

ROB SHIELDS

# The Illocutionary Force of Inuit Ice Vocabularies

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**ABSTRACT** Lexicons of Yup'ik sea-ice terminology rely on extra-textual elements, including photographs, diagrams and sketches. Definitions are also supplemented with stories about personal experience and of the behaviour of ice phenomena. Speech act theory argues that these elements communicate an often overlooked illocutionary dimension which shows the importance of semantics in addition to the syntax of scientific definitions. The illocutionary aspects captures the performative, experiential quality of sea ice as a lived environment engaged in processes of hunting, travel and fishing. I argue that the illocutionary force of the descriptions presented in the lexicons is epistemic and ignoring this silences the Indigenous "voice." This supports Townsends argument that illocutionary silencing occurs when science treats environmental descriptions as not material but cultural and circumstantial.

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**KEYWORDS** illocution, illocutionary silencing, sea-ice, Yup'ik, Indigenous

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While there have been several sea ice lexicons published recently showing the semantics of ice, this paper considers the syntactic and performative importance of the illocutionary aspects of their Inuit sea ice terminology. Southerners' "urban myths" about the number of "Eskimo words for snow" (Martin 1986) and ice have been debunked; however,

we need to understand sea ice lexicons not only as lists of terms defined for their semantic meaning; they need to be read for their illocutionary elements that relate to context and imperatives regarding activities on and around sea ice (Gilbert 2012). It is not surprising that extra-textual elements in recent lexicons help to convey the illocutionary aspects through drawings, photographs and story-telling. This understanding comes from Speech Act Theory which positions language as an aspect of social interaction rather than more lexical approaches that highlight definitional meaning and description as the content of communication (Austin 1962; Vanderveken 2001). Differentiating the syntactic from the semantic meaning allows a focus on performative language related to ice conditions (Young 2016).

Lists of terms go as far back as Frank Boas, an early Arctic anthropologist who published a list in 1894 based on his fieldwork on Baffin Island (Boas 1894; Boas & Powel 1966; see also the review by Krupnik & Müller-Wille 2010; Cichocki & Kilarski 2010). This list is at the origins of the Southern myth of Inuktitut having many more words for snow than English (Whorf 1940). Cichocki and Kilarski approach this fascination with Inuit “words for snow as a figurative motif pervasive in modern intellectual history” (Cichocki & Kilarski 2010: 346). The fascination that this case exerts on the “Southern” imagination is evidenced not only by how it was taken up in the linguistic literature and distorted over time, but in the ongoing reviews and discussion by linguistic anthropologists (Martin 1986; Pullum 1989) and northern ethnographers.

A decade or so ago, activities around the International Polar Year (2007–2008) saw the publication of much refined lexicons and ice dictionaries (Oozeva *et al.* [eds.] 2004; Aporta 2002; Aporta 2010). Beginning in 1986, Conrad Oozeva created an illustrated Yup’ik listing focused on the ice conditions encountered by himself and an older generation of Yup’ik. These were divided into categories, for example, “Dangerous spots,” “Best to work on” and “Hard to walk on.” The expanded 2004 version adds illustrative sketches of each ice condition defined in the lexicon (Oozeva *et al.* [eds.] 2004). Krupnik’s and Aporta’s works provide photographs (e.g., Krupnik, Apangalook Sr & Apangalook 2010: 88) while Aporta annotates maps, photos and diagrams to illustrate how different ice forms are encountered in the Eastern Canadian Arctic. These descriptive elements in the texts and extra-textual illustrations point to a performative and also normative aspect that is my focus. These elements involve ice risks as well as guidance for how to hunt effectively and safely on sea ice that may be lost in the simple glossary listings of lexicons.

