
A SEMANTIC ANALYSIS OF SNOW-RELATED WORDS IN DANISH AND KALAALLISUT (WEST GREENLANDIC)

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Abstract*

This paper emerges from the vexed question whether the allegedly many “Eskimo”¹ terms for snow document a linkage between language, culture, and cognition. Using the semantic explication technique of the natural semantic metalanguage (NSM) approach, the emic logics embedded in the Kalaallisut snow-related words *aputit* and *nittaappoq* and the Danish snow-related words *sne* and *det sneer* are unfolded. Through a comparison of the findings, the paper discusses how the physical world is conceptualized in both culture-specific and transcultural ways. The explications are based on evidence from semantic consultations and text examples.

Keywords: Weather terms, snow-related terms, environmental semantics, Kalaallisut, West Greenlandic, Danish, natural semantic metalanguage (NSM)

1. Introduction

The exotic myth that there are hundreds of words for snow in Greenlandic is almost inevitable to steer clear of in Danish conversations about the High North. But the myth does not just haunt the dinner table. The conceptualization of the natural phenomenon has long been a much-discussed topic in academic research. Some

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¹ I use the undifferentiated term *Eskimo* about the languages of the Arctic to reference the earlier discussions (Boas 1911; Martin 1986; Pullum 1991). The language family usually referred to as *Eskimo* has two divisions. One of them, Yupik, comprises at least three languages: Central Siberian Yupik, Central Alaskan Yupik, and Alutiiq. The other branch is Inuit, and it is a dialect continuum spoken in Greenland and across the Alaskan and Canadian Arctic (Kaplan & Grimes 2003). The Inuit branch includes Inupiaq in Alaska, Inuktitut in Eastern Canada, and Kalaallisut in Greenland. In this study, the focus is on Kalaallisut.

researchers have used “Eskimo” snow-related words as a model example of the interests and environment of a linguaculture influencing the organization of its language. Franz Boas was the first to introduce the example in his famous *Handbook of American Indian languages* from 1911 (Boas 1911:25–26). Boas identified four different “Eskimo” words for *snow* and used them as documentation that something central to a linguaculture will be distinguished into many aspects. Echoing Boas, Benjamin Lee Whorf (Whorf 1940 in Pullum 1991:163) claimed that independent words will develop for each aspect that plays an important role in people’s lives, whereas it will be sufficient for other linguacultures to express the phenomenon with modifications of a single term:

We have the same word for falling snow, snow on the ground, snow packed hard like ice, slushy snow, wind-driven flying snow—whatever the situation may be. To an Eskimo, this all-inclusive word would be almost unthinkable.

Other researchers have criticized the example for being a misleading narrative of dubious scientific quality. In the polemical essay “The great Eskimo vocabulary hoax”, Geoffrey K. Pullum strongly criticizes the academic community (Pullum 1991:170):

Among all the hundreds of people making published contributions to the great Eskimo vocabulary hoax, no one had acquired any evidence about how long the purported list of snow term really was, or what words were on it, or what criteria were used in deciding what to put on the list.

About the example itself, Pullum states that the limited reliable research of “Eskimo” languages does not indicate significantly longer lists of snow-related words than English (Pullum 1991:170). However, a longer list, according to Pullum, would be “[u]tterly boring, even if true” (ibid.:166) as he does not consider linguistic elaboration an indication of culture-specific worldviews. This claim has been rejected by Anna Wierzbicka (1997:10):

What Pullum seems to overlook is that once the principle of cultural elaboration has been established as valid on the basis of “boring” examples, it can be applied to areas whose pattering is less obvious to the naked eye. This is the reason (or at least one of the reasons) why language

can be, as Sapir put it, a guide to “social reality,” or a guide to culture in the broad sense of the word (including ways of living, thinking and feeling). If someone finds it boring that, for example, the Hanunóo language of the Philippines has ninety different words for rice (Conklin 1957), that is their problem. To those who do not find the comparison of cultures boring, the principle of cultural elaboration is of fundamental importance.

Pullum’s article is based on Laura Martin’s research report “*Eskimo words for snow*”: *A case study in the genesis and decay of an anthropological example*. In Laura Martin’s view, the existing lexical counts are detrimental to research by implying that counting words is an appropriate method of examining the relationship between language structures, cultural behaviour, and human cognition (Martin 1986:421). Following Martin, one must instead refer to distinct roots to argue for variations in cognition (ibid.:419). This leads her to conclude: “Thus, Eskimo has about as much differentiation as English does for ‘snow’ at the monolexic level: snow and flake” (ibid.:422). Martin seems to overlook that although some words have the same root, they do not necessarily share meanings. For example, the meaning of the adjective *happy* differs from the meaning of the noun *happiness* (Wierzbicka 1992:567). The idea of counting roots rests on a structuralist basis, where it is expected that formally similar words must also be semantically similar. But semantics is not limited to the surface, and the count of roots is therefore only poorly informative in terms of examining linguistic relativity.

