives from the Canadian Arctic. McGill University (Canada).

Less frequently occurring codes used to describe the context of support
SPT-CSC: Case Study Support (help with NAC general info) **MS:** (Moral Support) **PerS:** (Personal Support) **PSUP:** (Research planning support) **Other(airfare)** **RPro:** (Research Promotion Support) **SPT(Admin):** (administrative support) **SPT(coordination)** **SPT(cooperation)** **SPT(layout and Design) SPT(meetings)** **SPT(ORS)** (Office Resources) **SPT(other)**: I.e., for inspiration and enthusiasm for community-based research in the north **SPT(oversight)** **SPT(transit)**: undescribed **SPT(travel)** **SPT(RI):** (research infrastructure) **SPT(scholarly)** **SPT (Field Training)** **SPT(transportation)** **SPT(advice)** **SDS (Survey Distribution Support)** **SPT(Translation)**

Exclusionary codes

ABS/AGDA (Abstract): When a tertiary source such as manuscript report, list of abstracts, conference agenda, and conference proceeding report were found in the corpus, they were coded with **ABS/AGDA**.

ALD (Appears in Larger Document): When we found that a record did not contain our terms, but that the terms did appear elsewhere in the document that contained the record, then the record was coded with **ALD**.

OB (Obituary): When a record was found to be the obituary of a former NAC/NRI staff or affiliated research author, the record was coded as **OB**.

AXO (Appendix only): When it was found that a record consisted only of the appendix of a larger article, it was coded as **AXO**.

BIB (Bibliography/Biographies): When NRI, NAC and/or IQ were found in records that were standalone bibliographies or biographies, the record was coded with **BIB**.

BR (Books Received): When a record was found to be an announcement from a library or other repository for new books they had received, the record was coded as **BR**.

DUP (Duplicate record): When a record was found to be a duplicate of one already accounted for else where in the corpus, the record was coded with **DUP**.

NPA (Newspaper Article): Records that were found to be news articles, media releases, and items in consumer magazines were coded with **NPA**.

ODNL (Other Documents that were Not Located): We were unable to locate or access every record identified through database searches, reference list searches, or found inadvertently). **ODNL** was assigned to records when:
-the record exists as an unpublished or forthcoming (in press) work that has not yet been made available,
-the record was not accessible through any of the licenses possessed by Memorial university, the University of Alberta, Concordia University, or affiliated institutions,
-the record was requested from the author, publisher, library, etc., but did not arrive in time to be included in this study,
-the only known link to the records no longer functioned or the host no longer displayed the record,
-The document was updated or revised and only the newer edition existed, or
-The record was not identifiable given unresolvable software translation errors.

RCE: (Research conducted elsewhere): When a record was found to be a report on research that was not conducted in or on Nunavut, the record was coded as RCE.

Review (Book/Article Review): When a record was found to be a review of a book, article, or other materials, the recorded was coded as **Review**.

W/E (Wikipedia/Encyclopedia entry): When a record was found to be a Wikipedia or encyclopedia entry, it was codded with **W/E**.

WANL (Wildlife or archaeology research that is not licensed by NRI): When a research record related to archology or wildlife was found to contain no indication of NRI licensing, the record was coded as **WANL**.

Appendix 10. Flow Chart- From identified records to final corpus.

Identified Records	
scholarly databases	11, 145
licensing database*	787
reference list finds*	14
unintentional finds*	19
other*	14
TOTAL:	11, 979

Excluded Items	
duplicate database records	5, 289
not enough info to identify record	48
misidentified records	191
archeology and wildlife only	18
TOTAL:	5, 546

Not Available For Analysis	
licensed but not located	173
requested but delayed	19
purchase/subscription required	66
broken link	19
hard copy/protected	40
miscellaneous	9
unspecified	62
TOTAL:	385

Not Selected For Further Analysis	
news/press/media articles	284
wiki/encyclopedia articles	533
books received	24
book reviews	160
abstracts/ agenda items only	58
appendix only	3
obituary	17
bibliographies/biographies only	30
TOTAL:	1, 109

Not Nunavut Institutional Research (NNIR)	
research conducted elsewhere	452
otherwise stated as NNIR	55
not research related	109
TOTAL:	616

Analyzed Separately	
reference lists only	642

Identified records	Excluded or Separated Records	Final Corpus Total
11,979	- 8298	= 3681

Confirmed Licensed Records (CLR)	1583
Presumed Licensed Records (PLR)	470
Not Previously Excluded or Separated Records (NPE/S)	1638
Final Corpus Total:	3681

DETAILS	SOURCE	TOTAL
duplicate records		5, 289
	identified by covidence	4, 827
	manually identified	462
not enough info to identify rec	scholarly databases	48
misidentified records		191
	appeared in larger document	153
	unknown	38
archeology/wildlife only	scholarly database	18
news/press/media articles	scholarly databases	284
wiki/encyclopedia	scholarly databases	533
books received	scholarly databases	24
book reviews	scholarly databases	160
Abstracts/agenda items only		58
	Scholarly databases	37
	nri.nu.ca	21
appendix only	scholarly databases	3
obituary	scholarly databases	17
bibliographies/biographies only	scholarly databases	30
research conducted elsewhere		451
	scholarly databases	450
	reference list finds	1
otherwise stated as NNIR	scholarly databases	55
not research related		109
	scholarly databases	105
	NAC media	2
	reference list finds	1
licensed but not located		173
	scholarly databases	2
	licensing database	170
	reference list finds	1
request but delayed		19
	scholarly databases	17
	unintentional finds	2
purchase/subscription required		63
	scholarly databases	48
	unintentional finds	1
	reference list finds	3
	NAC media	8
	google pub	3
broken link		19
	scholarly databases	14
	unintentional finds	1
	reference list finds	2
	NAC media	2
hard copy/protected		40
	scholarly databases	34
	unintentional finds	1
	reference list finds	1
	NAC media	4

miscellaneous	scholarly databases	9
unspecified		62
	scholarly databases	37
	unintentional finds	6
	reference list finds	18
	NAC media	1
reference lists only		642
	scholarly databases	640
	unintentional finds	**2**

Appendix 11. Noteworthy descriptions/definitions

1. Arnakak, J. (2003). Inuit qaujimaningit and policy development. Proceedings of the second IPSSAS seminar, 176-180. https://docslib.org/doc/5537425/building-capacity-in-arctic-societies-dynamics-and-shifting-perspectives

Arnakak (2003) speaks specifically to IQ and its meaning by seeing it as something that is fluid, significant and comprehensive. They describe it as knowledge that is both “traditional” and “contemporary” infused with “social values and influences behavior” (p. 177). IQ being the means by which Inuit culture is “perpetuat[ed” and “advance[d]”. The author further explaining it as a “corpus of Inuit epistemology and cosmology”.

In discussing the transmission of IQ, Arnakak (2003) states that “Inuit psychology” is very much reflected in the process of “observing, trying out and experiencing the skills or knowledge being learned” (p. 177). They add “[i]t is thus a very experiential approach to learning”. Further detailing IQ as being of “cultural value” that can be found in Inuit “art, technology and social structures”. It is not a “monolith” but rather a “phenomenon” that is “very diverse” in that it “changes from community to community with unlimited themes” (Arnakak, 2003, p. 177).

2. Martin, K. (2009). “Are we also here for that?”: Inuit qaujimajatuqangit – traditional knowledge, or critical theory? *Canadian Journal of Native Studies*, *29(1/2)*, 183–202.

Martin (2009) quotes Jaypeetee Arnakak to explain that IQ is “not a set or finite body of knowledge; rather, it is "a set of teachings on practical truisms about society, human nature and experience passed on orally (traditionally) from one generation to the next.... It is holistic, dynamic and cumulative in its approach to knowledge, teaching and learning..." (p. 185).

Martin (2009) further notes that “[i]t is difficult to pin down or to define but is most readily manifested in the knowledge and memories of Nunavut Elders, who are able to provide information about what Inuit life was like before residential schools, welfare initiatives, and permanent settlements changed the face of Arctic Canada” (p. 185).

3. Semple, W. (2020). Decolonizing architecture: Stories from the Canadian North [Doctoral dissertation, University of Alberta].

Semple (2020) interpretes IQ as being “embedded in a process” and a “system that links Inuit philosophy and action in the evolving contemporary context” (p. 102). It is the transfer of “knowledge and skill” that are important to supporting the development of “contributing member(s) of family and society”. It includes “knowledge and respect for the environment” and being a “protector of all things” (p. 102). Semple (2020) also adds that “IQ views ‘living things’ as being anything that has a cycle (e.g. seasons, rocks and waterways)” (p. 102).

4. Abele, F. & Gladstone, J. (2021). Climate change health adaptation program: Synthesis report and impact analysis.
http://www.climatetelling.info/uploads/2/5/6/1/25611440/cchap_final_report.pdf

Abele and Gladstone (2021) discuss how traditional knowledge is sometimes viewed as something tangible that can be gathered and used as needed. They state “Indigenous knowledge or traditional knowledge is treated as an item that can be ‘collected’ and then applied to a problem defined in externally determined terms” (p. 33). However, the authors argue “Indigenous knowledge is far more than a collection of facts. It is an understanding of the world and of the human place in the world….From observations, people everywhere find patterns and similarities and associations, from which they develop a view of how the world

works, a view that explains the mysteries surrounding them, that gives them a sense of place" (p.33).

5. Aporta, C. (2002). Life on the ice: understanding the codes of a changing environment. Polar Record, 38(207), 341-354.
Aporta (2002) describes IQ as "Inuit knowledge" and they view this knowledge as "reveal[ing] a deep understanding of the complex relationships between ice, currents, the Moon, and the winds, as well as a holistic approach to knowledge where classification based on a western scientific approach becomes difficult, if not counter-productive" (p. 341). Further adding, it includes a "system of knowledge (…) which requires a lifetime of practice and observation" (p. 341).

6. Levac, L., McMurtry, L., Stienstra, D., Baikie, G., Hanson, C., & Mucina, D. (2018). Learning across Indigenous and Western knowledge systems and intersectionality: Reconciling social science research approaches. Unpublished SSHRC Knowledge Synthesis Report). University of Guelph.
Levac, McMurtry, Stienstra, Baikie, Hanson, & Mucina (2018) references IQ as a "theory" and they explain that it "is as much a way of life as it is sets of information" (p. 31). They also mention that it is through the eight [IQ] core principles "that Western knowledge will be able to examine and integrate IQ to the benefit of all mankind" (p. 31).

7. Laugrand, F.B., & Oosten, J. G. (2010). Inuit shamanism and christianity: Transitions and transformations in the twentieth century. McGill-Queen's University Press.
Notably, Laugrand and Oosten (2010) explore IQ as a means for cultural revitalization. They tie "the loss of a shamanic tradition" to "the decline of Inuit culture", and they state that "researching Inuit Qaujimajatuqangit" is considered "as a way to recover a cultural heritage" (p. 17). They argue Inuit will be enabled "to create a modern society based on their own traditions and values" in this way (Laugrand and Oosten, 2010, p. 17). In the past and modern day, Elders being considered "authorities on knowledge".

Furthermore, Laugrand and Oosten, J. G. (2010) maintain that IQ contains "fundamental ideas and values that distinguished Inuit from Qallunaat" (p. xviii). They add that "Inuit qaujimajatuqangit helps to maintain people's connection to [the deceased]. The deceased live on in the stories" (p. 308).

8. Brooker, A. L. (2018). Counselling within Inuit systems in Canada's north. *Canadian Journal of Counselling and Psychotherapy, 52(1)*.
Brooker (2018) connects the "systems theory" to "Inuit Qaujimajatuqangit" in that individuals are seen "in the context of their relationships [which] align with Inuit culture" adding this "[a]llow and encourage Inuit clients to engage with their families and communities when coping with difficulties [and this] would reconnect these clients with their cultural values" (p. 11). The author further states that IQ "reflects traditional values that encourage actions that serve one's family and community" (p. 11). Maintaining that a "collectivistic mindset (…) moves away from an individualistic perspective" and it is considered "more appropriate" (Brooker, 2018, p. 11). The author explains that the "guiding principles" of IQ "overlap, revealing the foundation of this society that values the interconnected nature of all involved" (p. 11).

9. White, G. (2006). Cultures in collision: Traditional knowledge and Euro-Canadian governance processes in Northern land-claim boards. *Arctic, 59(4)*, 401–414.

In this article, White (2006) looks briefly at the language used in discussing Inuit knowledge. They point out the “misleading connotations” found in using such thermology as “traditional” which “suggest customs and beliefs [being] “frozen at a particular point in time (usually the distant past)” (Nadasdy, 2003 as cited in White, 2006, p. 402). They also state that IQ has become the preference over “traditional” given that IQ combines “the traditional knowledge, experience and values of Inuit society, along with the present Inuit knowledge, experience and values that prepare the way for future knowledge, experience and values” (GN, 2002 as cited in White, 2002, p. 402).

10. Schmidt, L. A., & Poole, K. L. (2020). Perspective on shyness as adaptive from Indigenous Peoples of North America. In *Adaptive Shyness*, 239–249. Springer International Publishing. https://doi.org/10.1007/978-3-030-38877-5_13

Gurr at al. (2020) states that IQ is “the concept of intelligent or adaptive qualities of thinking and behavior” and they feel the “central teaching (…) which predominates across Inuit Nunangat is piliriqatigiingniq” (p. 244). Piliriqatigiingniq being described as “emphasiz[ing] that Inuit people build collaborative networks to work toward a shared, overarching goal that benefits the common good” and “stress[ing] the primacy of the community over that of individual interests" (Gurr at al., 2020, p. 244).

11. McHugh, S. (2021). Arctic nomadology: Inuit stories of the mountie sled dog massacre. In *Love in a time of slaughters: human-animal stories against genocide and extinction*. *Penn State University Press*, *3*, 122-154. https://doi.org/10.1515/9780271084541-007

Interestingly, this article connects “managing dogs” as being a “central component of Inuit Qaujimajatuqangit (IQ)” (McHugh, 2021, p. 135). McHugh (2021) uses Keavy Martin’s (n.d) explanation that “IQ requires intense experiential efforts to achieve “a state of silatujuq—having wisdom—which aligns itself practically with a close understanding of one’s sila, one’s environment” (p. 135). The author explains that dogs (“qimmiit”) are used to hunt “large and formidable animals like seals, caribou, and polar bears” and they require skillful handling” which McHugh (2021) state is “so essential to IQ that it maintained an Inuk’s high social value, even his masculinity, within his culture" (p. 135). Additionally, today’s approach to dealing with sick dogs was seen as “controversial because it contrasts sharply with the IQ approach to sick dogs” (McHugh, 2021, p. 142).

12. Steiner, N. S., Bowman, J., Campbell, K., Chierici, M., Eronen-Rasimus, E., Falardeau, M., Nacke, M., Nomura, D., Tedesco, L., van Franeker, J. A., van Leeuwe, M. A., & Wongpan, P. (2021). Climate change impacts on sea-ice ecosystems and associated ecosystem services. *Elem Sci Anth*, *9(1)*, 00007.

Steiner, Bowman, Campbell, Chierici, Eronen-Rasimus, Falardeau, Nacke, Nomura, Tedesco, van Franeker, van Leeuwe, & Wongpan. (2021) describe IQ as something that will help inform understanding around climate change. They state that IQ “provides a wealth of information to help understand ongoing and future changes, and the interweaving of Inuit knowledge with academic science can lead to more comprehensive assessments of climatic changes” (p. 19). It is also noted that IQ will “inform future decision making for the management and protection of [Tallurutiup Imanga National Marine Conservation Area]” which is “an area that has been used since time immemorial by the Inuit” (p. 30).

13. Gordon, E. S. (2018). Critical engagement: Integrating spirituality and “wisdom sharing” into higher education curriculum development. In *Interreligous Pedagogy*, 89-105. Palgrave Pivot, Cham.

While discussing “contemporary (…) participatory research models involving indigenous knowledge”, Gordon (2018) adds a spiritual component to IQ by maintaining it has a

“spiritual domain and cannot be reduced to a “cultural artifact” (p. 96). The author states that “[a]cknowledging these transcendent connections of spirituality as integrated into our humanity, as well as the difficulty in “capturing” a single, secure cross-cultural description”. Further maintaining, “tools" are needed to create space for the experiential and collaborative learning of wisdom sharing” (p. 96).

14. Tagalik, S. (2010). A framework for Indigenous school health: foundations in cultural principles. Prince George, BC: National Collaborating Centre for Aboriginal Health.

Tagalik (2010) explains that the Inuit Qaujimajatuqangit Education Framework for Nunavut Schools is based on “cultural embeddedness”. It outlines four foundational core beliefs which “include
working for the common good, respect for all living things, maintaining harmony and balance , and continually preparing for the future.” (p. 8). Tagalik (2010) continues “These core beliefs are further articulated through eight guiding principles which are expressed as cross curricular competencies, and they are supported by forty key values which are expressed as educational expectations” (p. 8).

Tagalik (2010) also uses a description of IQ that focuses it “as a system of belief which considers the importance of relationship/interconnectedness to the environment/sila and to other people” (p. 8). The author further adds that “[t]hese critical relationships are embedded within circles of belonging, seasonal changes and of a continuum of life. Taken as a whole the conceptualization is described as the strengths of the individual” (p. 8). It requires “being in the here and now grounded in the continuum, but operating within in the whole context” (Tagalik, 2010, p. 17).

15. Kusugak, J. (2004). Inuit traditional knowledge is a real science. *Inuktitut (English, Inuktitut and French Ed.), 94*, 2–.

Interestingly, Kusgak (2004) adds a different perspective around the meaning found in IQ translation. They explain “[f]ollowing the literal meaning of Inuit Qaujimajatuqanjit, I would have been born with the knowledge of building iglus, qajaqs, Shamanism, traditional music skills, delivering babies, the intricacies of skinning animals, weather forecasting and a thousand other things; because Inuit Qaujimajatiqangit, which, when translated into English literally means "Inuit instinctive knowledge". Other than suckling, crying and hurting, not much else is instinctive. [However], like all races of people in this world, all knowledge is learned” (p. n.a.). The author further adds “All this new knowledge had to be taught from one Inuk generation to the next. It also had to be taught and learnt in the most practical way respectable to the culture, in which it is taught and learned. That way was to observe, do, and improve, without unnecessary questioning. Fathers taught sons, mothers taught daughters, and when either was lacking, both parents taught the other. Thus gender in names was meaningless. It was the spirit of individuals to carry on the race that mattered, not oneself” (p. n.a.).

16. Aikens, K. (2019). A critical policy analysis of environmental and sustainability education in Canada [Doctoral dissertation, University of Saskatchewan].

Aikens (2019) describes IQ as being a “knowledge system” that is “key to the continued thriving of northern communities” (p.63). The author explains “the Elders are not advocating a return to the past, but a grounding of education in the strengths of the Inuit so that their children will survive and successfully negotiate the world in which they find themselves today” (Nunavut Department of Education, 2007 as cited in Aikens, 2019, p. 63).

17. DeLorenzo, L. C. (2016). Giving voice to democracy in music education. New York, NY: Routledge.
Within Delorenzo's exploration of Piercey's work, they briefly discuss the significance of balancing between worlds. They state "Piercey (…) emphasizes that "the elders' aim for Inuit Qaujimajatuqangit was not to force a return to the past but to illuminate the strengths of Inuit so children could successfully negotiate their worlds" (Piercy, 2012 as cited in DeLorenzo, 2016, p. 15).

18. McCall, S. (2014). 6 "I Can Only Sing This Song to Someone Who Understands It." In First Person Plural. UBC Press.
McCall (2014) identifies some of the prominent arguments in the debate surrounding the of defining IQ. For instance, she relays "Political scientist Ailsa Henderson explains that IQ, usually glossed as 'an Inuit way of doing things,' is notoriously difficult to define. As a holistic philosophy, IQ encompasses a vast range of ideas and actions, including knowledge of land, kinship patterns, and customary law, as well as the elders' accumulated 'memories, knowledge, stories, and skills'" (pp. 200 -201). McCall (2014) adds Japetee Arnakak's insights on IQ as not a "fixed body of knowledge" but more so "a set of teachings on practical truisms about society, human nature and experience passed on orally (traditionally)" (p. 200 – 201).

19. Klein, J. (2017). Indigenous rights in environmental justice: examining decolonization and human security in the context of Inuit seal hunting [Doctoral dissertation, Åbo Akademi University].
Notably, Klein (2017) brings the importance of animals into IQ literary dialogue. They speak to the value of seals in IQ. They state "[b]efore they became a source of economic growth and viability, seals were used by Inuit to sustain all aspects of life: the meat is incredibly nutritious and feeds many families, oil from seals was used in fires and candles, seal skin and fur were used for clothing and materials, and the passing of Inuit knowledge, Inuit Qaujimajatuqangit, and cultural values were preserved through the seal hunt" (p. 51).

20. Topkok, C. S. A. (2015). Iñupiat ilitqusiat: Inner views of our iñupiaq values. [Doctoral Dissertation, University of Alaska].
Topkok (2015) touches briefly on IQ and Inuit values. They offer some insight into how these work together. They state "[t]here are 38 values and beliefs for Inuit cultural values developed by Canadian Inuit Elders and educators (Aboriginal Learning Knowledge Centre, 2007). These Inuit values are centered on connection, work, coping, and government. According to the Inuit Qaujimajatuqangit, each value represents a person holding a skin blanket (learning) for a blanket toss (journey). In order for a successful pull, each individual (value) needs to pull equally in order to help the one on the blanket" (p. 21).

21. Woodley, S., MacKinnon, K., McCanny, S., Pither, R., Prior, K. S. N. & Lindenmayer, D. (2015). Managing protected areas for biological diversity and ecosystem functions'. *Protected Area Governance and Management*, 651-684.
Woodley, MacKinnon, McCanny, Pither, Prior, & Lindenmayer. (2015) highlight IQ as the "hard-won wisdom of the indigenous people of the Nunavut Territory of Canada—survivors in a harsh northern landscape" (p. 674).

The authors provide an example of the "effectiveness of IQ" in the research team's work around "population and distribution trends for four species of migratory birds" (p. 674). The team found "[f]or two of the species examined, local knowledge identified population shifts that were previously unknown to Western science" (p. 674). It is concluded that "[i]n general, the degree of contact with the species was an important factor in determining the quality of

observations. In one case, the species' distribution was poorly understood by local hunters despite seasonal harvests. Thus, like any source of information, there must be scrutiny of reliability" (Woodley et al., 2015, p. 674).

22. Okalik, P. (2007). Nunavut: The road to indigenous sovereignty. *Intercultural Human Rights Law Review, 2*, 11–18.

Okalik (2007) explains IQ in term of being a "developed social code and knowledge system" (p. 12). They add that "[it] is this belief system that continues to define our Inuit societal values" and it is "closely tied to [Inuit] land and the family bonds that have allowed [Inuit] to flourish where others have not" (p. 12).

The author also touches on "[Inuit] statues and governing natural resources management" as being "[a]n example of [Inuit] traditional knowledge in modern law" (p. 16). They relay that it is through the use of "Inuktitut" that "Inuit have ensured (…) future land management decisions [are] interpreted through the prism of Inuit Qaujimajatuqangit" (p. 16). Adding, "[i]t was only a few years ago that Inuit knowledge was dismissed. It wasn't considered scientific, and was therefore unworthy of consideration" (Okalik, 2007, p. 16).

23. McMahon, R., O'Donnell, S., Smith, R., Woodman Simmonds, J., & Walmark, B. (2010). Putting the 'last-mile' first: Re-framing broadband development in First Nations and Inuit communities. Vancouver: Centre for Policy Research on Science and Technology (CPROST). Simon Fraser University.

The authors in this article describes IQ as "a body of knowledge and unique cultural insights of Inuit into the workings of nature, humans and animals" (Burgess, n.d. as cited in O'Donnell et al., 2010, p. 32).

24. Cowan, C. (2005). Re-Learning the traditional art of Inuit grass basket-making. *Convergence*, *38(4)*, 51-67.

In this article, Indigenous knowledge is "summarised as including three dynamic concepts: (a) the experience of colonisation, (b) identification with the land as a central component of identity, and (c) pedagogical processes that involve the strengthening and survival of both the people and the culture of a specific place" (Aikman, 1999 as cited in Cowan, 2005, p. 53). Cowan (2005) further touches on the traditional aspect of IQ and its influence on Inuit relational dynamic. They state that "[in] Nunavut, Inuit qaujimajatuqangit refers to the traditional worldview of the Inuit prior to colonisation and defines the essential relationships between individuals, families and the environment" (p. 53).

25. Griebel, B., Diesel, T., & Rast, T. (2016). Re-Presenting the past: A new archaeological outreach strategy for the Canadian Territory of Nunavut. *Open Archaeology, 2(1)*.

Griebel et al. (2016) view IQ through a lens of historical and present-day transmission that is fostered within traditional way of life. They explain "[t]raditional Inuit understanding of space and time —as developed through land-based and nomadic hunting lifestyles—are seen as constituting the basis of Inuit Qaujimajaqtuqangit (…) and continue to inform the core of everyday practice in the North (Wenzel, 2004 as cited in Griebel et al., 2016, p. 292).

26. Soukup, K. T. (2006). Travelling through layers: Inuit artists appropriate new technologies. *Canadian Journal of Communication*, *31(1)*.

Seemingly, Soukup (2006) places much consideration on the value and holistic relationship approaches found within IQ. They describes IQ as "[the] pedagogical framework and guiding or foundational principles are based on the essential elements of humaneness, collaboration, environmental stewardship, acquiring skills and knowledge, being resourceful to solve problems, achieving consensus in decision-making, and serving the common good"

(p. 244). They further add “IQ values creativity and innovation in all of these essential elements, as well as in the discipline of the arts, to recognize the importance of creative expression in Inuit life and the value of artistic excellence as a way of interpreting and sharing culture and values” (p. 244).

27. Kilbourne, J. (2008). Teaching social studies through storytelling: the enduring spirit of the Arctic. *Social Education*, *72(6)*, 322.
Kilbourne (2008) looks more closely at the environmental and sharing aspects of IQ. They state "[b]y engaging with the ocean, land, rivers, lakes, and animals, Inuit learn through observation, discovery, and experience. Information about where and how to fish and hunt, and a sense of sharing and community is passed from one generation to the next. This knowledge and these values, which are hallmarks of traditional Inuit culture, are known as Inuit Qaujimajatuqangit (IQ); and Inuit in Iqaluit work hard to weave them into their daily lives. Fishing is an excellent activity for promoting these guiding principles" (p.n.a).

28. Gold, S. K. T. (2007). Techniques of citizenship: Health and subjectivity in a new and predominantly Inuit territory. *Citizenship Studies*, *11(4)*, 349-365.
Interestingly, Gold (2007) touches on the importance of IQ, the complexity of defining IQ in the English language and the difficulty of mobilizing IQ in Western systems. Notably, they reference IQ as “a hybridizing perspective” (p. 359). Further describing it as “a system of laws, values and consultations; and an understanding of complex family relationships that is explained by Inuktitut kinship terminology” (Nunavut, 2000 as cited in Gold, 2007, p. 359). Adding, “IQ is about “healthy, sustainable communities regaining their rights to a say in the governance of their lives using principles and values they regard as integral to who and what they are” (Arnakak, 2001 as cited in Gold, 2007, p. 359). The author states that IQ is “central to the attempt to legitimate northern and Inuit expertise” (p. 359). “[H]owever, [it] is not easily translated into English and its broad scope makes for an uneasy fit in government processes that reflect national governance processes. It is even more difficult to put into practice in Nunavut health care planning, due to the perception that health care is non-Inuit, that Inuit and northern lives are risky and that health expertise comes from the south” (p. 359).

29. Castleton A. (2017). Tecnología e identidad: el caso de los Inuit y Facebook. CIC. *Cuadernos de Información y Comunicación*, *22*, 107-125. https://doi.org/10.5209/CIYC.55970
Adding a modernized and youth perspective, Castleton (2017) challenges the traditional conceptualization of what it means to be an Inuk. They state “If we look closely at the iconic and real Inuk, the image appears to be both mythical and mythical – a rigid, inaccurate and outdated model, usually promoted by someone claiming to be an authority (…) Today, however, even the nature of the Inuit Qaujimajatuqangit is being challenged by younger Inuit, who may have a different notion of what constitutes a real Inuk. For them, a real Inuk should not be judged by the standards of an earlier age or held up as a mythical, deviant, and unobtainable model today” (p. 112).

30. Howe, L. E. (2010). Temporality and reconciliation. Administrative Theory & Praxis, 32(4), 611-619.
In their work, Howe (2010) seeks out reconciliation to Inuit worldview. They touch on “the ambiguities of efforts to reconcile wildlife biology’s scientific knowledge with Inuit traditional knowledge” (p. 611). They advise “[i]f, as I have tried to show by way of thinking about temporality, Inuit qaujimajatuqangit fundamentally challenges mainstream temporal–political affectivity, then the best way to encourage scientists, administrators, and conservationists to react positively to a time out of joint is to offer a vision of having a better time" (p. 617).

31. Sbert, C. (2020). *The lens of ecological law: a look at mining*. Edward Elgar Publishing Limited. https://doi.org/10.4337/9781839102134

Sbert (2020) states that "Inuit Qaujimajatuqangit (IQ) reflects a worldview based on interconnectedness with, and respect and responsibility towards the natural world. These 'traditional Inuit values, knowledge, behaviour, perceptions and expectations' have been explicitly incorporated into the Nunavut Wildlife Act. An initial analysis indicates that several of the IQ principles in the Act can be seen as examples of ecological law, in particular the acknowledgement of interconnectedness of people and nature, and a needs-based approach to wildlife harvesting that prohibits wastage and accumulation" (p. 75).

33. Berger, P., & Epp, J. R. (2006). Practices against culture that "work" in Nunavut schools: Problematizing two common practices. *McGill Journal of Education/Revue des sciences de l'éducation de McGill*, *41(1)*.

Through relationality of time, Berger and Epp (2006) look at cultural complexities surrounding perceptions of Inuit culture, the "assault" of EuroCanadian contact and the conflict from within. They explain "By "practices against culture," we mean teaching methods or ways of doing things that seem incongruent with historical or contemporary Inuit culture, as we understand it from the literature by both Qallunaat and Inuit authors. We are aware that culture is not static, that not all Inuit share the same beliefs and practices, and that cultures change over time (Crago, Annahatak, & Ningiurvik, 1993 as cited by Berger and Epp, 2006, p. 10). They add further, there is "An extremely complex cultural shift (…) underway (Henze & Vanett, 1993), and, although Inuit still hold values distinct from Euro-Canadian values (Inuit Qaujimajatuqanginnut [IQ] Task Force, 2002), Inuit culture has been under a massive assault by EuroCanadians for many years. This has sometimes led to alienation and confusion, a divide between elders and youth (Minor, 1992; Reimer, 1996), and changes in some Inuit values (Stairs, 1992); in deciding whether a practice is compatible with "Inuit culture," a relevant question is, which culture" (Berger and Epp, 2006, p. 10).

34. Yamamura, B., Netser, S., & Qanatsiaq, N. (2003). Community elders, traditional knowledge, and a mathematics curriculum framework. *Education Canada*, *43(1)*, 44-46.

Despite the complex nature of IQ, there is simplicity and directness in Yamamura, Netser and Qanatsiaq (2003) description as they explain IQ as being "all aspects of the Inuit that makes them a unique people, including culture, language, values, beliefs, relationships, governance, etc." (p. n.a.).

35. Berkman, P. A., Vylegzhanin, A. N., & Young, O. R. (2019). Baseline of Russian Arctic laws (*Vol. 438*). Springer International Publishing.

Berkman, Vylegzhanin and Young (2019) briefly looks at the inclusion of IQ in research and science. They contend "A key element of research and science in the North includes traditional knowledge and Inuit Qaujimajatuqangit – the uniting of traditional thought and action. Northerners, because we live here and have lived here for centuries, have deep reservoirs of traditional and local knowledge about the land and the environment and can make major contributions in this regard" (pg. 327).

36. Arnakak J. (2002). Incorporation of Inuit qaujimanituqangit, or Inuit traditional knowledge, into the Government of Nunavut. *The Journal of Aboriginal Economic Development*. *3(1)*:33-9.

Arnakak (2020) touches on the modern relationality of IQ. He relays "Inuit Qaujimajatuqangit, or IQ, from its inception, is intended to include not only Inuit traditional knowledge, but also the contemporary values of Nunavut's communities. IQ, translated as "that which are long known by Inuit," is a misnomer" (Arnakak, 2020, p. 34).

37. Burrows, J. (2006). La justice en soi: les traditions juridiques autochtones. Ottawa: Commission du droit du Canada.
Translated by Google: "Inuit Qaujimajatuqangit is a particularly important concept in Inuit law. It contains lessons for the future. The term Inuit Qaujimajatuqangit includes the orally transmitted traditional knowledge, family and political structures, learning, social development projects and even understanding the conditions local weather conditions. It has also been described as a living technology of rationalization of thought and gestures and organization of tasks, resources, family and society into a coherent whole."

38. Tremblay, M., Ford, J., Statham, S., Pearce, T., Ljubicic, G., Gauthier, Y., & Braithwaite, L. (2018). Access to the land and ice: Travel and hunting in a changing environment. In *Science to policy in the Eastern Canadian Arctic: An integrated regional impact study (IRIS) of climate change and moderization*. *ArcticNet*, *560*, 305.
These authors reiterate that “IQ is transmitted orally through stories, myths, songs, and lessons, and it is continually being revised and expanded to include new information” (Berkes 1999, Aporta 2002, Thorpe et al. 2001, Thorpe et al. 2002, Berkes 2004, Laidler 2006 as cited in Tremblay et al., 2018, p. 307). When applied to climate change, they maintain “the dynamic and flexible nature of IQ continues to underpin Inuit adaptability to a rapidly changing climate (Laidler et al. 2009, Ford 2009, Ford et al. 2010, Pearce et al. 2015” (Tremblay et al., 2018, p. 307).

39. Jeannotte, M. S. (2017). Caretakers of the earth: Integrating Canadian Aboriginal perspectives on culture and sustainability into local plans. *International Journal of Cultural Policy*, *23(2)*, 199-213.
Jeannotte (2017) speaks of project findings around the importance of land in culture connection and the significant of creative, cultural expression. "At these gatherings, participants asserted that the community was based on relationships anchored in the culture. One stated that ‘Cultural connections to the land are hugely important to the quality of life of Iqalummuit and contribute positively to the health, education, family, community, culture and spirit of the community’ (Sustainable Iqaluit 2012, 5). Another stated that ‘Inuit are the land – the land is an extension of ourselves’. In addition to educating non-Inuit residents on Qaujimajatuqangit and strengthening the status of Inuktitut (the Inuit language), the participants wanted to ‘balance living concurrently in two (or more) very different cultures’. Expressive elements of culture identified as being important included Inuit celebrations and festivals, an Inuit museum, and ‘more Inuit artistic presentations, fairs, performances, art markets, film screenings; more public art, wall murals, sculptures/carvings; more Inuit art, books, prints, shows, TV and Inuit Broadcasting Corporation programming; more Inuit fashion, videogames, cartoons, animated films, illustrated books; more dancing, music concerts, theatre” (Jeannotte, 2017, p. 206).

40. McAuley, A., & Walton, F. (2011). Decolonizing cyberspace: Online support for the Nunavut MEd. *The International Review of Research in Open and Distributed Learning*, *12(4)*, 17-34.
McAuley and Walton (2011) discuss IQ as a framework in relation to Nunavut MEd and its importance to government. They “A second, perhaps more diffuse conceptual framework permeating the Nunavut MEd, was that of Inuit Qaujimajatuqangit (IQ). A framework that “embraces all aspects of traditional Inuit culture including values, world-view, language, social organization, knowledge, life skills, perceptions and expectations” (Government of Nunavut, 2005, as cited in McAuley, 2011, p. 20). They state “Inuit Qaujimajatuqangit is being used to guide the development of all government initiatives in Nunavut, including education. The diffuseness of this framework with respect to the Nunavut MEd is a result of its being an emergent “work in progress,” particularly at its intersection with the values and

structures of contemporary governmental institutions and practices" (McAuley and Walton, 2011, p. 20-21).

McAuley and Walton (2011) also speak to the principles of IQ. They contend "…the eight Inuit Qaujimajatuqangit principles are relational, that is, they focus on connections between individuals and their sociocultural, psychosocial, and physical environments. Although all eight principles influenced the design of the distance learning portion of the MEd, relationality was particularly important" (p. 21).