Indigenous language concerning the environment involves not only a set of meanings (semantics) but a *syntax* of the qualities and performance

of ice and snow—what it does, how it acts and what can be done with, on and around it. That is, ice is not a matter of descriptive nouns, or something to be contemplated. Instead Inuit languages capture natural elements in their active, performative sense of matter that supports certain activities or entails consequences when it is engaged with. If open water in the ice is a “lead” in English, its many Inuktituk terms capture the risk of crossing, warn of the danger of opening and closing ice floes, the risk of snow covered but unfrozen areas, and indicate possibilities for travel. Inuit societies can comfortably imagine ice as their history and themselves as part of its futurity in a direct, engaged sense. Hence the crisis as ice cover and weather patterns change. Arctic ice has historically been understood to have a permanence that distinguishes multi-year pack ice from the seasonal, metropolitan experience of ice. This is a strong contrast to even those metropolitan Canada cities such as Edmonton or Québec City that present themselves as “winter cities” but which are only seasonally cold and icy. Yet, this distinction is now challenged, glaciers and ice alike melting away. In some cases this risks becoming a form of absent presence, where the year-round regularity of ice that typified anywhere understood as “Arctic” is presumed but not encountered.

### Indigenous Experiential Terms for Sea Ice

Unlike Southerners’ stereotype of the Arctic as a landscape of permanently frozen features, the Inuit consistently emphasize the form, age and affordances or utility of ice, *siku*. Elders remind us that language is land-based or local. For example, in interviews with residents in the Hudson Bay and Nunavik region, Furgal, Tremblay and Angiyou note that

differences can be observed between the terms used by Nunavummiut from southern and northern areas of Hudson Bay, Hudson Strait, and Ungava Bay. For example, in Inuktitut the term *allanuk* that means “mobile ice” amongst Umiujamiut is replaced by the term *aulaniq* amongst Ivujivimiut. (Furgal, Tremblay & Angiyou 2010: 453–454)

Local experience of a multitude of conditions is necessary to judge between different types of, for example ice shingles or which types of ice will bear a person’s weight.

It is a mistake to frame this as a merely empirical observation rather than a seamlessly relational knowledge that understands the dynamics of and between ice forms, wind, currents and tides (Nadasdy 2005). Laidler and others observe:

Scientists tend to focus on understanding the physical processes involved in linking sea ice to climate change, while Inuit communities are more interested in understanding how changing ice conditions may affect their travel safety along with wildlife habitat and availability. (Laidler 2006: 424)

Understood as a narrative of action and engagement rather than a lexical list, the terms illustrate the Indigenous argument that abstract representations of environmental knowledge, should not be relied upon. Hence the injunction in some cases that knowledge is not to be entrusted to the written form. Rather, like a dancer's understanding of the centre of gravity of their bodies, routines need to be acquired through practice. This experiential knowledge of the performative interaction of ice, snow, bodies and boats is more trustworthy and robust.

Commenting on their research on climate warming in the Nunavik region of Northeastern Canada, Furgal, Tremblay and Angiyou note,

Inuit knowledge of the ice, in particular the terminology of sea ice, formations, and processes, provides valuable insights into the processes of ice formation and break-up in these communities. The value of this knowledge in protecting individuals in the community from unsafe travel or hunting conditions related to ice stability cannot be underestimated. Local ice terminology constitutes a set of structured terms passed down from generation to generation describing a dynamic environment that has always been in a state of change. (Furgal, Tremblay & Angiyou 2010: 454)

Ice and snow are performative in at least three different ways: first, they have different qualities, for example heavy wet snow or light fluffy snow; second, they have a range of character such as the snow found just below the surface that has the correct density to be cut and built with; and third, they interact with water and other ice forms in different way. Far from permanently frozen, there is a continuum between snow and pure ice, between water and air. Ice is often young, newly formed and weak. Its fragility and malleability pose both risks and opportunities, attracting animals to weak spots where seals and walruses may surface. Ice is thus often described and identified visually and/or by the activities it does or doesn't support.