Studies of cultural elaboration can render intelligible culture-specific worldviews. However, as Martin and Pullum have pointed out, it can be problematic to count words related to something, as it can be difficult to delimit which concepts are to be counted. For example, should *snowmobile*, *snow shovel*, *snowflake*, *snowfall*, and *snowstorm* count as five different concepts in a study of English snow-related words? And what about *ice*, *frost*, and *hail*? When is a word a modification and when is it a whole new category? In the case of Kalaallisut, counting gets further complicated by the fact that it is a strongly polysynthetic language, where each word can consist of many morphemes corresponding to several independent words in other languages. Therefore, the aim of this study is not to suggest a new number of snow-related Kalaallisut terms. Instead, this study identifies how components in the meanings of selected Kalaallisut and Danish

snow-related concepts are matching, related, or different. More specifically, using the natural semantic metalanguage (NSM), I propose semantic explications and unfold the emic logics condensed within the words, thereby examining the following questions: How is the physical environment conceptualized across linguacultures? Does the physical, concrete world call for universal aspects in conceptualizations?

2. Empirical foundation

2.1. Semantic consultations

By combining semantic explications with semantic consultations, it is possible to make practical semantic analyses based on collaboration with speakers (Levisen 2017:104). In other words, even though I do not speak Kalaallisut, semantic consultations enable me to put forward a hypothesis about the meanings of concepts existing in the language.

I have held semantic consultations with speakers on both selected Kalaallisut and Danish terms. During the consultations, I asked the consultants to reflect on word meanings, practices, attitudes, feelings, narratives, memories, and how and in which contexts the snow-related words are used. On the selected Danish terms, the speakers consulted live in Denmark and have Danish as their first language. The speakers consulted on the selected Kalaallisut terms live in Greenland and have Kalaallisut as their first and Danish as their second language. All consultations took place in Danish. The exercise of moving between Kalaallisut and Danish is common for the consultants on the Kalaallisut terms due to the massive parallel language use in Greenland. The Greenland Language Council has estimated that half of the Greenlandic population speaks Greenlandic and little or no Danish, 10% is Danish-speaking with little or no Greenlandic, 20% is bilingual with Greenlandic as their most-proficient language, and 20% of the Greenlandic population is bilingual with Danish as their most-proficient language (Sæhl 2018). In other words, the bilingual speakers in Greenland express their thoughts in both languages in their various everyday contexts.² Nevertheless, it would have been more optimal for the study if the

² It should be noted that the varieties of Danish spoken in Greenland differ in syntactic, morphological, phonetic, prosodic, and semantic characteristics from the varieties spoken in Denmark. The Greenlandic varieties of Danish are a result of the language contact between Kalaallisut and Danish in Greenland since Danish colonization (Jacobsen 2003; Mašková 2022).

consultations took place in Kalaallisut, as Danish conceptualizations may have distorted the Kalaallisut ones. I have minimized this potential source of error by not using Danish snow-related words like *sne* and *snefnug* during the consultations.

2.2 Collection of examples

To gain further insight into the lexicality of the Danish concepts, I have looked for collocations and text examples in the text corpora Sketch Engine and KorpusDK. In addition, I have searched articles, blog posts, literature, and social media to capture the meanings of the terms as they are used by different senders in varying contexts, selecting for my analysis those examples that reflect prototypical uses of the words. To get a deeper understanding of the Kalaallisut words, I have looked for text examples in the text corpus developed by Oqaasileriffik (Greenland Language Secretariat). I used the Nutserut translation service, also developed by Oqaasileriffik, for the text examples, but since I was not able to check the translations, I do not use them explicitly in the analysis. Unfortunately, it was not possible to examine collocational profiles for Kalaallisut words as there is no text corpus with the opportunity to search for collocations. Overall, a more solid empirical foundation for the Kalaallisut words is required, and the semantic explications of *aputit* and *nittaappoq* should therefore be considered preliminary work.

Despite the differences in language resources available for Kalaallisut and Danish, and thus diverse data, I have been able to compare the selected words, as the semantic explication technique of NSM has a synthesizing potential. That is, based on the data collected, it is possible to propose semantic explications for each word, and, on that basis, make detailed descriptions of how the words have overlapping and deviating meanings.