41. Baikie, G. (2020). Indigenist and decolonizing memory work research method. *Journal of Indigenous Social Development*, *9(1)*, 41-59.

Baikie (2020) leans heavily on Tagalik's explanation and perspective of IQ. They report "Fortunately, when the Canadian territory of Nunavut was established in 1999, its government made a priority, through engaging with Elders as traditional knowledge keepers, to identify and articulate an Inuit ethnophilosophy as the means to develop Inuit-centered policies and practices. Inuit Qaujimajatuqangit (IQ)2 was the outcome and is "defined as Inuit ways past, present and future" (Tagalik, 2009-2010, p. 2). Tagalik (2009-2010) explains "IQ encompasses the entire realm of Inuit experience in the world and the values, principles, beliefs and skills which have evolved as a result of that experience. It is the experience and resulting knowledge/wisdom that prepares us for success in the future and establishes the possible survival of Inuit." (p.2). IQ also refers to the Inuit epistemology or "that which Inuit have always known to be true" (McGregor, 2012, p. 297). While there are variations amongst the diverse Inuit societies, IQ "has been recognized as being consistent with Inuit worldview as it is described in various Inuit circumpolar jurisdictions" (Tagalik, 2009-2010, p.1). Tagalik (2009-2010) points out that an Inuit worldview must be seen within the context of the knowledge continuum, the time continuum, and the relationship continuum. Furthermore, the Inuit Elders in Nunavut identified maligait (four big laws): working for the common good; respecting all living things; maintaining harmony and balance; continually planning and preparing for the future (Government of Nunavut, 2007; McGregor, 2012; Tagalik, 2009-2010) out of which emerge the IQ principles which are summarized in the table. These principles guided the evolution of the method, the research design and the research process" (Baikie, 2020, p.43).

42. Bishop, B., Owen, J., Wilson, L., Eccles, T., Chircop, A., & Fanning, L. (2022). How icebreaking governance interacts with Inuit rights and livelihoods in Nunavut: A policy review. *Marine Policy*, *137*, 104957–. https://doi.org/10.1016/j.marpol.2022.104957

Bishop et al. (2022) recognizes the need for meaningful inclusion of Inuit within the IQ integration. Within their work, they state "Thus while we present the eight IQ principles and draw on them for our policy review, any consideration of Inuit governance values and their application to maritime policy development requires a nuanced understanding of IQ achieved through meaningful engagement with and by Inuit" (p. 4).

43. Clifford-Peña, J. (2009). Human perceptions, comprehension and awareness of contaminants in Sanikiluaq [Master's thesis, University of Manitoba].

Clifford-Peña (2009) speaks to the interchangeability that is sometimes found in literature around Inuit knowledge terminology. They explain "Currently, the term Traditional knowledge is now referred to as Inuit Qaujimajatuqangit (IQ). IQ is used to describe a body of knowledge and unique cultural insights of Inuit into the workings of nature, humans and animals. Inuit Qaujimajatuqangit, then, has both practical and epistemological aspects that branch out from a fundamental principle that human beings are learning, rational beings with an infinite potential for problem-solving within the dictates of nature and technology (Kruse et al.,2OO4). However, for the purposes of this project, the term Traditional Knowledge is

used for what is now commonly known today as “Inuit Qaujimajatuqangit" (Clifford-Peña, 2009, p. 17).

44. Tomaselli, M. (2018). Improved wildlife health and disease surveillance through the combined use of local knowledge and scientific knowledge [Doctoral dissertation, University of Calgary].
Although conscience of diversity found in literature, Tomaselli (2018) explains that wildlife management tools prefer to use local knowledge terminology. They describe "There are several names that refer to experiential-based knowledge driven by local resource use and practices, including general names such as local and traditional ecological knowledge, indigenous knowledge, technical knowledge, folk knowledge and wisdom, and more specific names that connote specific groups, for example Inuit Qaujimajatuqangit or Inuit knowledge. This local and experiential-based body of knowledge is herein conjointly referred as LK” (p. 7).

45. Imrie, D. D. (2009). Limit knowledge and adaptations to sea ice change in the Belcher Islands, Nunavut [Doctoral dissertation, University of Manitoba].
Imrie (2009) explores IQ in the context of Inuit knowledge which is beyond the concept of traditional knowledge. They convey "Inuit Qaujimajatuqangit (IQ) is a term commonly used in Canada to encompass all forms of Inuit knowledge and ways of knowing (Thorpe et al., 2002). However, Quajimajatuqangit is a reference to old or historical knowledge, implying knowledge that is historical or outdated in nature, when in reality IQ is dynamic and relevant, and more accurately described by the term Inuit Quajimaningit, which translates directly into Inuit Knowledge (Leduc, 2006). Traditional Knowledge (TK) and Traditional Ecological Knowledge (TEK) can be included under the umbrella of IQ, which incorporates environmental knowledge, attitudes, values, behaviors, and world view (Wenzel, 2004). IQ will be considered synonymous with Inuit Knowledge for the purpose of this discussion” (Imrie, 2009, p. 19).

46. Obed, D. (2017). Illiniavugut Nunami: learning from the land: envisioning an Inuit-centered educational future [Masters Thesis, Saint Mary’s University].
Obed (2017) mobilizes and validates the importance of IQ through their work. They state “This study, guided by Inuit knowledge and understandings of the land as pedagogy, meaning a process of relationship building that is specific to the principles of Inuit Qaujimajatuqangit (IQ), supports us as Inuit to tell stories from our own worldviews while also honing and demonstrating our inherent competencies" (p. 4).

47. Grimwood, B. S., & Doubleday, N. C. (2013). Illuminating traces: Enactments of responsibility in practices of Arctic river tourists and inhabitants. *Journal of Ecotourism*, *12(2)*, 53-74.
In their work, Grimwood and Doubleday (2013) highlight that "Inuit knowledge, or Inuit Qaujimajatuqanginnut (IQ), is described as ‘the Inuit way of doing things: the past, present and future knowledge, experience and values of Inuit society’ (Inuit Qaujimajatuqanginnut Task Force, 2002, p. 4). It represents a unity of fundamental relationships, an adaptive entanglement of factual knowledge, land use, values, norms, direct experience and cosmology (Tester & Irniq, 2008). Inuit Elders are the traditional interpreters of these seamless relations and transfer knowledge to younger generations” (n.p.a.).

48. Leduc, TB. (2006). Inuit economic adaptations for a changing global climate. *Ecological Economics*, *60(1)*, 27–35 https://doi.org/10.1016/j.ecolecon.2006.02.004
Leduc (2006) discusses an old controversy surrounding the traditional and modern-day dialogue found when exploring the meaning of IQ in English translation. They relay “More recently, an Inuit-directed compilation of cultural knowledge defined IQ as “knowledge that

has been passed on to us by our ancestors, things that we have always known, things crucial to our survival—patience and resourcefulness" (Bennett and Rowley, 2004, p. xxi). Jaypeetee adds that IQ is not simply an ecological knowledge for managing relations with the environment or a traditional knowledge isolated in the past. Talking about this point in relation to defining Inuit Qaujimajatuqangit, he wrote (Arnakak, 2004, p. 1): The fact remains that Inuit Qaujimajatuqangit is a semi-literal translation of the original term in English—and in the passive tense at that. I have suggested on a number of occasions taking out the reference to "old" in Qaujimajatuqangit, and making the term an infinitive—Inuit Qaujimaningit—or simply, Inuit knowledge" (Leduc, 2006, p. 28).

49. Higdon, J. W., & Ferguson, S. H. (2014). Inuit recollections of a 1950s killer whale (Orcinus orca) ice entrapment in Foxe Basin, Nunavut, Canada. *Aquatic Mammals*, *40(1)*, 9.
Higdon and Ferguson (2014) touch on the holistic nature of IQ. From their literary exploration, they maintain "Inuit Qaujimajatuqangit (IQ) encompasses all aspects of traditional Inuit culture, including values, language, social organization, and knowledge (Simpson, 2004; Wenzel, 2004; Tester & Irniq, 2008). It can be broadly outlined as a set of teachings about society, human nature and experience, and ecological knowledge, passed on orally from one generation to the next, that is holistic, dynamic, and cumulative in its approach to knowledge, teaching, and learning, essentially, that one learns best by observing, doing, and experiencing (Arnakak, 2000, 2002)" (Higdon, 2014, p. 15).

50. Stern, P. R., & Stevenson, L. (Eds.). (2006). Critical Inuit studies: an anthology of contemporary Arctic ethnography. University of Nebraska Press.
Giving a historical review of IQ, Stern and Stevenson (2006) summarize "Based on a series of conferences and workshops with Inuit elders in the late 1990s, the Nunavut government initiated a plan to implement Inuit qaujimajatuqangit, or traditional knowledge (literally that which was known prior to the arrival of qallunaat—Europeans and Canadians of European descent), at all levels of government. Alexina Kublu of Arctic College in Iqaluit provided a detailed etymology of the term for me: qauji means to find out; qaujima means to know; qaujimajaq means what or that which is known; qaujimajatuqaq means something which has been known for a long time; and Inuit qaujimajatuqangit means something that Inuit have known for a long time" (p.101).

The authors further add "Lori Idlout, a longtime resident of Iqaluit and originally from Igloolik, Nunavut, has been centrally involved in the movement to incorporate Inuit qaujimajatuqangit (iq, or Inuit traditional knowledge over time) into the structures of the Nunavut government (Wilman 2002). Many Inuit see the conscious incorporation of IQ as a tool for decision making as critical to the success or failure of Nunavut in aboriginal self- government" (Stern and Stevenson, 2006, p. 54).

51. Gearheard, S., Pocernich, M., Stewart, R., Sanguya, J., & Huntington, H. P. (2010). Linking Inuit knowledge and meteorological station observations to understand changing wind patterns at Clyde River, Nunavut. *Climatic Change*, *100(2)*, 267-294.
While there is a relationship value acknowledgement, Gearhead et al. (2010) focus more on environmental knowledge found within IQ. "For generations, Inuit have lived off the land. Through activities such as hunting, fishing, preparing food and skins, and travelling the land, ice, and waters of the Arctic, Inuit have developed a complex understanding of the environment. Constant observation and experience over time accumulates to form Inuit knowledge (Inuit Qaujimajatuqangit), which also incorporates Inuit values and beliefs. Inuit knowledge and skills are passed down through generations through oral tradition, observation, and practice. This knowledge is dynamic, constantly evolving as each

knowledge-holder engages with their environment and integrates their own experiences (Berkes 1999; Ingold and Kurtilla 2000; GN 1999)" (Gearhead et al., 2010, p. 271).

52. Dunning, N. (2012). Reflections of a disk-less Inuk on Canada's Eskimo identification system. *Études/Inuit/Studies*, *36(2)*, 209-226.

Dunning (2012) touches on the importance of Inuit connection to each other and the transmission of IQ. In part, they also rely on Arnakak's description of IQ. "Ujamiit became one of the missing items I needed to prove to my own people that I am who I say I am. I had only one thing, her atiq ('name'). Her named was Angaviadniak, a Pallirmiut woman. She is my maternal anaanatsiaq ('grandmother') and I know of her through the oral passing down of Inuit knowledge, Inuit Qaujimajatuqangit. Qaujima is the verb 'to know,' and Inuit Qaujimajatuqangit literally means 'the things that Inuit have known for a long time' (Stern 2010: 33). It is traditional knowledge from Inuit elders, and how Inuit know who, what, and where they are in this world. It is, as Jaypetee Arnakak says: a set of teachings on practical truisms about society, human nature and experience passed on orally (traditionally) from one generation to the next […]. It is holistic, dynamic and cumulative in its approach to knowledge, teaching and learning […]. IQ […] is most readily manifested in the knowledge and memories of Nunavut Elders […] (in Martin 2009: 184). Very simply put, Inuit Qaujimajatuqangit "is about remembering; an ethical injunction that lies at the root of Inuit identity" (Tester and Irniq 2008: 61)" (Dunning, 2012, p. 210).

53. Hearne, J. (2017). "Who We Are Now": Iñupiaq Youth On the Ice. *MediaTropes*, *7(1)*, 185-202.

Hearne (2017) makes some notable mentions in their work as they look examine IQ in terms of adaptability and resourcefulness. They use this to analyze components of the film *On the Ice* . "In her 2012 study of Inuit literature, *Stories in a New Skin*, Keavy Martin turns to a document outlining Inuit cultural concepts, the *Inuit Qaujimajatuqangit* ("IQ") ("what Inuit have known for a very long time"), which was commissioned by the government of Nunavut, the largest of Canada's three territories and the first Inuit majority territory, to guide the integration of Inuit values within the self-governing province. The IQ framework describes the quality of *qanuqtuurniq*, or "a quality of resourcefulness in problem-solving," suggestive of resilience or plasticity; as Qitsualik-Tinsley asserts, "Inuit are the embodiment of adaptability itself" (qtd. in Martin 3, 8). The IQ report foregrounds a model of traditional Inuit conceptions of knowledge that already encodes systems for incorporating the new, because its very definition as knowledge entails the ability to adapt resourcefully to changed circumstances as a central value. While *Inuit Qaujimajatuqangit* ("IQ") is linguistically and culturally Inuit, built from the participation and knowledge of elders from the eastern Arctic (Nunavummiut communities), its articulation of a mode of Inuit knowledge—along with western Arctic Iñupiaq concepts—can begin to offer a broad scaffold for understanding the characters' interactions with ice and with each other in *On the Ice*, and for thinking through the film's Indigenization of American film genre forms" (Hearne, 2017, p.188).

54. Payne C. (2011). "You hear it in their voice": Photographs and cultural consolidation among Inuit youths and elders. In *Oral History and Photography*. Palgarve Studies in Oral History. https://doi.org/10.1057/9780230120099_6

While discussing "six key concepts" of IQ, Payne (2011) briefly brings a feminist concept to the IQ discussion. "In this, the school reflects the Government of Nunavut's own emphasis on Inuit Qaujimajatuqangit, which is widely known across Nunavut by the acronym "IQ." An indigenized play on intelligence quotient, IQ is defined and systematized by the territorial government as a set of "Inuit traditional knowledge and values" summarized by six key concepts: Pijitsirarniq (Serving), Aajiiqatigiingniq (Consensus-Decision Making), Pilimmaksarniq (Skills and Knowledge Acquisition), Qanuqtuurungnarniq (Being Resourceful

to Solve Problems), Piliriqatigiingniq (Working in Collaborative Relationships toward a Common Purpose) and Avatimik Kamattiarniq (Environ - mental Stewardship).11 In turn, these values inform some of the practice of governance in Nunavut.12 IQ principles are based on community life and skills developed by Inuit hunter-gatherers as they were understood to be before European contact.13 In this respect, IQ is arguably an exercise in "strategic essentialism." A concept coined by Gayatri Spivak and closely associated with second-wave feminism, strategic essentialism describes the subversive tactic of referencing broad (even stereotypical) cultural characteristics in an attempt to foster group cohesion while simultaneously critiquing the effect of essentializing stereotypes themselves" (Payne, 2011, p. 613 – 614).

55. Woynarski, L. (2020). Decolonised ecologies: Performance against the anthropocene. In *Ecodramaturgies*, 179-211.

Woynarski (2020) focuses on an Inuk elder's comparison of Inuit and Qallunaat knowledges. "Tulugaq, the Inuit elder, explains to him the role of traditional knowledge: That is Inuit qaujimajatuqangit. Inuit traditional knowledge. Old learning about living in peace with people, animals, nature. Arctic is not just numbers. Arctic is stories. Like aqsarniit story. Qallunaat learning: lots of numbers. But it comes here—(pointing to his head). Only here. Not good for us. Inuit qaujimajatuqangit comes here—(pointing to his head), here—(pointing to his heart), and here—(moving hands and feet). Inuit qaujimajatuqangit is alive. Observation, experience. Always changing. Numbers are not enough. We need stories. You understand? (Bilodeau 2015: 59–60) Rather than being the object of study, Inuit Qaujimajatuqangit [traditional knowledge] is considered a relevant (and lifesaving) study in and of itself" (Woynarski, p. 204).

56. Knopf, K. (2018). Indigenous knowledges, ecology, and living heritage in North America. In *Decolonial heritage: Natures, cultures, and the asymmetries of memory*, 175-202.

Knopf (2018) touches on Tagalik's IQ continuum discussion in their detailed analysis. They relay, "Shirley Tagalik explains that Inuit qaujimajatugangit — Inuit epistemology or the Indigenous knowledge of the Inuit - is based on three continuums: knowledge continuum, time continuum, and relationship continuum. Inuit qaujimajatugangit is "knowledge embedded in process" (Knopf, 2018, p. 194). Knopf (2018) also adds that IQ is "…reliant on the cultural expectation of iqaqqaukkaringnig (deep thinking that leads to innovation). This is a dynamic process of knowing, applying, experiencing, evaluating and creating new knowledge grounded in a continuum of knowing and continually improving. This adapting and creating new knowledge is and has always been necessary to ensure survival. Likewise, the time continuum means that deep understandings of views and values of the past influence and support success in the future" (p. 194).

Knopf (2018) further adding societal values in their IQ description while warning against pan-Indigenization. They continue "And finally, building of relationships is central to Inuit qaujimajatugangit and 'is a consistently applied life building process aimed at establishing self-reliant, wise individuals who can cope successfully and actively contribute to the wellbeing of others and to the continual improvement of society'. Since Inuit knowledge includes traditional and contemporary knowledges constantly changing and adapting to neo/colonial, climatic, and industrial influences, it can be seen as 'living heritage' as suggested in the 'memorial' heritage discourse, which understands cultural heritage 'as a corpus of processes and practices that are constantly recreated and renewed by present generations effecting a connection with the past' (Alivizatou 48). But there are warnings against homogenization and commodification of living Indigenous knowledges in our capitalist and globalized world. The 'discontents' of such 'minority heritage' due to colonization and Westernization of non-European cultures, as Lowenthal argues, are

manifold: diverse tribal views on aspects and content of heritage might be homogenized into pan-tribal or even pan-Indigenous views vis-a-vis other tribal or mainstream government concerns and political clout; diverse distinct ethnic and regional legacies might become more alike. Generalized abstractions of specific forms of religion and shamanism might become vehicles of cultural nationalism and political struggles. Indeed, even religious concepts and practices might be 'Westernized', popularized, and commodified by Indigenous sellers and New Age buyers of initiation seminars and ceremonies. Confrontation with the mainstream and Western cultures erodes distinctiveness, as Lowenthal explains: 'The more minorities negotiate with sovereign powers and exchange views and tactics among themselves, the more all heritage "takes on a similar Western tinge' (The Heritage Crusade 84-85). Western mainstream trivializes Indigenous legacies by reducing and formularizing their diversity into omnipresent and retrievable icons of Indigeneity, like profiles of famous chiefs, their speeches, historic sites, wise proverbs, traditions, and skills - many of which slip into the realm of stereotypes" (Knopf, 2018, p. 194).

57. Derman, B. B. (2015). Making climate justice: Social natures and political spaces of the anthropocene [Doctoral dissertation, University of Washington].

In their doctoral work, Derman (2015) briefly explains the environmental significance of IQ transmission. The author states "The ICC [Inuit Circumpolar Council] first methodically demonstrates the validity and importance of traditional knowledge (Inuit Qaujimajatuqangit, or IQ) for the maintenance of Inuit culture and livelihood. Crucially, IQ encodes sophisticated understanding of weather, climate, and the ecological conditions they influence, which are in turn described as fundamental to Inuit practices of hunting, travel, and shelter" (p. 79).

58. McCarney, P. (2018). Contexts, conditions and methods conducive to knowledge co-Production: Three case studies involving scientific and community perspectives in Arctic wildlife research [Doctoral Dissertation, York University].

McCarney (2018) notes the importance of appropriately referencing and positioning Inuit knowledge terminology and literary conceptualization in their work. "For the purposes of this dissertation, it was not critical that I develop and adhere to a single term and unified definition for Traditional Knowledge, including distinguishing between terms used and preferred by a variety of scholars, including Indigenous Knowledge, Traditional Ecological Knowledge, or Local Ecological Knowledge. For my purposes, it was more important to focus on understanding key conceptual foundations of Traditional Knowledge, rather than grasping for a concrete definition. To that end, I focus more specifically on Inuit Knowledge as recognition of the culturally specific form of knowledge with which I interacted in this research. Attempts to define Inuit Qaujimajatuqangit (IQ), the Inuktitut term for Inuit Knowledge in Nunavut, have been criticized for being overly narrow, often focusing on IQ as 'either useful to a more nuanced management and development of resources or important to cultural survival and resistance to dominant Western ideology' (Tester & Irniq, 2008, p. 49)" (McCarney, 2018, p. 8).

The author detailing "The Government of Nunavut has worked to develop a unified understanding of IQ and the role of Inuit culture in government operations. A meeting on Traditional Knowledge in Igloolik, Nunavut in 1998 convened by the Nunavut Social Development Council brought together Elders from all Nunavut communities to address this need. Wenzel (2004) quotes an anonymous meeting participant who conceptualized IQ as a way of knowing that encompasses 'all aspects of traditional Inuit culture including values, world-view, language, social organization, knowledge, life skills, perceptions, and expectations'. In Tester & Irniq's (2008) discussion about the foundations of Inuit Knowledge, they refer to IQ as a 'seamless' knowledge system that does not have easily

distinguishable or compartmentalized constituent parts. In using the idea of a ‘seamless’ body of knowledge, Tester & Irniq (2008) adopt Bell’s (2002) definition of IQ as ‘the Inuit way of doing things: the past, present, and future knowledge of Inuit Society’ (p. 3)” (McCarney, 2018, p. 8-9).

McCarney (2018) further discussing "Similarly, Wenzel (2004) documents three primary sources that give more clarity to the meaning of IQ. These sources together describe the essence of IQ as a ‘living technology’ that, while derived from ‘the ancient knowledge of the Inuit’, includes and applies to ‘all aspects of Inuit life’ (Wenzel, 2004, pp. 241-242). Therefore, Indigenous Knowledge in general, and IQ in the current context, shouldn’t be defined in such a way that its meaning is restricted to the environmental aspects of the knowledge, but within an understanding that encompasses all aspects of life (Huntington, 2005; Tester & Irniq, 2008; Wenzel, 2004). This research is not examining IQ as a knowledge system, but rather is concerned with the inclusion of Inuit community perspectives in knowledge co-production processes and therefore recognizes the role of IQ in framing these perspectives” (p. 9).

59. Kelley, K. E. (2009). Policies and practicalities of shipping in changing ice conditions: A case study from Cape Dorset, Nunavut [Doctoral dissertation, Carleton University].

In their dissertation, Kelley (2009) provides much discussion around IQ. They maintain "The concepts of traditional knowledge and, in the Inuit context, Inuit Qaujimajatuqangit (IQ), can be used alongside political ecology as they recognize different perspectives, social networks, and environmental knowledge alongside unique cultural and political practices. Traditional knowledge has been defined as "a cumulative body of knowledge, practice, and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment" (Berkes, 2008: 7). In this context, tradition is considered "cultural continuity transmitted in the form of social attitudes, beliefs, principles, and conventions of behavior and practice derived from historical experience" (Berkes, 2008: 3), and ecological knowledge is considered "knowledge, however acquired, of relationships of living beings with one another and with their environment" (Berkes, 2008: 5). In the Canadian North "aboriginal peoples often refer to their 'knowledge of the land' rather than to ecological knowledge" (Berkes, 2008: 5). Land "includes the living environment" (Berkes, 2008: 5) and is not limited to the physical land, but also the sea ice, and water. Overall, Inuit recognize that humans and the environment should be considered as parts of a whole. They are intrinsically linked and have enormous influences and effects on each other. This research attempts to understand, incorporate and respect this foundational knowledge gained by people through living and connecting with the land" (p. 43 – 44).

Kelley (2009) continues "In the Canadian Arctic, the term IQ was coined by Inuit in the context of the new reality created by the territory of Nunavut (GN, 2006). This term is preferred when discussing all aspects of Inuit knowledge, and way of life. IQ is defined as "encompassing] all aspects of traditional Inuit culture including values, world-views, language, social organizations, knowledge, life skills, perceptions and expectations" (Anonymous 1998:1 as cited in Wenzel 2004: 240). This is, in fact, the guiding principle adopted by the Government of Nunavut (GN), and used by many academics to broadly refer to Inuit knowledge (see Laidler, 2006; Wenzel, 2004), in an effort to incorporate more relevant terminology in relation to Inuit knowledge, practices, and beliefs in governance and research. In the context of my own work and research in Cape Dorset, it was important to recognize and understand what this concept entails. IQ involves respecting traditional and contemporary perspectives, thoughts and actions, decision-making, resourcefulness, and environmental stewardship (Wenzel, 2004). IQ is also considered as a type of conceptual

framework, and remains a changing concept, evolving as Inuit face new challenges and new opportunities (Wenzel, 2004). It has been well established that "Inuit have knowledge of many natural processes occurring in their ecosystem including seasonal cycles, rivers, currents, sea ice, food webs and seasonal foods" (McDonald and Dalby, 1997: 9) and that "Inuit knowledge of ecosystem[s are] founded on respect for the environment and its processes and for the wildlife they share the region with" (McDonald and Dalby, 1997: 9). It is my intention to reflect on such understandings through the study of how Inuit of Cape Dorset understand and use the sea ice. Inuit have developed a deep understanding of their environmental context and surroundings, through their long-term observations, uses, and experiences of the land, water, sea, and ice around their communities and in the places were they used to live before moving to the settlements. Within the limits of the thesis, and given my relatively short exposure to Inuit life and the concept of IQ, I have done my best to incorporate Inuit perspectives and understanding of the sea ice, weather, travel, shipping and sovereignty" (Kelley, 2009, p. 44 – 45).

60. Williamson, C. (2022). Sewing in Arviat: Inuit women's work through stories and parkas [Doctoral dissertation, Carleton University].

In their work, Williamson (2022) touches on various discussions surrounding IQ and IQ mobilization. Notably, they clarify why they prefer to use Inuit knowledge over other terminology. "I use the term Inuit Knowledge rather than Indigenous Knowledge, Traditional Knowledge, or the term Inuit Qaujimajatuqangit (IQ) in this dissertation. Inuit Knowledge is more specific than the terms Indigenous Knowledge and Traditional Knowledge; there is, for some, an implied pastness in the latter term as well.74 The most controversial aspect of my choice is, however, not to use the term IQ. Often translated as "that which is long known by Inuit," IQ is a neologism developed by the Government of Nunavut (GN), and although it is increasingly used interchangeably with Inuit Knowledge, the two concepts should not be conflated (Plate 1.1). The concept of IQ came out of a 1998 Nunavut Sustainable Development Committee meeting to develop a formalized set of principles based on Inuit Knowledge that would guide GN policy and governance in ensuring its operations were culturally relevant.75 IQ is a descriptive and structured way of thinking about and describing the ancient knowledge, ontology and epistemology that remains relevant and embedded in Inuit society today, but it is vital that it not be conflated with the knowledge in and of itself. A risk with the structuring of IQ principles and maligait (natural laws) by the GN is that it has the potential of ossifying Inuit knowledge and masking the particularities of the localized, community-based knowledge found across Nunavut. For these reasons, I am personally resistant to using the term IQ, with the caveat that IQ has served as an empowering and useful concept for many Inuit and Qallunaat scholars, policymakers, activists and others.76" (Williamson, 2022, p. 46 – 47).

Furthermore, Williamson (2022) speaks to how IQ helped Inuit traders adapt. "Qiqut's material wealth and trade strategy required more help and support in the camp context, and the three wives, with their distinct roles, show the differentiation of labour needed for this trade context. According to Arviat historian Mark Kalluak, Inuit traders were successful because "they knew exactly what Inuit would want to buy."59 Natasha Lyons argues that they "provide ideal examples of IQ [Inuit Qaujimajatuqangit]—they found ways to accommodate and thrive in the new foreign trade economy at the same time as sustaining Inuit family values.60" (p. 94).

The author also touches on the lack of discussion around gender and Indigenous knowledge contexts. "This chapter begins by showing how studies about traditional/Indigenous knowledge often fail to acknowledge the gendered nature of that knowledge.1 Of course, traditions are dynamic and ever-changing, and Indigenous knowledge is more than a static

collection of skills and information. I use the term Inuit knowledge in order to reinforce that this is a specific, situated complex of living knowledge and skills (see also the discussion on Inuit knowledge and Inuit Qaujimajatuqangit in Chapter 1, section 9)" (Williamson, 2022, p. 165).

Williamson (2002) does provide some mention of IQ integration within their work. They state "With its intensive period of skill development, the workshop format broke from the traditional method of learning through long periods of observation followed by attempting the task oneself. Nonetheless, these workshops still allowed for the transfer of knowledge and following the Inuit Qaujimajatuqangit principle of pijitsirniq (to serve and provide for family and community.130 Workshops can mitigate, at least to some degree, the generational separation caused by ilisayuq southern-style schooling, which removes intergenerational connections and extended time spent together. Workshops place skilled women in a space with other women who could learn using isumsaqsayuq methods" (p. 219).

61. McGregor, H. E. (2013). Situating Nunavut education with indigenous education in Canada. *Canadian Journal of Education*, *36(2)*, 87-118.

McGregor (2013) distinctively highlights the nature of IQ outside the broad generalization that can be found within Indigenous knowledge discussion. They explain "Like Indigenous peoples around the globe, over the last two decades Inuit have been actively "reclaiming their cultural knowledges and asserting their legitimacy in many spaces" (Dei, 2011b, p. 3). Inuit conceptual paradigms do not include the medicine wheel or the characteristics seen in other Indigenous cultures in Canada. Inuit Qaujimajatuqangit (IQ) is defined by Elders as: "knowledge that has been passed on to us by our ancestors, things that we have always known, things crucial to our survival – patience and resourcefulness" (Bennett & Rowley, 2004, p. xxi). The holistic and inclusive nature of IQ is repeatedly emphasized: "Inuit Qaujimajatuqangit embraces all aspects of traditional Inuit culture, including values, world-view, language, social organization, knowledge, life skills, perceptions and expectations" (Nunavut Social Development Council, 1998). IQ as a "theory of knowledge" has been outlined by Jaypetee Arnakak (2000) working closely with Elders as a set of oral, practical, intergenerational teachings about social and human experience; the knowledge of "country" and interrelationships within the environment; and, holistic, dynamic and cumulative approaches to teaching and learning through observing, doing and experience" (p. 97 – 98)

62. Martin, K. (2009). Stories in a new skin: Approaches to Inuit literature in Nunavut [Doctoral dissertation, thèse de doctorat, University of Toronto].

Martin (2009) touches on the challenge of successfully mobilizing IQ within Southern contexts given the lack of meaningful and significant Western acknowledgement and engagement. They state "Along with Traditional Ecological Knowledge (TEK), Inuit Qaujimajatuqangit is attracting more and more interest in the South, especially as wildlife management officials have to negotiate with Inuit assessments and protocols, which are often radically different from their own.147 In 2003, a book entitled In the Words of Elders: Aboriginal Cultures in Transition made important steps toward the recognition of elders as scholars, and discussed the importance of "showing a new respect for the thought of Aboriginal cultural, spiritual, artistic, and political leaders . . . [and for] providing a greater legitimacy in academic settings for the teachings of those leaders" (Kulchyski, McCaskill, and Newhouse xi). However, as the sled dog controversy demonstrates, many Southerners still do not have a great deal of confidence in Inuit as scholars of their own reality. IQ may be tolerated for its romantic appeal, but it has yet to be taken seriously as an intellectual tradition" (p. 118).

63. Johnston, P. (2014). Constructing a bridge between two cultures: How “Inuit Qaujimajatuqangit” is essential to addressing the “modern” child welfare system in Nunavut. *Canadian Social Work Review*, *31*(2), 267–287.

Johnston (2014) challenges the perspective of IQ being only of historical significance. They state “IQ is not a "museum piece with limited use," but rather a means for the past to inform the present and future, as well as the "critical underpinning of Inuit worldview" (Tagalik, 2009a, p. 2)” (Johnston, 2014, p. 269).

64. McAuley, A., & Walton, F. (2011). Decolonizing cyberspace: Online support for the Nunavut MEd. *The International Review of Research in Open and Distributed Learning*, *12(4)*, 17-34.
McAuley and Walton (2011) does a brief examination of the IQ principles. They relay "…six of the eight Inuit Qaujimajatuqangit principles are relational, that is, they focus on connections between individuals and their sociocultural, psychosocial, and physical environments” (p. 21). They continue, “Given that the principles are as much “a living technology . . . a means of organizing family and society into coherent wholes” (Arnakak, 2001) as they are a fixed set of traditional values, allowing the non-Inuit lead instructors to predefine their roles in the online environment would have been inappropriate at best” (p. 23).

65. Henshaw, A. (2006). Pausing along the journey: Learning landscapes, environmental change, and toponymy amongst the Sikusilarmiut. *Arctic Anthropology*, *43(1)*, 52-66.
As similar to other authors, Henshaw (2006) conveys “…Inuit Qaujimajatuqangit (IQ) or Inuit ""traditional"" knowledge that ""encompasses all aspects of traditional Inuit culture including values, world view, language, social organization, knowledge, life skills, perceptions and explanation” (Department of Culture, Language, Elder and Youth 2005)” (p. 53).

66. Healy, G., & Tagak Sr, A. (2014). Piliriqatigiinniq ‘working in a collaborative way for the common good’: a perspective on the space where health research methodology and Inuit epistemology come together. *International Journal of Critical Indigenous Studies*, *7(1)*, 1-14.
Healy and Tagak (2014, explores the holistic nature of IQ in their discussion. They relay “Iqqaumaqatigiinniq is the Inuit concept of all thoughts, or all knowing, coming into one. It is often referred to as part of the holistic Indigenous worldview. […] How are these ideas coming together? What do they offer to the Inuit community? What do they offer to the community of colleagues, collaborators, partners and participants? Placing the ideas in the context of the literature, the experiences of others and the experiences of the community is part of finding meaning and understanding” (p. 8).

67. Johnston, P. (2011). Stuck in the Ways of the South: How Meritocracy, Bureaucracy, and a One-Size-Fits-All Approach to Child Welfare fails Nunavut’s Children. *First Peoples Child & Family Review*, *6(1)*, 66–82. https://doi.org/10.7202/1068897ar
Johnston (2011) describes IQ as reasoning that leads into organized wholeness. They maintain "Fortunately, a road map to resolving issues within Nunavut’s child welfare system has already been drawn. Inuit culture and traditional knowledge can provide the direction, for Inuit epistemology or the theory of Inuit Qaujimajatuqangit (IQ), has been described as “a means of rationalizing thought and action, a means of organizing tasks and resources, [and] a means of organizing family and society into coherent wholes,” (Arnakak, 2001)” (Johnston, 2011, p. 69).

68. Grimwood, B. S. R. (2012). Picturing the Thelon: natures, ethics, and travel within an Arctic riverscape [Doctoral dissertation, Carleton University].

Building from other authors and perspectives, Grimwood (2012) provide some insight into IQ and relationship descriptions. They explain "Inuit knowledge, or Inuit Qaujimajatuqanginnut (IQ), has been described as "the Inuit way of doing things: the past, present and future knowledge, experience and values of Inuit society" (Inuit Qaujimajatuqanginnut Task Force, 2002 as cited in Grimwood, 2012, p. 200). They continue "Tester and Irniq (2008) link such perspectives in a discussion of Inuit knowledge, or Inuit Qaujimajatuqangit (IQ)11. As a variant to holistic metaphors of Indigenous knowledge, IQ is a "seamless" unity with no discernable parts and where everything is related to everything else in such a way that nothing can stand alone, even in the interest of gaining an appreciation of the whole" (Tester & Irniq, 2008, p. 49). For Tester and Irniq, IQ is fundamentally about relationships: for example, between factual knowledge and uses of the environment; culturally informed values, norms, and behaviours; and culturally based cosmology founded upon the explanations and guidance derived from observation, experience, and instruction. The definition and application of IQ in Nunavut government and Land Claim contexts demonstrates its adaptability and fluidity (Tester & Irniq, 2008)" (Grimwood, 2012, p. 88-89).