The performative aspects of sea-ice knowledge extends even beyond the verbal to gestures. Consider my following field experience:

We are in coastal waters in an open boat, an (Inuit) West Greenlander, my South Baffin Inuit friend and me, not intending to hunt (a Kabloona such as me is a risk). We are visitors to Greenland being shown summer

camping sites. The water is mostly open but talk is of the sea ice—and then there is sudden silence. A word or two but lots of hand signals between the Greenlander and the Canadian: a seal bobs 150 m away, attentively listening. It's a tin-can sized target I could certainly never hit from a bobbing boat. Regardless of their recent acquaintance, there is suddenly a team focused on closing up to the seal. The Inuit in the bow gestures an approach to our host in the stern.

## Sea Ice Lexicons

Oozeva's Yup'ik sea ice lexicon (Oozeva *et al.* [eds.] 2004) lists 99 distinct (Alaskan) Yup'ik terms for sea ice with varied meanings depending on the place. It celebrates the nuanced vocabulary that points to the “performative” syntax of ice itself (Austin 1962). These might be drawn together into a narrative of Yup'ik terms as well as Eastern Arctic Inuktituk terminology. Consider sea ice, *sikupik*, as opposed to freshwater ice (*kuluusiqu*). *Siku* is divided between thinner, new *sikuliig* (in Inuktituk, *sigikaghat* or *sikug*) or *sikupigek* (*sikutuqag* in Inuktitut). *Siku* is also the Yup'ik name for the Bering Sea. Hunters negotiate different forms of ice, with rough dangerous sections making some kills irretrievable or leading to loss of the hunter's life if they try to enter or cross in pursuit. Allow me to condense part of Oozeva's lexicon in narrative form:

*Siku* begins to freeze (*sikulliig*) as small cakes (*iighwilkaa*) formed by ocean waves. These still consist of water and fissures as the oval cakes are blown together by wind (*aygughnin*) and current, alternately collecting along and being broken away from shore depending on the weather and tide conditions (e.g. *eslaaghilleq*).

Small broken ice (*gelughtaaq*, *qenughhaghaqri*) is dangerous to walk on but may be pushed aside, such as by boat. Chunks are washed up on or along the shore (*tetaan*). As ice collects more thickly, it cracks (*iitga*). Leads open and close depending on the tide. Other shorefast ice will crack.

Tides also bring water on top of shorefast ice which then gets covered by snow (*saqralqaq*). Spray freezes (*nasaghuk*) on any object or forms icicles (*sikughnak*). Heavy snowfalls stay on top of or sink just below the water making a frozen soup of ice crystals. Snow-covered water (*qanigvik*) or packed slush ice (*qateghrapak*) is dangerous to walk on.

*Ayngelin*, walls of ice, form and collapse when pushed against the shore. Pressure ridges (*qivallekeltaq*) form large areas over shallow water sometimes, making it hard to work on (*qivenghak*). Ice can be stuck on the bottom, allowing for other ice to pile up and over on either side or over reefs (*eltugheq*). Large pressure ridges (*qivalluk*) make walking difficult. In dense pack ice, changes in current or wind direction mean that boats can be

trapped by ice floes locking together (*ngaayuun*). Chunks refreeze into new, wide layers of ice. Thin, smooth ice (*sikojuq*) forms in the leads (*meghhaak*) between other ice floes.

Ice darkened with walrus feces hints at favourite sunning spots or may be old, long exposed ice which has collected sand on its surface (*nunaavaaleq*). The best sea ice to work and travel on is smooth (*nutaghin*) shorefast expanses (*ngevzin*) and even slightly dimpled, bumpy (*maklukestaq*) or wavy (*qagin*, *qagitek*) expanses, allowing boats or sleds to move with little friction. Sometimes this is ice that has melted and refrozen (*qenghuk*) smooth (*sikughlluggaq*). By contrast, wet snow with a wet base on ice offers friction and means wet boots. Snow in water (*kiivnin*), like *qelughtaaq*, can be pushed through by boat.

