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# *Noun Incorporation in West Greenlandic*

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*To Pasqualina Bettanello*

*1<sup>st</sup> April 1929 – 25 March 2020*

«If in the twilight of memory we should meet once more,  
we shall speak again together and you shall sing to me  
a deeper song»

G.K. GIBRAN, *The Prophet* (1923)

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Last but not least, all my love and sincere gratitude goes to my beloved Marco... *porque yo no puedo respirar sin ti*<sup>1</sup>.

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<sup>1</sup> CAMILO, *Manos de Tijera* (2021)

## Abstract

The aim of this study is to provide a novel analysis of Noun Incorporation (hereafter NI) in Kalaallisut (West Greenlandic).

The choice to study this phenomenon is linked to its highly debated and complex nature due to its bridging between morphology and syntax: it is subject of debate since the *querelle* between Kroeber and Sapir at the beginning of the twentieth century, and I was deeply fascinated by it.

On the other hand, the choice to study the phenomenon within this specific language depends on many factors: firstly, it depends on a personal interest in the languages spoken in the Arctic region; secondly, concluding my Master's degree by studying a language geographically and typologically distant from those most familiar to me was a personal challenge.

The more "academic" motivation, on the other hand, is the following: it is still a matter of debate whether West Greenlandic has Noun Incorporation or not and how the phenomenon could be formalized.

In detail, the traditional account proposed in Baker (1988) explains NI phenomena as originated by  $X^{\circ} \rightarrow X^{\circ}$  (head-to-head) movement. Nevertheless, there is widespread crosslinguistic evidence for the existence of Phrasal Incorporation (Sadock, 1980; Spencer, 1995; Barrie & Mathieu, 2012; Barrie & Mathieu 2016) involving XP movement, and West Greenlandic is one of the languages which seems to display this characteristic (e.g., incorporation of both a noun and a modifier): on the basis of data gathered through field work, I will provide new empirical evidence for the existence of Phrasal Incorporation. Therefore, NI in Kalaallisut should be considered – differently from Baker's analysis (1988) – a much less peculiar phenomenon involving the movement of an entire XP towards a low specifier position located at the edge of the vP area.

Examining the data collected, I will propose some restrictions on incorporated elements and verbs hosting incorporation.

To conclude, I will propose some criteria that – in my opinion – could be useful for proceeding with a typological classification of Incorporation phenomena.

A disclaimer: since Noun Incorporation is a phenomenon which is composite in nature, my approach will also have a composite nature, because, in my opinion, only the dialogue between different approaches could lead to a progress.



## 1. Towards a definition of Noun Incorporation

As previously stated, Noun Incorporation is a bridge-phenomenon between morphology and syntax: it's a morphologic phenomenon because – broadly speaking – it affects the structure of *words* (complex notion that deserves to be treated separately); it's a syntactic phenomenon because it seems to affect (a) the argumental structure of the verbs hosting incorporation, (b) word order, (c) sentence structure and (d) movement.

But what could be – if possible – a good definition of Noun Incorporation?

### **Kroeber (1909) and Sapir (1911)**

A good starting point to understand the notion of Noun Incorporation (hereafter NI) is the definition proposed by Kroeber (1909) and discussed in Sapir (1911): «Noun Incorporation is the combination into one word of the noun object and the verb functioning as the predicative of a sentence».

Sapir (1911) accuses this definition of being too restrictive, since it only takes into account incorporation of the direct object. Later, he argues for the need of a definition - based on empirical data rather than logical speculation – of NI phenomena «broader or more inclusive» which «requires classification to make it practically usable». A more loose-knit definition would – in fact – allow the inclusion of a wider range of phenomena, which could then be better classified on the basis of their peculiar characteristics.

The definition proposed by Kroeber (1909) is problematic also from a second point of view. The notion of «combination into one word» is – in fact – too vague, and lends itself to numerous interpretations, since it is well established that no definition of *word* can be applied to all languages.

The most superficial – and maybe trivial – distinction is between “written” (orthographic) and “oral” (phonological) words:

- *Phonological word*: a succession of sounds separated by prosodic boundaries;
- *Orthographic word*: a graphic representation (of a succession of sounds) comprehended between two white spaces (Graffi & Scalise, 2013).

These two definitions are problematic, because there is not necessarily an overlap between orthographic words and phonological words. Let's consider the following example from De Carvalho & al. (2019):

(1) Regarde! La petite bamoule!



(2) [Regarde]! [La petite] [bamoule]!

The brackets in (2) identify the distinct phonological units separated by prosodic boundaries. The unit [La petite] can be considered a *phonological word* according to the definition previously proposed, but this same unit can't be considered as formed by a single *orthographic word*: in this case, the single phonological word [La petite] is represented by two orthographic words: {La} {petite}. Later in this study the problems that the notions of phonological and orthographic words present with respect to NI are exposed.