69. McMillan, J., & Sheppard, L. (2020). Unsettling ground: Arctic urbanism on fluid geology. *Etudes Inuit*, *44(1/2)*, 183–206. https://doi.org/10.7202/1081802ar

Uniquely, McMillan and Sheppard (2020) explore IQ as applied to building and land change. The authors note "Traditional dwelling on the changing ground has been maintained by adapting building practices based on generations of shared knowledge. Inuit Qaujimajatuqangit, or IQ, describes the deep body of ancestral knowledge passed down through generations, rooted in understanding, and respecting the uniqueness of weather, climate, and living with other species (Kalluak 2016, 43). IQ frames a world view around Nuna by four maligarjuat (translated literally as 'big things that must be followed'): maintaining harmony in communities and in the mind; working for the common good; being respectful of all living things; and continuously planning for the future in the changing environment (Karetak and Tester 2017, 9–15). For Inuit, these ethical principles are the foundations for living together and collective adaptation" (McMillan & Sheppard, 2020, p. 197 – 198). The authors further add "Today, generational and seasonal cycles still drive the social and economic relationships of collective spaces. The principle of aajiiqatigiingniq, or collective work to address challenges, is the principle used by Inuit to adapt as a community to their environment. Elder Rhoda Karetak describes the principle as an important part of healing the brutal legacy of colonization by all who work and research in Inuit Nunangat (Karetak 2017, 200–201). Readily visible in Arviat is a local building practice that works between the fluid geology and constructed stability of housing to weave together new connections between the buildings of the town and the inhabited terrain of Unsettling Ground 199 the community. Faced with the accelerating impacts of climate change and the inherited instability of this form of public housing, the unique architecture informed by the principles of IQ addresses the complex rates of change in the environment. Inuit are themselves negotiating the dislocation and trauma of living between two worlds: that of the modern Canadian town and traditional life on the land (Collignon 2006, 207). The many residents of Arviat I spoke with did not consider their local building as a form of climate adaptation, but rather as building in "a good way", namely, attuned to their community needs and the shifting land" (McMillan & Sheppard, 2020, p. 198 – 199).

70. Yunes, E. E. (2019). Decolonizing Nunavut's art market [Doctoral Dissertation, York University].

Yunes (2019) relays that "Inuit Qaujimajatuqangit is a living technology incorporated into every aspect of Inuit life. As Tagalik says, "For Inuit, being grounded in Inuit Qaujimajatuqangit supports personal wellness, but also contributes to a collective cultural

sense of health and wellness which has sustained Inuit over generations". Inuit Qaujimajatuqangit is the foundation of adaptation and innovation and is interwoven with Inuit futurisms through its incorporation with emerging technologies, policies, and communications" (p. 6). They maintain "Inuit Qaujimajatuqangit positions communities first; creates strong, robust cultural connections; and places the power of decision making in collaboration and discussion. As Inuit community leader Joe Karetak and geographer and cultural researcher Frank Tester describe in Inuit Qaujimajatuqangit: What Inuit Have Always Known To Be True, "In Inuit culture the application of principles is holistic, occurring through an integrated and mutually supporting system of beliefs, cultural practices and principle-based social processes... It engages the environment, universe and spiritual realms as considerations of equal importance" (Karetak Loc. 369–371)" (Yunes, 2019, p. 6).

The authors continue "Inuit Qaujimajatuqangit is transmitted through storytelling and exemplifies a path to living a collaborative and adaptive life built through the experiential knowledge of Arctic peoples spanning hundreds of years. The principles are as follows:

1. Working for the common good;
2. Respecting all living things;
3. Maintaining harmony and balance; and
4. Continually planning and preparing for the future.

Inuit Qaujimajatuqangit is achieved through the following societal values:

1. Tunnganarniq (fostering good spirits by being open, welcoming, and inclusive);
2. Pijitsirniq (serving one's family/community);
3. Aajiiqatigiinniq (decision making through discussion and consensus);
4. Pilimmaksarniq/Pijariuqsarniq (developing one's knowledge and skills);
5. Piliriqatigiinniq/Ikajuqtigiinniq (collaborating for the common good);
6. Qanuqtuurniq (problem solving through creativity and resourcefulness);
7. Avatimik Kamattiarniq/Avatittinnik Kamatsiarniq (stewarding the ecosystem); and
8. Inuuqatigiitsiarniq (respecting others and relationships and caring for people) (Inuit Societal Values, Tagalik 2)" (Yunes, 2019, p. 6 – 7).

71. Gold, S. T., O'Neil, J., & Van Wagner, V. (2005). Examining midwifery-based options to improve continuity of maternity care services in remote Nunavut communities.

Gold et al. (2005) discuss IQ in terms of its complex, evolving nature and in relation to maternity care. "Beginning with Nunavummiut requires that maternity care talk be informed by Inuit Qaujumajatuqanjut. Inuit Qaujumajatuqanjut is most simply defined as Inuit traditional knowledge, expertise, and experience; however, this definition fails to capture the breadth of the term as well as the evolving, fluid quality of this knowledge, expertise, and experience. Inuit Qaujumajatuqanjut is too often reduced to the ways in which things were done long ago. This treatment risks the oversimplification of its incorporation into maternity care governance through the gathering of stories about birthing on the land — the tools and knowledge that were used. While Inuit Qaujumajatuqanjut certainly includes these ways, it is an ever-evolving, all-encompassing approach to life that is based in Inuit history and experiences of living on the land, colonialism, and resulting settlement of communities and the imposition of Western European religions and Southern Canadian healthcare. One elder suggests that to appreciate the evolving nature of Inuit Qaujumajatuqanjut we should think of it as Inuit experiences rather than traditional knowledge" (Gold et al., 2005, p. 17).

72. Franke. A., Berteaux, D., Ferguson, S., Gauthier, G., Hotson, C., Marcoux. M., Martin. Z., Sahanatien, V., Statham, S., Szor, G., Tallman, R. (2018). Climate change impacts on

managed wildlife. In *From science to policy in the Eastern Canadian Arctic: An integrated regional impact study (IRIS) of climate change and modernization*. *ArcticNet*, 417–457.
"Of the 13 principles that comprise IQ, five explicitly relate to hunting and/or stewardship of wildlife. The principle of:

'Surattittailimaniq' indicates that one must hunt only what is necessary and avoid waste;

'Iliijaaqaqtailiniq' requires that harvesting must avoid cruelty to animals. Similarly,

'Sirliqsaaqtittittailiniq' requires that harvesters avoid causing unnecessary harm to wildlife. The principle of

'Akiraqtuutijariaqanginniq' explicitly recognises that "the animals and land cannot be owned", and

'Nirjutiit Pijjutigillugit Ikpigusuttiarniq' obliges harvesters and others to treat all wildlife with respect."

73. Gadoua, MP. (2013). Integrating research and Inuit knowledge: Critical approaches to archeology in the Canadian Arctic, McGill University.
Gadoua (2013) briefly mentions the influence of past on the present and future. They state "IQ is a concrete example of how Inuit use their past collectively and institutionally, for present needs and future goals" (p. 137).

74. Thompson, C. J. (2008). Inside school administration in Nunavut: Four women's stories [Doctoral dissertation, University of Western Ontario].
Thompson (2008) describes IQ key principles which are applied these to leadership in detail. They explain "As identified in Inuit Qaujimajatuqangit (1Q), the guiding principles of Inuit leadership were, and continue to be:

> **Pijitsirarniq; *Concept of Serving***
> The concept of serving is central to the Inuit style of leadership as is the measure of the maturity and wisdom of an Inuk. Key here is the understanding that each person has a contribution to make and is a valued contributor to his/her community. Students will be expected to demonstrate this kind of leadership and commitment to serving the common good.
>
> ***Aajiiqatigiingniq:* Consensus Decision-Making**
> The concept of consensus decision-making relies on strong communication skills and a strong belief in shared goals. All students are expected to become contributing members of their community and to participate actively in building the strength of Inuit in Nunavut. Being able to think and act collaboratively, to assist with the development of shared understandings, to resolve personal conflict in consensus-building ways, and to consult respecting various perspectives and worldviews, are expectations that cross all curriculum areas.
>
> ***Piummaksarniq:* Concept of Skills and Knowledge Acquisition**
> The concept of skills and knowledge acquisition and capacity building is central to the success of Inuit in a harsh environment. Building personal capacity in Inuit ways of knowing and doing are key expectations for students. Demonstrating empowerment to lead a successful and productive life, that is respectful of all, is a powerful end goal of our education system.
>
> ***Qanuqtuurungnarniq:* Concept of Being Resourceful to Solve Problems**
> The concept of being resourceful to solve problems through innovative and

creative use of resources and demonstrating adaptability and flexibility in response to a rapidly changing world, are strengths all our students should develop, Resourcefulness should be demonstrated in all learning and also thinking that seeks to improve the context in which Inuit live.

Pitiriqatigiingniq: **Concept of Collaborative Relationship or Working Together for a Common Purpose**
The concept of developing collaborative relationships and working together for a common purpose is an essential Inuit belief that stresses the importance of the group over the individual should pervade all our teaching. Expectations for students will reflect working for the common good, collaboration, shared leadership and volunteerism. Piliriqatigiingniq also sets expectations for supportive behaviour development, strong relationship-building and consensus building.

Avatimik Kamattiarniq: **Concept of Environmental Stewardship**
The concept of environmental stewardship stresses the key relationship Inuit have with their environment and with the world in which they live. Students will be expected to articulate respect for this mutually interdependent relationship and to demonstrate responsible behaviours that seek to improve and protect the relationship in ways that meet global challenges to environmental wellness. (GN, Department of Human Resources, 2006, pp. 2-3, holding in original, italics added)" (Thompson, 2008, p. 43 – 45).

75. Rosen, A. (2013). Inuit art, knowledge and "staying power": Perspectives from Pangnirtung. [Master's thesis, University of Manitoba].
Rosen (2013) elaborates more on the concept of 'process' within IQ knowledge and the difficulty found in defining it. They discuss "Two elements of this understanding are important, the emphasis on process ("doing"), and a way of thinking about time that is indicated in the synthesis of past, present and future. IQ is not just a product or body of knowledge, but a way or process. In being "traditional", it is not fixed, or only relevant to bygone days. Similarly, to the idea of IK (Indigenous Knowledge) in general, IQ is not easily defined, nor should it be. Tester and Irniq (2008, p.49) suggest the term "avaluqanngittuq 'that which has no circle or border around it'" as descriptive of the way IQ is all encompassing or "seamless," and argue that it is dangerous to construe the meaning of IQ narrowly" (Rosen, 2013, p. 8).

76. Brown, A. D. (2016). Collaborative management, differential discourse, and youth engagement; A case study of Auyuittuq National Park, Nunavut [Master's thesis, University of Manitoba].
Brown (2016) focuses more on the IQ being societal laws that guide behaviour and influence relationships. They highlight "Inuit Qaujimajatuqangit, which often translates to "Inuit Traditional Knowledge" or "The Inuit Way of Knowing" outlines a series of eight cultural values through which Inuit society weighs and measures individual behavior. These laws include (Department of Nunavut Education 2007:32-35):

- Inuuqatigiitsiarniq – showing respect and a caring attitude towards others.
- Tunnganarniq – being welcoming to others, open in communication, and inclusive in the ways of interacting.
- Piliriqatigiinqniq – developing collaborative relationships.
- Avatittinnik Kamattiarniq – environmental stewardship.
- Pilimmaksarniq – the concept of skills and knowledge acquisition.
- Qanuqtuurunnarniq – being resourceful to solve problems.

- Aajiqatigiingniq – consensus decision-making.
- Pijitsirniq – the concept of serving.

Adhering to these cultural values implies that one is willing to place the common good ahead of their own self-interests. In doing so, individuals demonstrate social responsibility, humility, respect for others, and a commitment to maintaining social harmony (Department of Nunavut Education 2007, 28-29)" (p. 22). Brown (2016) further adding "(…) Elders are regarded as the keepers of Inuit Qaujimajatuqangit (IQ), language, culture, and knowledge" (Brown, 2016, p. 23).

Brown (2016) also touches on IQ transmission characteristics. "Such lessons served to pass cultural information onto successive generations through observational, experiential, and participatory learning methods. This process ensured that upon reaching puberty, each individual would be fully capable of, and therefore expected to meaningfully contribute to the community's physical and social needs (Condon and Stern 1993). Thus, by age twelve or thirteen, an individual would be expected to complete all tasks socially ascribed to their gender (Condon and Stern 1993). In short, childhood was characterized as a period of experimental learning, while adulthood required tangible action" (p. 73).

77. Jeannotte, M. S. (2017). Caretakers of the earth: Integrating Canadian Aboriginal perspectives on culture and sustainability into local plans. *International Journal of Cultural Policy*, *23(2)*, 199-213.

Jeannotte (2017) maintains "Inuit Qaujimajatuqangit helps us to better understand and adapt to today's changes and challenges. It recognises that everything is related to everything else, in such a way that nothing can stand alone. This is actually the pulse of our sustainability'. Inuit Qaujimajatuqangit also guided the process by which the plan was developed, such that 'opportunities for respectful dialogue, discussion, questioning, and listening revolved around these concepts" (pp. 205-206).

78. Meis Mason, A. H. (2015). Canadian Inuit use of caribou and Swedish Sámi use of reindeer in entrepreneurship [Doctoral Dissertation, University of Canterbury].

Meis Mason (2015) includes Arnakak and the IQ Task Force's definition of IQ in their work. "IQ is more than traditional knowledge or wisdom; it is about process (Arnakak, 2001). According to the First Annual Report of the Inuit Qaujimajatuqanginnut Task Force (2002, p. 7),

"It is more properly defined as, The Inuit way of doing things: the past, present and future knowledge, experience and values of Inuit Society." This definition makes clear that it is the combining of the traditional knowledge, experience, and values of Inuit society, along with the present Inuit knowledge, experience and values that prepare the way for future knowledge, experience and values." (p. 137)

They also include some discussion on interpersonal elements. "In Inuit culture, valued personal characteristics are self-reliance and the ability to meet life's challenges with innovation, resourcefulness and perseverance as well as patience and the ability to accept reality (Pauktuutit, 2006a)" (Meis Mason, 2015, p. 137).

79. Ferrazzi, P., Tagalik, S., Christie, P., Karetak, J., Baker, K., & Angalik, L. (2019). Aajiiqatigiingniq : An Inuit consensus methodology in qualitative health research. *International Journal of Qualitative Methods*, *18*. https://doi.org/10.1177/1609406919894796

Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019) add to the IQ and traditional knowledge discussion. They state "In this article, the authors use the phrase “cultural knowledge” rather than “traditional knowledge” as the shorthand English-language reference to IQ. While the latter is used frequently in scientific literature, many Inuit elders are not comfortable with this terminology as potentially ignoring the very dynamic and adaptive nature of IQ. The phrase “cultural knowledge” is thought to better capture the need to include contemporary and future knowledge as epistemological conceptions embedded in IQ” (p. 3).

80. Metuzals, J., & Hird, M. J. (2018). “The disease that knowledge must cure”?: Sites of uncertainty in Arctic development. *Arctic Yearbook 2018*, *57*.
Metuzals and Hird (2018) discuss IQ in a way that has not been looked at closely much in literature. They connect it to being comfortable with the unknown. The authors state “Inuit ways of knowing (which means acknowledging and working with uncertainty)” (p. 8). Furthering adding, “Cameron emphasizes that responding to uncertainty in this way is based on an epistemology that does not imply a need to master a set of circumstances. Rather, it reflects a patient engagement with the future and an acceptance of the confusion, and limits that necessarily accompanies living within, and as part of, permanently changing (and therefore uncertain) environments” (Metuzals and Hird, 2018, p. 8).

81. Schmidt, L. A., & Poole, K. L. (Eds.). (2020). Adaptive shyness: Multiple perspectives on behavior and development. Springer Nature.
Schmidt and Poole (2020) focus on piliriqatigiingniq as being a primary IQ principle. They maintain, “Arguably, the central teaching of Inuit qaujimajatuqangit (the concept of intelligent or adaptive qualities of thinking and behavior) which predominates across Inuit Nunangat is piliriqatigiingniq, which emphasizes that Inuit people build collaborative networks to work toward a shared, overarching goal that benefits the common good. This value stresses the primacy of the community over that of individual interests” (p. 244).

82. Weber, B. (2013). The politics of development in Nunavut: Land claims, Arctic urbanization, and geopolitics. [Doctoral dissertation, University of Alberta].
Weber (2013) acknowledges IQ importance to current times. They content “IQ represents an effort to recognise and harvest the great continuities and strengths of Inuit culture in the context of the 21st century with its mad scramble for resources in the ‘pristine’ Arctic" (p. 215).

Appendix 12. Important Inuit concepts appearing in the research literature

Concept	English paraphrasing	In-text Context/Explanation	Appears in
Aajiiqatigiingniq/Pitiakatigiiklotik	being respectful and considerate to resolve important matters	The Government of Nunavut (2013) summarizes "…Aajiiqatigiingniq/Pitiakatigiiklotik, which means that people who wish to resolve important matters or any differences of interest must treat each other with respect and discuss them in a meaningful way, keeping in mind that just because a person is silent does not necessarily mean he or she agrees…" (p. 21). They identify this as one of many guiding principles and concepts of Inuit Qaujimajatuqangit that apply under the Wildlife Act.	Government of Nunavut (2013)
aajiiqatigiinniq	the Inuit way of decision-making in which decisions are made through direct, face-to-face communications	Scott Clark Consulting Inc. (2004) relays "Aajiiqatigiinniq: The Inuit way of decision-making. • This principle applies to everyone at all times. • Decisions should be made through meetings and direct communication. • Important communications and decisions will not be made by e-mail. • Inuktitut will be anyone's choice of language at any time" (p. 63). The record identifies aajiiqatigiinniq as a key IQ concept in the Terms of Reference of the Department of Justice Working Group, Nunavut Department of Justice, Inuit Qaujimajatuqangit. It is defined as a "category of action" in mobilizing IQ within Nunavut Justice (p. 9). The Municipal Corporation of the City of Iqaluit (2014) describes "ᐊᔩᖅᑲᑎᒌᖕᓂᖅ (aajiiqatigiinniq) - the way of decision-making where decisions are made and	Scott Clark Consulting Inc. (2004); The Municipal Corporation of the City of Iqaluit, (2014)

		important information is relayed through face-to-face communications" (p. 4).	
Aangainniq	awareness, clear purpose	The Government of Nunavut (2013) notes "The following [term was] approved by [Inuit Uqausinginnik Taiguusiliuqtiit] to build on the current IQ Guiding Principles when communicating about devolution: … • Aangainniq (awareness, clear purpose)…" (p. 53). They state that this is one of many guiding principles and concepts of Inuit Qaujimajatuqangit that apply under the Wildlife Act.	Government of Nunavut (2013)
aaqiksuiqatigiit	fixing together	Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019) convey "That is, *aajiiqatigiingniq* is an approach for restoring harmony to the individual and group when faced with a threat of disruption. The purpose of the *aajiiqatigiingniq* system is to ensure *inuutsiangniq*, or wellness, has continual support from the community. Inherent in the process are the concepts of applying a collective wisdom to address a situation and current needs and *isumaliuqatijiitsinirningma*—or making decisions together in the Inuit way. It also includes *aaqiksuiqatigiit* (fixing together), (talking together), and *aivaqatigiit* (arguing together/discussing heavily)" (Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik, 2019, p. 7). Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik's (2019) work uses the concept of aaqiksuiqatigiit as a component of aajiiqatigiingniq in relation to consensus making and how one works together with Inuit. This being involves a collaborative process and includes "fixing together" when issues do arise. This concept is well supported through the researchers' work with Inuit Elders.	Ferazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019)

Aaqqiumatitsiniq	keeping order in place	Scott Clark Consulting Inc. (2004) defines "Aaqqiumatitsiniq: To keep order in place • As for the workplace, the supervisor or manager should be attentive to the wishes and concerns of the workers and employees" (p. 64). The record identifies Aaqqiumatitsiniq as a key IQ concept in the Terms of Reference of the Department of Justice Working Group, Nunavut Department of Justice, Inuit Qaujimajatuqangit. It is described as a "category of action" in mobilizing IQ within Nunavut Justice (p. 9).	Scott Clark Consulting Inc. (2004)
aivaqatigiit	arguing together/discussing heavily	Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019) explains "That is, *aajiiqatigiingniq* is an approach for restoring harmony to the individual and group when faced a threat of disruption. The purpose of the *aajiiqatigiingniq* system is to ensure *inuutsiangniq*, or wellness, has continual support from the community. Inherent in the process are the concepts of applying a collective wisdom to address a situation and current needs and *isumaliuqatijiitsinirningma*—or making decisions together in the Inuit way. It also includes *aaqiksuiqatigiit* (fixing together), *uqamanggatigiit* (talking together), and *aivaqatigiit* (arguing together/discussing heavily)" (p. 7). Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019) uses aivaqatigiit as a component of aajiiqatigiingniq in relation to consensus making and how one works together with Inuit. This involves a collaborative process that includes "arguing together/discussing heavily" when issues do arise. This concept is well supported through the researchers work with Inuit elders.	Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019)

Ajuqsatittinginniq piviqarialinnik	support for growth, development and success	Scott Clark Consulting Inc. (2004) defines "Ajuqsatittinginniq piviqarialinnik: To support a place for growth, development and success" (p. 65). The record identifies Ajuqsatittinginniq piviqarialinnik as a key IQ concept in the Terms of Reference of the Department of Justice Working Group, Nunavut Department of Justice, Inuit Qaujimajatuqangit. It is described as a "category of action" in mobilizing IQ within Nunavut Justice (p. 9). The Municipal Corporation of the City of Iqaluit, (2014) outlines "ᐊᔪᖅᓴᑎᑦᑎᙱᓐᓂᖅ ᐱᕕᖃᕆᐊᓕᓐᓂᒃ (ajuqsatittinginniq piviqarialinnik) "to support a place for growth, development and success" (p. 4). They continue, "In the creation of this plan, these Inuit Qaujimajatuqangit concepts have been a guiding force. Opportunities for respectful dialogue, discussion, questioning, and listening revolved around these concepts. We purposefully and continually created safe, non-scary gatherings where sustainability and the future of our community could be discussed across cultures and generations" (p. 4).	Scott Clark Consulting Inc. (2004); The Municipal Corporation of the City of Iqaluit, (2014)
Akiraqtuutijariaqanginniq Nirjutiit Pijjutigillugit/Hangiaguikluhi Nekyutit InuupPiutigingitait	wildlife and habitat can not be owned and therefore shouldn't be disputed over	The Government of Nunavut (2013) relays "…Akiraqtuutijariaqanginniq Nirjutiit Pijjutigillugit/Hangiaguikluhi Nekyutit InuupPiutigingitait, which means that wildlife and habitat are not possessions and so hunters should avoid disputes over the wildlife they harvest or the areas in which they harvest them…" (p. 22). They convey that this is one of many guiding principles and concepts of Inuit Qaujimajatuqangit that apply under the Wildlife Act.	Government of Nunavut (2013)

Angiqatigiinniq	proceeding forward with clear understanding	Scott Clark Consulting Inc. (2004) describes “Angiqatigiinniq: The tool for proceeding forward with clear understanding.” (p. 65). The project lists Angiqatigiinniq as a key IQ concept in the Terms of Reference of the Department of Justice Working Group, Nunavut Department of Justice, Inuit Qaujimajatuqangit. It is conveyed as a “category of action” in mobilizing IQ within Nunavut Justice (p. 9).	Scott Clark Consulting Inc. (2004)
avatittinnik kamattiarnik	environmental stewardship	Scott Clark Consulting Inc. (2004) describes “Avatittinnik Kamattiarnik: The concept of environmental stewardship. • We must apply this principle because of its value to our personal and cultural survival. • This principle helps us to ground ourselves in the strengths of our ancestors. • It reflects the unique aspects of our culture: e.g. the Inuit ability to survive in the extreme Artic environment. • Respecting Inuit practice and relationships with wildlife and the natural environment. Need to collect this information and knowledge and to develop an information source” (p. 63). The Municipal Corporation of the City of Iqaluit, (2014) describes “ᐊᕙᑎᑦᑎᓐᓂᒃ ᑲᒪᑦᓯᐊᕐᓂᖅ (avatittinnik kamattiarnik) “environmental stewardship” (p. 4).	The Municipal Corporation of the City of Iqaluit, (2014)
Avatimik Kamattiarniq/Amiginik Avatimik	nature is interconnected and people must treat it holistically and with respect	The Government of Nunavut (2013) explains “…Avatimik Kamattiarniq/Amiginik Avatimik, which means that people are stewards of the environment and must treat all of nature holistically and with respect, because humans, wildlife and habitat are inter-connected and each person's actions and	Government of Nunavut (2013)

		intentions towards everything else have consequences, for good or ill…" (p. 21). They note that this is one of many guiding principles and concepts of Inuit Qaujimajatuqangit that apply under the Wildlife Act.	
Elagikatigiyut	balance and interconnectedness	Romain (2016) describes *Elagikatigiyut* as one of three IQ values, including *Piliriqatigiingniq* (collaboration) and *Pijitsirniq/Pikutigiktot* (sharing and reciprocity), that guides Inuit wellness.	Romain (2016)
Ikajuqatigiinniq	cooperating to help each other/assistance and cooperation without barriers	Scott Clark Consulting Inc. (2004) describes "Ikajuqatigiinniq: Assistance and cooperation when it is called for, in any shape or form, without barriers" (p 64). The record identifies *Ikajuqatigiinniq* as a key IQ concept in the Terms of Reference of the Department of Justice Working Group, Nunavut Department of Justice, Inuit Qaujimajatuqangit. It is described as a "category of action" in mobilizing IQ within Nunavut Justice (p. 9). With a slightly different spelling for ikajuqatigiinniq, Ferrazzi, Tagalik, Christie, Karetak, Baker, and Angalik (2019) states "Our findings suggest the discourse used in ajiiqatigiingniq is characterized by a slow, narrative, respectful communication style in keeping with the Inuit tradition of ikajuqtigiinniq or cooperating to help each other. The mode of decision-making in this sense avoids inutuujjingginniq—being individualistic— but rather relies on the collective wisdom, or silatuuniq" (McGrath, 2011, as cited in Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik, 2019, p. 7). Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019) describes *ikajuqatigiinniq* as a component of	Scott Clark Consulting Inc. (2004); Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019); The Municipal Corporation of the City of Iqaluit, (2014) (2014)

		aajiiqatigiingniq in relation to consensus making and how one works together with Inuit. This involves a collaborative process that includes being "cooperative to help each other". This concept is well supported through the researchers work with Inuit elders. Municipal Corporation of the City of Iqaluit (2014) adds further "ᐃᑲᔪᖅᑲᑎᒌᓐᓂᖅ (ikajuqatigiinniq) "offering assistance and cooperation when it is called for, in any shape or form, without barriers" (p. 4).	
Ikpigusuttiarniq Nirjutilimaanik/Pitiaklugit nekyutit	wildlife should be treated respectfully	The Government of Nunavut (2013) speaks to "…Ikpigusuttiarniq Nirjutilimaanik/Pitiaklugit nekyutit, which means that all wildlife should be treated respectfully…" (p. 22). They identify that this is one of many guiding principles and concepts of Inuit Qaujimajatuqangit that apply under the Wildlife Act.	Government of Nunavut (2013)
Ilainnasiunnginniq	sensitivity to difference	Scott Clark Consulting Inc. (2004) discusses "Ilainnasiunnginniq: This principle reminds us to be sensitive to all people because we are uniquely different from one another. Our grandparents and parents have taught us that there are individuals who are dominant and others who are dominated, but that we should treat them equally" (p. 64). The work lists *Ilainnasiunnginniq* as a key IQ concept in the Terms of Reference of the Department of Justice Working Group, Nunavut Department of Justice, Inuit Qaujimajatuqangit. It is described as a "category of action" in mobilizing IQ within Nunavut Justice (p. 9).	Scott Clark Consulting Inc. (2004)
Ilajjuttigiinniq	encouragement of others	Scott Clark Consulting Inc. (2004) explains "Ilajjuttigiinniq: To encourage others is important for their goodwill. • I encourage you to do well in whatever you are doing.	Scott Clark Consulting Inc. (2004)

		• I hope you will be successful in your hunt. • The teaching is -putting down an individual has a consequence to the greater whole. As the example is used with dogs in a traditional sense. One dog that is not encouraged and supported equally detaches from the rest of the team and therefore does not perform the expectations" (p. 64). The report identifies *Ilajjuttigiinniq* as a key IQ concept in the Terms of Reference of the Department of Justice Working Group, Nunavut Department of Justice, Inuit Qaujimajatuqangit. It is described as a "category of action" in mobilizing IQ within Nunavut Justice (p. 9).	
Iliijaqsuittailiniq/Kimaitailinik	even though wild animals are harvested for food and other purposes, malice towards them is prohibited	The Government of Nunavut (2013) mentions "Iliijaqsuittailiniq/Kimaitailinik, which means that, even though wild animals are harvested for food and other purposes, malice towards them is prohibited" (p. 22). They identify that this is one of many guiding principles and concepts of Inuit Qaujimajatuqangit that apply under the Wildlife Act.	Government of Nunavut (2013)
inummariktituuqtuq	reflective of Inuit core values and beliefs	Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019) maintains "The process also assumes that participants rely on naalangniq— respectful listening in the right relationship—and that they participate in a spirit that is inummariktituuqtuq or reflective of Inuit core values and beliefs" (McGrath, 2011 as cited in Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik, 2019, p.7). The researchers use *inummariktituuqtuq* as a component of *aajiiqatigiingniq* in relation to consensus making and how one works together with Inuit. This being involved with the collaborative process and inclusive of "reflective of Inuit core	Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019)

		values and beliefs" when issues do arise. This concept is well supported through the researchers work with Inuit Elders.	
inunnguiniq	making a human being	Tagalik (2012) advises "To become "able" means that you are a person grounded in these principles. You are made to become "able" through the process of inunnguiniq – making a human being. This process is designed to stabilize an individual and also a culture/society by situating both within the continuum frameworks. It assumes a high level of proficiency in what Inuit describe as "life matters" or becoming a capable and contributing human being" (p. 2).	Tagalik (2012)
Inuuqatigiittiarniq	respecting others, building positive relationships and caring for others	Heay and Tagak (2014) conveys that "Inuuqatigiittiarniq is the Inuit concept of respecting others, building positive relationships and caring for others. When each person considers their relationship to people and behave in ways that build this relationship, they build strength both in themselves and in others, and together as a community (Karetak 2013). This is foundational to Inuit ways of being" (p. 5).	Healy & Tagak (2014)
inuutsiangniq	Wellness	Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019) explains "The purpose of the aajiiqatigiingniq system is to ensure inuutsiangniq, or wellness, has continual support from the community (p. 7).	Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019)
Ippigusuttiarniq	caring for others	Scott Clark Consulting Inc. (2004) details "Ippigusuttiarniq: Caring for others and taking their situations and who they are into account" (p. 64). The document lists *Ippigusuttiarniq* as a key IQ concept in the Terms of Reference of the Department of Justice Working Group, Nunavut Department of Justice, Inuit Qaujimajatuqangit. It is described as a "category of action" in mobilizing IQ within Nunavut Justice (p. 9).	Scott Clark Consulting Inc. (2004)
Iqqaqtuijjiqattariaqannginniq	restraint on personal judgment	Scott Clark Consulting Inc. (2004) states "Iqqaqtuijjiqattariaqannginniq: We are not to judge other people.	Scott Clark Consulting Inc. (2004)

		• Our ancestors taught us never to be judgmental towards someone's past that we were never part of. If a new couple were partnered, the husband was totally discouraged from judging his wife's past. If the wife happened to express her past activities to her new partner, which he doesn't approve of, he is not to keep bringing it up" (p. 64). The researchers recognizes *Iqqaqtuijjiqattariaqannginniq* as a key IQ concept in the Terms of Reference of the Department of Justice Working Group, Nunavut Department of Justice, Inuit Qaujimajatuqangit. It is described as a "category of action" in mobilizing IQ within Nunavut Justice (p. 9).	
iqqaqqaukkaringniq	dynamic system that links an Inuit philosophy and action in the changing contemporary context	Tagalik (2012) informs "It is thus a dynamic system that links an Inuit philosophy and action in the changing contemporary context. The philosophy cannot be abstracted from the processes. This evolution of Inuit Qaujimajatuqangit is reliant on the cultural expectation of iqqaqqaukkaringniq (deep thinking that leads to innovation). This is a dynamic process of knowing, applying, experiencing, evaluating and creating new knowledge grounded in a continuum of knowing and continually improving" (p. 2). The researcher continues "It is also believed that through being highly skilled, a person is most suited to adapting and succeeding in difficult and unpredictable circumstances. This is the application of iqqaqqaukkaringniq" (p. 2).	Tagalik (2012)
Iqqaumaqatigiinniq	ideas or thoughts may come into one understanding	Healy & Tagak (2014) relays "Iqqaumaqatigiinniq is the Inuit concept of all thoughts, or all knowing, coming into one. It is often referred to as part of the holistic Indigenous worldview.	Healy & Tagak (2014); Blondin, B., Cherba, M., de Boer, K., Etter, M., I Healey, G.,

		Finding meaning and understanding" (p. 8). They continue "The goal of data analysis is to find meaning and understanding in the stories, to return to the research question and to examine the data in the context that was set at the beginning of the study. In order to accomplish this, often a multi-stage process is needed, such as those described by Creswell (Creswell 2003). Thinking about and analysing dialogue at the time of the conversation with a participant or collaborator is part of the process, therefore, some meaning-making occurs immediately in the moment of the conversation. After transcription, transcripts are read and re-read several times and reflected upon. The recordings of interviews or conversations are listened to and transcripts are re-read to ensure that transcription is verbatim and to fill in any missing words. After a period of time immersed in the words and stories, ideas may start to form or crystalize (Borkan 1999; Healey & Meadows 2008). Discussing these ideas with others, colleagues, collaborators, or participants, is a critical part of the analysis at this phase, from a relational perspective (Kovach 2009; Wilson 2008). How are these ideas coming together? What do they offer to the Inuit community? What do they offer to the community of colleagues, collaborators, partners and participants? Placing the ideas in the context of the literature, the experiences of others and the experiences of the community is part of finding meaning and understanding" (p. 8). Blondin, B., Cherba, M., de Boer, K., Etter, M., I Healey, G., Horlick, S., Redvers, N., Russell L., & Ruttan, J. (2021) quotes "The Piliriqatigiinniq Community Health	Horlick, S., Redvers, N., Russell L., & Ruttan, J. (2021)

		Research Model (Healey & Tagak, 2014; Healey et al., 2019) emphasises relational epistemology (Thayer-Bacon, 2003) and the relationships that are fostered or created as part of the research process. It builds on five key Inuit concepts: Piliqatigiinniq (working together for the common good), Pittiarniq (being good, kind, or ethical), Inuuqatigiittiarniq (being respectful of others), Unikkaaqatigiinniq (storytelling and the power and meaning of story), and Iqqaumaqatigiinniq (ideas or thoughts may come into one understanding). While Inuit are not the only Indigenous population that was engaged in this study, the model calls attention to Indigenous ways of knowing and research approaches that originate from a shared Indigenous worldview and the universal principles of relationality, collaboration, and solution-seeking at the heart of research implementation across communities (Arnakak, 2006; Battiste, 2002; Chilisa, 2012; Kovach, 2009; Thaman, 2003; Wilson, 2008 as cited in Blondin, B., Cherba, M., de Boer, K., Etter, M., I Healey, G., Horlick, S., Redvers, N., Russell L., & Ruttan, J., 2021, p. 5)	
isumaliuqatijiitsinirningma	making decisions together in the Inuit way	Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019) explains “Inherent in the process are the concepts of applying a collective wisdom to address a situation and current needs and isumaliuqatijiitsinirningma—or making decisions together in the Inuit way” (p. 7). The researchers maintain this involves a collaborative process and that includes being “reflective of Inuit core values and beliefs”. This concept is well supported through the researchers work with Inuit elders.	Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019)
Kajungittiarniq	perseverance and determination	The Government of Nunavut (2013) describes “The following [term was] approved by [Inuit Uqausinginnik Taiguusiliuqtiit] to build on the current IQ Guiding	Government of Nunavut (2013)