3. Common snow-related words

3.1 The selection process

With the purpose of deciding the starting point for my semantic consultations on Kalaallisut snow-related words, I initially collected all definitions that I was able to ferret out. In several places, it is described that *aput* ‘snow’ and *qanik* ‘snowflake’ are the most common terms, and it is also these nouns and the verb *nittaappoq* ‘it is snowing’ which I have been able to find most definitions of. During the semantic consultations, however, it became clear that the consultants did not know a snow-related meaning of the word *qanik*

and that they often use the plural form *aputit* instead of the singular form *aput*. Thus, I have chosen to make explications of the Kalaallisut words *aputit* and *nittaappoq*.

To select the Danish concepts, I used Sketch Engine to search for the frequency of snow-related words in the web corpus daTenTen (Sketch Engine 2022). *Sne* ‘snow’ as a noun occurs 74,312 times, while *sne* ‘snow’ as a verb occurs 9,695 times, *snefald* ‘snowfall’ 2,316 times, *snefnug* ‘snowflake’ 2,196 times, and *snedække* ‘snow cover/blanket’ occurs 950 times. Thus, *sne* as a noun has been shown to have the markedly highest frequency, and it is also the word most often used in Danish translations of the Kalaallisut noun *aput*. Therefore, and since the Danish noun *sne* is uncountable, it is the best candidate to compare with the Kalaallisut plural noun *aputit*. The verb *sne* is the second most common, and since *nittaappoq* is often translated with *det sner* ‘it is snowing’, I have also explicated this expression.³

3.2 Problems with existing definitions

My initial work of collecting translations of Kalaallisut snow-related words showed that *sne* or *snow* consistently appear in the translations. For example, in the Kalaallisut–Qallunaatut/Qallunaatut–Kalaallisut dictionary developed by Oqaasileriffik and Ilinniusiorfik (Teaching Material Publishers), *aput* is described as “*sne der ligger på jorden*” ‘snow lying on the ground’ (Ilinniusiorfik 2010). Likewise, in the *Dictionary of the West Greenland Eskimo Language* from 1927, *aput* is defined as “snow (on the ground)”, and in the *Greenlandic–English Dictionary* from 2018, *aput* is translated directly into “snow” (Oqaasileriffik 2022). When *sne* and *snow* are used as neutral words, the translations risk being distorted from the emic logics rooted in the translated words. Similarly, the definition of the Danish noun *sne* on Ordnet.dk, developed by the Society for Danish Language and Literature’s Department for Digital Dictionaries and Corpora, consists almost exclusively of complex concepts:

³ There are other snow-related verbs in Kalaallisut than *nittaappoq* (e.g. *apivoq*, *nittaalarpoq*, and *qannerpoq*). NSM analysis of all the verbs would illuminate if *nittaappoq* is the closest in meaning to *det sner*. However, it is outside the scope of this study to propose semantic explications for all the words.

- (1) *nedbør i form af iskrystaller der hænger sammen i lette, hvide fnug*
(The Danish Dictionary 2022)

‘precipitation in the form of ice crystals that are bound together in light, white flakes’

Moreover, *sne* is part of the definition of *nedbør* ‘precipitation’ provided by the website, and the explanations of the terms, therefore, end up being circular. In short, the definitions do not convey access to local knowledge; consequently, the snow-related words call for analysis with NSM.

4 Analysis of snow-related words

4.1 A semantic explication of *aputit*

The word *aputit* is conceptualized as a concrete natural phenomenon. This is reflected with component (a): “something”. During the semantic consultations, the consultants explain *aputit* as something *koldt* ‘cold’ and *hvidt* ‘white’. The physical configuration seems central to the word, and I have therefore included *cold* and *white* as semantic molecules in component (b). In the explication, components (a) and (b) read:

- a. something
- b. it is cold [m], it is white [m]

Besides being cold itself, cold weather is also a physical condition for *aputit*, which is why it can only be found sometimes in some places. This is captured in component (c):

- c. this something is some places when it is cold [m] in these places

Component (d) reflects descriptions of *aputit* as something lying on the ground. For example, one of the consultants explains:

- (2) *det er sne, der er på jorden*
‘it is snow which is on the ground’

This aspect is also evident in most of the existing translations. Therefore, *the ground* is another semantic molecule in the explication:

- d. people often say this word about this something when it is on the ground [m]

The component includes “often” since another, less common, use of the word is implied during the consultations:

- (3) *aputit er mest det, der er nede på jorden*
‘*aputit* are **mostly** down on the ground’

That is, the word can also be used about something that has not touched the ground yet:

- (4) *det er noget hvidt, og det falder til jorden*
‘it is something white and it falls to the ground’

When I ask one of the consultants to elaborate on whether you can use the word about something which is not on the ground, she explains:

- (5) *Ja, men så bliver man nok skældt ud af vores forfædre. Men det kan man sagtens, i vores generation er det selve ordet, som betyder sne, snefnug*
‘Yes, but then you will probably be scolded by our ancestors. But you can easily do that, in our generation, it is the word itself that means snow, snowflakes’

Although the Kalaallisut linguaculture may be divided on the question of whether you can use *aputit* about something that is not on the ground, I have included it in the explication. I have done so because the purpose of an explication is not to reveal how the word should be used, but how it is used. Including “often” and “at some times” in components (d) and (e), respectively, captures that the most common use of the word is concerning something on the ground, while it is less common to say the word to represent something as moving from the sky towards the ground. Component (e) of the explication reads as follows:

- e. at some times people say this word about this something when it is like this:
this something has many many very small parts
these small parts are in many places above the ground [m]
these small parts are moving from the sky [m] to the ground [m]

The “many many very small parts” in component (e) reflect that what is in the air falling from the sky in the direction of the ground does so in the form of *bitte en millimeter snefnug* ‘tiny one millimeter snowflakes’.

The consultants further explain that the natural phenomenon is the prerequisite for activities with *hundeslæde* ‘dog sledge’, *snescooter* ‘snowmobile’, and *ski* ‘skis’. The explication reflects this in component (f):

- f. people can do many kinds of things with it
 people can do many kinds of things on it

In addition, the word *aputit* is associated with positive emotions. For example, this shows with descriptions such as *hyggeligt* ‘cozy’,⁴ *smukt* ‘beautiful’, and *en kunst i sig selv* ‘an art in itself’. That the natural phenomenon evokes positive emotions is reflected in component (g):

- g. when people see it, they often feel something very good

However, the word *aputit* does not exclusively evoke positive emotions. It is described that *aputit* can *forhindre* ‘hinder’ people and that the natural phenomenon is not always *favoritten* ‘the favorite’. In addition, it is a part of the concept that *aputit* can be beset by danger:

- (6) *Hvis der kommer lavine, og du begravnes i sne, så kan du ikke få luft eller bevæge dig. Så den er smuk, men man skal også have respekt og vide, hvordan man omgås med sne. Så på den måde, skal man respektere den*
 ‘If an avalanche comes and you get buried in snow, then you cannot breathe or move. So, it is beautiful, but you must also have respect and know how to deal with snow. So, in that way, you have to respect it’

With this explanation and descriptions such as *du er ingenting i forhold til sneen* ‘you are nothing compared to the snow’, the consultants express a feeling that something very bad can happen

⁴ For a semantic explication of the Danish cultural keyword *hygge* see Carsten Levisen (2012:80–114).

when there is much of *aputit*. Nevertheless, these feelings do not seem as salient as the positive emotions, which is why component (h) reflecting the danger and negative emotions is explicated with “at some times”:

- h. when there is much of it, very bad things can happen,
because of this, at some times people can feel something bad when
they see it

In addition to this, the natural phenomenon is conceptualized as closely connected to Greenland. When asked about *aputit*, one of the consultants says:

- (7) *Sne er lig med Grønland*
‘Snow is equal to Greenland’

The link with Greenland also shows in both cultural pride and prejudices:

- (8) *Vi bliver meget set i fordomme som, at vi har rigtig meget sne hele tiden, og vi bor i noget hvidt, og at vi bor i igloer ... Grønland er i hvert fald et af de steder, man tænker på, når man tænker på sne. Når man kommer herfra, betyder ordet rigtig meget for nogle.*
‘We are very much seen in prejudices like that we have a lot of snow all the time and we live in something white and that we live in igloos ... At least, Greenland is one of the places you think of when you think of snow. When you come from here, the word means a lot to some’

Therefore, component (i) reads:

- i. people can think like this:
“there is much of this in Greenland [m]”

The last component of the explication relates to the physical nature of *aputit*. When the weather is no longer cold, *aputit* melt and *bliver ... til vand* ‘turn ... into water’. *Water* is an integral part of the meaning and therefore a semantic molecule in the explication.