Local experience of how sea ice constantly changes is essential. Some shorefast ice will stay put depending on both the local topography and the bottom conditions. Other thick ice (*umughak*) is solid (*saagrugaaq*). At times it will suddenly drift out to the ocean with a wind change. The edge of shorefast ice facing open water is *laaq*. At the edge (*kangin*) of ice (ice edge *luughek* or *iitga*) adjacent to open water, soft ice is pushed over harder ice into overlapping sharp shingles (small, medium and large, *kaspigpak*, *kaspik*, *kaspikengeltaq* respectively) which makes walking treacherous and falls are serious.

In open water, there may be floating blue chunks of old pack ice (*kulusik* or larger: *kulusiq*). In some cases ice floes are top heavy with anvil shapes or overhangs and will flip if stepped upon (*uulsugnaq*) and may remain that way (*uultelleq*). As snow falls on older ice, soft granular layers of frozen crystals result (*nutemtaq*). New ice that starts as snow or frost freezes from the top (*nutaqiiq*). On calm water, thin ice (*sallek*) and ice sheets (*saalqaaq*) form. In more windy conditions, slushy salt water (*qenu*) and ice crystals thicken from the surface down, creating a bright white colour but a weak structure which is unsafe. Drifting ice flows arrive at different times from different places and are given specific names, for example, spring ice (*ivga-ghutkak*). In summer, melting sea ice (*ughuun*) develops holes (*pequ*), floes begin to spread out with the ice weakening dangerously and dissolving, allowing seals to surface (*muyileq*).

This descriptive and performative listing in the form of a narrative does not exhaust Oozeva's dictionary. It illustrates how lexicons both present and imply processual and performative meanings beyond the definitional semantics of various Yup'ik and Inuktituk words. Definitions reference the ways ice and snow are structured and combine with each other, at certain times or seasons and in specific places, tides, or currents to allow certain activities and make others risky. The performative dimension a lexical universe that as a

whole speaks to the working relations between hunters, animals and environmental conditions. This captures the engagement of humans with a hostile environment where they depend on understanding risks in order to trust the capacities of ice and snow to, for example, bear the loads of hunters, snowmobiles and equipment and drift in a predictable manner.

The performative hints at the necessarily deliberate, fully present encounter with a dynamic and lively material and spiritual world, a world that is not reduced to Cartesian subject-object dualisms. To interject theoretically, the Inuit sea ice lexicon illustrates an “assemblage” in the sense Deleuze and Guattari originally intended as an “*agencement*” (Deleuze & Guattari 1987: 4); that is, not a collection of discrete, dead objects but energetic entities all having different tendencies, mobilities and qualities that add up to entities with their own different “agencies”—seals that prefer to return to breathing holes to keep them open, top-heavy ice floes that will tend to flip, or ice packs drifting on tides away from the safety of shore. This goes beyond the contingency of what environmental psychology has named the “affordances” of objects (Gibson 1992: 127), but a predictably patterned universe of active material objects.

### Illocutionary Force. A Syntax of Ice

For Oozeva, the lexicon also has a memorial quality. The definitions are couched in reminiscences of past experiences and interactions with elder hunters from whom he derives his authority. This historical social component is both a textual and epistemic element by which Oozeva asserts a collective voice of accumulated Yup'ik knowledge.

These were elderly hunters of my time—like Ungalaq. [...] Ungalaq learned it all from [...] the elders of the earlier days. I was hunting often with this man, Ungalaq; and he always showed me where the ice was weak and also many types of ice accumulations. (Oozeva *et al.* [eds.] 2004: 26)

The *Dictionary* is not only a list of terms for “ice” but has a certain “voice” that conveys a set of engagements and orientations with and around sea ice in which a community is also included. This extends backward in time as much as it varies geographically. Thus, multiple voices from different villages interject within the definitions:

*Ayughnin* [...] Newly formed ice built against the wind; dangerous spot (CO [Conrad Oozeva]) [...] It can freeze both from top and from the bottom; should be avoided when traveling by boat (S [the interpretation from Savoonga, a different village]). (Oozeva *et al.* [eds.] 2004: 31)

This amplifies the performative quality of these terms as they relate to contingent, ever-changing conditions on the sea-to-shore margin where hunters work. What appears on the surface to be a glossary of sea ice qualities has biographical and cultural elements that are often left implicit and unexplored in the subsequent collections, expansions and revisions of his and other listings. If we focus only on the terminology, we miss what is intended to be communicated. We don't hear the "voice" that is necessary in order to get the point of the communication.