		Principles when communicating about devolution: … • Kajungittiarniq (perseverance and determination) …" (p. 53). They relay that this is one of many guiding principles and concepts of Inuit Qaujimajatuqangit that apply under the Wildlife Act.	
maligait	living a good life	Tagalik (2012) highlights "Inuit Elders in Nunavut have identified a framework for Inuit Qaujimajatuqangit which is grounded in four big laws or maligait (Government of Nunavut, C&SS, 2007). All cultural beliefs and values are associated with the implementation of these maligait, ultimately contributing to "living a good life" which is described as the purpose of being. These maligait are: 1. working for the common good 2. respecting all living things 3. maintaining harmony and balance 4. continually planning and preparing for the future" (p. 1).	Tagalik (2012)
naalangniq	respectful listening in the right relationship	Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019) state "The process also assumes that participants rely on naalangniq—respectful listening in the right relationship…" (p. 7). The researchers depict *naalangniq* as a component of *aajiiqatigiingniq* in relation to consensus making and how one works together with Inuit. This involves a collaborative process and that includes "reflective of Inuit core values and beliefs" when issues do arise. This concept being well supported through the researchers work with Inuit Elders.	Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019)
niqiqainnarniq	securing a change or new way		McGrath (2011)
paningniq tuavijinirlua	the notion of care fully planning without rushing		McGrath (2011)
Papattiniq/Munakhinik	the obligation of guardianship or stewardship that a	The Government of Nunavut (2013) describes "Papattiniq/Munakhinik, which means the obligation of guardianship or	Government of Nunavut (2013)

	person may owe in relation to something that does not belong to the person	stewardship that a person may owe in relation to something that does not belong to the person" (p. 21). They identify this as one of many guiding principles and concepts of Inuit Qaujimajatuqangit that apply under the Wildlife Act.	
Paqqijautuinnarumannginiq	striving to be autonomous	The Government of Nunavut (2013) states "The following terms were approved by [Inuit Uqausinginnik Taiguusiliuqtiit] to build on the current IQ Guiding Principles when communicating about devolution: … • Paqqijautuinnarumannginiq (striving to be autonomous) …" (p. 53). They identify the term as one of many guiding principles and concepts of Inuit Qaujimajatuqangit that apply under the Wildlife Act.	Government of Nunavut (2013)
Pijitsirniq/Ihumaliukti	a person with the power to make decisions must exercise that power to serve the people to whom he or she is responsible	The Government of Nunavut (2013) explains "…Pijitsirniq/Ihumaliukti, which means that a person with the power to make decisions must exercise that power to serve the people to whom he or she is responsible…" (p. 21). They identify that this is one of many guiding principles and concepts of Inuit Qaujimajatuqangit that apply under the Wildlife Act.	Government of Nunavut (2013)
Pijitsirniq/Pikutigiktot	sharing and reciprocity	Scott Clark Consulting Inc. (2004) describes "Pijitsirniq: The concept of serving and providing for family and/or community. • This principle applies to every division of the Department of Justice. • All Department of Justice staff will endeavour to serve each other in the workplace" (p. 63). The report identifies *Pijitsirniq* as a key IQ concept which are a part of a Terms of Reference of the Department of Justice	Scott Clark Consulting Inc. (2004); Romain (2016)**;** The Municipal Corporation of the City of Iqaluit, (2014)

		Working Group, Nunavut Department of Justice, Inuit Qaujimajatuqangit. It is described as a "category of action" in mobilizing IQ within Nunavut Justice (p. 9). The Municipal Corporation of the City of Iqaluit, (2014) conveys "ᐱᔨᑦᓯᕋᖅ (pijitsirniq) "serving and providing for family and/or community" (p. 4).	
Pilimmaksarniq/ Ayoikyumikatakhimanik	skills must be improved and maintained through experience and practice	The Government of Nunavut (2013) speaks of "…Pilimmaksarniq/Ayoikyumikatakhimanik, which means that skills must be improved and maintained through experience and practice…" (p. 21). They add that this is one of many guiding principles and concepts of Inuit Qaujimajatuqangit that apply under the Wildlife Act. Romain explains *"Pilimmaksarniq*, a felt or revealed knowledge gained through experience and observation (Wihak & Merali, 2003 as cited in Romain, 2016, p. 76). This revealed truth holds privilege over scientific truths through situational awareness and traditions passed down through generations. This is keenly demonstrated through the respect for Elders and their wisdom often common in Inuit communities" (p. 76).	Government of Nunavut (2013); Romain (2016)
Pilimmatsaniq	the passing on of knowledge and skills through observation, doing, and practice, and accommodating or making room for new things or practices that need to be implemented	Scott Clark Consulting Inc. (2004) references "Pilimmatsaniq: The passing on of knowledge and skills through observation, doing and practice. • The workplace will be accommodating and flexible. • Accommodating or making room for new (things) practices that needs to be implemented. • Inuit staff must be given opportunities to develop skills on the job during regular hours through mechanisms such as	Scott Clark Consulting Inc. (2004); The Municipal Corporation of the City of Iqaluit, (2014)

		cultural training and programs” (p. 63). The report identifies *Pilimmatsaniq* as a key IQ concept which are a part of a Terms of Reference of the Department of Justice Working Group, Nunavut Department of Justice, Inuit Qaujimajatuqangit. It is described as a “category of action” in mobilizing IQ within Nunavut Justice (p. 9). The Municipal Corporation of the City of Iqaluit, (2014) outlines **“**ᐱᓕᒻᒪᑦᓴᓐᓂᖅ (pilimmatsaniq) “the passing on of knowledge and skills through observation, doing, and practice, and accommodating or making room for new things or practices that need to be implemented” (p. 4).	
Piliriqatigiinniq	working together for a common cause through collaboration and mutual understanding	Scott Clark Consulting Inc. (2004) describes “Piliriqatigiinniq: Working together for a common cause. • Through collaboration and mutual understanding in the workplace. • Inuit and non-Inuit staff will work together from the basis of their own knowledge and experience to develop mutual understanding and a balanced approach to the provision of programs and services” (p. 63). The report lists *Piliriqatigiinniq* as a key IQ concept in the Terms of Reference of the Department of Justice Working Group, Nunavut Department of Justice, Inuit Qaujimajatuqangit. It is described as a “category of action” in mobilizing IQ within Nunavut Justice (p. 9). The Municipal Corporation of the City of Iqaluit, (2014) states ″ᐱᓕᕆᖅᑲᑎᒌᓐᓂᒃ (piliriqatigiinniq) “working together for a common cause through collaboration and mutual understanding” (p. 4).	Scott Clark Consulting Inc. (2004); The Municipal Corporation of the City of Iqaluit, (2014)

Piliriqatigiingniq/Havakatigiiklutik,	people must work together in harmony to achieve a common purpose	The Government of Nunavut (2013) "…Piliriqatigiingniq/Havakatigiiklutik, which means that people must work together in harmony to achieve a common purpose…" (p. 21). They identify this as one of many guiding principles and concepts of Inuit Qaujimajatuqangit that apply under the Wildlife Act.	Government of Nunavut (2013)
Pittiarniq	Being good, kind, or ethical	Healy and Tagak (2014) explains "Pittiarniq is the Inuit concept of 'being good', which can mean being 'good' in a philosophical and moral sense, and also in terms of action 'good behaviour' (for example, in the behaviour of children). The historical context of health research in Nunavut is complex. Different communities have had varying experiences with researchers coming to the north from the south. For decades, researchers have come and gone from Nunavut to conduct their research and then leave. Some had good intentions, some were ignorant of their intentions. Some developed relationships with Inuit, others conducted experiments on Inuit" (Emberley 2008; Wachowich, Awa, Katsak & Katsak 1999 as cited in Healy & Tagak, 2014, p. 8 - 9). Blondin, B., Cherba, M., de Boer, K., Etter, M., I Healey, G., Horlick, S., Redvers, N., Russell L., & Ruttan (2021) relays "The Piliriqatigiinniq Community Health Research Model (Healey & Tagak, 2014; Healey et al., 2019) emphasises relational epistemology (Thayer-Bacon, 2003) and the relationships that are fostered or created as part of the research process. It builds on five key Inuit concepts: Piliqatigiinniq (working together for the common good), Pittiarniq (being good, kind, or ethical), Inuuqatigiittiarniq (being respectful of others), Unikkaaqatigiinniq (storytelling and the power and meaning of story), and Iqqaumaqatigiinniq (ideas	McGrath (2004); Healy & Tagak (2014); Blondin, B., Cherba, M., de Boer, K., Etter, M., I Healey, G., Horlick, S., Redvers, N., Russell L., & Ruttan, J. (2021)

		or thoughts may come into one understanding)" (p. 5).	
Piviqaqtittiniq	opportunity for participation and contribution	Scott Clark Consulting Inc. (2004) describes "Piviqaqtittiniq: It is important to give people their opportunity for participation and contribution. • The opportunity must be there for staff and members to attend meetings and sessions on relating to cultural and language issues" (p. 65). The report lists Piviqaqtittiniq as a key IQ concept in the Terms of Reference of the Department of Justice Working Group, Nunavut Department of Justice, Inuit Qaujimajatuqangit. It is described as a "category of action" in mobilizing IQ within Nunavut Justice (p. 9). The Municipal Corporation of the City of Iqaluit, (2014) specifies "ᐱᕕᖃᖅᑎᑦᓯᓂᖅ (piviqaqtittiniq) "it is important to give people their opportunity for participation and contribution" (p.4).	Scott Clark Consulting Inc. (2004); The Municipal Corporation of the City of Iqaluit, (2014)
Qanuqtuuttiaqsimaniq	thoughtful coordination and planning	The Government of Nunavut (2013) explains "The following terms were approved by [Inuit Uqausinginnik Taiguusiliuqtiit] to build on the current IQ Guiding Principles when communicating about devolution: … • Qanuqtuuttiaqsimaniq (thoughtful coordination and planning)…" (p. 53). They relay that this is one of many guiding principles and concepts of Inuit Qaujimajatuqangit that apply under the Wildlife Act.	Government of Nunavut (2013)
Qanuqtuurungnarniq	resourceful in solving problems (derivative of IQ principle?)	Dunning (2014) speaks to "Qanuqtuurungnarniq – being resourceful to solve problems. Through the continued research and writing of this thesis the Inuit contextual meaning of the disk system can be put into place and	Dunning (2014)

		hopefully brought into the light to the rest of the Canadian population. The concept of qanuatuurungnarniq requires that a problem, no matter what it is, be solved to completion. This means that a problem cannot be ignored or expected to resolve itself, it means that work is required and that both sides of a problematic issue be looked at and considered in ways that may seem unusual or out of scope. By examining all the forces at play during the lifetime of the disk system, a place of understanding can be built" (p. 21).	
Qanuqtuurniq	being resourceful and persistent to solve problems, recognizing that we must constantly explore many different opportunities in order to find the best ways to move forward	Scott Clark Consulting Inc. (2004) recounts "Qanuqtuurniq: The concept of being resourceful to solve problems. • It is important to recognize that we must constantly explore many different opportunities in order to find the best ways to move forward. • This is the basis of persistence" (p. 63). The report lists Qanuqtuurniq as a key IQ concept in the Terms of Reference of the Department of Justice Working Group, Nunavut Department of Justice, Inuit Qaujimajatuqangit. It is described as a "category of action" in mobilizing IQ within Nunavut Justice (p. 9). The Municipal Corporation of the City of Iqaluit, (2014) describes "ᖁᓇᖅᑐᖁᑎᒋᔭᖅ (qanuqtuurniq) - "being resourceful and persistent to solve problems, recognizing that we must constantly explore many different opportunities in order to find the best ways to move forward" (p. 4).	Scott Clark Consulting Inc. (2004); The Municipal Corporation of the City of Iqaluit, (2014)
Qanuqtuurunnarniq/ Kaujimatukanut	the ability to be creative and flexible and to improvise with whatever is at hand to achieve a purpose or solve a problem	The Government of Nunavut (2013) quotes "…Qanuqtuurunnarniq/Kaujimatukanut, which means the ability to be creative and flexible and to improvise with	Government of Nunavut (2013)

		whatever is at hand to achieve a purpose or solve a problem…" (p. 21). They report that this is one of many guiding principles and concepts of Inuit Qaujimajatuqangit that apply under the Wildlife Act.	
Qaujimanilik/Ihumatuyuk	a person who is recognized by the community as having in-depth knowledge of a subject	The Government of Nunavut (2013) states "…Qaujimanilik/Ihumatuyuk, which means a person who is recognized by the community as having in-depth knowledge of a subject…" (p. 22). They identify that this is one of many guiding principles and concepts of Inuit Qaujimajatuqangit that apply under the Wildlife Act.	Government of Nunavut (2013)
Qaujimautittiarniq	information sharing	Scott Clark Consulting Inc. (2004) notes "Qaujimautittiarniq: Sharing of information through various initiatives and methods" (p. 64). The report lists Qaujimautittiarniq as a key IQ concept in the Terms of Reference of the Department of Justice Working Group, Nunavut Department of Justice, Inuit Qaujimajatuqangit. It is described as a "category of action" in mobilizing IQ within Nunavut Justice (p. 9).	Scott Clark Consulting Inc. (2004)
Saimaqatigiingniq	the place where Inuit and Qallunaat meet in the middle and are reconciled	Qikiqtani Inuit Association (2010) maintains "In Inuktitut terms, Qikiqtani Inuit are seeking saimaqatigiingniq, which means a new relationship —when past opponents get back together, meet in the middle, are at peace" (p. 6). The report continues "I hope that this Commission marks the beginning of a new relationship, of saimaqatigiingniq, in which the two sides meet in the middle and are reconciled. This relationship must be between equal partners, who share the goal of ensuring the well-being of the Qikiqtani Inuit, and it must be built upon mutual respect and ongoing consultation. Only through continuous dialogue and engagement on all issues that could	Qikiqtani Inuit Association (2010)

		potentially impact the lives of Inuit can we achieve healing and reconciliation between the North and the South, governments and Inuit" (p. 50).	
Silatuniq	wisdom to know how to apply your knowledge	Scott Clark Consulting Inc. (2004) explains "Silatuniq: Inuit wisdom is -the wisdom to know how to apply your knowledge. • If you asked an Inuit Elder on any question, he/she will give you an answer without checking into secondary information. Silatunikumut isumaginngiqqaujaraluani uqausirijunnattautigijanga" (p. 65). The researchers list Silatuniq as a key IQ concept in the Terms of Reference of the Department of Justice Working Group, Nunavut Department of Justice, Inuit Qaujimajatuqangit. It is described as a "category of action" in mobilizing IQ within Nunavut Justice (p. 9). The Municipal Corporation of the City of Iqaluit, (2014) states "ᓴᓪᓕᑐᓂᖅ (silatuniq) "the wisdom to know how to apply your knowledge" (p. 4).	Scott Clark Consulting Inc. (2004); The Municipal Corporation of the City of Iqaluit, (2014)
silatuuniq	Collective wisdom	Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019) reports "The mode of decision-making in this sense avoids inutuujjingginniq—being individualistic—but rather relies on the collective wisdom, or silatuuniq" (p. 7). This being involved with the collaborative process and inclusive of "collective wisdom". This concept being well supported through the researchers work with Inuit elders.	Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019)
Sirliqsaaqtittittailiniq/ Naklihaaktitihuiluhi	hunters should avoid causing wild animals unnecessary suffering when harvesting them	The Government of Nunavut (2013) speaks to Sirliqsaaqtittittailiniq/Naklihaaktitihuilui, which means that hunters should avoid causing wild animals unnecessary suffering when harvesting them…" (p. 22).	Government of Nunavut (2013)

		They stipulate this as one of many guiding principles and concepts of Inuit Qaujimajatuqangit that apply under the Wildlife Act.	
Surattittailimaniq/ Hugattittailimanik	hunters should hunt only what is necessary for their needs and not waste the wildlife they hunt	The Government of Nunavut (2013) explains "Surattittailimaniq/Hugattittailimanik, also called Iksinnaittailimaniq/Ikhinnaittailimanik, which means that hunters should hunt only what is necessary for their needs and not waste the wildlife they hunt" (p. 22). They identify that this is one of many guiding principles and concepts of Inuit Qaujimajatuqangit that apply under the Wildlife Act.	Government of Nunavut (2013)
suvuliqsuqtuq	The role of the collective in ensuring a person will have a good future	Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019) describes "These characteristics mirror other accounts and understandngs of the aajiiqatigiingniq process. Many of its underlying features are best expressed in Inuktitut because the terms are densely defined and resist single word translations into English: "[T]he concepts which are self-evident in the Indigenous language can never be captured by another language" (Smith,1999). For instance, aajiiqatigiingniq has been previously described by elders as essential to suvuliqsuqtuq or the role of the collective in ensuring a person will have a good future. That is, aajiiqatigiingniqis an approach for restoring harmony to the individual and group when faced with a threat of disruption" (p. 7). This involves a collaborative process that includes "The role of the collective in ensuring a person will have a good future". This concept being well supported through the researchers work with Inuit elders.	Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019)

Tukisiumaqatigiinniq	conscious understanding of others as the basis of mutual relationships	Scott Clark Consulting Inc. (2004) draws attention to "Tukisiumaqatigiinniq: Like its meaning, conscious understanding of others is the basis of mutual relationships" (p. 64). Scott Clark Consulting Inc. (2004) list Tukisiumaqatigiinniq as a key IQ concept which are a part of a Terms of Reference of the Department of Justice Working Group, Nunavut Department of Justice, Inuit Qaujimajatuqangit. It is described as a "category of action" in mobilizing IQ within Nunavut Justice (p. 9).	Scott Clark Consulting Inc. (2004)
Tukitaaqtuq	they explain to one another, they reach understanding, receive explanation from the past	Dunning (2014) explains "This thesis will explore the need for Tukitaaqtuq, an Inuktitut word meaning, "they explain to one another, reach understanding, receive explanation from the past" I have purposely chosen this Inuktitut word because I have found only two Canadian government sponsored documents, written by government paid writers about the Eskimo Identification system and one government document concerning Inuit policy in Canada that does not make mention of this system at all. The voice of the Inuit disk holders and Inuit non-holders, those most affected, the Inuit themselves is not expressed, published or documented anywhere in these publications" (p. 6).	Dunning (2014)
Tunngaviqattiarniq	reflecting and establishing a solid foundation	The Government of Nunavut (2013) describes "The following terms were approved by [Inuit Uqausinginnik Taiguusiliuqtiit] to build on the current IQ Guiding Principles when communicating about devolution: … • Tunngaviqattiarniq (reflecting and establishing a solid foundation)…" (p. 53). They explain that this is one of many guiding principles and concepts of Inuit Qaujimajatuqangit that apply under the Wildlife Act.	Government of Nunavut (2013)

Tunnganarniq	openness, acceptance and inclusivity	Scott Clark Consulting Inc. (2004) specifies “Tunnganarniq: Fostering good spirit by being open, accepting and inclusive. • We must follow this at all times, in our words, our actions, in the example we give, in what we do, and in how the workplace is organized. • We must make the workplace people friendly, welcoming and open” (p. 64). Scott Clark Consulting Inc. (2004) lists Tunnganarniq as a key IQ concept which are a part of a Terms of Reference of the Department of Justice Working Group, Nunavut Department of Justice, Inuit Qaujimajatuqangit. It is described as a “category of action” in mobilizing IQ within Nunavut Justice (p. 9).	Scott Clark Consulting Inc. (2004)
Unikkaaqatigiinniq	storytelling and the power and meaning of story	Healy and Tagak (2014) detail “Unikkaaqatigiinniq is the Inuit concept related to story-telling, the power of story and the role of stories in Inuit ways of being. Story-telling and the sharing of experiences. Kovach (2009) states that a defining characteristic of Indigenous methods is the inclusion of stories and narratives by both the researcher and research participant. In an Indigenous context, stories are methodologically congruent with tribal knowledges (Wilson 2008). The Inuit have a very strong oral history and oral culture. The telling of stories is a millennia-old tradition for the sharing of knowledge, values, morals, skills, histories, legends and artistry. It is a critical aspect of the Inuit ways of life and of knowing (Bennet & Rowley 2004), and allows respondents to share personal experiences without breaking cultural rules related to confidentiality, gossip or humility. Kovach (2009) 7 ISSN: ISSN 1837-0144 © International Journal of Critical Indigenous Studies and Wilson (2008), have underscored the importance of ‘story’ in a research setting. In a study	Healy & Tagak (2014); Blondin, B., Cherba, M., de Boer, K., Etter, M., I Healey, G., Horlick, S., Redvers, N., Russell L., & Ruttan, J. (2021)

		of determinants of health for Inuit women in Nunavut, participants drew upon examples from the community and used stories to illustrate points about important health issues, such as teenage pregnancy and custom adoption. These stories illustrated aspects of the broader health context involving the community and society relating to education and cultural identity (Healey 2006b; Healey & Meadows 2008). Understanding this approach for sharing knowledge allows for greater insight into the data and greater understanding of the meaning of the stories. Although some knowledge or practices may be disappearing, the use of stories to effectively communicate information remains part of Inuit life. It is for this reason that the recognition of the power of story is particularly important in the context of Inuit communities" (p. 6 – 7). Blondin, B., Cherba, M., de Boer, K., Etter, M., I Healey, G., Horlick, S., Redvers, N., Russell L., and Ruttan, J. (2021) recounts "The Piliriqatigiinniq Community Health Research Model (Healey & Tagak, 2014; Healey et al., 2019) emphasises relational epistemology (Thayer-Bacon, 2003) and the relationships that are fostered or created as part of the research process. It builds on five key Inuit concepts: Piliqatigiinniq (working together for the common good), Pittiarniq (being good, kind, or ethical), Inuuqatigiittiarniq (being respectful of others), Unikkaaqatigiinniq (storytelling and the power and meaning of story), and Iqqaumaqatigiinniq (ideas or thoughts may come into one understanding)" p. 5).	
unikkaat	stories, reports, and testimonials	Rosen (2013) maintains "Inuit have a rich oral tradition. Unikkaat, stories, are educational, serving to pass knowledge on, as well as entertaining. Unikkaat refers to stories in general – an unikkaaq could be a story about any everyday event happening at any time, such as an	Rosen (2013)

		account of a hunting trip taking place a few months earlier, or a funny thing someone did the other day. Unikkaaqtuat16 are older stories, long stories, or 'traditional stories', about physical and spiritual worlds. As Seidleman and Turner eloquently state, The stories represent the cultural memory and imaginative history of the community. They encode the values considered important for survival. Both the commonplace and the important events are understood in relation to these stories and the beliefs they express" (Seidleman and Turner, 2001, as cited in Rosen, 2013, p. 55 – 56). The researcher further adds "Both unikkaat and unikkaaqtuat are elements of IQ, of Inuit 'traditional' knowledge, producing and reproducing information about Inuit culture, society, values, and the land and environment. Storytelling is part of the process that has sustained Inuit traditional knowledge over thousands of years, and which reinforces and develops IQ today" (p. 64).	
Uppiriqattautiniq	fair treatment	Scott Clark Consulting Inc. (2004) depicts "Uppiriqattautiniq: It is the foundation for fair treatment, honest commitment to work together, and the source of harmonious environment" (p. 64). Scott Clark Consulting Inc. (2004) list Uppiriqattautiniq as a key IQ concept which are a part of a Terms of Reference of the Department of Justice Working Group, Nunavut Department of Justice, Inuit Qaujimajatuqangit. It is described as a "category of action" in mobilizing IQ within Nunavut Justice (p. 9). The Municipal Corporation of the City of Iqaluit, (2014) interprets "ᐅᑉᐱᕆᖃᑦᑕᐅᑎᓂᖅ (uppiriqattautiniq) "the foundation for fair treatment, honest commitment to work together,	Scott Clark Consulting Inc. (2004); The Municipal Corporation of the City of Iqaluit, (2014)

		and the source of harmonious environment" (p. 4).	
uqamanggatigiit	talking together	Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019) explains "(…) *aajiiqatigiingniq* is an approach for restoring harmony to the individual and group when faced with a threat of disruption. The purpose of the *aajiiqatigiingniq* system is to ensure *inuutsiangniq*, or wellness, has continual support from the community. Inherent in the process are the concepts of applying a collective wisdom to address a situation and current needs and *isumaliuqatijiitsinirningma*—or making decisions together in the Inuit way. It also includes *aaqiksuiqatigiit* (fixing together), *uqamanggatigiit* (talking together), and *aivaqatigiit* (arguing together/discussing heavily)" (Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik, 2019, p. 7). Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019) uses *uqamanggatigiit* as a component of aajiiqatigiingniq in relation to consensus making and how one works together with Inuit. This being involved with the collaborative process and inclusive of "talking together" when issues do arise. This concept being well supported through the researchers work with Inuit Elders.	Ferrazzi, Tagalik, Christie, Karetak, Baker, & Angalik (2019)

Appendix 13. Other prominent IQ themes in the literature

Introduction

An analysis was undertaken to gain insights regarding how 'Inuit Qaujimajatuqangit' appears (i.e., is defined, described, engaged, used, applied, represented, discussed, etc.) in Nunavut research. Themes emerged within the text obtained from 1384 research records. We selected descriptive and/or unique examples[8] to illustrate the more prominent themes. We present them here as a supplemental resource for new researchers seeking a general understanding of Inuit Qaujimajatuqangit as it is discussed in the Nunavut research literature.

In the interest of knowledge mobility, we reduced repetition by using solitary yet representative examples of how Inuit Qaujimajatuqangit appears in the Nunavut research literature. These examples do not encapsulate the entirety of a literary discussion, qualify a particular discourse, or bring closure to existing debates. In addition, the themes are interconnected and interdependent and our arrangement below is not meant to suggest that the concepts, discourses, or applications can be understood in isolation. Instead, these often-overlapping accounts help to better imagine the whole of Inuit Qaujimajatuqangit from what is shown in the Nunavut research literature.

Summary of findings

• The modern origins and the political contexts in which the term 'IQ' developed is generally agreed upon in the literature. Yet, we also found that IQ is defined and described with some inconsistency, and this has impacted the application of IQ in established systems and institutions.

• The research literature largely acknowledges the colonial history of research in Nunavut. It also shows that as Inuit self-determination in research grows, so does the confidence among Inuit that research will be beneficial to Inuit.

• Land is a central component of IQ and Inuit-land relationality is emphasized in climate change research, Ice studies, and discourses on resource sustainability. Similarly, Inuit-animal relationality also informs discussions on food security, however there are overt examples of the clash between IQ and western knowledge within these discussions.

• The application of IQ in education and government is discussed in the research literature, and the difference between the successes and challenges of each can be associated with how IQ is accommodated.

• The role of Inuit Elders as authorities in Inuit Qaujimajatuqangit is reflected in the research literature. In addition, an inventory of the known pathways in which IQ disseminates from Elders can be drawn from the literature.

• The connecting between IQ and youth development and family well-being is emphasized in the research literature and this gives rise to calls for culturally congruent family services and health care.

[8] Our abundant use of direct quotes represents our effort to respect research authors' original articulations. We also mirror the language use by authors when not directly quoting them. This has allowed us to present our findings in a tone similar to those conducting the research in Nunavut.

• IQ and Western knowledge are often compared in the literature, and it is argued that outward differences reflect fundamental differences in the how reality and knowledge creation is perceived. These differences tend to appear in optimistic but cautious discussions around the co-creation of knowledge.

The (modern) origin of 'Inuit Qaujimajatuqangit'

The origin of the term Inuit Qaujimajatuqangit is frequently attributed to the 1998 Nunavut Traditional Knowledge Conference/Committee meeting (Arnakak, 2002; Lévesque, 2014; Peletz-Bohbot, 2019). The term was proposed by the Nunavut Social Development Council following discussions on how to move past the limitations of using 'Inuit Traditional knowledge' in discussions of contemporary realities (Arnakak, 2002; Peletz-Bohbot, 2019). Stevenson (2014) adds, "…in 1998 Qaujimajatuqangit was coined to encompass all aspects of traditional Inuit culture including values, worldview, language, social organization, knowledge, life-skills, perceptions and expectations" (p. 181). Laugrand & Oosten (2010) describes that this change in "concept demonstrated a new valorization of the Inuit cultural heritage and a rejection of the notion that modernization implied an unconditional acceptance of Qallunaat ideas and values" (p.xviii).

With the settlement of the Nunavut Land Claims Agreement in 1999, the creation of Nunavut as a 'legal' territory "represented the fruition of 25 years of Inuit effort to move towards political autonomy" (Wihak & Merali, 2003; p. 243). The Nunavut Government's first Cabinet presented the Bathurst mandate which identifies "IQ as the principles that will guide the development of the Nunavut Government" (Gowen, 2003). It was further mandated that Inuit culture and worldviews would be integrated in all areas of its public system (Wihak & Merali, 2003; Cameron, 2015; Arnakak, 2002; Levesque, 2014). Committees (including the Inuit Qaujimajatuqangit Task Force and the Sustainable Development IQ Working Group) consisting of Elders and community representatives were gathered to document Inuit culture and worldviews to "flesh out their vision for how to govern in the Inuit way..." (Cameron, 2015, p. 181). The result of this process gave way to IQ's working definition: "the past, present, and future knowledge, experience, and values of Inuit Society" (Arnakak, 2002, p. 34) and the creation of an IQ framework loosely based on tuqturausiit (kinship structures... the principles, which describe the "interconnections among all aspects of life and place" (p. 40).

Many iterations of values, concepts, and principles of Inuit Qaujimajatuqangit can now be found in research articles spanning a variety of disciplines, including Education, Law, Environment, Health, and Economics. The literature does indicate that research authors continue to rely on the Nunavut Government for descriptions of IQ with many authors directly transcribing content from materials like the Government of Nunavut's (2013) resource 'Incorporating Inuit Societal Values' (Cancel 2009; Lackenbauer & Kikkert 2020; Burrows 2005; Jeannotte 2017).

INUIT SOCIETAL VALUES AND INUIT QAUJIMAJATUQANGIT (IQ) PRINCIPLES

a) Inuuqatigiitsiarniq (respecting others, relationships and caring for people);
b) Tunnganarniq (fostering good spirit by being open, welcoming, and inclusive);
c) Pijitsirniq (serving and providing for family or community, or both);

d) Aajiiqatigiinniq (decision making through discussion and consensus);
e) Pilimmaksarniq or Pijariuqsarniq (development of skills through practice, effort, and action);
f) Piliriqatigiinniq or Ikajuqtigiinniq (working together for a common cause);
g) Qanuqtuurniq (being innovative and resourceful);
h) Avatittinnik Kamatsiarniq (respect and care for the land, animals, and the environment).

Adapted from Government of Nunavut, Incorporating Inuit Societal Values (2013) as cited in Lackenbauer & Kikkert (2020)

Several authors (Government of Nunavut, 2007; McGregor, 2012; Tagalik, 2009-2010) also present these principles as being founded on four Inuit Maligait (things that must be done): "(1) working for the common good, (2) respecting all living things, (3) maintaining harmony and balance and (4) continually planning and preparing for the future" (Tagalik 2009, as cited in Jeannotte, 2017 p. 203).

IQ as old Adaptative Knowledge

The literature describes Inuit Qaujimajatuqangit from several perspectives, some of which presents it as an established knowledge that has been relatively consistent through time. Others portray Inuit Qaujimajatuqangit as adaptive knowledge that is fluid and evolving. Examples of the ways that Inuit Qaujimajatuqangit is useful for Inuit in the present are often found when it is discussed as adaptive knowledge.

Gold, O'Neil, & Van Wagner (2005) assert that Inuit Qaujimajatuqangit is too frequently "reduced to the ways in which things were done long ago" (p. 17). Several authors point out that this oversimplification misrepresents the evolving, fluid[9] quality of Inuit knowledge, expertise, and experience (Gold, O'Neil, & Van Wagner, 2005; Tester & Irniq, 2008; Stuckenberger, 2009; Grimwood, 2012). When conceptualized as adaptive knowledge, IQ's benefits become timeless.

IQ is more than traditional knowledge: In an early description, Bravo (2000) differentiates between IQ and traditional knowledge by reaffirming that IQ is specifically Inuit and "explicitly rooted in Inuit ways of doing things" (P472). Thiessen, Noble, & Hanna (2020) and other research authors (Tester & Irniq, 2009; Barry, 2016; Karetak & Tester, 2017; Egede Dahl & Hansen, 2019; Kourantidou, Hoover, & Bailey, 2020) suggest that Traditional knowledge typically has a narrow conception, whereas IQ consists of Inuit knowledge, worldviews, cosmology, experiences, and values all of which guides us on how to live a good life. Bravo (2000) adds that Traditional knowledge is too often characterized in terms of "what can be made commensurable and accommodated within the frameworks of the sciences, leaving behind the cultural context which gave rise to it" (P472). While Bravo (2000) feels, "it is a mistake to suppose that IQ is an epistemological innovation that will redress the TK-science relationship problems" (p. 472), the "concept['s]" "strength" is ensuring that "policymaking reflects the aspirations and traditions of Inuit life as lived in northern communities" (P. 472).

[9] As reported by Stern & Stevenson (2006), Inuit people view memory as a means of preserving their culture, although Inuit identity is anchored more by the memory of a way of life than by a series of historical occurrences. Although there are events that actually occur and possible sequences to follow based on Inuit tradition and knowledge, the manner of life is fluid, which implies that IQ is fluid.

Kelley (2009) reiterates Wenzel (2004) when saying “IQ is also considered as a type of conceptual framework, and remains a changing concept, evolving as Inuit face new challenges and new opportunities” (p.45). Thomas (2008) describes IQ as an evolving knowledge base that is continually being supplemented by new information and observations. IQ is constantly evolving as each knowledge-holder engages with their environment and integrates their own experiences, insights, and elements (Stuckenberger 2009; Gearheard, Pocernich, Stewart, Sanguya, & Huntington, 2010). Stuckenberger (2009) states that IQ is also considered “conservative with respect to values. While open to new elements, these elements are subsequently integrated into the framework of Inuit values to make them part of Inuit lifeways” (p.18) to help them “understand and productively (and safely) negotiate the world around them” (Desjardins, Friesen, & Jordan, 2020; p. 246).

When IQ is held as knowledge on the ways things used to be done, it is consequently placed in opposition to modernity. For example, Anang, Gottlieb, Putulik, Iguptak, & Gordon (2021) report that “the dialectic of being rooted in Inuit Qaujimajatuqangit (“What Inuit always have known to be true”) on the one hand, and on the other hand needing to adapt to modern day challenges is ongoing for young people in Naujaat” (p. 7). Similarly, Jewell (2021) is among many authors that express a shared fear that Traditional knowledge has become less reliable “as weather becomes more unpredictable” and this “is impacting the transfer of generational knowledge" (p. 50).

Desjardins, Friesen, & Jordan (2020) agree that “the dominant social and economic system—relatively recently imposed upon Inuit—demands they negotiate two often complementary and parallel, but sometimes starkly different and conflicting ways-of-knowing and ways-of-organizing information” (p. 246). But they also speak to the dynamic nature of traditional knowledge, and its capacity to equip Inuit for rapidly changing climates. But IQ’s applicability is not restricted to a motionless environment. In fact, Desjardins, Friesen, & Jordan (2020) argue quite the opposite:

> “[The] utility in such insights is not the promise of fixed rules or neat packages of ancient strategies that can be applied uncritically to the challenges of the present. Instead, the power of traditional knowledge, such as IQ among Inuit, for addressing the relationship between past and present climate change may lie in its capacity to bestow wisdom about how and why decisions were made, as well as to consider the consequences such actions had for people, communities and environments” (p. 246).

In addressing the transfer of generational knowledge, Nunavummiut youth are being connected to experienced hunters and Elders, not only in a classroom setting, but on the land, sea, and ice. Elder and archaeologist-led visits to archaeological sites also facilitate an understanding of the adaptive power of IQ. Desjardins, Friesen, & Jordan (2020) hold that learning about past resilience to extreme climate change facilitates agency, innovation, and perseverance (precisely what youth need in the changing modern world). Laidler, Ford, Gough, Ikummaq, Gagnon, Kowal, Qrunnut, & Irngaut (2009) add that for youth in Igloolik, IQ prescribes the relations of trust and reciprocity that enable people to act collectively and thereby contributes to their capacity for adapting to change. Inuit have demonstrated remarkable resilience and strength, having thrived in a constantly changing environment for centuries. Throughout history, Inuit have successfully adapted to change in ways that allowed them to maintain their core values and traditions while integrating new ideas and practices (Young, 2020). Former ITK president

Terry Audla (2014) describes Inuit knowledge as “adaptable and resilient, transforming over time as the world and landscape around us changes” (as cited in Young, 2020; p.243). “It is also highly practical, pragmatic and applicable. […] I am here today – because our knowledge taught us how to survive and thrive in one of the most challenging environments on the planet” (as cited in Young, 2020; p.243). To borrow Palsson’s (2016) phrasing, IQ is then much less “a romantic adherence to the past” or the “fetishizing of traditional knowledge” (p.165) and more a collection of evidenced-based practices.