Altogether, the analysis leads to my hypothesis about the meaning of *aputit*:

[A] A semantic explication of *aputit*

- a. something
- b. it is cold [m], it is white [m]
- c. this something is some places when it is cold [m] in these places
- d. people often say this word about this something when it is on the ground [m]
- e. at some times people say this word about this something when it is like this:
 - this something has many many very small parts
 - these small parts are in many places above the ground [m]
 - these small parts are moving from the sky [m] to the ground [m]
- f. people can do many kinds of things with it
people can do many kinds of things on it
- g. when people see it, they often feel something very good
- h. when there is much of it, very bad things can happen,
because of this, at some times people can feel something bad when they see it
- i. people can think like this:
“there is much of this in Greenland [m]”
- j. when it is not cold [m] anymore in a place, this something is not like it was before, it is water [m]

4.2 A semantic explication of *nittaappoq*

Cliff Goddard and Anna Wierzbicka have worked out explications of several weather verbs and on that basis proposed a semantic template (Goddard & Wierzbicka 2016). The semantic template for weather verbs contains the following elements: LEXICOSYNTACTIC FRAME (what is happening in a place at a given time), SITUATION SCENARIO (details about the physicality of the situation), SUBJECTIVE IMPRESSION (the human experience of the weather phenomenon), and POTENTIAL OUTCOME (the potential outcome of the weather phenomenon) (ibid.:241–42). In their work with weather verbs, Goddard and Wierzbicka have proposed a semantic explication of “It’s snowing in this place (at this time)” (ibid.:242). Therefore, besides basing the explications of the snow-related verbs *nittaappoq* and *det sner* on the template, I will also show how the Kalaallisut and Danish conceptualizations overlap with and deviate from the English.

[B] It’s snowing in this place (at this time) (Goddard & Wierzbicka 2016:242)

something is happening for some time in this place (at this time), not because people are doing something in this place	LEXICOSYNTACTIC FRAME
when this happens in a place, something can be happening to people in this place because of it	
something like this happens in some places at many times when it is very cold [m] in these places	SITUATION SCENARIO
when this happens in a place, at all times it is like this:	
- something is happening far above this place	
- because of this, there is something in many places above the ground [m] in this place, it is white [m]	
- this white [m] something (=stuff) is moving	
when people see this, at many times they can think about it like this:	SUBJECTIVE IMPRESSION
“many many very small things are moving above the ground [m] here”	
if it happens like this in a place for some time, after this, there can be much of this white [m] something (=stuff) on the ground [m] in this place	POTENTIAL OUTCOME

As with *snowing*, the word *nittaappoq* describes a weather phenomenon that delineates what happens somewhere at a given time. Both *snowing* and *nittaappoq* differ from many other verbs by not being caused by human action but having “a potential human significance” (Goddard & Wierzbicka 2016:241), which is expressed with components (a) and (b):

- a. something is happening for some time in this place (at this time), not because people are doing something in this place
- b. when this happens in a place, something can be happening to people in this place because of it

Likewise, it is both a part of the conceptualization of *snowing* and *nittaappoq* that the weather phenomenon presupposes that it is cold. However, it does not seem to be part of the Kalaallisut conceptualization that it must be *very* cold since the consultants only

describe the weather as being *koldt* ‘cold’. Therefore, component (c) in the explication of *nittaappoq* differs slightly by leaving out *very*:

- c. something like this happens in some places at many times when it is cold
[m] in these places

Component (d), which elaborates the physicality of the situation, is part of both the meaning of *snowing* and *nittaappoq*. In other words, the concepts *white* and *ground* are also integral parts of the meaning of *nittaappoq* and therefore semantic molecules in the explication.

Component (d) is reflected with descriptions such as:

- (9) a. *Større snefnug, klumper af snefnug, der falder langsomt*
‘Larger snowflakes, lumps of snowflakes falling slowly’
- b. *Det er bare noget hvidt*
‘It is just something white’

Component (d) reads as follows:

- d. when this happens in a place, at all times it is like this:
 - something is happening far above this place
 - because of this, there is something in many places above the ground [m]
in this place, it is white [m]
 - this white [m] something (=stuff) is moving

The following component expresses the human experience of the phenomenon and is also present in both explications. However, the space specifications differ in component (e) of *snowing* and *nittaappoq*. The direction of the “many many very small things” falling from the sky and moving towards the ground is a central part of the conceptualization of *nittaappoq*:

- (10) a. *når noget hvidt ...falder fra himlen*
‘when something white ... falls from the sky’
- b. *ikke har nået jorden endnu*
‘has not reached the ground yet’

Whereas the subjective impression in the explication of *snowing* is that many very small things are “above the ground [m]”, the direction is included in *nittaappoq* and explicated as follows:

- e. when people see this, at many times they can think about it like this:

“many many very small things are moving from the sky [m] to the ground [m] here”

In addition, the above example (10b) resembles the meaning expressed in the last component in the explication of *snowing* by indicating with *yet* that the many small things will be on the ground at some point. The potential outcome that the white stuff subsequently covers the ground is reflected in component (f).

