



The following short statement was submitted by Inuit Circumpolar Council to the 2022 Arctic Observing Summit under “Sub-Theme 3: Data Sharing” and presented as part of Arctic Science Summit Week (ASSW) 2022. The statement was written on behalf of Inuit Circumpolar Council by Vanessa Raymond, Data Advisor and Archivist for ICC Alaska and edited and reviewed by Kelly Eningowuk, Carolina Behe, and Eva Krummel of ICC.

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### **Categorization is Political: Using Grounded Theory in the Creation of Controlled Vocabularies**

Classifications are really very much like theories. Like theories, classification schemes can provide an explanatory shell for looking at the world from a contextually determined perspective. Classification schemes not only reflect knowledge by being based on theory and displaying it in a useful way.... but also, classifications in themselves function as theories do and serve a similar role in inquiry (Kwasnik 1992, 32).

#### **First, Some Context**

At UNFCCC's COP17, ICC called for international recognition of the need for equity with regards to the utilization of Indigenous Knowledge in databases housing observational data (ICC 2011). As a data manager, I hear these calls and agree with them, wholeheartedly. But, as the saying goes, “you can't put a round peg in a square hole.” The information management systems and the categorization methods themselves are wholly ill-suited for incorporating IK and science from an Indigenous perspective, and thus are long overdue for a change. Moreso, these information management and categorization methods, by their sheer design, stymie Indigenous theories and analysis, and in these contexts, hinder Indigenous-led scientific inquiry.

In a 2016 presentation to the Interagency Arctic Research Policy Committee (IARPC) on the ICC Alaska project *Alaskan Inuit Food Security Conceptual Framework: How to Assess the Arctic From an Inuit Perspective* ICC representative, Carolina Behe, asks participants to imagine how the data collected by Western scientists in Arctic regions would fit into and “move across” (Behe, 2016) a holistic conceptual framework of a food web, depicted as a drum. The conceptual framework demonstrates the holistic and interconnected nature of the information that may be gleaned from observations and monitoring, as well as listing the pertinent information sources that are necessary for effective assessment and complete analysis within an Indigenous-developed framework. Behe shares:

People are seeing a need not only for scientists to work better with Indigenous Knowledge, but for science disciplines to be working more collaboratively with each other. That, to understand anything about the walrus, we also need to understand abiotic features... Indigenous Knowledge tells us, if you're going to talk about the walrus, you better know something about sea ice thickness, and about ocean stratification, and many other components (Behe, 2016).

This quote touches on many important topics related to data, data collection, analysis, and information management. How does point-based, tabular, observational data with a singular disciplinary focus fit within a holistic information management system? How can Western science align itself to a broader

worldview (what Western science calls “interdisciplinary” or “transdisciplinary” research)? If this was to happen, what would the data collected look like, what would the data management system look like, and what would the analytical methods look like? Indigenous Knowledge holders have their own methods for this type of information gathering, synthesis, analysis, testing of hypotheses, sharing of findings and communication back to the community. So how can Western science align itself with Indigenous scientific methods, worldview, and theorizing? At the end of the day, “the proof is in the pudding”; the degree to which the research equitably engaged Indigenous Knowledge will be revealed in the metadata, information categorization, and the information management systems.

### **Library & Information Science have proposed solutions, pulling from social science theories**

The use of grounded theory in the classification & categorization of information, and the creation of controlled vocabularies has been discussed in the Library and Information Science (LIS) field for several decades, including in publications such as Susan Leigh Star’s “Grounded Classification: Grounded Theory and Faceted Classification.” Star writes, “it is uncommon to see information systems classification as an ethnographic or theoretical enterprise, even where it has sometimes been seen as political” (1998). This quote reveals the crux of the issue - many do not acknowledge the ways in which Western theorizing and worldview is reflected in Western information systems & classification schemes. In the realm of Arctic research and observations, these Western systems are very much an outside theoretical framework, differing greatly from the traditional information management systems of rightsholders of the region. For those outside of the information management fields, one could dismiss or overlook the role that classification plays in creating theories and building hierarchical/networked relationships between observations or other information resources. Yet classification, categorization, and metadata, in their essence, are the act of ascribing meaning and defining of relationships. This role has been identified by the LIS community, including even in their examinations of the power dynamics exposed in discussions around interoperability in metadata. Writes Alemu et al (2011) “Contemporary metadata standards and interoperability approaches are mainly top-down and hierarchical, and, hence, fail to take into account the diversity of cultural, linguistic and local perspectives that abound.” Alemu and their co-authors position metadata and interoperability within social constructivist theories about the creation of meaning of observations, information, and data within a social context.

### **How does this relate to Arctic observing systems and data management?**

If we examine the ways in which Indigenous Knowledge and Indigenous ways of knowing classify, categorize, and place significance on information, observations, and evidence, we can begin to see how the current state of Arctic observation and its information management is misaligned. If information management and metadata creation (and the associated activities of categorization & classification) is inherently theory creation, then the categorization of Arctic observations, particularly those taken on Indigenous land and pertinent to Indigenous communities, is not designed to reflect Indigenous Knowledge, methodologies, and theories, and thus is in need of significant re-categorization.

### **But what about synthesis and large-scale analysis?**

In Arctic research and beyond there is, of course, a push to make data and metadata more interoperable so that information and data points can be more easily shared, re-used, and incorporated in analysis. This need is an outcome of the non-Indigenous social constructs that created western scientific classification and collection methods. Indigenous Knowledge is inherently holistic, ecosystem based, and as Indigenous observations span millennia and (national) boundaries, Indigenous ways of knowing are both broad and deep; global and hyperlocal.

Indigenous communities have their own methods of categorization, classification, and methodologies for data collection / information gathering. As described in the *ICC Ethical and Equitable Engagement Synthesis Report: A Collection of Inuit Rules, Guidelines, Protocols. And Values For The Engagement Of Inuit Communities And Indigenous Knowledge From Across Inuit Nunaat* (2021),

One aspect of Indigenous methodologies is reflective of the gathering of information, evaluation, and validation of Indigenous knowledge. Another aspect focuses on community engagement - how we interact with each other, identify problems, and discuss solutions. Both aspects of methodologies are guided by the Inuit values and ways of viewing the world... (30)

The EEE Synthesis report goes on in detail to describe the various hallmarks of Inuit methodologies. This has been discussed throughout ICC's history, including during its earliest general assemblies and resolutions from 1977 and 1983, and the sentiment is reflected elsewhere in the Indigenous world. Lindi Tuhiwai Smith describes the relationship between classification and imperialism in her seminal work, *Decolonizing Methodologies*,

Imperialism provided the means through which concepts of what counts as human could be applied systematically as forms of classification, for example through hierarchies of race and typologies of different societies. In conjunction with imperial power and with 'science,' these classification systems came to shape relations between imperial powers and indigenous societies (Smith, 1999, 26).

By classifying and categorizing Arctic observations in accordance with knowledge systems of the people whose land the observation was taken on, Indigenous-led theories will be given their proper place in the role of Arctic observation. As a start, grounded theory informed by constructivism can begin to establish a preliminary classifications structure from pre-existing data. These preliminary re-classifications may align with Indigenous language & linguistic structure and categorization.

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