Land and Inuit Qaujimajatuqangit

The research literature repeatedly acknowledges that Land is a significant and vital component of Inuit Qaujimajatuqangit. The literature offers examples of how relations to the land act on Nunavummiut well-being, skill development, mobility, and more. These examples often appear in research on climate change, sea ice, and resource sustainability.
Blakney (2010) is one of many research authors that detail the relationship between Land and Inuit well-being:

> Among Arviat Inuit (Arviarmiut), IQ, health and wellbeing and the land are tightly interconnected. When one relationship is stressed, disruptions occur throughout the whole system. IQ is embedded in Inuit perceptions of health and wellbeing, and to be healthy, Inuit maintain they must interact with the land in Inuit ways (abstract).

Thomas (2008) relays that Inuit “who have close relationships with the land are keen observers of the natural environment due to their reliance on it for economic, cultural, social and subsistence ways of life” (p.87).
The literature also acknowledges that “many of the skills that Inuit and Northern residents have are actually taught through experiences on the land and from elders” (Tait, 2008; Tester & Imiq, 2008 as cited in Johnston, 2011, p113). For example, Grimwood & Doubleday (2013) connect Inuit knowledge to the Thelon River which they describe “as a place where Inuit knowledge is produced, stored, transmitted, and revised” (p. 11). They observe that IQ is ‘relational and adaptive’ and not ‘bound’ by ‘traditional’ notion[s]”, and this “was mirrored in the ways that Inuit participants use and relate to the Thelon” (p. 11). Grimwood & Doubleday (2013) add that “amongst other landscape features and resources, using the Thelon fosters Inuit knowledge expressed as observations of change at diverse scales (e.g., environmental-cultural, local-global)” (p. 11).

Some research authors have sought an understanding of IQ and Inuit land relations by focusing on how Inuit travel on the Land. Tremblay, Ford, Statham, pearce, Ljubicic, Gauthier, & Braithwaite (2018) draw on several authors and relate that "[d]espite changes in the modes of travel (i.e., dog sled to snowmobile) and means of navigation (i.e., Global Positioning System (GPS)), many trail networks remain the same and [IQ] continues to be important for safe and successful travel (Aporta and Higgs 2005, Ford, Smit & Wandel, 2006; Laidler, Ford, Gough, Ikummaq, Gagnon, Kowal, Qrunnut, & Irngaut, 2009)” (p.307). Aporta (2004) adds: "[s]ince travelling has been, and in many ways still is, one of the most important activities of Inuit daily life, the study of Inuit knowledge and use of routes, trails and tracks seems relevant in order to have a better understanding of how Inuit relate to their environment, and of the Arctic environment itself” (p. 11).

IQ and Climate Change

> *Derman (2015) states "IQ encodes sophisticated understanding of weather, climate, and the ecological conditions they influence, which are in turn described as fundamental to Inuit practices of hunting, travel, and shelter. These practices are essential to the maintenance of community, health, and intergenerational cohesion" (p79).*

The literature shows that Inuit Qaujimajatuqangit is engaged in research from multiple disciplines, however, there has been a substantial interest in IQ and Inuit land knowledge in the context of climate change.

Young (2020) acknowledges IQ as a "seamless and comprehensive epistemological system" which contains "profound implications for environmental management" given that "it inherently grounds environmental and governance decisions in normative values such as respecting others (inuuqatigiitsiarniq), serving the community (pijitsirniq), and respect for the land (avatimik kamatsiarniq)" (see Tester and Irniq, 2008; White, 2006, 2009 as cited in Young 2020; p. 233). Young (2020) cites Cameron, Mearns, McGrath (2005) and relays that these values are even emphasized in language, as 'climate change' is translated into the Inuktitut as silaup asijjirluktauninga, meaning 'the unethical abuse of the environment'. Young (2020) maintains that "[t]his close empirical and normative relationship with the natural world ensures that Inuit have an expansive view of both the environment and environmental resilience" (p. 238). Young (2020) adding further, states that "[b]y engaging with notions of resilience across these topics, Inuit improve their control over the environment as viewed through IQ" (p238).

Inuit knowledge includes rich insights and detailed information on climate change and adaptation. As such, Inuit are in a unique position to understand climate change and help support climate change action. The Government of Nunavut (2010) states:

> Inuit Qaujimajatuqangit […] is based upon a long and close relationship with the land and environment. It provides rich and detailed insight into climate change and adaptation, and provides context to help understand how climate change will impact Inuit culture, communities, and individuals. Interviews with elders, hunters and community members have supplemented and enhanced scientific research on climate change (p. 13).

Leduc (2008) shares that "IQ is described by Riedlinger and Berkes as important to climate science for at least three reasons: the Arctic is an early ecological indicator of climate changes, science has insufficient knowledge "of physical and ecological processes in the Arctic" and there is a lack of historical baseline data against which to measure data" (p. 2). Leduc (2008) further relays that "[t]hese difficulties lead them to propose that IQ can be helpful to scientists since its assessments of change are based on cumulative knowledge of local trends, patterns, and processes, derived from generations of reliance on the land" (p. 2).

Research authors express a "deep respect" for Inuit knowledge and the ability "to report not only changes in weather, ice, and natural resources but also changes in their communities as a result of climate change" (Sansoulet, Therrien, Delgove, Pouxviel, Desriac, Sardet Vanderlinden, 2020; p. 1). Desjardins, Friesen, & Jordan (2020) elaborates:

> Knowledge about the environment can also be placed in a longer-term historical context. Modern Inuit of Inuit Nunangat […] are the direct cultural and genetic descendants of Thule Inuit populations (ca. 820-350 BP) that already survived major episodes of climate

change in the past, including the Little Ice Age and Medieval Warm Period (see Desjardins and Jordan, 2019).

The Government of Nunavut (2010) reports that "Inuit observations have provided useful information at different time scales and levels of detail that have significantly contributed to our understanding of climate change in Nunavut. Recurring themes with respect to Inuit knowledge of climate change include:

- Sea ice conditions have changed; the ice is thinner, freezes up later and melts earlier. Similar observations have been made for lake ice.
- Aniuvat (permanent snow patches) are decreasing in size. There is more rain, and the snow and ice form later in the year and melt earlier.
- The weather is unpredictable. It changes faster than it used to with storms blowing up unexpectedly.
- Water levels have gone down, making it hard or impossible to travel by boat in certain areas.
- Temperatures are warmer throughout the year.
- New species have been observed.
- The land has been observed to be drier and the stability of the permafrost is changing.
- The length and timing of the traditional Inuit seasons have changed" (p. 13).

Adaption is very much a part of the IQ/climate change discussion. The Government of Nunavut (2010) offers a rich description of IQ and climate change adaptation. It maintains that "Inuit Qaujimajatuqangit is reinforcing and supporting scientific observations of these changes. [IQ] is also providing valuable insight on adaptation, and information on how these changes may affect Nunavummiut and the ecosystems on which we rely" (p. 4). Henshaw (2006) adds that "Maliqattarnikkut iliniarniq, the process by which Inuit learn the names, is just one aspect of Inuit Qaujimajatuqangit, but one that underscores the important role accumulated and experiential knowledge play in adapting to northern environments. Without such knowledge the risks of traveling in unpredictable and ever changing conditions make individuals and groups that much more vulnerable to the extreme climate change currently being forecasted for the Arctic" (p. 64).

> *"Individuals from Repulse Bay discussed the value of Inuit knowledge as an adaptive strategy, emphasizing the importance of using Inuit Qaujimajatuqangit (IQ) more often and in a more consistent manner to reduce hunters' vulnerability to sudden weather changes" (Nickels and Furgal, 2005, p. 10)*

Some challenges associated with incorporating IQ into climate change discourses are identified in the literature. Thomas (2008) relays that much of community knowledge is based on the environment. The ability to anticipate weather and environmental conditions is in danger. Thomas (2008) concedes "There is an understanding that the environment is always evolving and is not static, therefore IQ cannot be considered static" (IPCC. 2001 : ACIA. 2005 as cited in Thomas, 2008). However, many authors share the concern that the environment is changing so quickly that IQ's evolution cannot keep up (Thomas, 2008; Kronlid, 2009; Desjardins, Friesen, Jordan 2020). Desjardins, Friesen, Jordan (2020) shares this concern:

> Many modern Inuit are well versed in [IQ], which draws from and builds on past experiences, to inform contemporary life and aid in planning for the future. However, dramatic new social and environmental stressors (e.g., the combined effects of Euro-Canadian colonialism and modern climate change) may be pushing IQ to its operative

> limit in terms of its ability to inform responses to some human-environment relationships (p. 241)

Gearhead, Pocernich , Stewart , Sanguya & Huntington (2010) relay that “Inuit recognize that the rapid social and cultural changes of recent decades have eroded some Inuit knowledge and skills. However, in terms of traditional weather forecasting, elders and experienced hunters argue that traditional knowledge erosion is not the cause of faulty forecasts. Inuit have been living in a modern community setting for over 30 years and forecasting skills were reliable enough during that time to advise hunting parties and to teach until the 1990s (Fox 2004). During that decade, weather patterns changed and many local forecasters say their predictions became less reliable. Second, Inuit note that recent conditions are not unprecedented; there has always been unpredictable weather. What is unprecedented is how quickly conditions change from one to the next and the persistence of this unpredictability over time” (p. 8).

Kronlid (2009) cites Leduc (2007) in recognizing that the changing climate influences the adaptation of Inuit knowledge. While Ford, Smit & Wandel (2006) explain that the "increasing unpredictability of climatic and environmental conditions is now part of the collective social memory that frames individual practice and decision-making in Arctic Bay” (p.153). Ford, Smit & Wandel (2006) quote Tagoonak Qavavauq who contends: “I think the hunters now are more aware of [the changing climatic conditions] so they are preparing” (p.153). They also maintain that “as a repository of accumulated experience and knowledge of changing conditions and experience of successful adaptations, IQ allows ‘response with experience’ to changing exposure. This increases adaptive capacity” (Ford, Smit, & Wandel, 2006; p.153). Pointedly, Ford, Smit & Wandel (2006) state that “[i]t is this dynamic nature of IQ, its ability to learn and adapt to change, which confers adaptability" (p.153).

Research authors prescribe the meaningful inclusion of IQ in discussions on climate change. Henshaw (2006) suggests that this starts with a closer “explorat[ion] of the full breadth of Inuit knowledge particularly sensitive to changing environmental conditions" (p. 58). Young (2020) identifies the need for Western science to “learn from Inuit in order to better adapt […] to climate change” (p. 244). He refers to “Inuit Websites” that acknowledge “Inuit [as] valuable partners in the global struggle against climate change” (p. 240) and adds that in understanding that the Arctic ecosystem is the indicator of global environmental health” (p. 244). “Inuit organizations describe themselves as leaders in solving environmental problems that will soon affect southern societies” (p. 244). Inuit maintain that they “can help southern societies react to the environmental and socio-political effects of environmental shifts as they begin to experience them” (p. 240).

Higgins (2011) posits “[the] need to be both resilient and adaptive” while recognizing "my [Inuit Qaujimajatuqangit] and your [Western modern science] go together” (p. 303). Young (2020) believes that this requires “opening up pluralistic and global spaces to discuss IQ as it might apply to southern attempts at adaptation” (p. 240). This must extend “beyond opening space for IQ within Arctic policy” (p. 240). Young (2020) reiterates Sheila Watt-Cloutier’s (former chair of the ICC) perspective whereby IQ can be “leverage[d]” as a “system to force colonial societies to expand their view past the technical and environmental aspects of climate change” (p. 245). Cameron (2012) suggests that “this change in orientation” would also be “a first step toward recognizing, and addressing, the role that colonialism plays in producing climate vulnerabilities” (Cameron, 2012 as cited in Young, 2020; p. 245). Furthermore, the Government of Nunavut has done much work in relation to IQ and climate change. They have developed documents outlining future plans that incorporate IQ guiding principles with the intent of “help[ing] to

facilitate increased resilience and adaptive capacity in Nunavut" (The Government of Nunavut, 2010; p. 8).

The Government of Nunavut (2020) outlines how each IQ principle is enacted in climate change action: "Inuuqatigiitsiarniq – Respecting others, relationships and caring for people. The Government of Nunavut recognizes climate change as an issue that stands to impact the lives of Nunavummiut. Strategic planning is being done out of care for Nunavummiut and their needs. Upagiaqtavut – respects Inuit knowledge and takes into consideration the important contributions that all Nunavummiut can make toward planning for the future. Tunnganarniq – Fostering good spirit by being open, welcoming and inclusive. The government will take an inclusive and collaborative approach to climate change adaptation planning and research. Pijitsirniq – Serving and providing for family and/or community. Upagiaqtavut demonstrates the government's commitment to providing Nunavut families and communities with the tools and resources needed to successfully adapt to a changing climate. Aajiiqatigiinniq – Decision making through discussion and consensus. Individuals, community governments and other organizations will be given meaningful opportunities to share ideas and participate in decision making that will directly affect them and their communities. Pillimmaksaniq/Pijariuqsarniq – Development of skills through observation, mentoring, practice and effort. Participation in the development and implementation of adaptive measures will enhance individual and community self-reliance, empowerment and capacity. Training, capacity building and skills acquisition are key factors to increasing local adaptive capacity. Piliriqatigiinniq/Ikajuqtigiinniq – Working Together for a common cause. Collaborative relationships that are based on the integrated application of Inuit Qaujimajatuqangit, local knowledge and scientific research will help us work together in innovative partnerships towards increased resilience. Qanuqtuurniq – Being innovative and resourceful. Upagiaqtavut ensures the wise use of human, natural and financial resources through innovative partnerships and collaboration. This innovation and resourcefulness will maximize our climate change knowledge and our potential to successfully adapt. Avatittinnik Kamatsiarniq – Respect and care for the land, animals and the environment. The Government of Nunavut will demonstrate leadership by continuing to diligently and responsibly take actions to control its own emissions of greenhouse gases and adapt to climate change impacts. Through collaboration by all stakeholders, decisions will be made that help ensure the long-term sustainability of Nunavut's people and the land and wildlife on which we all depend" (pp. 8-9).

IQ and Ice knowledge

The meaningful contributions of Inuit Qaujimajatuqangit are presented with more certainty in discussions around ice knowledge. Rathwell (2020) is among many research authors (Riedlinger and Berkes, 2001; Laidler, 2006; Krupnik, Aporta, & Laidler, 2010) who acknowledge that "Inuit expertise (Inuit Qaujimajatugangit) has made significant contributions to understanding the complexity of Arctic sea ice change" (p. 68). Rathwell (2020) recognizes that "honouring a plurality of knowledge in the context of efforts to understand and respond to environmental change is a challenging process" (p. 68). However, she explains that "there are diverse settings that bridge knowledge systems, including various methods and processes (e.g., scenarios, workshops), bridging organizations that link different knowledge holders, and institutional or governance arrangements (e.g., co-management boards)" (Rathwell, Armitage, & Berkes, 2015 as referenced in Rathwell, 2020; p. 68)." Many examples of the overt benefits of resolving these challenges are also found with in the research on ice travel. For instance, Wilson, Arreak, Bell & Ljubicic (2021) describe their work with sea ice travel safety maps as part of the Sikumiut (people of the ice) project. The act of including IQ to this type project entailed

adding “more than locations of safe and hazardous ice conditions” (p. 2), as important information for sea ice travel and survival is embedded in Inuktitut place names and sea ice terms. Wilson, Arreak, Bell & Ljubicic (2021) add that “maps also provide a time-integrated baseline of the winter and spring sea ice travel conditions” (p. 2). Interestingly, Wilson, Arreak, Bell & Ljubicic (2021) detail “Sikumiut's IQ-based sea ice climatology is maintained by passing down their IQ through generations, and orally sharing their extensive and recent travel experiences on the sea ice” (p. 2). They clarify that “Sikumiut's sea ice climatology is therefore not in a database, but exits in the collective minds of these expert sea ice travelers. Also, their climatology is not focused on ice conditions in a general scientific sense, but more specifically on ice conditions supporting safe travel and spatio-temporal patterns of ice features that support hunting” (p. 2). This work was made possible by collaboration and inclusivity as exemplified by “a novel approach [being] co-developed to document for the first time their sea ice IQ to create the **Mittimatalik siku asijjipallianinga** (sea ice climate atlas)” all of which was completed “[t]o support Sikumiut's climate change adaptation needs” (Wilson, Arreak, Bell, Ljubicic, 2021; p. 2).

> “**The Sikumiut maps** that were co-produced in 2018 share the IQ of known locations of safe and hazardous ice conditions by season. […] The winter travel map highlights dangerous areas such as reoccurring naggutiit (cracks in the ice that can be easily crossed), ivujuk (ridges, high areas of rough ice you have to travel around), and siku saattuq aragulimaamik (thin ice all year) […]. The spring maps show new and expanding dangerous travel areas such as aajurait (leads, cracks in the sea ice that get wider in the spring are always possible to cross), siku saattuq upingaat pigiarningani (thin ice in spring), and imaqainnaujattuq ukiutamaa (water that runs from the glaciers). […] These maps provide an IQ-based climatology for the region of Mittimatalik; however, the information on which they are based is not in a database, they exist in the collective memory of Sikumiut members” (Wilson, Arreak, Bell, Ljubicic, 2021; p. 8).

Bishop, Owen , Wilson , Eccles , Chircop , Fanning (2022) suggest how four IQ principles could be directly applicable for governance of icebreaking activities:
“Inuuqatigiitsiarniq (respecting others, relationships and caring for people) can be interpreted and implemented to better situate respectful relationships with Inuit as the basis of icebreaking policy development so that governance can be inclusive of Inuit participation and perspectives. Aajiiqatigiinniq (decision making through discussion and consensus) can be interpreted and implemented to improve transparency and legitimacy in decision-making. Although consensus may not be achievable, an amicable compromise may be. Decision making through discussions is important so that Inuit are well informed of the shipping routes and icebreaking policies that will ultimately impact their livelihood and wildlife, and so that vessel operators are aware of Inuit use of the marine spaces within which they operate. Piliriqatigiinniq or ikajuqtigiinniq (working together for a common cause) can be interpreted as the basis of working together to create policies and decision making that draw from IQ and are respectful to Inuit lives and livelihoods. Through applying piliriqatigiinniq or ikajuqtigiinniq, policies can better involve Inuit in collaborative icebreaking governance. Lastly, avatittinnik kamatsiarniq can be implemented to develop policies that respect and care for the land, animals, and the environment, which supports Inuit lives and livelihoods. While these IQ principles are suggested based on our analysis, meaningful engagement and respectful collaboration with communities in Nunavut will be essential to establish a legitimate approach" (p. 9).

IQ in the context of resource sustainability

The research literature also discusses Land use in the context of responsible sustainability. This is particularly significant in that (within these conversations) Land is characterized as a matter of renewable and non-renewable resources; terms that carry connotations of Western worldviews. Jacobsen (2018) describes the significance of worldview within a sustainability framework. He draws on material from the Nunavut Planning commission and states that:

> "in Nunavut's official mining strategy and in the Land Use Plan, the dominating Western WCED [World Commission on Environment and Development] understanding of sustainable development is particularly visible, but when Inuit Qaujimajatuqangit is included, the hegemonic perception is contested: '[s]ustainable development is not a fixed understanding. As communities change, their relationship with the land and with each other will continue to develop and evolve' (Nunavut Planning Commission, 2016; p41)" (p. 62).

Jacobsen (2018) further adds that "as in the Thule Laws, the sustainability principle is closely linked to food security and social sustainability through covering the basic needs of the local community" (p.n.a.). Jacobsen (2018) adds that this is also related to the "hunting and harvesting of renewable resources". However, it is "open to interpretation" in relation to non-renewable resources – and even more so when adding the perception that the concept is in flux." Perrin, Ljubicic & Ogden (2021) explain how IQ "has sustainability principles embedded within Inuit societal values", particularly the principle of avatimik kamattiarniq, which "encourages sustainable social/environmental stewardship" (p. 30).

> "[T]he Inuktitut translation of 'sustainable' is quite clear. Ikupik, as it is called, means 'to conserve and not take all at once; what is brought in from a hunt. Everyone takes a piece for their family, ensuring there is enough to go around" (Nunavut Planning Commission 2016; 42, as cited in Jacobsen, 2018).

Matthijsse (2010) adds to "the importance of avatimik kamatiarniq" which cautions "economic development through mining that could make the territory a large amount of money very quickly and would likely bring opportunities for male employment, but that would destroy the environment, which is at the very core of Inuit culture and identity" (p. 187). Pointedly, Matthijsse (2010) references Arnakak (2005; p. 178) in describing "the responsibility to leave the environment as natural and intact as possible for future generations" (Arnakak 2005: p. 178).

> Example: Vanderkaden (2019) draws from materials from the Government of Nunavut (n.d.c.) to report that "[t]he current model for resource management of sealing is based on Inuit Qaujimajatuqangit and reflected through the three key principles of sustainable harvest, complete use, and humane harvest, that guide the seal hunt in Nunavut (p. 45).
>
> Peterson (2012) states "[d]espite higher numbers of hunters enabled to participate in harvesting activities, the amount of meat harvested in the community has not increased significantly, reflecting their adherence to IQ principles" (pp. 107-108).

IQ and Inuit-animal relationality

Inuit-animal relations in the north are also discussed in the research literature. In these discussions, Inuit Qaujimajatuqangit is often linked to wildlife harvesting and management. In addition, the harvesting, processing, and consumption of wild foods are components of a larger

discussion in the literature that connects Inuit Qaujimajatuqangit to food security/sovereignty. These discussions provide some notable examples of disagreements between Inuit Qaujimajatuqangit and Western knowledge. In several of these cases, it is shown how Inuit Qaujimajatuqangit has developed as a platform to legitimize Inuit perspective and authority in resource management. Instances of collaborative successes (built on both Inuit Qaujimajatuqangit and Western knowledge) appear to outweigh instances of contention in the literature when it comes to the co-management of wildlife, parks, and protected areas in Nunavut.

Inuit-animal relationality in Northern landscapes is articulated in the research literature and tends to inform discussions on wildlife harvesting and management. Wong (2017) states that "[Inuit Qaujimajatuqangit] is defined as a guiding principle for how Inuit conceptualize human-wildlife relationships and how this affects their interactions with and perceptions of animals" (Wenzel, 2004 as cited in Wong, 2017; p. 100). Dowsley (2008) discusses this connection from the perspective of hunters. They explain that "for northern hunters, animal-human relationships are most obviously expressed through hunting and, in order to be successful hunters, humans must have a proper attitude towards animals" (Fienup-Riordan 1990; Stairs and Wenzel 1992 as cited in Dowsley, 2008; p. 108).

Several researchers have sought to understand the Inuit perception of wildlife in relation to IQ. Dowsley (2008) describes that Inuit understand "all animals (…) to be sentient" which differs from "Euro-Canadian ideology" (Wenzel 1991; Fienup-Riordan 1999; Zavaleta 1999 as cited in Dowsley, 2008; p. 108). This understanding is reflected in IQ principles that serve as "references to proper behaviour in relation to animals, including recognizing that there are consequences of one's actions, one should harvest without malice, and one should avoid unnecessary harm" (Wenzel 2004 as cited in Dowsley, 2008; p. 108). Vanderkaden (2019) adds that hunting "offers not only economic return" (p. 52) but it is also "an important cultural activity for passing on Inuit ways of knowing through generations, referred to as Inuit Qaujimajatuqangit" (p. 5). Henri, Carter, Ljubicic, Smith & Johnston (2020) emphasizes a "complex web of relationships between people, land, and all living beings" (p. 175) that is acquired and shared through personal experience, careful observation, and oral histories.

> The obligation of guardianship or stewardship that a person may owe in relation to something that does not belong to the person ... that people must work together in harmony to achieve a common purpose ... and that people are stewards of the environment and must treat all of nature holistically and with respect, because humans, wildlife and habitat are inter-connected and each person's actions and intentions towards everything else have consequences, for good or ill (Dylan, 2018; p. 87).

Dowsley (2008) cites Wenzel (2004) in recognizing that the Inuit Qaujimajatuqangit principles prescribe appropriate behaviour in relation to animals, such as harvesting without malice, avoiding needless harm, and acknowledging the repercussions for one's actions. Dowsley (2008) further adds:

> Two related themes, arising from this cultural construct, appeared in the interviews and consultations: the recognition of polar bears as sentient and deserving of respect, and the incorporation of new information into traditional understandings of the relationship between humans and polar bears (p. 108).

IQ and food security/sovereignty

The harvesting, processing, and consumption of wild foods are important components of a larger discussion on food security found in the literature. The high nutritional value of wild foods is extremely important in the Inuit diet and, as Matta (2011) explains: “consumption is also indicative of an adherence to a traditional lifestyle” (p. 60). The literature suggests that IQ prescribes food security through historic and contemporary practices, social relations, and knowledge sharing.

Desjardins, Friesen & Jordan (2020) provide a historic example of how IQ contributed to food security. They describe that “a long and innovative tradition of caching walrus meat in beach-gravel caches may have provided local populations with a far greater degree of food security during the Little Ice Age than Inuit elsewhere experienced” (Desjardins, 2018 as cited in Desjardins Desjardins, Friesen, Jordan 2020, p. 246). Desjardins, Friesen & Jordan (2020) add that:

> [T]he caching process—and the butchery preceding it—is laborious; IQ demands it be carried out in relatively precise and ordered steps. These provisions (including the depth and capacity of caches, grade of the beach gravel, approximate timing of each step, etc.) likely evolved at least in part to ensure the resulting meat—excavated and consumed months later—was not only tasty, but also safe to eat. Over time, the logic of following these provisions is clear: they have kept generations of Inuit safely fed for centuries (p. 246).

Daborn (2017) relates food security to the ongoing Inuit practice of food sharing in social networks. Daborn (2017) explains that the “relationality that is expressed through the practice of sharing is a key component of Inuit ontology, or how Inuit theorize being Inuk, which is further reflected in the values of Inuit Qaujimajatuqangit” ([p. ?]). Egeland, Charbonneau-Roberts, Kuluguqtuq, Kilabuk, Okalik, Soueida & Kuhnlein (2009) document important connections between food security and the prescriptive stories told by Elders. For example, Elders’ stories contain "Inuit Qaujimajatuqangit regarding the role of country food in health, including spiritual, mental and physical health” (p. 14). Vaudry (2015) recognizes important “aspects of Inuit cosmology that explicate hunting as a means of subsistence and economic development that is intimately connected to Inuit identity” (p.161).

Panikkar and Lemmond (2020) relay that "food sovereignty in the Arctic is deeply tied to an ethic of subsistence, of being able to harvest fresh food from the immediate environment year-round” (p. 1). They acknowledge that Inuit have been self-sufficient for generations by working hard, being resourceful and passing on ‘land and sea’ knowledge” (p. 1). They further add that:

> Subsistence (…) holds a deep cultural and spiritual tie that provides a source for recreation, connection, therapy, beauty, and knowledge and hence is central to the physical as well as social, cultural, and spiritual wellbeing of Inuit communities. Subsistence is a way of life that binds Inuit to the natural world (p. 1).

However, there are identified challenges associated with food governance and food security in Nunavut.

Henri, carter, Irkok, Nipisar, Emiktaut, Saviakjuk, Ljubicic, Smith, & Johnston (2020) speak of a time when “Canada did not value IQ” and looked to “impose without Inuit input (…) by educating Inuit on sustainable harvesting practices” (p.176). Further adding that “past [Canadian]

legislation restricted Indigenous harvesting rights related to migratory birds (…) which negatively impacted Inuit cultural practices, food security, and self-determination" (p.176).

Daborn (2017) explains that the federal government continues to hold autonomy in matters of food security:

> [T]he federal government operates the Department of Health, the Department of Agriculture and Agri-Food, and the Department of Aboriginal Affairs and Northern Development – all of which impact the governing of food for Inuit living in Nunavut. For instance, Nutrition North is operated by the Department of Aboriginal Affairs and Northern Development. Even though Nunavut can be considered autonomous in many regards, when it comes to issues of food insecurity, the territory is still impacted by federal governing (p. 10).

Nunavut Tunngavik Inc. (2020) report that a lack of infrastructure is another challenge affecting food security. They report that a "lack of space to store or prepare country food undermines food sovereignty" (p. 31). This gap in infrastructure impacts both Inuit and their capacity to maintain the practices associated with IQ (Nunavut Tunngavik Inc., 2020). Shin & Lee (2020) convey that food security is threatened by the competing practices from Western worldviews. They report that "due to the inflow of monetary economy, [Inuit] began to sell animals for a fee instead of sharing them with local residents" (Shin, Lim, & Lee, 2020; p.n.a.). They add that the presence of grocery stores and restaurants reduced time spent in the cultural procurement and distribution of food. As a result, the sense of community and culture of sharing that is largely perpetuated by the respective practices have suffered (Shin, Lim, & Lee, 2020).

Notable IQ and Western knowledge clashes

There are several discussions in the research literature that detail disagreements between Inuit Qaujimajatuqangit and Western knowledge as it relates to wildlife management. A well reported example comes from research literature on polar bear co-management.

Dowsley (2008) reports that IQ had taken on a substantial role in polar bear management through its direct use in quota setting procedures.[10] However, in the mid 2000s, quotas were reduced based on scientific information that suggested that polar bears were in decline because of over-hunting and the effects of climate change. Inuit indicated their lack of support for quota reductions given that their observation[11] of population size justified the previous increase in quota. Their argument was dismissed with the notion that climate change has concentrated

[10] Florko, Derocher, Breiter, Ghazal, Hedman, Higdon, Petersen (2020) acknowledges that "For polar bears, additional information is held within communities as traditional ecological knowledge" (TEK; a component of Inuit Qaujimajatuqangit; Usher 2000 as cited in Florko, Derocher, Breiter, Ghazal, Hedman, Higdon, Petersen, 2020; p. 618). Keith (2009) presents two projects whereby they "recorded aspects of Inuit Qaujimajatuqangit (IQ) related to polar bears and their habitat" (p. 11). These projects "benefited from the participation of active hunters (…) who grew up during the time prior to Inuit moving into permanent settlements and who participated in polar bear hunting using traditional methods" (p. 11). Their contributors noted "significant changes" in not only the polar bear but also the ice and snow. They connected a reduction in "multi-year ice in the forms of piqalujait and hikutuqait" to the "quality of polar bear habitat" (p. 11).

[11] Carter, Henri, Johnston, Emiktaut, Saviakjuk, Smith, Chaudhary, Murray, and Ljubicic (2018) report on the IQ centered management strategies for light geese in the Kivalliq region is one of several documents that attempts to explain the diversity of perspectives found among Inuit Knowledge bearers. They suggest a diversity of perspectives can be attributed to factors including the age of knowledge bearers, as it related to the number of years of experience that they had on the Land, and the depth and breadth of oral history and IQ they had been able to acquire in their lifetimes. Worboys, Lockwood, Kothari, Feary, & Pulsford, 2015) suggest that the degree of contact with the species was an important factor in determining the quality of observation. In a study of migratory birds, local knowledge was credited with identifying population shifts that had been previously unknown to Western science, yet the distribution of another species was thought to be poorly understood. This variation suggests that local knowledge, as with any other source of information, must be scrutinized for reliability (Worboys, Lockwood, Kothari, Feary, & Pulsford, 2015).

polar bears in areas where humans are more likely to encounter them. Clark, Tyrrell, Dowsley, Foote, Freeman & Clark (2008) discuss how the increased quota "was criticized heavily by individual non-Inuit biologists and environmental groups in the media" (p. 3). What followed was an International Union for Conservation of Nature resolution that included "a precautionary approach when setting catch levels in a warming Arctic" (p. 3) and dictated that "polar bear harvests can be increased on the basis of local and traditional knowledge only if supported by scientifically collected information" (p. 3). However, Nirlungayuk and Lee (2009) note that there have been foundational

> [D]isagreements over: (1) the methods used to estimate polar bear population numbers; (2) the time period used in management (i.e., the posited 'base-line' population used to determine any increasing or decreasing trend in population levels); and, (3) disputes with management agencies over the appropriate use of [IQ] in their analyses and decision-making (p. 142).

Wong (2017) explains Inuit discontent with research and management practices suggests a need to improve collaborative relationships and incorporate Inuit perspectives on research, monitoring, and management, as well as Inuit methods that enrich interpretations of [polar bear] behavior. Dowsley (2008) adds that subsequent "discussions with Inuit reveal two categories of problems that, though couched in the polar bear management issue, involve the co-management system and the integration of Inuit and scientific knowledge more generally. The first relates to direct observations of the environment by both Inuit and scientists and the synthesis of such information. The second relates to Inuit conceptualizations of human-animal relationships and the incorporation of scientific studies and management into that relationship" (p. 86).

Inuit Qaujimajatuqangit as a platform

Centuries of foreign commercial harvesting, government prohibitions, and a disregard for customary practices where among the many social changes that "may have led to degradation of traditional governance structures and cohesion that empowered the strength and adherence of Inuit practices" (Ferguson & Viventsova, 2007 as cited in Herrmann, Ferguson, Raygorodetsky, & Mulrennan, 2012; p. 15).

> You see, we don't want to change the world - we just want our rightful place in it. And the easiest part is that we simply want it back. But it seems we need to assimilate non-Inuit ways to assert ourselves as a people within a system that might not do anything about it for us otherwise" (letter to the editor of Nunatsiaq News, name withheld, March 5, 2004 as cited in Matthijsse, 2010; p. 184).

Weber (2013) states that "Northern and native populations have fought to introduce traditional knowledge, Inuit Qaujimajatuqangit (IQ), as a form of everyday environmental authority and a legitimate description of the reality of the north and of the environmental trends taking place there" (p. 33). But as Matthijisse (2010) explains, in order to be incorporated into modern governance structures, IQ has to be modified to align with Euro-Canadian structures and values and is empowered by Euro-Canadian structures only to the degree in which it can do so. Hence, the application of IQ remains on the terms set by Euro-Canadian society (Matthijisse, 2010). In their discussion of resource co-management, Gombay (2014) suggests that the non-renewal of an Inuit chair of a resource co-management board (because he was deemed to be too supportive of IQ) is one example of how Euro-Canadian

structures maintain their position. In the context of this disparity, some research authors suggest that the contemporary iteration of IQ developed in response to or as a platform against scientific authority (Stuckenburg, 2009; Gombay, 2014). For example, Stuckenburg (2009) suggests that Inuit Qaujimajatuqangit is a "term recently developed to carve out the specificity of Inuit knowledge in comparison with scientific or Western cultural knowledge" (Stuckenburg, 2009; p. 18). This implies that IQ, as an Inuk axiology, must be communicated in ways that fit it into the mainstream Western one.

On the other hand, Inuit may solidify their own understanding when prompted to articulate IQ. Stewart, Dawson & Draper (2011) provide a simple example of this through their examination of Nunavut tourism. They state "…another resident thought local people talked more about 'IQ' […] because "tourists ask questions" (Stewart, Dawson & Draper, 2011; p. 101). In the practice of codifying collective cultural memory, certain elements of Inuit knowledge become standardized across communities. Not only does this facilitate social cohesion and offer reference points for Inuit identity, but standardized knowledge is also more apt to be operationalized in systems and institutions (Stern & Stevenson, 2006). Furthermore, Martin (2019) the canonization of IQ has preserved ancient ideals.

Henri, Carter, Ljubicic, Smith & Johnston (2020) report that, to address government concerns over population declines, the Migratory Birds Convention Act and the Northwest Game Act of 1917 imposed seasonal restrictions on geese and eggs that prohibited Inuit from harvesting unless they were "actually in need of such game or eggs to prevent starvation" (Northwest Game Act, sect. 3, cited in Kulchyski & Tester 2007, p. 32). "As a result, Inuit often had to starve or hunt illegally, and hide their catches from the authorities, because otherwise they could face significant fines or threats of incarceration" (Qikiqtani Inuit Association 2013, p. 37). Henri, Carter, Ljubicic, Smith & Johnston (2020) report that "today, within Inuit Nunangat, Inuit are assured of their rights to harvest light geese and eggs for domestic use, which includes areas within federally regulated Migratory Bird Sanctuaries (MBS) and National Wildlife Areas. Environment and Climate Change Canada (ECCC) established nine Area Co-Management Committees to manage protected National Wildlife Areas and MBS in partnership with Nunavut Inuit (Government of Canada 2016). As co-management organizations, the committees advise ECCC on all aspects of the management of these protected areas, and develop procedures ensuring that IQ substantially informs decision-making (Government of Canada, 2014)."

Successes co-management and governance

Collaborative successes and complimentary knowledge use appear to outweigh instances of conflict and contention in literary discourses on the co-management of wildlife, parks, and protected areas in Nunavut.