This leads to the following explication:

[C] A semantic explication of *nittaappoq*

- a. something is happening for some time in this place (at this time), not because people are doing something in this place
- b. when this happens in a place, something can be happening to people in this place because of it
- c. something like this happens in some places at many times when it is cold [m] in these places
- d. when this happens in a place, at all times it is like this:
 - something is happening far above this place
 - because of this, there is something in many places above the ground [m] in this place, it is white [m]
 - this white [m] something (=stuff) is moving
- e. when people see this, at many times they can think about it like this:
“many many very small things are moving from the sky [m] to the ground [m] here”
- f. if it happens like this in a place for some time, after this, there can be much of this white [m] something (=stuff) on the ground [m] in this place

4.3 A semantic explication of *sne*

Like *aputit*, the explication of *sne* begins with “something” to capture the ontological status of the word as a concrete natural phenomenon. In the conceptualization of *sne*, *cold* is also a semantic molecule embedded in the meaning of the word. For example, *sne* is described as cold in the title of the Danish film *Ud i den kolde Sne* ‘Out in the Cold Snow’ from 1934, which was directed by Lau Lauritzen Jr. and Alice O’Fredericks. Likewise, *white* is a semantic molecule in the explication of *sne*. This can be illustrated with the following metaphorical text example:

- (12) *Sandsynligheden for, at hele Danmark er indhyllet i et hvidt tæppe af sne juleaften, er lig nul* (Kjeldsen 2019)

‘The probability that the whole of Denmark is wrapped in a white blanket of snow on Christmas Eve is nil’

Consequently, components (a) and (b) are identical with the components in *aputit*:

- a. something
- b. it is cold [m], it is white [m]

The next two components differ from *aputit*. As we have seen, it is part of the conceptualization of *aputit* that the word is primarily used about something on the ground and to a lesser extent about something moving in the direction of the ground. This does not apply to *sne*, as the word captures both meanings to the same extent, which can be exemplified by the following text example:

- (13) *Det føles ikke rigtig som jul, hvis sneen ikke daler blidt ned om aftenen d. 24. december og lægger sig i et tykt lag på græsplænen* (Cappelen 2020)

‘It does not really feel like Christmas if the snow does not fall gently on the evening of December 24th and settles in a thick layer on the lawn’

Sne falls from showers in the sky when it is cold, and thereafter, it settles on the ground. Thus, the *sky* and *ground* are also semantic molecules in the explication of *sne*, and in the explication, this is expressed by component (c):

- c. when it is very cold [m] in a place, sometimes it is like this for some time:
 - this something has many many very small parts
 - these small parts are in many places above the ground [m]
 - these small parts are moving from the sky [m] to the ground [m]
 - after this, this something is on the ground [m] in this place

Component (c) also becomes evident when we turn our attention to the five most frequent collocations with *sne* in the corpus daTenTen (Sketch Engine 2022).

Words	Number of occurrences	LogDice
<i>rydde</i> (clear away)	634	7.57
<i>smelter</i> (melts)	464	7.26
<i>nyfalden</i> (newly fallen)	370	7.16
<i>skovle</i> (shovel)	326	6.94
<i>daler</i> (is falling)	309	6.81

Table 1: Collocations with ‘sne’

Sne appears in the corpus with words confirming that it is moving from the sky to the ground (*nyfalden*, *daler*), and words confirming that *sne* is subsequently on the ground for a while (*rydde*, *skovle*).