Indeed, the lexicons that gather Inuit dialectics and terminology for ice satisfy an academic demand for collecting and a practical need for translation resources. The problem presented by lexicons is that lists defining terms have an unfortunate museal effect, embalming and exhibiting a language without demonstrating its command over situations. The reader, particularly those with no experience on sea ice or of hunting, is left to imagine the significance of these terms. To fall through ice, to have an ice flow flip the moment it is stepped on means a sudden plunge into water—a situation that is a struggle for survival against shock, drowning, breathtaking cold and the loss of essential equipment. More often than not, this is beyond the experience and imaginative capabilities of the reader in a metropolitan library. Instead they must fall back on what linguistics refers to as "secondarity," and extrapolate the situation being referred to. Secondarity includes cues about the context referred to. These are found in what a hearer knows of a community's structural rules by which words are put together to correctly describe an experience, object or environment (Sionis 1997). Instead of communicating an understanding, the language risks being appropriated into the context of a new, distanced technical text, an instrument in the service of entirely different knowledge projects that have been described by some as colonial (Pfeifer 2018; Cruikshank 2005). That is, they are not merely definitional but contribute to knowledge projects used by states and dominant groups to penetrate and assimilate marginalized groups.

More specifically, lexicons risk not satisfying the illocutionary function, as the lexicon overlooks both the context of terms in the ice vocabulary. This aspect is related to the active intentionality of Inuit speakers, which is not merely to describe but, as Aporta (2010) notes, to remember, advise and caution. This involves knowledge passing between speakers—not just informational data describing ice but knowledge cues that direct behaviour. This goes beyond either raw data and information (structured data). It sets information in a framework of human practice and intention that is required for a listener to understand. These are thus normative texts.

Illocutionary speech are acts that clarify what type of communication is being offered: for example, distinguishing between a declaration, com-



mand, promise, or request. This is distinct from the actual act of speaking, being inherent and implicit to the utterance or communication. This has also been described as attitude or voice. Without the illocutionary aspect, these terms lose their *force* and purchase on both the situation or materials at hand and the agents to whom they are addressed (Austin 1962).

The illocutionary aspect of communication is performed “in saying” something, rather than “by” saying something (Austin 1962: 123). It is neither the content nor form (such as intonation, although that might indicate how the utterance is to be understood). Instead illocution is the intent, latent in the context of other aspects of a communication, such as other words or the context. As a result, illocution is known only through its effect. This ineffable aspect of speech acts is not an “abstract” meaning such as a definition but is a “virtuality”—both real but also ideal in the sense of being an intangible (Shields 2006). Definitions are the abstract content but the “real meaning,” the “real idea” of the communication is illocutionary. Illocution has also been referred to as an attitude or mood that modifies the tone or force of the speech act as either an assertion, command, promise or commitment, expression of affect or attitude, and finally declarations or pronouncements (Searle 1976; Searle & Vanderveken 1985). The effect of this virtuality is only known via the audience’s reception and response. If they don’t share the same context or are unsure of the intended force of the utterance, then the intention or force is lost (Bach & Harnish 1979). This is the problem of lexicons: they lay the trap of abstract information rather than directing attention to understanding.

Illocutionary force has not often been considered explicitly in geography nor in Northern research with the caveat that it is an essential and implicit element in textual analyses, as Young (2016: 471) notes. His Critical Discourse Analysis (CDA) of Indigenous and scientists’ English-language discussions of polar bear management notes the challenge of incorporating

*Inuit Qaujimanituqangit* [traditional knowledge] [...] because English is often inadequate for expressing Inuit ways of thinking (Pasch 2008). Even translations between Inuktitut and English can be problematic at best and deeply political at worst (Cameron *et al.* 2015). (Young 2016: 470)

Young finds scientific texts to be predictive, based on modelling techniques, whereas his sample of traditional knowledge rejects the relevance of outsider, non-local or indirect experience in what Castree refers to as “defensive localization” (Castree 2004; Young 2016: 473).