> It is important to collaborate anyway possible, regardless of who we are—organization, group or school, scientists. We need to work together and collect much information, as much as possible for our next generation. This way, we can build up Qaujimajatuqangit (Inuit traditional knowledge). (Inuit adult from Pangniqtuuq) (Sansoulet, Therrien, Delgove, Pouxviel, Desriac, Sardet Vanderlinden, 2020; p. 11).

Henri, Carter, Ljubicic, Smith & Johnston (2020) are among many research authors (Henshaw, 2006; Houde, 2007; Gagnon & Berteaux 2009; Wenzel, 2009; Campbell, Goorts, Lee, Boulanger, & Pretzlaw, 2015; Sansoulet, Therrien, Delgove, Pouxviel, Desriac, Sardet, & Vanderlinden, 2020) who express that holistic ecological perspectives contribute unique

information to environmental and wildlife research and decision-making. For example, Inuit Qaujimajatuqangit and traditional or community ecological knowledge[12] can provide important information on the location, distribution, and behavior of wildlife that produces outcomes well beyond that of typical survey approaches (Gilchrist & Robertson, 2000; Usher, 2000; Stern & Gaden, 2015). These contributions have led to, among other successes, unique/novel methods of monitoring a high-profile at-risk species (Wong, 2017) and an increase in the cumulative knowledge of mutually concerning species (Florko, Derocher, Breiter, Ghazal, Hedman, Higdon & Petersen, 2020).

> …[T]he development of some of the 'best in class' caribou protection measures that Nunavut has ever seen" relied on "the collective efforts of Sabina, the KIA, Elders, harvesters and community members to ensuring that Inuit Qaujimaningit and Traditional Knowledge contributions have been incorporated into this assessment in a meaningful way (Prno, Pickard, Kaiyogana, 2021; p. 1004).

The integration of IQ into park management is celebrated in the literature. Jacobson, Manseau, Mouland, Brown, Nakashuk, Etooangat, Nakashuk, Siivola, Kaki, Kapik, Evic, Kennianak, & Koonelieusee, 2016) detail how IQ is a key aspect of park management in Nunavut. Jacobson, Manseau, Mouland, Brown, Nakashuk, Etooangat, Nakashuk, Siivola, Kaki, Kapik, Evic, Kennianak, & Koonelieusee (2016) quote Willie Nakoolak, chairman of the Wildlife Resources Management Council of Nunavut: "The inclusion on an equal footing of Inuit knowledge (Inuit Qaujimajatuqangit), is a source of great satisfaction […]. The cooperative, holistic approach adopted by the Inuit and Parks Canada for purposes of managing the park is faithfully reflected in the master plan […]. This type of partnership will ensure that the Inuit will always be an integral part of the rich, healthy and unique ecosystems that Auyuttuq National Park is home to" (Auyuittuq Park: 2010; p. iv).

Inuit Qaujimajatuqangit as the basis of the Nunavut Government

The history of Inuit Qaujimajatuqangit is frequently articulated in the research literature and many authors speak to the origins and development of the term in the context of the Nunavut Government. There are many examples where the successes and challenges of using Inuit Qaujimajatuqangit to guide governmental processes are debated. However, by following this debate over time, we found the successes were linked to Inuit representation in policy development and the challenges were linked to the everyday use of Inuit Qaujimajatuqangit by workers using those policies.

"Inuit Qaujimajatuqangit encompasses the traditional philosophies, values and wisdom of Nunavut's founding people" (Morse & Zakrison, 2010; p. 54). As foundational principles, IQ prescribes "how the government should function, to transact business and engage in other matters of daily life relations among the Inuit" (Morse & Zakrison, 2010; p. 54), and serve Nunavut's needs, with the most effective use of resources (Timpson, 2003).

[12] Dowsley (2008) describes four categories of knowledge encapsulated in the term 'Traditional Ecological Knowledge (TEK)'. They are: "1. Knowledge about the environment, 2. Knowledge of the use of the environment, 3. Environmental values, Environmental values, and 4. The knowledge system itself" (p.87). Knowledge in the first two categories have been used to improve wildlife management (Usher, 2000; Dowsley, 2008).

Inuit Qaujimajatuqangit and the accumulated wisdom of the elders can provide the context for an open, accountable government[13] (Timpson, 2003) that reflects "the Inuit approach to collective life and collective decision making [and] the importance of working together"[14] (Fuji-Johnson, 2018, p. 112). Morse & Zakrison (2010) suggests that "In this vein, the government strives to operate using a consensus model, which combines parliamentary democracy with principles derived from traditional Inuit values including cooperation, common accountability, and effective use of leadership resources" (p. 54).

The guidance from Inuit Qaujimajatuqangit in the structuring of government entities has meant to privilege Inuit language, knowledge, and culture (Boyer 2010; Timpson 2009; Burrows 2005; McGregor 2012; Waller 2018). In describing the creation of the Nunavut government, Dorais (2006) reports:

> Its public symbols (flag, coat of arms) are Inuit inspired, Inuktitut is official (alongside English and French) and its administrative and legislative practices are supposed to be inspired by Inuit Qaujimajatuqangit ("old stock Inuit knowledge"), traditional knowledge. This means that far from having been a strictly political act, the creation of Nunavut brought about or confirmed (by extending the legal status inherited from the Northwest Territories) the formal recognition of the language, culture, and social organization of its Inuit residents, within the limits of a territory where they constituted the vast majority of the population (Dorais, 2006; p. 165).

Many authors connect an IQ-guided government with Inuit aspirations for a return to self-determination (Waller 2018; Stern and Stevenson 2006; McGregor 2012). For example, Stern & Stevenson (2006) state that "IQ has become the guiding ethical and intellectual template for building a new government and society, one that many Inuit believe is a formula for both cultural preservation and greater self-determination" (p. 97). Former premier Paul Okalik asserts that "IQ [is] providing a cultural 'foundation' to counteract colonial policies of displacement and social fragmentation" (as cited in McCall, 2004; p. 201). Its presence in government allows Inuit to reclaim a modern form of self-reliance and renew their identity (Arnakak, 2002; Selin & Davey, 2012).

> "While the values are steeped in tradition its application is contemporary and continues to evolve" (Okalik, 2003 in Van Dam, 2005 p. 204).

Inuit Qaujimajatuqangit serves as a purpose; "from the outset, there was an implicit understanding that the Inuit need and want to take the best of traditional Inuit values (social, political, economic, and environmental) as well as contemporary methods and means of governance and adapt them to the changing environment" (Arnakak, 2002, p. 36). Matthijsse

[13] Bishop, Owen, Wilson, Eccles, Chircop, & Fanning (2022) explains "The social and cultural values expressed through IQ contain governance values that are grounded in "a morality that is the base for Inuit existence. It is the knowledge, belief system, principles, and values at the core of Inuit identity and that guide/govern Inuit society" (p. 4)

[14] "Inuit Qaujimajatuqangit does not box things in; it tries to keep everything interconnected and related. Because it's all for the sole purpose of Inuusiqattiamiq,... to be healthy, to be independent so we can work well with others. To be contributing to our community... (Government of Nunavut Employee, 1999, p. 43)" (Thompson, 2008, pg. 62).

(2010) states that, for Inuit and government policy makers, IQ can serve as “a bridge to the past and a key to a better future” (n.p.a.).

IQ-based governmental policy “reflects the aspirations and traditions of Inuit life as lived in northern communities” (Bravo, 2000; p. 472) and “make sense to the people we serve” (Arnakak, 2002; p. 36). Paul Okalik shares: “as a government, and as a matter of policy, we endeavor to view every piece of proposed legislation and policy decisions are screened through the prism of IQ” (2003 cited in Van Dam, 2005, p. 124). Dyer (2016) states that “Nunavut’s political and legal structures are officially dedicated to incorporating principles and practices of Inuit knowledge (Inuit Qaujimajatuqangit)" (p. 267). But for many Inuit, the ability to incorporate Inuit Qaujimajatuqangit into policy and then put that policy into practice will persist as the measure of success for the Nunavut Government (Stern & Stevenson, 2006; Rice, 2016) and what makes it specifically Inuit (Stern & Stevenson, 2006).

> With the creation of Nunavut, government aspirations were bold, and expectations were raised. Some Inuit anticipated that implementation would ensure Inuit dominance in social and economic terms, absolute Inuit control, full Inuit employment, recognition of Inuktitut as the official (and some suggested, only) language, and/or the operationalisation of Inuit Qaujimajatuqangit (Doubleday, 2003; n.p.a.).

Application and challenges in government

In the creation of Nunavut, Sabourin (2012) explains, “it was important that Inuit Qaujimajatuqangit (IQ) be incorporated into decision-making and activities, thereby enabling Inuit culture and values to be reflected in its governmental processes” (p. 30). Sabourin (2012) adds that “the goal of incorporating IQ is to force people to reflect if their actions are consistent with this term” (p. 30). The mobilization of Inuit Qaujimajatuqangit in government is not without challenges.

“In subcommittees within departments and interdepartmental committees, Inuit public servants involved in developing strategies to integrate IQ into government operations have been able to work together in the Inuit Language (despite having to translate their recommendations into English to ensure they become more widely known)” (Timpson, 2009, p. 173). But Altamirano-Jiménez (2013) explains that, while there may be extensive use of Inuktitut all the way up to the Legislative Assembly, many of the staff are from the south and may not possess adequate training to understand Inuit culture and language. Johnston (2021) estimates that more than half of the government employees are Qallunaat (i.e., people who are not Inuit that come from outside the territory) and that they rarely possess Inuit knowledge, wisdom or values. Staff require training and a more in-depth understanding of what Inuit Qaujimajatuqangit means not just to the organization but to the community as well in order to combat the difficulties of merging such values within the tiers of government. A packet of information about IQ is provided to both Inuit and non-Inuit employees of the Nunavut government (Stern & Stevenson, 2006) with expectation that employees use IQ in the workplace and in the design and implementation of new programs and policies" (p. 97). Zizman (2010) wrote that the purpose of the ‘cultural orientation tool kit’ is to provide staff of the Government of Nunavut with a brief history of the territory. IQ, how Inuit culture and values are implemented into the workplace, government services and programs, the history of Inuit, and instructing the Inuktitut language are some of the subjects covered in the toolkit (Zizman, 2010). In addition, each government department is to “invite at least one Elder to consult on all policy, strategic planning, business planning

meetings and development sessions to ensure Inuit traditions and beliefs are respected during program delivery" (Thompson, 2008, p. 62). Yet, Government of Nunavut employees struggle to incorporate IQ into their practices (Stern and Stevenson, 2006). Altamirano-Jiménez (2013) warns that Inuit Qaujimajatuqangit is easily written in Nunavut Government policies and regulations, but it is not easily put into practice. Particularly, the NG priorities are expressed vaguely and there is no guidance on how to incorporate IQ into everyday work or ensure that work is consistent with IQ (Johnston, 2011; Altamirano-Jiménez (2013). Furthermore, "the implementation commission recommended the creation of departments that would translate IQ into public policy." Although these "departments were central to the creation of Inuit-sensitive institutions of governance, they have since been dismantled." Leaving the responsible for "Inuitizing" government policy and programs solely on the office of Nunavut's Director of IQ (Rice, 2016).

The literature also suggests that the application of Inuit Qaujimajatuqangit in government operations has been problematic, because the tenets of IQ have been limited by the standards of Euro-Canadian structures in government (Altamirano-Jiménez, 2013; Cancel 2009; Haycock-Chavez 2021; White 2009; Kathan 2015; Palaudeix 2012). This challenge may lie in how Inuit Qaujimajatuqangit has been previously presented. Pelaudeix (2012) explains that, because the concept of IQ is not specified in an operative way, the application of IQ in Western political institutions is problematic. Furthermore, how one person or system interprets the meaning of Inuit Qaujimajatuqangit may not reflect that of the community. Leduc, (2010) explains that Inuit Qaujimajatuqangit has been categorized in silos to serve certain purposes of operations. This has caused confusion in areas such as Traditional Ecological Knowledge, where a divide between usage and meaning has emerged.

In an example from maritime policy development, Bishop, Owen, Wilson, Eccles, Chircop, & Fanning (2022) draw on the eight IQ principles in their policy review of icebreaking governance and Inuit rights and livelihoods. They recognize that relating Inuit governance values to maritime policy development "requires a nuanced understanding of IQ achieved through meaningful engagement with and by Inuit" (p. 4) but warn "the application of these values would be challenging given the current asymmetrical influence of non-Inuit driven policies and practices in place for icebreaking" (p. 4).

White (2009) argues that the fundamental characteristics of Westminster politics have been modified but not displaced fully with IQ because there is a lack of guides or manuals to accurately reflect IQ in Government. This may be only part of the challenge though, as in education, "new curricula" was developed and "many additional resources in Inuit languages," all guided by "four Inuit Elders" and "a territory-wide Elders Advisory Committee" (McGregor, 2015; p. 69). Yet structural challenges associated with implementing IQ not unlike those identified in Bishop, Owen, Wilson, Eccles, Chircop, & Fanning (2022) have surfaced in Nunavut's educational system (McKechnie, 2014). These challenges have been associated with "the continued dominance of Eurocentric epistemologies within the structures of the school system" and the reliance "on Qallunaat (non-Inuit) teachers and administrators for the education system to function" (p. 61).

Jean-François Létourneau's (2021) exploration of the relationship between IQ and literary studies, Létourneau asks the same of literary studies as he does of the Nunavut government: should the effort be to fit decontextualized fragments of cultural practice into an imposed system, or should accommodations be sought in "the larger Inuit system that has since long preceded in the territory[?]" (p. 160). "Alert to the potential for Inuit ways to be simply "added on" as a kind of supplement to fundamentally Qablunaaq institutions, the IQ Task Force challenged the government of Nunavut to "incorporate itself into the Inuit Culture" rather than try to incorporate Inuit culture into itself" (Cameron, 2015; p. 181). The reality remains that many Inuit are frustrated with western bureaucracy, "[t]ell the GN that our culture is disappearing. Find ways to make laws that reflect Inuit culture — if it's good for Inuit culture it will be good for everyone and it won't violate the laws of Canada" (Rondon, 2014, p. 105).

> "I urge scientists not to come to our communities and ask how our knowledge can be integrated into science. We have invited you into our regions to help us. We are grateful for that. But maybe Inuit need to turn the paradigm around as well, at least from time to time. So help us find ways to integrate your knowledge into the Inuit way of seeing the world. Help us turn the question around. This way, science can indeed be relevant to us" (Former ITK president Terry Audla as quoted in Young, 2020; p.240).

School/formal education

Inuit Qaujimajatuqangit is discussed in the context of 'Inuitizing' education in Nunavut. Discussions about Inuit Qaujimajatuqangit in formal education are unique from discussions about IQ in other areas (like governmental departments or established institutions). In education, Inuit Qaujimajatuqangit is not usually talked about as an additional approach to education that has to be fit into what already exists. It is more often discussed as the foundation of a modern system. The research literature describes a lot of the successes, but cautions are also made about how IQ does not always fit within the classroom setting.

Chen (2010) stated that prior to the creation of Nunavut, the government of the Northwest Territories and the regional boards of education had begun implementing and promoting initiatives such as Inuuqatiqiit[15] to incorporate traditional knowledge and culture into the school curriculum. With the establishment of the Nunavut territory in 1999, the education system began to be reconceptualized and redesigned so that the entire curriculum would reflect Inuit perspectives and be delivered in a setting that supported Inuit identity (Carry, 2011). The Department of Education understood that a curriculum based on IQ would provide learners with a greater feeling of self-worth, direction, and optimism, which would lead to greater academic performance (Yamamura, 2003). Daitch (2013) and Copland, White, Crawford, Mueller, Van Wychen, Thomson, & Vincent (2018) add that, in addition to practical skills and problem solving, students learn who they are and what society expects from them when IQ concepts are at the center of the curriculum.).

[15] " Innuuqatiqiit: The Curriculum from an Inuit Perspective (Education, Culture, and Employment, 1996) describes Inuit values and beliefs. Inuit value strong family ties, family unity and responsibility, respect for the land and sea, sharing and generosity, life, traditional knowledge and values, their language, and continuous learning" (Gerein, 1998; p. 81).

“Nunavut is the only jurisdiction in Canada with education legislation calling for all public education to be based on Indigenous knowledge” (McGregor, 2012, p. 299). This meant that schools could not obtain their curricula, teaching materials, and learning resources from other jurisdictions or the for-profit educational publishing sector. The Department of Education started by compiling what little institutional information was available, to make it accessible to educators (Carry, 2011). Educators and curriculum developers were given direction and resources to work with Elders[16] to actively reconceptualize K-12 schooling based on Inuit foundations (McGregor, 2012). McGregor (2012) reports that the Department of Education's curriculum development was organized by four integrated curriculum "strands" rather than a variety of topic categories, allowing for a “closer approximation of the holistic nature of Inuit knowledge:

> • Nunavusiutit: heritage, culture, history, geography, environmental science, civics, economics, current events, world news.
> • Iqqaqqaukkaringniq: math, innovation, problem-solving, technology, practical arts.
> • Aulajaaqtut: wellness, safety, society, survival, volunteerism.
> • Uqausiliriniq: communication, creative and artistic expression, critical thinking” (McGregor, 2012; p. 297).

McGregor (2013) describes several important initiatives intended to effect change in other areas of the education system:

In response to earlier systematic barriers, a process was developed to certify Elders as co-instructors. Certification legitimizes Elders’ place in the school system and ensures that learners can avail of Elders’ expertise in the classroom setting (Aylward, 2018).

- the provision of sustainable funding to communities for early childhood language and culture programs
- the made-for-Nunavut principal / vice-principal educational leadership certification program
- school community counselor training program
- new educator orientation program
- certification of and special funding for Elders as co-instructors (McGregor, 2013; p. 99).

These systematic changes have lessened the divide between schools and communities. Collaborative program development has increased the representation of community interests in educational programming. Howard (2008) provides a practical example of this when describing the development of the music program at the Qitiqliq High School. The instructor tasked with developing the music program engaged with Elders and sought the expertise of several community members. The collaboration produced a culturally rich music program that featured,

[16] McGregor explains that Elders do not seek a return to the past, but rather an IQ-informed strengths-based education so that their children can survive and thrive in today's world. By incorporating IQ beliefs and principles into systems and curricula, the intention is to create a learning environment that promotes siratunik (becoming wise) and develops the strength of the inumalik (capable person) (McGregor, 2012).

among other things, throat singing, contemporary songs in Inuktitut, and drum dancing (Howard 2008).

McAuley (2011) observed that family and community obligations and the socio-cultural way of life make it difficult for students to attend graduate programs at southern universities. This emphasizes the need for Nunavut based graduate programs, not only to facilitate accessibility but also to 'Inuitize' academic education at higher levels (McAuley, 2011). According to Roden (2018), students at the post-secondary level embrace curricula when they feel the content is relevant to them. Students place a high priority on programs that use IQ-based materials, have more open timetables, and flexible assessments. Roden (2018) adds that schools that are 'Inuitizing' programs, like Akitisiraq Law School, Nunavut Sivuniksavut, and others, have higher graduation rates.

> Elders in the Classroom: "Encounters with elders over photographs have indeed 'shed a new light' on Inuit culture for Kevin Iksiktaaryuk and his classmates. They have illuminated dark spaces of silence while helping students see their families and communities anew…The interviews have allowed them to revisit a traumatic period in recent Inuit history, which, although before their time, has shaped much of their experience as Inuit and in relation to non-Inuit. In turn, these postmemory encounters have allowed them to reframe representations of that past from a new position informed by the tenets of IQ, the Government of Nunavut's strategy of rendering government policies, procedures, and values in terms of Inuit culture. In this way, photographs and the oral histories they have sparked have transformed affect into cultural and political engagement not only for the elders, but also for the youth interviewers" (Payne, 2011; p. 621).

Although the literature widely agrees that centering IQ in curriculum has been a positive development, Stern & Stevenson (2006) remind us that not all Inuit knowledge/education can be delivered in classroom settings with written materials. Stern & Stevenson (2006) cite Rasmussen (2000) to convey that Inuit should be wary of the notion that established forms of knowledge exchange can be replaced with books or that literacy is equivalent to competence and attunement. Nevertheless, a system-wide IQ framework and bilingual approaches have fostered innovation in educational structures, facilitated greater consistency across communities, and enabled students and parents to see themselves in the school system (McGregor, 2016).

Elders

Inuit Elders are recognized in the research literature as authorities in Inuit Qaujimajatuqangit. The research literature shows that they are sought after research collaborators and that research produces richer results when they are involved. The literature also shows that Elders share (verbally) their knowledge about Inuit Qaujimajatuqangit while, at the same time, demonstrating key values and principles in their way of being (through non-verbal actions). Inuit Elders are acting as research collaborators and informing discussions on the application of IQ in the past, the present, and the future.

According to Meis Mason (2015), Inuit Elders are regarded as culture bearers because they exemplify cultural ideals and way of life. A similar perspective is conveyed by Oosten (2005), who notes that Inuit Qaujimajatuqangit is believed to be both preserved and embodied by Elders. Waddell (2017) explains that Elders have "innate knowledge, knowledge that transforms and is dictated by social circumstances, and community relationships as it is passed through generations" (p. 10). Accordingly, Elders are revered in Inuit society as interpreters of Inuit relationality; knowledge bearers who pass on teachings to younger generations (Grimwood, 2012). Snow & Tootoo (2021) cite the Pauktuutit Inuit Women's Association (2002) in explaining that "to become Inummarik (respected Elder/real or genuine person) is a life-long learning process [...] This was traditionally achieved holistically through mentorship and practice with Elders as part of a community working together in daily life (Pauktuutit Inuit Women's Association, 2002)" (Snow, & Tootoo, 2021; p. 10).

They act as instructors, philosophers, and advisers[17] (Meis Mason, 2015) and pass on personal life experience and collective Inuit knowledge (Matta, 2011). Vaudry (2015) cites Martin (2009) to report that "Fundamentally, Inuit knowledge comes from the elders' memory" (p.151). Oosten (2005) describes that this knowledge is different for each Inuk elder, and that:

> it did not matter whether the elders came from different places. Variation is an essential characteristic of the knowledge of the elders. As each one has his or her own knowledge, it is absolutely essential that this knowledge be seen as related only to that particular elder. Once the source – or more specifically the name of the elder – is lost, the knowledge loses its roots and becomes devoid of value to most Inuit (p. 193).

In an effort to preserve the oral history of Inuit Elders, Elders' stories[18] are being recorded in a number of research projects and community initiatives (Matta, 2011; Norwood, 2014). Norwood (2014) states that:

"Elders […] have experienced the life of the true Inuit, the Inumariit of the past, out on the land" (p.192). As such, younger generations often defer to "Elders as the real holders of qaujimajatuqangit" (Oosten, 2005; p. 192).

> "[a] major concern of Inuit, and one that would seem to be the basis for other forms of their wellbeing is the preservation of their stories. Inuit scholars are in the midst of transposing their oral culture to written texts in an effort to record what is known as Inuit Qaujimajatuqangit (…) or Inuit traditional knowledge held by elders who remember life on the land before settling in communities (p. 18).

[17] "In Nunavut, the Department of Justice involves Inuit Elders as policy consultants and has adopted a vision statement expressing the following commitment: Our vision reflects Inuit Qaujimajatuqangit values, and promotes fairness, equality and a safe society supported by a justice system that is trusted and understood. The vision is respectful of and responsive to diversity, individual and collective rites, and community needs" (Stratton, 2006; p.18).

[18] "The primary sources for [IQ] principles are the memories of Inuit elders, and as a result, the years of political organizing that resulted in the creation of Nunavut were also marked by a renewed interest in the collection of oral traditions (Nunavut Department of Human Resources as cited by Martin, 2009; p. 130).

Elders are essential to the dissemination of IQ, not only in the sharing of Inuit knowledge, but in demonstrating the application of values[19], decision making processes, and more. Regrettably, Elders' roles do not typically fit in Western systems and institutions (Tagalik, 2012). Policy makers, program developers, and research collaborators often desire consultation with elders to better reflect Inuit values and relationships in their pursuits. Making place for Elders in Western systems and institutions would make Elders and other knowledge bearers accessible when available to fulfill their guidance role, and thereby reduce challenges associated with consultation fatigue (Peletz, Hanna, & Noble, 2020).

Inuit art and the transfer of IQ

The transmission of Inuit Qaujimajatuqangit is discussed in the research literature in several different contexts. The literature shows that Inuit art has been a method for transmitting Inuit Qaujimajatuqangit, but not one without challenges. Other methods described in the literature include music and song, video games, websites, and social media. There has also been a growing interest in how Inuit Qaujimajatuqangit is transmitted through research and research practices.

The literature portrays Inuit art as an established medium for Inuit Qaujimajatuqangit dissemination, but not one without challenges. The literature both describes these challenges and prescribes potential ways forward.

> "Our ancestors – shamans, hunters, storytellers – were the keepers of collective social memory; now our artists share that responsibility for preserving Inuit Qaujimajatuqangit in their works, by asserting themselves as the true authorities on Inuit culture and confronting the legacies of colonial influence and the more recent mediation of Inuit identity by both the media and the art markets" (Igloliorte, 2010, p. 44).

Inuit artistic expression is a "symbiosis of knowledge and cultures, transmitted from generation to generation and translated by the Inuit word Qaujimajatuqangit" (Dubois, 2020; p. 35- translated from original). There is agreement in the literature that IQ is embedded and embodied in Inuit artwork, storytelling, and artmaking (Igloliorte, 2010; Igloliorte, 2014; Rathwell, 2016; Dubois, 2020; Yunes, 2019). Furthermore, Inuit "arts and crafts express oral tradition, personal narratives, and Inuit worldviews and transfer those values intergenerationally" (Yunes, 2019; p. ii). Rathwell (2016) affirms that IQ in these forms tends to resist ecological or social pressures and "function[s] to maintain traditional knowledge between generations of Inuit" (p. 4), provided that Inuit retain control over interpretation.

The Inuit art market emerged during a time when Inuit communities were transitioning from a nomadic sharing-based economy to a capitalist, wage-based economy to satisfy the demand of southern institutions (Yunes, 2019). Inuit art has since become internationally recognized and has flourished into a multimillion-dollar industry (Yunes, 2019). In her discussion on mobilizing Inuit knowledge, Wilson (2007) draws on material from the Inuit Qaujimajatuqanginnut Task Force (2002) and asserts that "the goal of economic development is not to preserve traditional activities as such, but rather to provide for the continued exercise of the 'relationships' and 'values' that characterized pre-contact life, such as providing for family and community, taking counsel, and resourcefulness" (p. 40). Yunes (2019) states that "in spite of the inherent

[19]Salliq born scholar Saimanaaq Patricia Netser (2013) explains that Elders share knowledge but also demonstrate IQ principles and Inuit values in their actions: "they have so much to share, and they are so full of wisdom, and yet they always speak with humility" (p. 15).

importance of art for Inuit cultural health and wellbeing, the Inuit art market continues to run on the antiquated, colonial, third party distribution system introduced to the territory in the 1950s by southern institutions" (p. 132). In addition, "the frameworks, policies, and methodologies used to determine the value of Inuit art are all colonialist and, for the most part, ignore IQ" (Yunes; 2019; p. 132).

Inuk art historian Heather Igloliorte (2010) suggests that there is an extensive literature on Inuit art in Canada, including hundreds of exhibition catalogues and scholarly texts, publications in the popular media, journal articles, and edited volumes, yet only a small portion is produced by Inuit. The research, study, and dissemination of Inuit art has largely been done by non-Inuit scholars, curators, critics, and museum staff (Yunes, 2019). Rosen (2013) adds: "As the act of research is inseparable from the researcher, Western ways of thinking about people, material objects, and meaning have largely directed the discourse on Inuit art in the south" (Rosen, 2013; p. 8).

Yunes (2019) prescribes "decolonizing the market; shifting to a community-first, Inuit-created model that will support artistic movements such as Inuit futurisms; and ensuring that artists have access to the resources they need to experiment with new media" (p. 4). This will enable space for "innovations in strategy, distribution, and methods introduced by and for the Inuit arts community" (Yunes, 2019; p. 4).

Igloliorte (2017) explains that efforts toward Inuit independence, and a return to a self-determined existence, have been propelled by a number of issues (including climate change, food insecurity, and the ongoing legacy of colonialism) that bear on the quality of life of Inuit. As many feel that Inuit independence and self-determinacy is brought about in the practice of IQ, Inuit art also serves as a tool for resisting colonialism and recovering from the associated trauma. Igloliorte further states that when "Inuit continue to practice Inuit Qaujimajatuqangit and ensure its continuation and relevance in daily life, our artistic practices thrive" (p. 113).

"It is important that Inuit perspectives on art making, as well as the narratives represented in art are respected[20]" (Rosen, 2013; p. 87). Studies of Annie Pootoogook's drawings provide practical examples that speak to what Inuit art can accomplish as well as how non-Inuit art interpreters can appreciate Inuit art in a way that facilitates its intended function. For example, Lefebvre (2019) examines Pootoogook's visual representations of girlhood and shows that these images represent Annie's life experience and are reflective of IQ concepts related to cultural continuity and wellbeing. As a consequence, these images "disrupt sexualized stereotypes of Indigenous women" (p. 242). Emily Lawrence (2018), "as a qallunaat scholar" (p. 8), felt that she did "not possess the integral Inuit knowledge needed to fully catch all of the nuances that an Inuk scholar may extract from the artist's work" (p. 8). She therefore formulated a frame to appreciate Pootoogook's work based on the writings of Inuit and Indigenous scholars. For example, Lawrence (2018) follows Igloliorte's lead in "approaching Inuit artmaking as [an expression of] resilience and cultural sovereignty" (p. 8). Framing art with the tenets of IQ, instead of those offered by the western art historical tradition, encourages deeper and more locally specific

[20] Placing story at the centre of a discussion of Inuit art making leads to a consideration of what these stories accomplish" (Rosen, 2013; p87). Alena Rosen (2013) explains that a variety of unikkaat (stories) are represented in Inuit art "relating to Inuit Qaujimajatuqangit and oral history, to considerations of the impact of colonialism, to dreams and the spirit world, imagined worlds and beyond. These diverse narratives are expressions of experiences and communicate different areas of Inuit knowledge" (p. 87).

readings of Inuit artwork (Igloliorte, 2010, 2014). From this frame, Lawrence (2018) found that Pootoogook's art documents how love for family and culture persists as fundamental integral aspects being Inuit despite encroaching influence from the South" (n.p.a.).

Other routes of IQ transmission

Russell (2006) reports that music has long been an effective avenue for bringing the past and present together. Russell (2006) adds that music and song has aided the retention of the teachings, stories, and other information that reinforces language, culture, and spirituality.[21] Today, as Indigenous people have become more widely acknowledged by the video game industry, video games have become a platform to share Inuit specific cultural content, stories, and values (MacKenzie, 2016). Digital design has become increasingly user friendly and accessible to local governments and communities, who are producing interactive websites that gather and share Inuit relevant content including Inuit knowledge and IQ (Yunes, 2019). Young (2019) reports that a great deal of Inuit cultural knowledge is now being channeled through social media. Many of these platforms are accessible to people who are unfamiliar with Inuit culture and customs. As such, social media platforms provide an avenue for Inuit to share IQ and Inuit practices with each other and people with limited previous exposure. However, unlike other mediums, social media also provide an avenue for people to openly express disapproval or agitation with Inuit practices (Young, 2019).

Youth and IQ

The research literature provides many examples of Inuit Qaujimajatuqangit as discussed in the context of youth perspective, identity, and development. There is agreement among many research collaborators that youth are spending less time on the Land, and this affects the transmission of Inuit Qaujimajatuqangit.

Perrin, Ljubicic, & Ogden (2021) discuss how Nunavut youth view IQ as "more than just knowledge" adding that "[it] incorporates knowledge, customs and values. It is a way of life. It is as much about how we interact with one another, our attitudes and behaviours, as it is about what we know" (p. 21). Snow and Tootoo (2021) relay:

> Youth we spoke to identified eight critical factors in their personal definition of identity, this included: knowledge of shared history, IQ values, cohesion, language, physical well-being, self-efficacy, deep connections to land and connections to one another. […] Youth identified pride in identity associated with IQ values and traditional activities. Understanding and practicing traditional values helped youth recognise a path towards identity and adulthood (p. 15).

The research literature also indicates that IQ is contributing to youth resiliency and social adaptation. Ulrich (2017) states that Inuit youth are demonstrating their resilience while remaining rooted in Inuit societal values as they continue to adjust to the shifting social context in which they live. Piqujat (communal laws), for instance, aid young Inuit in how to live one's life

[21] Kunsugak (2004) explains that music and song was commonly used to help Inuit travel long distances before the arrival of maps, radios or other transmitted technology. Descriptions of objects, the locations of Inuksuit, and the unique characteristics of places were put into song. The songs were memorized and taught to others. The descriptions in the songs helped people to navigate across large areas that may have been initially unfamiliar to them.

as an Inuk and act in accordance with behavioral expectations. Thomas, Bohr, Hankey, Oskalns, Barnhardt & Singoorie (2022) furthers this discourse by emphasizing the relational aspect youth resilience: "[c]onceptions of resilience described by Inuit youth in previous studies are relational and ecological; resilience is centred on relationships and cation among friends and family, being on the land, forging strong communities, connecting to Inuit culture, and keeping busy" (p. 3).

Research collaborators recognize that Inuit youth are valuable contributors to research and research processes, and that they should be prepared to assume leading roles in future research. Sadowsky (2019) for example, places significant focus on "mobiliz[ing] Inuit youth's scientific knowledge and research skills" (p. 123) while looking to "uplift them to envision and take on academic and professional roles" within their respective "communit[ies] and/or the scientific community" in ways which "they find to be meaningful" (p. 124). Sadowsky (2019) recommends that research partnerships concentrate on "youth capacity development" which she sees as foundational for youth's autonomy, self-reliance, and ability to "support themselves and their families in tangible ways" (p. 124). Sadowsky (2019) further adds that "capacity development should empower youth to make decisions that uphold their Inuit values and are beneficial for their community and the environment" (p. 124).

> "[W]hen youth's basic needs are met, they are in turn afforded the freedom to choose to pursue research and higher levels of training and education. Ideally, youth would ultimately become prepared to partake in meaningful, skilled work that allows them to achieve socio-economic security" (Sadowsky, 2019; p. 124).

Respondents from Pond Inlet stressed the need to foster youth's learning pathways in ways that transcend perceived boundaries between Western science and Inuit Qaujimajatuqangit. The incorporation of Inuit Qaujimajatuqangit into scientific literacy for Inuit youth further ensures that Inuit values and research priorities are upheld in the long-term, underpinning the wellbeing and resilience of Inuit communities (Sadowsky, 2019; p. 124).

Land and transmission

Youth are spending less time on the Land, and this affects the transmission of Inuit Qaujimajatuqangit. The research literature suggests that trips on the land are shorter and occur less frequently given changes in technology, skill level, and climate (Stern & Stevenson, 2006; Tremblay, 2018; Clavijo, 2020; Desjardins at al., 2020).

Time on the land tends to be shorter given that technology has expedited hunting and travel. For instance, "motorized boats ha[ve] reduced the duration of walrus hunts from several days to several hours" (Desjardins at al., 2020; p. 246). Elders, hunters, and knowledge bearers have expressed concern that this abbreviates opportunities to learn from others and practice the skills associated with risk reduction. In turn, far more youth are less confident in their ability to safely navigate those risks (Tremblay, 2018; Clavijo, 2020). In addition, climate change is demanding the rapid adaptation of Inuit TEK and the modification of many of the practices that TEK informs (Jewell, 2011). Youth need continued opportunities to engage with the Land because, although IQ is "a set of values and practices, […] and ways of being and looking at things that are timeless" (Karetak, Tester, & Tagalik, 2017; p.1), its application (the processes that create self-reliant, capable individuals (Crump, 2016)) is advancing in time.

Because being on the land also impels youth to engage and bond with others (elders, teachers, etc.) it advances both intellectual attainment and socioemotional development (Sisco, 2010; Southcott, 2018). Stern & Stevenson (2006) report that youth lack access to the Land, and this is affecting their identity and their very concept of what it means to be Inuk. Despite this, when given the chance to spend time on the land and learn, they do so (Potter, Johnston, & Dawson, 2020). Inuit guardians continue honing their traditional abilities by matching up youth with more experienced mentors to aid in the transmission of IQ.