The last component (d) articulates the transformation to water, and it is supported by the collocation *smelter*. Component (d) can also be illustrated with the below text example:

- (14) *Da jorden—og luften—er over frysepunktet, vil sneen dog hurtigt smelte* (Pelt 2019).
 ‘As the ground—and air—are above freezing point, the snow will, however, melt quickly’

Accordingly, water also proves to be important for the meaning of *sne* and thus a semantic molecule in the explication. The analysis results in the explication [D]:

[D] A semantic explication of *sne*

- a. something
- b. it is cold [m], it is white [m]
- c. when it is very cold [m] in a place, sometimes it is like this for some time:
 - this something has many very small parts
 - these small parts are in many places above the ground [m]
 - these small parts are moving from the sky [m] to the ground [m]
 - after this, this something is on the ground [m] in this place
- d. when it is not cold [m] anymore in this place, this something is not like it was before, it is water [m]

4.4 A semantic explication of *det sner*

My work with both *sne* and *det sner* has shown that the morphological derivation reflects the semantic relationship between the words. The noun *sne* is a derivative base in the conceptualization of *det sner*, which I will illustrate in explication [E]. As with the verbs *snowing* and *nittaappoq*, the explication of *det sner* begins with component (a) reflecting that the term describes a weather phenomenon limited in time and place. Likewise, the phenomenon is not caused by human action, but it can have a potential impact on humans. This is how the explication articulates this:

- a. something is happening for some time in this place (at this time), not because people are doing something in this place
- b. when this happens in a place, something can be happening to people in this place because of it

In addition, cold weather is associated with *det sner*, which also corresponds with the conceptualizations of *snowing* and *nittaappoq*. Component (c) is articulated in the same way as in the explication of *snowing*, as the term appears with descriptions such as *piv koldt* ‘very cold’ (Team Tindur 2015). This differs from the explication of *nittaappoq*, where “very” is omitted. In the explication of *det sner*, component (c) reads:

- c. something like this happens in some places at many times when it is very cold [m] in these places

In component (d), the physical circumstances of the situation are elaborated and *sne* as the derivative base is introduced. As with *nittaappoq* and *snowing*, it is part of the physical circumstances that “something is happening far above this place”. The next two parts of the explication of *nittaappoq* and *snowing* are as follows: “because of this, there is something in many places above the ground [m] in this place, it is white [m]” and “this white [m] something (=stuff) is moving”. By using *sne* as a derivative base in the explication of *det sner*, “something” changes to *sne*, and the description about it being white is left out, as it is already included in the meaning of *sne*. The relation between *sne* and *det sner* can be illustrated with the following example:

- (15) *Her er vinterens første sne faldet—og det sner stadig* (Brandt 2018).
'Here, the first snow of the winter has fallen—and it is still snowing'

On that basis, component (d) is explicated:

- d. when this happens in a place, at all times it is like this:
– something is happening far above this place
– because of this, there is *sne* [d] in many places above the ground [m] in this place
– the *sne* [d] is moving

As mentioned, component (e) reflects the human experience of the weather phenomenon. All three verbs hold a similar conceptualization, but as in the case with *nittaappoq*, the direction seems central to the meaning of *det sner*. This is reflected, for example, in Benny Andersen's poem "Sne, sne, sne og atter sne", which was originally published in 1985 in the collection of poems *Tiden og storken*. The poem begins with the verse:

- (16) *Det sner fra himlen over byen* (Andersen 2018)
'It is snowing from the sky over the city'

The direction from the sky to the ground is also evident in the following description from one of the semantic consultations:

- (17) *Man kigger ud og der falder de der kolde krystaller mod jorden*
'You look outside, and those cold crystals are falling towards the ground'

Thus, the experience is that *sne* falls from snow showers in the sky when *det sner*, and this is incorporated in the explication with component (e):

- e. when people see this, at many times they can think about it like this:
"sne [d] is moving from the sky [m] to the ground [m] here"

Component (f) contains the potential outcome of the weather phenomenon. In both the explication of *snowing* and *nittaappoq*, the

component reads: “if it happens like this in a place for some time, after this, there can be much of this white [m] something (=stuff) on the ground [m] in this place”. The same emic logic shows in relation to the meaning of *det sner*. For example:

- (18) *Julen kan også være hvid, uden at det sner selve juleaftensdag. Ofte sner det dagene før jul, og så ligger sneen jo julen over* (KorpusDK 2022).
‘Christmas can also be white without it snowing on Christmas Eve itself. It often snows the days before Christmas, and then the snow is lying over Christmas’

As example (18) illustrates, “this white [m] something” can be replaced with *sne* in the explication of *det sner*. Altogether, this leads to the following semantic explication:

[E] A semantic explication of *det sner*

- a. something is happening for some time in this place (at this time), not because people are doing something in this place
- b. when this happens in a place, something can be happening to people in this place because of it
- c. something like this happens in some places at many times when it is very cold [m] in these places
- d. when this happens in a place, at all times it is like this:
 - something is happening far above this place
 - because of this, there is *sne* [d] in many places above the ground [m] in this place
 - the *sne* [d] is moving
- e. when people see this, at many times they can think about it like this:
“*sne* [d] is moving from the sky [m] to the ground [m] here”
- f. if it happens like this in a place for some time, after this, there can be much of *sne* [d] on the ground [m] in this place

5. Discussion of the analysis

By semantic analysis with NSM, I have shown differences and similarities in the meanings of selected snow-related words. Some components are shared across Kalaallisut, Danish, and English conceptualizations. For example, the snow-related verbs in all three languages follow the same semantic template. Furthermore, although expressed through a derivative base in the case of *det sner*, all the words contain the semantic molecules *cold*, *white*, and *ground*.