## Southern Ice

The American poet Wallace Stevens hypothesizes that it is difficult to embrace winter and the cold as a human environment. As he puts it in his poem *The Snow Man*, “One must have a mind of winter” (Stevens 1973; see also Gilbert 2012). There is actually a plethora of terms for snow and ice even in the English of southern metropolises, especially amongst English dialects spoken in northern latitudes, such as Scots (MacDonald 2015). Amongst the *kabloona*, or southern white people, some terms persist that refer to ice and conditions that may now be less common if not rarely encountered. For example, improvements in home insulation have reduced the prevalence of icicles and double-glazed windows generally do not frost up. Icicles are much more rare and many if not most children in southern metropolises will never push their noses against frosted windows to peer out into winter weather like they do in nineteenth century storybooks.

Stevens recognizes the challenge and advises a shift in orientation. Southern terminology for ice is descriptive rather than performative. Thus, icicles are understood as a (often diminutive) form of ice rather than a risk, at which point people would be advised in a different and more explicit warning, “Beware of *falling ice*.” Like an icicle, ice is perceived and presented in North American media as transiently seasonal, forming but melting, solid but fragile, resistant but traversable and breakable. With climatic warming, an increased number of freeze-thaw cycles are experienced in cities that still imagine themselves to be “winter cities.” Wet snow or *slush* becomes more common. Increasingly, *black ice* glazes asphalt roads with a slippery sheen that may be invisible and unnoticed until a car slides when its driver attempts to brake on it.

With this example, we can appreciate the Inuit illocution around *siku*. In utterances such as *black ice* and descriptions such as those of *icy* sidewalks, Southerners come much closer to the illocutionary force of Inuit terms for *sikiu*. These terms are not merely descriptive of perceptual physical qualities but are innately descriptions of risk and performativity. As Austen and Searle would note, *black ice* is not an accurate description of the colour of a frozen road surface, but a judgment and proclamation of a hazard that is dangerous precisely because it is hard to perceive. *Icy* sidewalks are slippery—and often in unanticipated ways and at unexpected moments. That virtually latent, surprise, quality amplifies any statement that is actually about both the material status of the sidewalks and the actual probabilities of slipping and falling. As is also true of scientific and meteorological studies.

What gets explained depends on a speaker's and audience's interests, and the success of an explaining act in generating understanding depends, in part, on the cognitive resources of the audience. As such, to evaluate any given act of explaining requires attending to the interests and cognitive resources of speakers and audiences and the context in which explanations are offered. (Franco 2019; see also Potochnik 2016)

The authoritative English language lexicon of ice and snow terminology is the American Meteorological Society's peer-reviewed *Glossary of Meteorology* (AMS 2013). The *AMS Glossary* informs its readers that the term *black ice* is

a popular alternative for *glaze*. A thin sheet of *ice*, relatively dark in appearance, may form when light *rain* or *drizzle* falls on a road surface that is at a *temperature* below 0°C. It may also be formed when *supercooled fog* droplets are intercepted by buildings, fences, and vegetation. (AMS 2013, italics added to indicate hyperlinks to definitions in the original)

The scientific focus is on the field science entity described in terms of its formation, a perception and location. The definitions avoid both interaction and the sort of agency and *agencement* seen in the Inuit terminology. As a result of this strategy, these meteorological science definitions have an ontological and categorical focus but not as much of a performative focus. Despite having Arctic territory and uniquely Arctic forms of meteorology, the AMS does not include Inuit terms for weather, nor for forms of ice and snow. That is, the specific forms and qualia identified in the above lexicons are relegated to the accidental and circumstantial rather than the Inuit historical certainty in the real actuality and specific disposition of different sea ice forms and weather patterns that can be predicted as actually probable occurrences.