Sellheim (2018) describes how seal hunting provides food for families and communities, reinforces IQ, and contributes to Inuit wellbeing: "[t]he sophisticated hunting tools and methods" and "[o]ther skills, such as the processing of seal skins (…) made the seal a significant contributor to the wellbeing of the Inuit by providing the raw material for tools, clothing and food" (Sellheim; p. 57).

IQ and Family

The literature emphasizes the importance of Inuit Qaujimajatuqangit in relation to family, kinship structures, communication, and family well-being. Connections between the family, Inuit Qaujimajatuqangit, and early childhood development are also recognized in the literature. There is a lot of agreement between research authors about the benefits of incorporating Inuit Qaujimajatuqangit into services related to family preservation, but many also identify that it has been challenging to do so.

Johnston (2011) describes Inuit Qaujimajatuqangit as being "particularly important to Nunavummiut families today" (p.69). Johnston (2011) cites Arnakak (2001), adding that "the traditional kinship structure is the means whereby goods and services are transacted and exchanged" but that it is also a "means of transmitting ideas, values, knowledge and skills from one generation to the next. In other words, individual, family and society are linked by the kinship structure" (p.69). The role of communication in family relations is also presented in the literature as being central to IQ. Kral, Adams, Akearok, Allen, Arnatsiaq, Cooper, Dyck, Ellsworth, Fletcher, Idlout, Kunuk, & Kirmayer (2003) note in their research that "[t]he third most common theme related to well-being concerned Inuit traditional knowledge or Inuit Qaujimajatuqangit (IQ) (…) [with] family and communication [being] central to this" (p. 17). They further add: "It should be noted that family/kinship and communication are also an integral part of IQ" (p. 17). They continue, adding that "the land, hunting, camping, eating country food (meat from the land or water), spending time with Elders, knowledge and practice related to making traditional tools, skin clothing, building the igloo, and knowledge of Inuit belief and cosmology" are all interrelated to family communication and cohesion (p. 17).

The literature also describes family as a domain of early child development and ongoing learning. McGregor (2012) reports that education "was integrated into the daily lives, daily responsibilities and daily relationships within families" (p. 290). Children learned experientially by playing games, imitating adults, and observing activities and the world around them (Snow, & Tootoo, 2021). This learning took place in an environment that prioritized caring interactions with others and emphasized good social relations, including encouraging members to be helpful and accountable to those around them (Matthijje, 2010; McGregor, 2012). Bauer & Giles (2018) add that Inuit children continue to be raised according to the idea that wisdom is gained through life experiences and is contextualized within the Inuit community (p. 238). They state, for example, that children's outdoor play may be described as "risky", but the mitigation of risk is

conceptualized as a childhood developmental milestone within the experienced-based learning framework of IQ (p. 238).

The research also identifies a need to incorporate IQ in services related to family preservation, however this can be challenging give the established systemic parameters. For instance, Gowan (2003) reports that some family services may lack the holistic approach prescribed by IQ. In speaking about emergency shelter services: “Nuturak asserted the need for both men and women to receive counseling. […] Approaching the issues holistically by looking at both the right and left hand is Inuit Qaujimajatuqangit” (p. 104). While meaningful attempts are being made to incorporate Inuit ways into social programs, there are pre-existing rules and regulations that preclude male participation in settings like women’s shelters (Gowan, 2003).

Patricia Johnston (2011; 2014) details how IQ is considered in child welfare and social work practice. Johnston (2011) associated a lack of cultural relevance in Nunavut’s child welfare system to a subsequent harm to kinship structures and the intergenerational transmission of Inuit culture.

Johnston (2014) has stated that this has generated a “significant amount of talk” surrounding IQ “and its importance to the development and delivery of the child welfare (child protection) regime” (p. 267). The Nunavut Government has mandated the inclusion of IQ as a priority, but because priorities were expressed vaguely, non-Inuit have had difficulty incorporating them into practice. The current system is still forced to mimic southern Canada’s child welfare systems while it reconciles “the distance between Inuit culture and the Qallunaat (non-Inuit) or Western worldview” (p. 268). Johnston states, that:

> [U]ltimately, Inuit Qaujimajatuqangit may, if truly given the opportunity to lead and give direction for the territory, show how a new approach, or rather a very old approach, to child welfare could better meet the needs of Inuit children, youth and families (p. 97).

Child abuse and neglect, when it occurred, was also traditionally addressed within extended family camps as Ekho and Ottokie (2000) describe: Some of the parents had their children taken away, because the whole camp could see that the child was often very hungry and it was obvious that the child was being mistreated. Sometimes the child would be taken away and placed with another family. There are a few parents who only mistreat one of their children…so we have to show them love…they would tell the parents in a kind way that they would take the child for a while to provide for him or her. They would do this in a way so that the parents didn’t start hating the child” (Johnston, 2011; p. 97).

Health and Wellness

In the Nunavut research literature, Inuit health and wellness is often discussed in terms of balance, reciprocity, and interconnectedness. Many of these discussions acknowledge the difference between Inuit perspectives of health and well-being from those from Western worldviews. Inuit Qaujimajatuqangit provides a framework for achieving well-being and many research collaborators feel that including it will make health care more suitable for Inuit. In addition to the literature calling for culturally relevant health care, there have been calls for additional Inuit service providers and more Inuit-specific materials and resources for health education.

Inuit worldviews are holistic and "ecological, social, economic, and spiritual aspects of life are closely intertwined (Berkes, 1999; Tester and Kulchyski, 1994; Nunavut Arctic College, 2008 as cited in Rixen & Blangy, 2016, p. 301). In the surveyed literature, Inuit health and wellness is often discussed in terms of balance, reciprocity, and interconnectedness. Many of these discussions recognize the conceptual difference between Inuit perspectives of health and wellbeing and those associated with Western worldviews. In the context of Health and wellness, Inuit Qaujimajatuqangit is prescriptive and many feel that its inclusion will make health care culturally congruent.

Inuit conceptions of wellness extend beyond a biomedical focus on patient-centred causes and treatments for disease. Wellness is conceived as a function of interpersonal relationships at individual, community, and environmental levels.

> Romain (2016) relays "the ideologies of Inuit wellness (…) and biomedicine" differ significantly. Inuit have values that are guided by "a distinct world-view which is relational" and is "embedded in Inuit life" (Romain, 2016; p. 76).

Individual health is realized in relation to others[22] and Inuit [personal development] goals are seated in creating harmony for the community; a "we" rather than "me" positionality (Snow, & Tootoo, 2021; p. 10). For Inuit, "living well is a lifelong process guided by relationships with others and is ultimately for the greater good of all" (Peliter, 2021; p. 347). This contrasts the tendency in Western cultures to think of healing and living well as individualistic pursuits (Peliter, 2021) tied to processes of individual self-actualization (Snow, & Tootoo, 2021).

Kral & Idlout (2012) describe IQ "as central to [Inuit] wellbeing" (p. 393); it embodies the relational ontology that informs Inuit conceptions of health and wellbeing, it prescribes a manner for achieving wellness, and its application is healing and identity forming. To understand IQ in the context of health and wellness, Kusugak (2013) draws on Shirley Tagalik (2010) to explain that "a sense of personal health and wellness is reliant on a strong sense of identity and belonging" (p. 6). Kusugak (2013) adds that understanding one's purpose and role comes from an appreciation of what specific skills and abilities one can offer to service others and support a common good. Yunes (2019) adds that "Inuit in Nunavut have come to measure community health culturally in accordance with IQ" (p.132).

> Romain (2016) cites the Government of Nunavut (2013) in relaying that Inuit wellness is guided by the IQ values of collaboration (Piliriqatigiingniq), sharing and reciprocity (Pijitsirniq/Pikutigiktot), balance and interconnectedness (Elagikatigiyut).

Kral & Idlout (2012) found that a "salient theme for [Inuit] happiness and wellbeing had to do with the values and practices of Inuit traditional knowledge, known among Inuit as [IQ]. This knowledge and practice had to do with things such as going on the land, hunting, sewing clothes, eating "country food" hunted from the land, spending time with elders and hearing their stories, and being able to build an igloo in order to survive on the land" (p. 393).

> Obed & Leroix (2019) describe how Inuit continue to tap into the earth's resonance to improve mental health and well-being and enact their accumulated generational knowledge, skill sets, and wisdom (Obed & Leroix, 2019).

[22] "Elders [place] emphasis on holism but also on interconnectedness and reciprocity in their conception of what it means to live a good life" (Peliter, 2021; p. 347).

Parlee & Furgal (2012) illustrate how cultural continuity and community wellbeing is connected to the health of the environment. As an example, Romain (2016) cites Kirmayer, Fletcher, & Watt (2009) to explain that IQ concept of Avatittinnik Kamatsiarniq (stewardship, respect and care for the land, animals and environment) influences and emphasizes one's relationship and connection to the land and situates wellness practices outside of institutional spaces.

Calls for culturally congruent health care

The dominance of Western models (and their corresponding values and viewpoints) in health care have destabilized Inuit conceptions of wellbeing and led to the unwellness of Inuit (Kral, 2003; Matthijsse, 2010). The research literature documents an ongoing and multilateral lateral desire for culturally congruent health care and service delivery in Nunavut (Kinnon, 2002; Bird, Wiles, Okalik, Kilabuk, & Egeland, 2008; Matthijsse, 2010; Geraci, 2011).

Matthijsse (2010) conveys that "the reappropriation of Inuit values, laws and culture is seen as a key means of making the people of Nunavut healthy again, and proud of who they are: thus building their spirits" (p. 188). Matthijsse (2010) cites Igah (2007) to add "[Inuit] really need to go through the process of cleansing. For us to become proud and healthy again, and to take on all the positions and to raise our children well, we have to be proud of who we are as a people (Igah, 45, justice sector worker, 07/06/07 as cited in Matthijsse, 2010; p. 188). Karetak, Tester, & Tagalik (2017) add that "providing Inuit with access to their own process of healing [will] reconnect […] them with the unique knowledge and perspective of Inuit Qaujimajatuqangit" (p.XV). "[T]he process of knowing IQ and reclaiming […] culture is a first step to decolonizing and healing who [Inuit] are as People" (Karetak, Tester, & Tagalik, 2017; p.n.a).

Calls for Inuit service providers

The roles of those engaged in Inuit wellness require participation in reciprocal relationships and partnerships with members of the community (Romain, 2016). Marchildon & Torgerson (2013) relay that:

> Applying IQ means that elders and other residents are included with government officials in planning health services in individual communities. Moreover, as part of the government of Nunavut's legal commitment under the Nunavut Land Claims Agreement and the territorial government's desire to ensure that residents receive services by individuals who understand Inuit culture and language, the Department of Health and Social Services (DHSS) is committed to increasing the proportion of Inuit within the health workforce (pp. 17-18).

Ha, Ahenakew, & Campbell (2019) confirm the "need [to] not only recruit and retain Indigenous nursing students, but also recognize Indigenous knowledge within the curriculum and train culturally competent practitioners (Canadian Nurses Association, 2014)" (p. 2). A developed understanding of IQ can serve as "…a vehicle to understand motivation and health-seeking behaviours" (Bird, Wiles, Okalik, Kilabuk, & Egeland, 2008; p. 19) and close gaps between health practice and the well-being (Healey, 2006).

Calls for Inuit specific materials and resources

Ward (2016) reasons that Inuit Qaujimajatuqangit is "the foundation upon which social/emotional, spiritual cognitive and physical wellbeing is built" (Tagalik, 2009 as cited in Ward, 2016, p. 24). Therefore, "health promotion resources must reflect understandings of health and wellness specific to a target audience and explicitly engage participants to share

their understandings of health" (p. 24). Ward (2016) argues it is not enough to simply use a holistic health model in health education or resource promotion. Egeland, Roberts, Kuluguqtuq, Kilabuk, Okalik, Soueida, Kuhnlein (2009) provide an example of a culturally specific approach to resource development in which they "utilize[d] traditional knowledge, Inuit storytelling, and country food to promote the health and well-being of community members" (p. 12). They did this by "document[ing] traditional knowledge of country food and its spiritual and health-giving attributes and use[d] this knowledge to promote country food use and healthy market food choices in the community" (p. 22).

Matta (2011) is among those researcher authors who link community well-being with the intergenerational transfer of IQ (Kral & Idlout, 2012; Parlee & Furgal 2012; Yunes, 2019; Newell & Doubleday; 2020). Matta (2011) feels that Elder story telling "is an effective way to teach health messaging to Inuit as it is a culturally acceptable vehicle that [adheres to the values of IQ and] also helps to preserve culture and identity" (p. 29). In particular, Matta (2011) availed of "[p]reviously recorded Elder stories" at part of their "culturally-appropriate community health promotion" work. Peliter (2021) adds that this type of "effective intergenerational communication […] facilitates both healing and transferring traditional Inuit knowledge between generations" (p. 347).

Inuit Qaujimajatuqangit and Western knowledge comparisons

Comparisons of Inuit Qaujimajatuqangit and Western science can be found in the Nunavut research literature. These comparisons are often made along the lines of their characteristics and/or their use. The literature shows that Inuit Qaujimajatuqangit and Western science can be complementary in some ways. However, the literature provides evidence of a number of basic differences that suggest that a cautious approach to bridging IQ and Western science (use them together/at the same time) is the most productive.

Comparisons of Inuit Qaujimajatuqangit and Western science in the literature remain in the realm of 'characteristics' and/or 'application'. This may be because, although in some ways complementary, IQ and Western science remain incommensurate due to a number of fundamental differences suggested throughout the literature. As such, comparisons found in the literature are often expressed as stated differences. Discussions of bridging (i.e., the tandem use of complementary methods in the co-creation of knowledge) IQ and Western science often emerge in consideration of these differences.

Outward differences reflect fundamental differences

The research literature does present a compelling argument for the incommensurability of Inuit Qaujimajatuqangit and Western science. This argument considers how distinct views of how knowledge is acquired, and of reality itself, amount to disparities in values and ways of being/doing/knowing. At the same time, disparate values and ways of being/doing/knowing reinforce distinct views of reality and knowledge acquisition.

Healy & Tagak (2014) cite Wilson (2008) and Getty (2010) when suggesting that "knowledge comes from the people's histories, stories, observations of the environment, visions and spiritual insights" (p. 3). Each of which has interacting implications for how knowledge is generated.

In the context of knowledge about caribou, Ferguson (1999) adds that an

> Inuit understanding of ecology is distinct from scientific understanding partially because of the rationale for its collection: human survival. […] Survival needs emphasizes the question 'Are there enough?' over 'How many are there?' (Unaaluq pers. comm., to R. Williamson pers. comm.) […] Once survival needs are met, hunters continue to observe population trends and changing ecological conditions accurately, but without numerical quantification (p. 42).

Authors regularly stress the interaction between history, culture, worldview, and practices when describing the generation and regeneration of knowledge (Furgal, Powell, & Myers, 2005; Omura, 2013; Yunes, 2019; Semple, 2020), however social relationality seems emphasized most often in the literature. Furgal, Powell, & Myers (2005) offer an example of how differences in knowledge link to differences in culture:

> Western (and in this case Southern) culture is information-based, whereas Inuit culture (based on IQ) is relationship-based. One places value on information in the form of paper, policies, contracts, etc. ("you are what you know"), and the other places value on the spoken word and the quality of relationships ("you are who you know") (Furgal, Powell, & Myers, 2005; p. 111).

With understanding how Inuit culture and IQ work together, Yunes (2019) states that "Inuit Qaujimajatuqangit positions communities first; creates strong, robust cultural connections; and places the power of decision making in collaboration and discussion. Similarly, Semple (2020) suggests that Inuit cultural worldview is partly a function of social relations:

> 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 central to why Inuit were such a successful society. Unity speaks to the importance of collective identity and collaboration across time (pp. 102-103).

The emphasis on social relations separates the particular and personal, relational and reciprocal qualities of IQ (Kral, 2009) from the general, abstract, and hierarchically authoritative qualities (Kublu, Laugrand & Oosten, 2004) of Western knowledge.

Omura (2013) explains that IQ is different from modern science, stating "[it] is qualitative, intuitive, holistic, subjective, spiritualistic, and based on a monistic ontology, in which humans are viewed as part of nature" (p.3). While "modern science" is considered "quantitative, rational, analytical, objective, mechanistic, reductionistic, and based on a dualistic ontology, in which nature is regarded as separate from the human realm" (Omura, 2013; p. 3). Healy and Tagak (2014) add an epistemological consideration to this discussion: "A relational epistemology draws our attention to relational forms of knowing. This differs from the common Western practice of focusing on individual descriptions of knowing" (p.3). Healy and Tagak (2014) cite Thayer-Bacon (2003) in adding that Inuit knowing is "informed by the multiple connections of knowers with other beings and the environment, by participating in events and observing nature, such as the birds, animals, rivers and mountains (Thayer-Bacon, 2003; p. 183)" (p.3).

The co-creation of knowledge

While outward and fundamental differences are observed in the research literature, they typically appear in optimistic but cautious discussions around the co-creation of knowledge (i.e., the tandem use of complementary methods to inform understanding).

Higgins (2010) believes that "Inuit Qaujimajatuqangit, the deep Inuit worldview, and Western science, a worldview that closely and minutely investigates the physical world, are both valuable, yet different culturally responsive paths to knowledge of the world that can be walked upon and viewed simultaneously" (p. 4). Weber (2013) also views science and Indigenous or local knowledge as two separate modes of knowledge generation but appreciates the recognition that these "separate branches of knowledge" (p. 190) can be complementary to one another, share the same pursuit in developing better understandings, and work together to inform prescriptive policy based on collaborative research.[23]

Gadoua (2013) reports that in the academic realm, IQ is often described in opposition to Western scientific knowledge. While acknowledging the extensive efforts to reconcile differences, Gadoua (2013) suggests that a dualistic perspective is unnecessary based on western scientific knowledge being a heterogeneous body of theories and methodologies among which there are a "growing number of approaches that have multiple intersections with Inuit perspectives" (p. 173). Many see the value in these intersecting points. For example, Ferrazzi (2015) quotes a knowledge bearer in their dissertation: "It's very important to have that bridge from the Western culture to the Inuit culture, to Inuit Qaujimajatuqangit. […] If you have a good bridge and you have good communication for the two that's how I would see it succeeding" (p. 161). Jose Kusugak (2004) proposes that "discoveries and inventions are found by trial and error [and] much hypothesis are afterthoughts of errors" (p. 1). He further supposes that "these experiments were all conducted like any western science" but instead of recording "…an accident that led to the discovery that it was the most effective method" into written laws, Inuit kept only the conclusion (the practical, tangible element) and expressed it within social conventions.

Bishop, Owen, Wilson, Eccles, Chircop, and Fanning (2022) support bridging approaches to knowledge creation but acknowledge that Western institutions tend to adopt narrowly focused interpretations/applications of IQ based on management needs thereby disregarding the cosmological implications of IQ. They propose that fuller understanding of IQ is necessary for bridging knowledges and that this requires meaningful engagement with and by Inuit.

While some authors support the blending of knowledges, there are several cautions in literature to consider. Most concerning, Young (2017) warns of the power dynamics at play in the blending efforts within studies and management regimes. Young (2017) feels that because Inuit views of the Arctic tend to be subordinated to dominant southern narratives, the inclusion of

[23] Notably, Peletz, Hanna, & Noble (2020) adds perspective to the bridging discussion. They explain that, to make assessment and decision-making processes more meaningful, IQ should be used beyond an attempt to "fulfill guideline requirements" (p. 419). IQ should be used as available knowledge in its own right "regardless of the availability of Western science" (p. 419). It does not have to be limited to "fill[ing] gaps" or as an "add-on' to Western science (Peletz, Hanna, & Noble, 2020). The use and treatment of IQ and western science should be equally valued and viewed "as complementary rather than contradictory" (p418).

Inuit Qaujimajatuqangit is done so in a manner which legitimizes its assimilation and co-optation.

In an act of co-optation, Leduc (2006) suggests that IQ is sometimes reduced to 'Inuit knowledge'[24] (thereby disassociating components like societal values, traditional cultural understandings, and culturally specific forms of learning) so that it can be accommodated more as observational data in Western knowledge systems.[25] As an example, when IQ is largely conceived as Traditional Ecological Knowledge (TEK), then the 'natural sciences' tend to be an accepted interface between Inuit knowledge and Western. Natural sciences inherently tend to discourage subjectivity, value guided conclusions, theories grounded in cosmology, etc. in the generation of knowledge. Although essential to IQ, these features get trimmed off for a better fit in the dominant system. Furthermore, when the terms IQ, TK, and TEK are treated as interchangeable, it is easy to emphasize the specific aspects of IQ that are compatible with Western science while referencing IQ in a general sense (Tester and Irniq, 2009). When detached from values and the non-empirical cultural aspects of IQ, TK/TEK can be used as a tool for dominant institutions to realize economic and environmental assumptions under the screen of cultural congruence (Leduc, 2006; Dowsley, 2007; Jacobson, Manseau, Mouland, Brown, Nakashuk, Etooangat, Nakashuk, Siivola, Kaki, Kapik, Evic, Kennianak, & Koonelieusee, 2016). Peletz-Bohbot (2019) reminds us of yet another challenge with referring to IQ as traditional knowledge. The term 'traditional' implies old knowledge that while useful in some contexts, may be dated in reference to modern developments and therefore easily dismissed within a dominant narrative. Arnakak (2000) advises "Separating IQ from the contemporary realities renders something that is profound, enriching and alive into something that is meaningless, sterile, and awkwardly exclusionary" (p. 1).

[24]Stuckenberger (2009) explains that "IQ includes a combination of features of knowledge, values, and skills, such as the knowledge of the environment, competence in the Inuktitut language, values of social conduct, and subsistence skills" (p.18). Young (2020) is among several research authors (Gearheard, Matumeak, Angutikjuaq, Maslanik, Huntington, Leavitt, Kagak, Tigullaraq, & Barry, 2006; Gadoua, 2013) that remind us that, even when reduced and compared as "knowledge', Inuit knowledge is by nature unlike scientific knowledge. For example, Gearheard, Matumeak, Angutikjuaq, Maslanik, Huntington, Leavitt, Kagak, Tigullaraq, & Barry (2006) state "despite generally being in agreement or even complementary to one another in some respects, these knowledges reflect different perspectives and emphases" (p.203).

[25] In practice, 'Traditional knowledge' tends to be used to confirm data already collected in scientific research processes (Jacobson, Manseau, Mouland, Brown, Nakashuk, Etooangat, Nakashuk, Siivola, Kaki, Kapik, Evic, Kennianak, & Koonelieusee, 2016), or in a review process, "like peer review in the university system" (Weber, 2013; p.190). Jacobson, Manseau, Mouland, Brown, Nakashuk, Etooangat, Nakashuk, Siivola, Kaki, Kapik, Evic, Kennianak, & Koonelieusee (2016) report that TK is not typically a determining factor in decision making processes, as it is scientific knowledge that ultimately validates results.

Appendix 14: The Prism of Inuit Qaujimajatuqangit

INTRODUCTION

As we began to engage with the research literature, it became apparent that 'Inuit Qaujimajatuqangit' is described with some variety between records. This observation prompted us to track unique, informative, or otherwise notable descriptions of IQ during our coding phase. A closer examination of the language found in 82 'notable descriptions' led to the identification of several reoccurring terms and phrases used to communicate, embody, or explain Inuit Qaujimajatuqangit. An extensive analysis was also undertaken to identify points of intersecting interests within and between discussions. Research team member Tapisa Kilabuk led this analysis, which manifested organically as she engaged with the material and recognized shared elements or features in diverse descriptions. The analysis enabled the clustering of any recurring terms and phrases that were indicative of a shared concept or construct. Several of the concepts/constructs are presented below. As part of a reflective process, each was paired with an underived Inuktitut term with which the concepts/constructs correlated. To contextualize this process, they are presented with summary descriptions, many of the insights from research authors, images, and commentary arising from the reflective approach. This analysis allowed for a broader conceptualization of what has been difficult to define in the Nunavut research literature.

PRISM OF INUIT QAUJIMAJATUQANGIT

About half of the authors that describe or define 'Inuit Qaujimajatuqangit' in their texts provide an uncomplicated and concise explanation. Our dataset also includes hundreds of records[26] that contained expansive and descriptive definitions, where authors have elaborated on various aspects and facets of Inuit Qaujimajatuqangit. Many of these authors expressed their understanding of IQ by connecting several narratives of Inuit experience and the complex ramifications of those experiences. Many of these understandings provide insight into the historical dimensions of Inuit Qaujimajatuqangit, contemporary social norms, the function or effect of holism on IQ communication, and much more.

The Honorable Paul Okalik, Nunavummiuq and former Premier of Nunavut, provided a particularly memorable characterization of Inuit Qaujimajatuqangit during his speech at the 'Seventh Tribal Sovereignty Symposium' in 2007. Paul credits Inuit Qaujimajatuqangit as the reason that Inuit were still able to flourish despite the challenges posed by colonization. He explains, "By using Inuit concepts expressed in Inuktitut, we have ensured that future land management decisions must be interpreted through the prism of Inuit Qaujimajatuqangit" (Okalik, 2007, p. 17). His description of Inuit Qaujimajatuqangit as a prism suggests that IQ is not a uniform concept that can be fleshed out and defined, but a multifaceted notion that can be examined, analyzed, and implemented in a myriad of ways and spaces.

The prism analogy immediately resonated among our team given our experience with the literature and the various interpretations of IQ that we discovered through our review process. That is, we found that

[26] 'Inuit Qaujimajatuqangit' appeared in 1385 (37.63%) of the records that we surveyed for our review and was defined or described in 945 (25.7%). Almost half of these definitions/descriptions were considered moderate (n=223; 22.6%) or detailed (n=229; 24.2 %). That is, we considered descriptions that were two to three sentences long as 'moderate', less than that as 'brief', and more as 'detailed'.

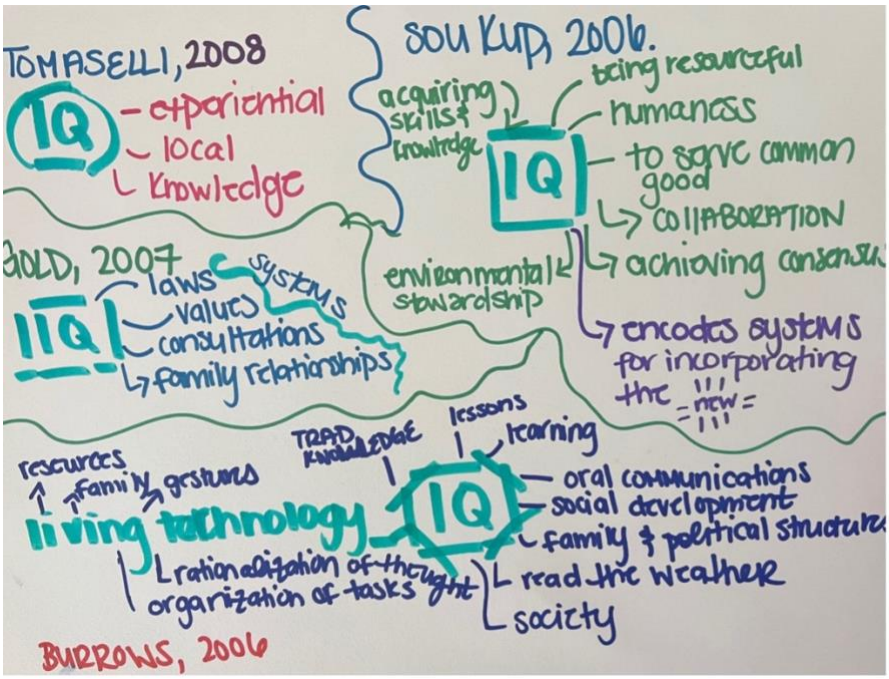
Inuit Qaujimajatuqangit can be discussed, engaged, or applied in many ways and spaces. We were therefore able to see the collective literature as a medium that refracts a broad spectrum of meaning as opposed to a consistent definition.

PROCESS AND ANALYSIS

The concepts and constructs discussed in this chapter emanate from the terms and phrases found in many descriptions of Inuit Qaujimajatuqangit (the specific records used for this analysis are listed in Appendix 11: Notable descriptions/definitions). Some concepts are already well-developed in the literature while some have more potential to be expanded upon. The ones presented here are meant to be understood in collaboration despite them being discussed in dedicated sections below. We appreciate that the concepts act in a system where overlap is accepted, as their meanings are often intertwined with one another.

This appendix was created independently from the other branches in this report. However, there are similar concepts discussed throughout. The intention is to identify key details of, and connections among, the concepts developed by authors in the surveyed literature.

Figure 1. *Visualizing the process: identifying the connections.*



CORE LEXES

Research authors often describe various concepts or constructs to explain what is or could be congruent with Inuit Qaujimajatuqangit. As it is common for scholarly writers to paraphrase others when not directly quoting them, these concepts or constructs can come to be expressed by many like terms while still remaining true to the original abstract or notion. In addition, derived ideas can be applied or elaborated on in several ways, spaces, and directions while still retaining their core conceptual meaning. In this way, Core Concepts (CC) are represented in the research literature by a lot of Alternate Language (AL) used to convey the same meaning. For instance:

CC: Experience < **AL**: life skills, ideas and actions, practices, consultations, experiential [as seen in Arnakak (2003), Higdon and Ferguson (2014), Martin (2009), McCall (2014), and McGregor (2013)].

> "The experiences of others and the experiences of the community are part of finding meaning and understanding" (Healy and Tagak, 2014, p.8).

CC: Relationship < **AL**: generational, social organization, kinship patterns, family, community [as seen in: Aporta (2002), Brooker (2018), Cowan (2005), Gold (2007), and Tagalik (2010)].

> "Inuit Qaujimajatuqangit" in that individuals are seen "in the context of their relationships [which] align with Inuit culture" (Brooker, 2018, pg. 11)

CC: Values < **AL**: laws, norms, ethics, governance, political structures [as seen in: Grimwood (2012), Henshaw (2006), Higdon, and Ferguson (2014), Imire (2014), and McGregor (2013)].

NOTE TO READER

This overview of Inuit Qaujimajatuqangit is based on what was found in the surveyed literature. It does not represent the views, beliefs, or knowledge of all Inuit, especially considering that most publications were authored by non-Inuit. It may however serve as a starting point to understand what has been documented and interpreted about the subject thus far in terms of research endorsed by, and in collaboration with, the Nunavut Research Institute.

LANGUAGE

Inuit Qaujimajatuqangit is a term that reflects the necessity to ‘Inuitize’ policy and incorporate ways of knowing into contemporary public service systems. Inuit knowledge is best reflected when contextualized with Inuit epistemologies. Because ontologies are shaped by language, we believe that further exploring the terms arising from the analyses and discussions in the systematic literature review is a worthwhile endeavor.

SECTION OVERVIEW

Literary descriptions of Inuit Qaujimajatuqangit that contained similar arguments, wording, interests, and more were compiled and analyzed for the following synopsis. The section headings are the underived Inuktitut terms with which the concepts/constructs correlate (followed by an English translation). The content is accompanied by quotes, images, and tables.

QAUJIMA
IQ as Knowledge
- a. Traditional Knowledge? Inuit Cultural Knowledge?

IKIAQTAQ
Layered relationships
- a. What Influences Inuit Qaujimajatuqangit

AVALUQANNGITTUQ
That which has no circle or border around it.
- a. An Introduction to Process

ILIQQUSIQ
Continuum, System, And Process.
- a. Using patterns to explain Interconnectedness.

TUKISIUMANIQ
Building understanding or making meaning in life
- a. Worldview, philosophy, and cosmology

SILATUNIQ
Inuit Qaujimajatuqangit is Relational

AKUNI
Evolving Nature Of IQ
- a. The Influence of Past, Present, And Future

SILATURNIQ
Inuit Conceptual Paradigms
- a. IQ As a Conceptual Framework: for understanding, preservation, and integration.

ISUMASAQSAYUQ
The elements of Inuit pedagogy
- a. The affection of teaching and learning creates positive effects.

ISUMAUTI
Metaphysics as IQ
- a. Fractions of Epistemology, worldview and more.

IQQAUMAQTIGIINIQ
All thoughts, or all knowing, coming into one (Concluding remarks)

ISUMAGIYAIT
Remembering (take aways)

QAUJIMA[27]

to know

"QAUJI - means to find out; QAUJIMA - means to know; QAUJIMAJAQ- means what or that which is known; QAUJIMAJATUQAQ - means something which has been known for a long time; and Inuit QAUJIMAJATUQANGIT means something that Inuit have known for a long time" (Alexina Kublu in Stern, and Stevenson, 2006, p. 101).

The inclusion of Inuit Qaujimajatuqangit in several academic discourses has provided an incredible opportunity for academics, organizations, and Inuit and non-Inuit community members to share their understandings of IQ and learn from one another as content emerges. Arguably, the typical definitions of Inuit Qaujimajatuqangit are formed by relating Inuit to their knowledge, culture, actions, and ideas **(Aporta, 2002; Brown, 2016; Dunning, 2012; Gearhead et al., 2010; Grimwood, 2012; Grimwood & Doubleday, 2013; Kelley, 2009; Klein, 2017; Knopf, 2018; Leduc, 2006; Meis, 2015; Obed, 2017; Okalik, 2007; Tomaselli, 2018; White, 2006).** Inuit Qaujimajatuqangit is often discussed as knowledge(s) connected to Inuit culture. A variety of perspectives inform the current discourse and authors' descriptions are either validated or invalidated by one another.

TRADITIONAL KNOWLEDGE?

The miscommunication of Inuit Qaujimajatuqangit has become a reoccurring concern in the literature. Many authors identify how IQ is connected to tradition(s) and this has become a point of contention, as that description limits IQ to the realm of past Inuit ideas or actions.

Williamson (2022) shares their ambivalence toward the terms Inuit Qaujimajatuqangit, Indigenous knowledge, and Traditional knowledge. Traditional knowledge, they said, has indication of pastness for some **(Williamson, 2022, p. 45)** and this same pastness has become embedded in Inuit Qaujimajatuqangit and Indigenous knowledge. **Arnakak (2002)** writes, "Inuit Qaujimajatuqangit, or IQ, from its inception, is intended to include not only Inuit traditional knowledge but also the contemporary values of Nunavut's communities" (p. 34). In the article *Cultures in Collision: Traditional Knowledge and Euro-Canadian Governance Processes in Northern land-claim Board*, the Author briefly examines the language used to discuss Inuit and their knowledge. They point out the "misleading connotations" found in using such terminology as "traditional," which "suggest customs and beliefs [being] frozen at a particular point in time (usually the distant past)" **(Nadasdy, 2003 as cited in White, 2006, p. 402).** They also state that Inuit Qaujimajatuqangit has become the preference over "traditional" given that IQ combines "the traditional knowledge, experience and values of Inuit society, along with the present Inuit

[27] Dunning, N. (2012). Reflections of a disk-less Inuk on Canada's Eskimo identification system. Études/Inuit/Studies, 36(2), 209-226.

knowledge, experience and values that prepare the way for future knowledge, experience and values" **(GN, 2002 as cited in White, 2002, p. 402).**

Jose Kusugak's (2004) perspective acknowledges that Inuit Qaujimajatiqangit develops from the past, but carries forward through cultural learning. He writes:

> "Following the literal meaning of Inuit Qaujimajatuqanjit, I would have been born with the knowledge of building iglus, qajaqs, Shamanism, traditional music skills, delivering babies, the intricacies of skinning animals, weather forecasting and a thousand other things; because Inuit Qaujimajatiqangit, which, when translated into English means 'Inuit instinctive knowledge.' Other than suckling, crying, and hurting, not much else is instinctive. [However], like all races of people in this world, all knowledge is learned" (p. n.a.). Furthermore, "all this new knowledge had to be taught from one Inuk generation to the next. It also had to be taught and learnt in the most practical way respectable to the culture, in which it is taught and learned" (p. n.a.).

Research authors alike exclaimed that Inuit Qaujimajatuqangit is not stagnant. Williamson (2022) wrote, "Of course, traditions are dynamic and ever-changing, and Indigenous knowledge is more than a static collection of skills and information. I use the term Inuit knowledge to reinforce that this is a specific, situated complex of living knowledge and skills" (Williamson, 2022, p.165). Several authors argue that regardless of the knowledge, skill, or understanding created in the past, the intention is that these ideas and actions should not be confined to the past, and therefore IQ remains relevant if understood correctly (Imrie, 2009; Kelley, 2009; Rosen, 2013; Williamson, 2022; Woynarski, 2020).

INUIT CULTURAL KNOWLEDGE?