In addition to the specific, identical components, all the selected snow-related words are rooted in an anthropocentric perspective. This is in line with previous research showing that concepts based in the concrete world generally incorporate a human-centred perspective (Bromhead 2017:182, 2018:9–20). For example, the semantic explications proposed so far suggest that human vision and spatial experience are decisive factors for how landscape terms are conceptualized (Bromhead 2011:58; Mašková 2022:58). Further, people’s physical abilities, experiences, risk of danger, interests, and uses have shown to be defining for the meanings of several Nuuk–Danish environmental words (Mašková 2022:58–61). Likewise, it often applies to concepts based in the concrete world that sizes are perceived in relation to the size of people (Bromhead 2017:188), and this is also the case with the selected snow-related terms. The *very small* size is explicitly articulated in the meaning of *aputit*, *nittaappoq*, *sne*, and *snowing*, whereas the explication of *det sner* does not explicitly contain a description of the size, but it is included indirectly through *sne* as a derivative base. Similarly, the human-centred perspective is reflected in the semantic template for weather verbs with a component to capture the human experience of the phenomenon: “The Subjective Impression concerns how this appears to human observers” (Goddard & Wierzbicka 2016:241). In the meaning of the word *aputit*, the anthropocentric perspective is further evident, as it is conceptualized as something people can do something on/with and as something potentially dangerous to humans. In short, this study supports the finding that conceptualizations of the concrete world are anchored in an anthropocentric perspective across languages.

Regarding the differences, the explication of *aputit* deviates from the other words by being dependent on the semantic molecule *Greenland* and closely connected to activities and emotions, including fear and cultural pride. These culture-specific components reveal that the natural phenomenon is central to the linguaculture as it plays an important role in people’s lives. Other components are close to identical between the languages but differ slightly in detail. For example, what is perceived as cold seems to depend on the geographical environment the speakers are surrounded by. That is, with *snowing* and *det sner* it is a prerequisite for the weather phenomenon that it is *very cold*, whereas the component in the

explication of the Kalaallisut verb *nittaappoq* is explicated without *very*.

While the Kalaallisut, Danish, and English linguacultures have identified something white and cold that falls from the sky, this does not necessarily apply to all languages, as the phenomenon requires air temperatures around or below 0°C, which is not a physical circumstance experienced worldwide. But what about the more common weather phenomenon, which is termed *rain* in English? Have all or almost all linguacultures conceptualized water falling from the sky? And if so, is *water*, which is proposed as a universal semantic molecule (Griffith University 2022), an integral part of all the conceptualizations? A cross-linguistic analysis of words for water falling from the sky will contribute further insight into how conceptualizations of the physical environment match and differ between languages and geographical zones.

6. Concluding remarks

The aim of this study was not to propose a new number of snow-related Kalaallisut terms. Instead, I have unfolded the emic logics condensed within selected Kalaallisut and Danish snow-related concepts and shown how the word meanings match, relate, and differ. Some components are language- and culture-specific, while others appear not to be.

For now, I agree with Martin and Pullum that counting words can be problematic from a scientific point of view. But once the meanings of many snow-related words have been mapped, the semantic explications will make it possible to develop typologies to help delimit counts. Consequently, with extensive NSM research, lexical counts of cultural elaboration can become informative to some extent. However, studies of linguistic diversity cannot be reduced to a matter of numbers since the numbers themselves do not say much. As illustrated in this study, an in-depth semantic analysis is needed to achieve an understanding of local culture-specific knowledge embedded in snow-related concepts. Further, cross-linguistic NSM analysis offers insight into an important aspect that the counts overlook: While the counts are solely centred around cultural differences, cross-linguistic NSM analysis also sheds light on potential universal aspects in conceptualizations.

Back at the dinner table, I encourage the myth about hundreds of words for snow in Greenlandic to be buried, and I hope that my study

will instead give rise to conversations about both differences and similarities across linguacultures based on genuine curiosity and eagerness for knowledge, not exotification.

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