### Frozen Lists, Lost Ice

The contextual elements in the form of local knowledge that elders argue are necessary to understand sea ice is most strikingly at odds with scientific lexicons such as the *Glossary of Meteorology* that aims, in its almost 80 terms for ice phenomena at value-free definitions. Elders are making a significant claim, however. This is often interpreted as a demand for participation and a claim to traditional authority. However what is at stake is a more fundamental assertion of the *epistemic necessity* of contextual judgments. Working with the Innuit in the western Canadian arctic, Collignon claims that there is not generic term corresponding to European languages words for "ice" (Collignon 1996). Performative and normative judgments are central

to the content of descriptors. They pertain to performativity in a broader environment such as depicted by adding photos and diagrams that show how different sea ice features co-occur and how they are juxtaposed and related. The illocutionary force of sea ice descriptions is necessary to produce actionable knowledge. It is implicitly guaranteed by the authority of the speaker who takes responsibility for asserting something such as the level of risk associated with different forms of sea ice (Chankova 2012: 258). By asserting an epistemic claim, the philosophical and logical implications of which have not yet been taken up by non-Indigenous specialists, the question of voice and illocution is pushed beyond simply a practical or ethical matter that could be captured with more “voices” or with greater “stakeholder input,” for example.

Townsend argues that a form of “illocutionary silencing” (Hornsby & Langton 1998) occurs when scientific knowledge ignores or treats environmental descriptions as not material but as cultural and circumstantial. The rights words are not sufficient without a recognition of “what the speakers is up to” (Townsend 2020: 33), the illocutionary intention.

Illocutionary force is argued to be the vehicle by which contextual specificity may be included or amplified. In the case of sea ice, a normative dimension is introduced based on the person-animal-ice-wind-tide-current relationships and seasonal processes that are described. This performative aspect is important to substantiate the epistemic claim often made by Indigenous elders that their knowledge has greater felicity to actual conditions. Couched in highly specific terminology, the cautionary rather than categorizing quality of these terms and Inuit environmental discourse should not be ignored.

However, as the climate warms, local weather and sea conditions shift. Climate heating entails not only shorter periods of “winter” but more cycles of freezing and thawing temperatures throughout the year, especially in the spring break-up and fall freeze-up. This changes the patterns of ice conditions for every part of the Arctic. The result is that this performative language may lose its purchase on local conditions and environmental processes. This renders some terms in the lexicons obsolete or obscure even to locals whose elders may have been familiar with the conditions the words were describing. For example, in his preface, Oozeva notes:

I discovered that in our language there were many more types of ice than I knew of. Most of them have already passed away since I prepared those notes about sea ice terms. These were elderly hunters of my time—like Ungalaq, Wallace Ungwilluk (Qavalghaq, born 1913). (Oozeva *et al.* 2004: 26)

Writing about translation, Kablutsiak emphasizes the contrast in orientation between “Southerners and Inuit whose survival dictated their daily activities and decisions. But these new visitors were concerned not with survival, but industrialization, colonization and conquering vast lands” (Kablutsiak 2013: 4).

The illocutionary aspects may be implicit but are also often made explicit in the lexicons through experiential story-telling as part of the definitions of terms or through extra-textual elements such as drawings and photographs. Questions of illocution highlight the importance of contextual accounts available in ethnographies and suggests further avenues of speech act research on environmental terminology and Indigenous environmental discourses in particular.

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## AUTHOR

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*Rob Shields* has worked on spatialisations and ideologies of the Canadian North and other "places on the margin." His theoretical research concerns the intangible but real status of culture. Currently his work concerns decolonial governance and hydroelectric infrastructure projects in the James Bay territories of the Cree, Eeyou Istchee. Before being awarded the University of Alberta's Henry Marshall Tory Research Chair, he was Professor of Sociology and Director of the Institute of Interdisciplinary Studies at Carleton University, Ottawa.

rshields@ualberta.ca