Many descriptions of Inuit Qaujimajatuqangit [82 articles analyzed: 92 mentions of cultur/e/al/ally. Alternative language: society[ties]/societal] emphasize the cultural component of Inuit knowledge **(Brooker, 2018; Ferrazzi et al., 2019; Leduc, 2006; and McGregor, 2013)**. Several authors preferred using the term cultural knowledge, [as it] "is thought to capture better the need to include contemporary and future knowledge as epistemological conceptions embedded in IQ" (**Ferrazzi et al., 2019, p. 3).** Descriptions of Inuit Qaujimajatuqangit that emphasize culture can signal its complex nature and tend to place it beyond the past. For example, **Weber (2013)** states, "IQ represents an effort to recognize and harvest the great continuities and strengths of Inuit culture in the context of the 21st century with its mad scramble for resources in the 'pristine' Arctic" **(p. 215).**

An analysis of the intersecting interests within and between discussions points to Inuit Qaujimajatuqangit as a broader philosophy, of which Inuit knowledge and culture are integral components. The elements are synonymous and, when in alignment, propose a framework. IQ reflects the inseparable connection between what the Inuit know and how they live, forming a unique foundation for their cultural identity and sustainable practices. As a term, 'Inuit Qaujimajatuqangit' encompasses both Inuit knowledge and cultural practices, but it is different from either of these concepts individually. Researchers may choose to avoid defining Inuit Qaujimajatuqangit in a silo or as being representative of an entire peoplehood at a specific time and space, and instead iterate IQ in a

way that is representative of the multi-dimensional realities from past, present, and future Inuit. This may lead to Inuit Qaujimajatuqangit being described more broadly, displaying more fractals in the 'prism'.

I K I A Q T A Q[28]

something made in layers, layered composition.

Environment, society, community, values, and Elders are among the interrelated layers that influence the nature of Inuit Qaujimajatuqangit.

INFLUENCE: LAND

(alternate terms: land, nuna, nature, animals, land-use, local, environment).

The connection between Inuit Qaujimajatuqangit and Land (*Nuna*) is regularly acknowledged within the literature. 'Land' is inclusive of water (I*maq*) and sky (*Sila*) **(Qitsualik, 2013)**. Particularly, **Kelley's (2009**) case study provides critical perspectives from various writers who elaborate on how land is integral to IQ. Kelley (2009) summarizes "Inuit have developed a deep understanding of their environmental context and surroundings, through their long-term observations, uses, and experiences of the land, water, sea, and ice around their communities and in the places where they used to live before moving to the settlements" **(p. 45)**. Additionally, **Okalik (2007)** writes, "[IQ] is [the] belief system that continues to define our Inuit societal values," and it is "closely tied to [Inuit] land and the family bonds that have allowed [Inuit] to flourish where others have not" **(p. 12).** Notably, **Woodley et al., (2015)** provide an example of the "effectiveness of IQ" whereby they use a research team's work around "population and distribution trends for four species of migratory birds" **(p. 674).** Thet found "[f]or two of the species examined, local knowledge identified population shifts that were previously unknown to Western science" **(p. 674). Berkman et al. (2019)** as they state "[as] Northerners, because we live here and have lived here for centuries, have deep reservoirs of traditional and local knowledge about the land and the environment and can make major contributions in this regard" **(p. 327).**

INFLUENCE: COMMUNITY

The community greatly influences the understanding, conceptualizing, and transmission of Inuit Qaujimajatuqangit. Community being inclusive of family, kinship ties, and ancestors. Many principles and natural laws associated with IQ mention the importance of serving the community with your knowledge and actions. IQ's meaning is complex and reflective of a community-based perspective.

[28] McGrath, J. T. (2018). *The Qaggiq model: Toward a theory of Inuktut knowledge renewal*. Nunavut Arctic College Media.

Arnakak (2003) writes "when we are talking about IQ, we are not talking about a monolith, but about a very diverse phenomenon that changes from community to community with unlimited themes" **(p. 176).**

Gold (2007) describes Inuit Qaujimajatuqangit as "a hybridizing perspective" **(p. 359).** The author further explains IQ as "a system of laws, values and consultations; and an understanding of complex family relationships that is explained by Inuktitut kinship terminology" **(Nunavut, 2000 as cited in Gold, 2007, p. 359).** Adding, "IQ is about "healthy, sustainable communities regaining their rights to a say in the governance of their lives using principles and values they regard as integral to who and what they are" **(Arnakak, 2001, as cited in Gold, 2007, p. 359).** Gold (2007) states that IQ is "central to the attempt to legitimate northern and Inuit expertise" **(p. 359).**

Johnston (2011) maintains "IQ is particularly important to Nunavummiut families today, as "the traditional kinship structure is the means whereby goods and services are transacted and exchanged," but it is also the "means of transmitting ideas, values, knowledge, and skills from one generation to the next. In other words, individual, family and society are linked by the kinship structure" (Arnakak, 2001)" **(p. 69). Brown (2016)** adds familial community context, stating "Such lessons served to pass cultural information onto successive generations through observational, experiential, and participatory learning methods. This Process ensured that upon reaching puberty, each individual would be fully capable of, and therefore expected to meaningfully contribute to the community's physical and social needs (Condon and Stern 1993). Thus, by age twelve or thirteen, an individual would be expected to complete all tasks socially ascribed to their gender (Condon and Stern 1993). In short, childhood was characterized as a period of experiential learning, while adulthood required tangible action" **(p. 73).** The influence of Inuit Qaujimajatuqangit within the context of community manifests in different ways. For instance, "the principle of Aajiiqatigiingniq, or collective work to address challenges, is the principle used by Inuit to adapt as a community to their environment" (McMillan & Sheppard, 2020, p.198),

INFLUENCE: SOCIETY

The Inuit Qaujimajatuqanginnut Task Force's (2002) IQ description is used often in articles that link IQ to society (Baikie, 2020; Grimwood, 2012; Grimwood & Doubleday, 2013; McCarney, 2018; Meis, 2015; Van Dam, 2005). They state "Inuit knowledge, or Inuit Qaujimajatuqanginnut (IQ), is described as 'the Inuit way of doing things: the past, present and future knowledge, experience and values of Inuit society" (Inuit Qaujimajatuqanginnut Task Force, 2002, p. 4).

Society greatly influences the transmission and interpretation of Inuit Qaujimajatuqangit. Inuk author Jaypetee Arnakak champions the narrative that links the presence of society with Inuit Qaujimajatuqangit. His work (2001, 2002, 2003) was used by many of the authors mentioned in this review. Notable ones include IQ being "a set of teachings on practical truisms about society, human nature and experience passed on orally (traditionally) from one generation to the next […]. It is holistic, dynamic, and cumulative in its approach to knowledge, teaching, and learning" (Jaypetee Arnakak (2002) as cited in Martin, 2009, p.185; Higdon & Ferguson, 2014, p. 15). Particularly, Johnston (2011) draws on Arnakak, 2001 in their work. They state "Inuit Qaujimajatuqangit (IQ), has been described as "a means of rationalizing thought and action, a means of organizing tasks and resources, [and] a means of

organizing family and society into coherent wholes," (Johnston, 2011, p. 69). Further dialogue highlights Arnakak's interpretation "that IQ possesses a temporal sweep that extends into the past, present, and future and is a living technology through which Inuit thoughts and actions, tasks and resources, family and society are organized" (Daborn, 2017, p. 30). Meis (2015) also uses Arnakak, 2001 in their discussion by stating "IQ is more than traditional knowledge or wisdom; it is about process" (Arnakak, 2001 as cited in Meis, 2015, p. 137).

INFLUENCE: VALUES

Principles, values, and laws are significant because they shape worldview, social structure, and ethical framework known to Inuit. A structure is offered for a better understanding of the nuances behind such values. This structure includes (1) four core beliefs, also known as natural laws and in Inuktitut as *Maligait/Maligarjuat,* (2) eight guiding principles or Inuit societal values that articulate further the four core beliefs, and (3) thirty-eight fundamental values supported by natural laws and IQ.

MALIGAIT

McMillan & Sheppard (2020) offers some insight into *maligait.* They describe "IQ frames a worldview around Nuna [land] by four maligarjuat which is translated as "big things that must be followed". These include:

- → Maintaining harmony in communities and in the mind
- → Working for the common good
- → Being respectful of all living things.
- → Continuously planning for the future in the changing environment" (p. 198).

Six of the 82 descriptions selected for this analysis referenced Maligait/natural laws. Their iterations were very consistent, however each left room for their meaning, significance, and impact to be further explored.

KEY INUIT VALUES

Topkok (2015) discusses how IQ and Inuit values work together simultaneously. This is demonstrated and articulated through the use of the Nalukauq (blanket toss). Topkok states, "[t]here are 38 values and beliefs for Inuit cultural values developed by Canadian Inuit Elders and educators (Aboriginal Learning Knowledge Centre, 2007). These Inuit values are centered on connection, work, coping, and government. According to the Inuit Qaujimajatuqangit, each value represents a person holding a skin blanket (learning) for a blanket toss (journey). In order for a successful pull, each individual (value) needs to pull equally in order to help the one on the blanket" (p. 21).

INFLUENCE: ELDERS

> *"Elder. A person identified by the community as a "culture bearer" as they exemplify the values and lifestyle (not just their chronological age. According to Inuit Qaujimajatuqangit, elders serve as advisors, philosophers, and professors" (Meis, 2015, p. xvi).*

Past, present, and future Elders are responsible for sharing the knowledge and concepts regarding the intricacies of Inuit Qaujimajatuqangit. Numerous texts have dedicated a plethora of information to help understand elder influence, responsibility, stories, and experiences. **Baikie (2020)** shares a quote explaining the connection between Inuit Qaujimajatuqangit and Elders. It reads, "Fortunately, when the Canadian territory of Nunavut was established in 1999, its government made a priority, through engaging with Elders as traditional knowledge keepers, to identify and articulate an Inuit ethnophilosophy as the means to develop Inuit-centered policies and practices. Inuit Qaujimajatuqangit (IQ) was the outcome and is "defined as Inuit ways past, present and future (Tagalik, 2009-2010, p. 2)" (**p. 43**).

In the past and modern day, Elders are considered "authorities on knowledge" (**Laugrand & Oosten, 2010, p. 17**), "As Elders are regarded as the keepers of Inuit Qaujimajatuqangit (IQ), language, culture, and knowledge" (Brown, 2016, p. 23). Aikens (2019) and DeLorenzo (2016), share the same perspective. They both quote, "The Elders are not advocating a return to the past, but a grounding of education in the strengths of the Inuit so that their children will survive and successfully negotiate the world in which they find themselves today (**Nunavut Department of Education, 2007 as cited in Aikens, 2019, p. 63**) and (**Piercy, 2012 as cited in DeLorenzo, 2016, p. 15**).

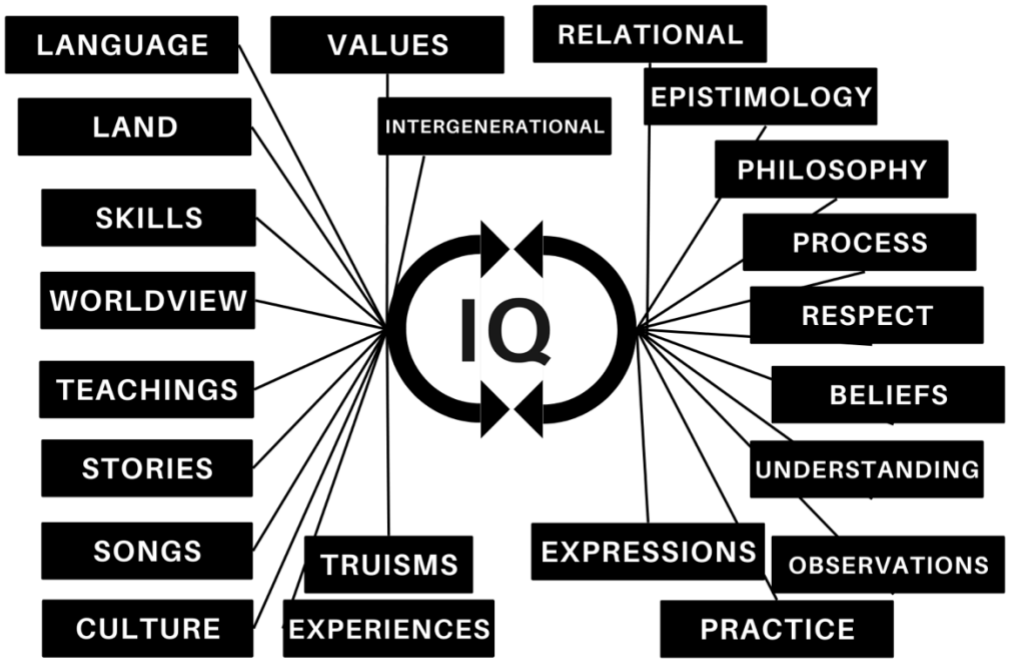
A V A L U Q A N N G I T T U Q[29]

that which has no circle or border around it

Several authors use expansive or encompassing descriptions of Inuit Qaujimajatuqangit that speak to it as a complexity of many aspects.

[29] Tester, F. J., & Irniq, P. (2008). Inuit Qaujimajatuqangit: Social history, politics and the practice of resistance. *Arctic*, 48-61.

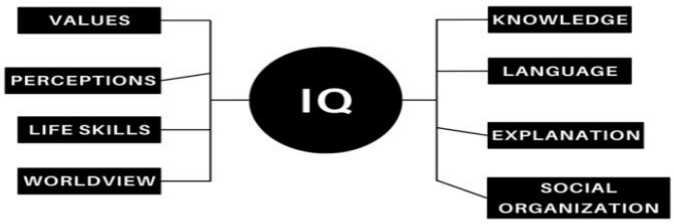
Figure 2. *Visualizing the Process: Communicating Concepts < Inuit Qaujimajatuqangit*



Several authors elaborate on the notion that Inuit Qaujimajatuqangit encompasses all aspects of Inuit culture and experience. Many source insights from Government of Nunavut (1998, 2005) documents **(Henshaw, 2006; Higdon, and Ferguson, 2014; McGregor, 2013; McCarney, 2018; and Kelley, 2009).**

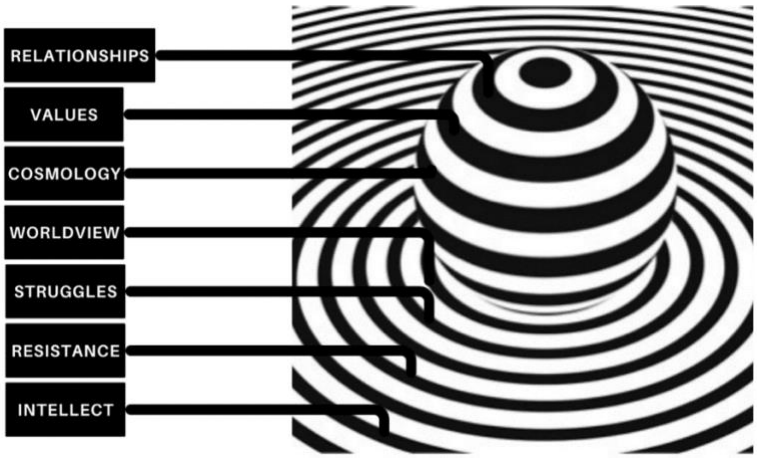
The government of Nunavut has worked to develop a unified understanding of IQ and the role of Inuit culture in government operations. A meeting on Traditional Knowledge in Igloolik, Nunavut in 1998 that was convened by the Nunavut Social Development Council, brought together Elders from all Nunavut communities to address this need. Wenzel (2004) quotes an anonymous meeting participant who conceptualized IQ as a way of knowing that encompasses "all aspects of traditional Inuit culture including values, worldview, language, social organization, knowledge, life skills, perceptions, and expectations" **(McCarney, 2018, pg. 8).**

Figure 3. *Visualizing the Process: Inuit Qaujimajatuqangit encompasses many aspects*



Many authors rely on one of the many Inuktut representations and translations found in Tester and Irniq (2008) (**Grimwood, 2012; McCarney, 2018; Rosen, 2013).** For example, the concept of *avaluqanngittuq* (that which has no circle or border around it) is a descriptive term meant to represent IQ as 'all-encompassing or seamless. IQ is a "seamless" unity with no discernable parts and where everything is related to everything else in such a way that nothing can stand alone, even in the interest of gaining an appreciation of the whole" **(pp. 88-89, p. 8, p. 8).** "In other words, everything is related to everything else in such a way that...nothing can stand alone" **(Tester & Irniq, 2008, p.49).**

Figure 4. *Visualizing the Process: imagining seamlessness*



PROCESS

Some authors introduce an element of 'process' to the understanding of an all-encompassing or seamless belief system. **Meis (2015)** quotes **Arnakak (2001):** "IQ is more than traditional knowledge or wisdom; it is about process" **(p. 137).** Explanations of IQ by writers including **Dunning (2012), Gearheard et al. (2010), and Grimwood (2012)** all recognize a 'process' led by elders using oral tradition, observation, and practice and connect it to how Inuit knowledge, values, beliefs, and skills are shared. Similarly, **Obed (2017)** writes, "This study, guided by Inuit knowledge and understandings of the land as pedagogy, meaning a process of relationship building that is specific to the principles of Inuit Qaujimajatuqangit (IQ), supports us as Inuit to tell stories from our own worldviews while also honing and demonstrating our inherent competencies" **(p. 4).** Processes evolve over generations and continue to play a crucial role in maintaining the vitality of IQ and the sustainability of Inuit communities. Process is discussed in terms of how Inuit Qaujimajatuqangit is developed, transmitted, and applied, and how it shapes Inuit practices, beliefs, and more.

ILIQQUSIQ[30]

our patterns of behaviour and being.

PATTERNS/INTERCONNECTING

Several authors extend the notion of 'process' by describing IQ in terms of continuums and patterns within the interconnected elements of systems. Expansive or encompassing descriptions are often found in use in the research literature by system theorists who aim to capture the complexity and interconnectedness of various phenomena and connect the different elements interacting within a system. Authors like **Brooker (2018)** specifically connect "systems theory" to "Inuit Qaujimajatuqangit" in that individuals are seen "in the context of their relationships [which] align with Inuit culture" **(p.11).** Other authors reference the systematic nature of IQ in their explanations. For example: **Okalik (2007)** explains Inuit Qaujimajatuqangit in terms of being a "developed social code and knowledge system" **(p. 12).** They add that "[it] is this belief system that continues to define our Inuit societal values," and it is "closely tied to [Inuit] land and the family bonds that have allowed [Inuit] to flourish where others have not" **(p. 12).** Similarly, **Tagalik (2010)** describes IQ "as a system of belief which considers the importance of relationship/interconnectedness to the environment/Sila and to other people" **(p. 8). Brooker (2018)** goes on to explain that the "guiding seven principles" of IQ "overlap, revealing the foundation of this society that values the interconnected nature of all involved" (p. 11). **Sbert (2020)** adds, "Inuit Qaujimajatuqangit (IQ) reflects a worldview based on interconnectedness with, and respect and responsibility towards the natural world **(p.75).**

Several authors also recognize that Inuit Qaujimajatuqangit can be understood along three continuums that are pertinent to the Inuit Worldview. For example, **Knopf (2018)** cites **Tagalik (2014)** in explaining "that Inuit Qaujimajatuqangit — Inuit epistemology or the Indigenous knowledge of the Inuit - is based on three continuums: knowledge continuum, time continuum, and relationship continuum. Inuit Qaujimajatuqangit is 'knowledge embedded in process' and 'reliant on the cultural expectation of iqaqqaukkaringnig (deep thinking that leads to innovation). This is a dynamic process of knowing, applying, experiencing, evaluating, and creating new knowledge grounded in a continuum of knowing and continually improving' **(p. 194).** That is, the patterns that emerge from the three continuums generate a space that provides Inuit the means to acquire knowledge by adapting to the experiences of past, present, and future Inuit. The processes manifest in health and well-being to establish self-reliant individuals who can share their wisdom with their community and honour the fact that knowledge must be ongoing **(Aikens, 2019; Aporta, 2002; Brooker, 2018; Gold, 2007; McCarney, 2018; Okalik, 2007; Semple, 2020; Tagalik, 2014).**

[30] Kaluraq, M. K. (2020). *Nunami Ilinniarniq: Inuit Community Control of Education through Land-based Education*. Gordon Foundation.

Figure 5. *Visualizing the process: growth through continuums.*

Abele & Gladstone (2021) describe a more common process that is characteristic of Indigenous Knowledge in general: "it is an understanding of the world and of the human place in the world…. From observations, people everywhere find patterns and similarities and associations, from which they develop a view of how the world works, a view that explains the mysteries surrounding them, that gives them a sense of place" **(p.33).**

TUKISIUMANIQ[31]

building understanding or making meaning in life

EPISTEMOLOGY

Inuit epistemology refers to how Inuit perceive and understand the world, acquire knowledge, and make meaning of their experiences. It shares ways of knowing, learning, and organizing knowledge that are deeply rooted in culture, society, and environment. Inuit epistemology reflects the worldview, philosophies, and cosmologies of the Inuit communities **(Arnakak, 2003; Johnston, 2011; Healy & Tagak, 2014; Knopf, 2018; Metals, 2018; Baikie, 2020; Williamson, 2022).** Inuit epistemology is brought into discussion is various ways. For example:

[31] Tagalik, S. (2012). *Inunnguiniq: Caring for children the Inuit way*. National Collaborating Centre for Aboriginal Health.

‘WORLDVIEW’ IN THE LITERATURE

Cowan (2005) states that "Inuit Qaujimajatuqangit refers to the traditional worldview of the Inuit prior to colonisation and defines the essential relationships between individuals, families and the environment" **(p. 53).**

"While there are variations amongst the diverse Inuit societies, IQ ‘has been recognized as being consistent with Inuit worldview as it is described in various Inuit circumpolar jurisdictions’ (Tagalik, 2009-2010, p.1)” **(Baikie, 2020, p. 43).**

Sbert (2020) writes, "Inuit Qaujimajatuqangit (IQ) reflects a worldview based on interconnectedness with, and respect and responsibility towards the natural world" **(p. 75).**

‘PHILOSOPHY’ IN THE LITERATURE

McCall (2014) draws on the perspective of Alisa Henderson to explain, “As a holistic philosophy, IQ encompasses a vast range of ideas and actions, including knowledge of land, kinship patterns, and customary law, as well as the elders' accumulated 'memories, knowledge, stories, and skills'" **(Report from the September IQ Workshop 1999, qtd. in A. Henderson 192 as cited in McCall, 2014, pp. 200 -201).**

Semple (2020) writes, "Inuit Qaujimajatuqangit is about knowledge that is embedded in process; a dynamic system that links Inuit philosophy and action in the evolving contemporary context" **(p. 102).**

‘COSMOLOGY’ IN THE LITERATURE

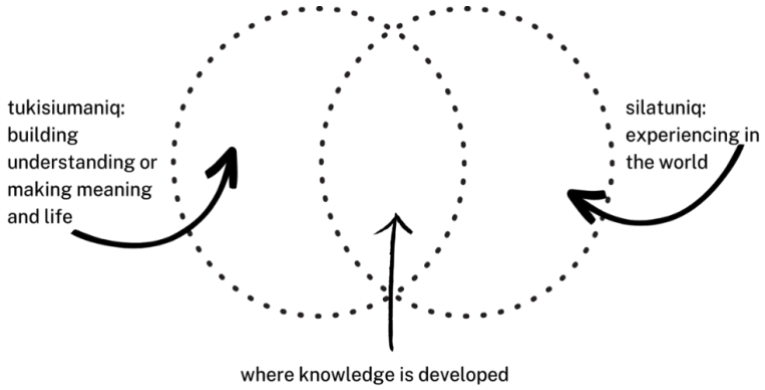
Arnakak (2003) also includes cosmology in his definition of IQ: "It is the corpus of Inuit epistemology and cosmology" (p 176). A similar perspective is put forth by **Grimwood and Doubleday (2013)** as they reiterate Tester and Irniq’s (2008) notion of IQ as the entanglement of Inuit beliefs and cosmology.

Inuit Qaujimajatuqangit is associated with Inuit epistemology, or how Inuit perceive and comprehend the world, learn, and interpret their experiences. It is comprehensive and shares ways of knowing, learning, and organizing information that are deeply ingrained in their cultural, social, and environmental contexts. Inuit epistemology is a reflection of the Inuit communities' worldview, philosophies, and cosmologies.

SILATUNIQ[32]

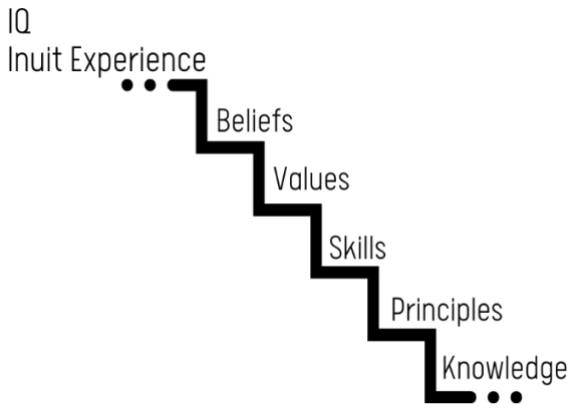
experiencing the world

Figure 6. *Visualizing process: Inunnginiq – the making of a human being.*



Inuit have a profound knowledge of their surroundings through firsthand experiences. Interacting, experimenting, reflecting, or engaging with relationships amid individuals, families, places, the universe, and spiritual realms determines Inuit realities and is reflected in Inuit Qaujimajatuqangit (**Arnakak, 2003; Baikie, 2020; Cowan, 2005; Dunning, 2012; Gearheard et al., 2010; Gold et al., 2005; Grimwood et al., 2012; Grimwood, 2013; Healy, and Tagak, 2014; Higdon, and Ferguson, 2014; Kelley, 2009; Kilbourne, 2008; Knopf, 2018; McGregor, 2013; McCall, 2014; Meis, 2015; Tremblay et al, 2018; Van Dam, 2005; White, 2006; Woynarski, 2020).**

Figure 7. *Visualizing the process: experience and resulting knowledge/ wisdom.*

	"Tagalik (2009-2010) explains "IQ encompasses the entire realm of Inuit experience in the world and the values, principles, beliefs and skills which have evolved as a result of that experience. It is the experience and resulting knowledge/wisdom that prepares us for success in the future and establishes the possible survival of Inuit (p.2)" (Baikie, 2020, p. 43).

[32] Tagalik, S. (2012). *Inunnguiniq: Caring for children the Inuit way*. National Collaborating Centre for Aboriginal Health.

SILATURNIQ

collective level of wisdom

McGregor (2013) defines Inuit Qaujimajatuqangit as an "Inuit Conceptual Paradigm" (p. 97). An Inuit conceptual paradigm could be understood as representing the "…epistemological conceptions embedded in IQ" (Ferrazzi et al., 2019, p. 3). McGregor agrees that communicating Inuit Qaujimajatuqangit as a conceptual framework enables a more comprehensive understanding and appreciation of the knowledge, values, and practices inherent in IQ. Examples of contributions to this discourse include:

> "IQ is also considered as a type of conceptual framework, and remains a changing concept, evolving as Inuit face new challenges and new opportunities (Wenzel, 2004)" **(Kelley, 2009, p. 44).**
>
> **Hearne (2017)** reiterates, "the IQ framework describes the quality of Qanuqtuurniq, or 'a quality of resourcefulness in problem-solving,' suggestive of resilience or plasticity; as Qitsualik-Tinsley asserts, 'Inuit are the embodiment of adaptability itself'" (qtd. in Martin 3, 8). The IQ report foregrounds a model of traditional Inuit conceptions of knowledge that already encodes systems for incorporating the new because its very definition as knowledge entails the ability to adapt resourcefully to changed circumstances as a central value" **(p.188).**
>
> "IQ involves respecting traditional and contemporary perspectives, thoughts and actions, decision-making, resourcefulness, and environmental stewardship (Wenzel, 2004). IQ is also considered as a type of conceptual framework, and remains a changing concept, evolving as Inuit face new challenges and new opportunities (Wenzel, 2004)" (Kelley, 2009, p. 45).

Presenting Inuit Qaujimajatuqangit as a conceptual framework serves to bridge understanding, preservation, and integration. It respects the Inuit culture, enhances cross-cultural communication, and offers valuable insights contributing to sustainable practices and informed decision-making.

Benefits of presenting IQ as a conceptual framework:

1. It allows individuals to grasp the interconnectedness of its components and how they work together to share the Inuit way of life.
2. Provides a structure that facilitates cross-cultural communication and understanding for those outside the Inuit community.
3. Creates a curriculum for teaching and learning opportunities in which the content resonates with Inuit realities.
4. Conceptual frameworks provide context, helping individuals understand the historical, cultural, and environmental factors that have shaped IQ. This contextualization enhances comprehension and appreciation.
5. To preserve and transmit Inuit beliefs, practices, and knowledge.
6. To give guidance regarding decision-making and perpetuating ethical behaviour.
7. Uplift and give voice to Inuit cultural identity.

AKUNI[33]

time between events; distance between objects

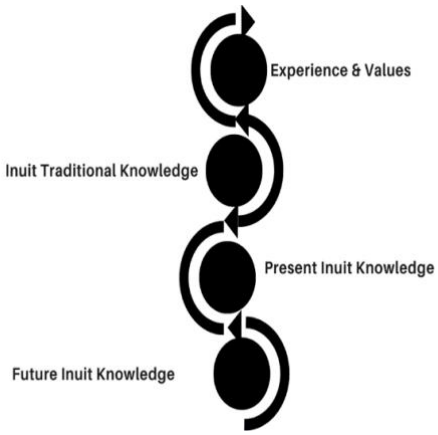
"One elder suggests that to appreciate the evolving nature of Inuit Qaujumajatuqanjut we should think of it as Inuit experiences rather than traditional knowledge" (Gold et al., 2005, p. 17).

The perspectives, experiences, thoughts, and actions of past, present, and future Inuit are connected by processes and purpose that synthesize time and space. Several authors suggest that the manifestation of Inuit knowledge is intergenerational and many describe the primary purpose of Inuit Qaujimajatuqangit as sustaining Inuit and Inuit culture for generations **(Aikens, 2019; Derman, 2015; Martin, 2009; Tagalik, 2010; Tremblay et al., 2017).**

According to **Rosen (2013),** IQ has two essential elements: emphasizing the 'process or doing' and relating to time as the synthesis of past, present, and future. IQ combines experiences and values as the knowledge of past, present, and future Inuit. Time and space are essential considerations to integrating past, present, and future Inuit perspectives, experiences, thoughts, and actions. **White (2006)** uses an explanation previously published by the Government of Nunavut, stating that IQ combines experiences and values as the knowledge of past, present, and future Inuit. **Meis (2015)** contributes to this conversation by reiterating, "this definition makes clear that it is the combining of the traditional knowledge, experience, and values of Inuit society, along with the present Inuit knowledge, experience and values that prepare the way for future knowledge, experience and values" **(Meis, 2015, p. 137).**

Several authors dismantle the idea of IQ being of the past by presenting arguments that bring it into the present. According to **Laugrand & Oosten (2010)**, "researching Inuit Qaujimajatuqangit" is considered "as a way to recover a cultural heritage. In this way, Inuit will be enabled "to create a modern society based on their own traditions and values" **(p. 17).** Similarly, Inuit Qaujimajatuqangit "…helps us to better understand and adapt to today's changes and challenges" **(Jeannotte, 2017, p. 205).** **Steiner et al. (2021)** write that IQ "provides a wealth of information to help understand ongoing and future changes..." **(p. 30).**

Figure 8. *Visualizing Process: IQ combines experiences and values from the knowledge of past, present, and future Inuit.*



[33] Translation by: https://tusaalanga.ca/glossary

ISUMASAQSAYUQ[34]

passing along knowledge through observation and imitation.

Inuit Qaujimajatuqangit is described as more than just content. That is, it is not just what is known, it is also how it becomes known. Jose Kusugak wrote, "All this new knowledge had to be taught from one Inuk generation to the next. It also had to be taught and learnt in the most practical way respectable to the culture, in which it is taught and learned" (Kusugak, 2004, p. n/a)

Arlene Stairs' definition of Isumasaqsayuq is from Williamson (2022):

> Isumasaqsayuq means *"[as] the way of passing knowledge, through observation, and imitation embedded in daily family and community activities with integration into the immediate, shared social structure and ecology as the principal goal. The focus is on values developed through the learner's relationships to other people and to the environment"* (p. 203).

Gearheard et al. (2010) writes, "For generations, Inuit have lived off the land. Through activities such as hunting, fishing, preparing food and skins, and travelling the land, ice, and waters of the Arctic, Inuit have developed a complex understanding of the environment. Constant observation and experience over time accumulate to form Inuit knowledge (Inuit Qaujimajatuqangit), which also incorporates Inuit values and beliefs. Inuit knowledge and skills are passed down through generations through oral tradition, observation, and practice. This knowledge is dynamic, constantly evolving as each knowledge-holder engages with their environment and integrates their own experiences (Berkes 1999; Ingold and Kurtilla 2000; GN 1999)" (p. 271).

Brown (2016), Obed (2017), Tester and Irniq (2008) are among many authors who stress the experience of relations with land, people, and others in the learning of IQ. Table 3 provides an overview of the process of turning Inuit experience into Inuit knowledge as explained by Tagalik (2009 – 2010).

There is a consensus among many texts that for Inuit Qaujimajatuqangit to continue through the generations, there must be opportunities for teaching and learning. Pedagogy is therefore meant to pass on the tools and skills to survive in such as way that Inuit belief systems retain meaning relevant to the present. Furthermore, Tagalik (2011) describes the process as Inunnginiq – the making of a human being. When learning is centred on "building understanding, or making meaning of life, along with experiencing in the world, knowledge is thus created. However, for knowledge to emerge, the belief, and actions of Inuit values and principles for wisdom must be adhered to" **(Tagalik, 2011, p. 1).**

Several authors agree on the purposes of practices and beliefs in Inuit pedagogy **(Abele and Gladstone, 2021; Arnakak, 2002; Martin, 2009).** Since time immemorial, Inuit have created opportunities to share their experiences, observations, and actions with the incoming generation, just as the generation before

[34] Williamson, C. (2022). *Sewing in Arviat: Inuit Women's Work through Stories and Parkas* [Doctoral dissertation, Carleton University].

them. Whether for purposes of survival, the development of living well, the particularities for a successful hunt, or carrying a name forward, each practice shares deep-rooted meaning. In addition, the teaching and learning of these practices enacts a sense of care.

Figure 9. *Visualizing the Process: processing pedagogy*

I Q Q A U M A Q A T I G I I N N I Q[35]

all thoughts, or all knowing, coming into one.

This analysis was conducted with the intension of finding meaning for the term 'Inuit Qaujimajatuqangit' by considering the descriptions offered by many authors, several of who themselves have grappled with pairing IQ with a purposed definition(s). An aggregate description of IQ based on an analysis of 82 'notable descriptions' might include:

Inuit Qaujimajatuqangit is a unique framework that interweaves Inuit knowledges, culture, values, and ways of being into an evolving approach to understanding and interacting with the world. It prescribes processes and practices that synthesize the past, present, and future. It is expressed through a complexity of deeply involved concepts that are purpose driven and affect behavior, relations, survival, well-being, and much more.

[35] Healy, G., & Tagak Sr, A. (2014). PILIRIQATIGIINNIQ 'Working in a collaborative way for the common good': A perspective on the space where health research methodology and Inuit epistemology come together. *International Journal of Critical Indigenous Studies*, *7*(1), 1-14.

ISUMAGIYAIT[36]

remembering

The points below are among the many take aways from this analysis of 'notable descriptions' found in the Nunavut research literature.

- → IQ is the traditional as well as the contemporary knowledge of Inuit. As a guiding practice, Inuit are the experts in their experiences.
- → The word knowledge derives from Western thought, which comes with a standard definition that is limiting when applied to Inuktitut. IQ is Inuit knowledge and much more.
- → By considering IQ as a conceptual framework, one that embraces change is a variable among interrelated components, we can recognize how IQ is evolving/adapting to create new opportunities to manage both new and reoccurring challenges.
- → A standard definition of IQ can place it within unintentional boundaries. However, by examining the points of intersect (i.e., the shared terms or concepts) between descriptions of IQ, we were able to see the collective literature as a medium that refracts a broad spectrum of meaning that is both more representative and expansile than a consistent definition.

[36] Translation provided by Mattutsi Kilabuk (personal communication, 2023)