A better operative definition of *word* is that proposed by Graffi e Scalise (2013): a word is a unit within which no other linguistic material can be inserted.

Anyhow, the definition proposed by Kroeber (1909) makes a good point, emphasizing the fact that the incorporated noun has its own *θ-role* and it is part of the argumental structure of the verb.

This example from Southern Tiwa proposed by Allen, Gardiner & Franz (1984) and presented in Baker (1988) shows a clear example of Noun Incorporation:

(3) **Seuanide** timuban

Seuan-	ide	ti-	mu-	ban
Man-	Suff	1sS/AO-	see-	PAST
'I saw the man'				

(3b) **Tiseuanmuban**

Ti-	seuan-	mu-	ban
1sS/AO	man-	see-	PAST
'I saw the man'			

Regardless – at least for the moment – of the syntactic nature of the incorporated element (a topic I will discuss later in this study), it is clear that in (1) the noun stem *seuan-* (man) stands as an independent entity, and it *moves* from its base (external) position within the verbal complex in (1b), even if the underlying structure of both the sentences is the same. In both cases, this noun stem is the direct object of the verb, that is, part of its argumental structure.

Example (3b) allows us to discuss a second problem connected to the notion of *word*: in Southern Tiwa, the *orthographic word* {Tiseuanmuban} corresponds to something which – in English as in every non-polysynthetic language – can't be considered a single orthographic word as well.

### **The nature of Noun Incorporation: lexical or syntactic?**

A first debated point regards the nature of NI phenomena, that is, whether their origin is lexical or syntactic. Since – as previously mentioned – NI involves *the movement* of an argument of the verb from its base position to a different one, the nature of NI phenomena is clearly syntactic.

Anyway, a comparison between NI and *compounding* (a clearly lexical phenomenon) will shed light on the differences between syntactic and lexical based phenomena.

### **NI and compounds**

A well-known lexical phenomenon are instances of *compounds*, that is, word sized units containing two or more stem (e.g., to babysit).

*Noun-Verb compounds* (e.g., to babyist: to [[baby]<sub>N</sub> [sit]<sub>V</sub>]<sub>V</sub>) are well attested, and one might wonder what is the difference between these cases and instances of NI, since even the cases of incorporated structures, at least under a mere superficial point of view, are complex verbs containing a noun and a verb.

As Sadock (1980; 1985; 1986) and Baker (1988) pointed out, the main differences between compounding and incorporation are the following:

- *Excorporation*: the nominal element involved in a compound can't be excorporated, whereas it is possible to excorporate an incorporated element;
- *Pronominal resumption*: it is not possible to pronominally resume the nominal element of a compound, but it is possible to resume an incorporated nominal element;
- *Modifiability*: it is not possible to modify a compounded element, but it is possible to modify an incorporated element;
- *θ-roles*: compounded elements do not have any θ-role, whereas incorporated elements do have their own *θ-role*.

A concrete application of these tests is postponed in next sections of this study, where I will examine the nature of Noun Incorporation in Kalaallisut (West Greenlandic).



## 2. The project

This thesis is organized as follows. Firstly, a brief introduction of the language object of this study and its main morphosyntactic characteristics. Secondly, the feature of Noun Incorporation in West Greenlandic are exposed and compared with the NI typology proposed by Mithun (1984).

This is followed by the presentation of the work phases, the elaboration of the first and second tests and the presentation of the data gathered through these tests.

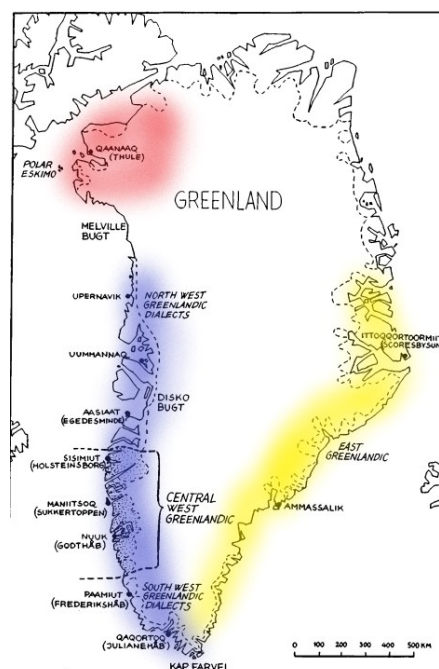
These data are therefore analysed taking into account different perspectives. The syntactic analysis (i.e., Noun Incorporation as  $X^{\circ} \rightarrow X^{\circ}$  movement) proposed by Baker (1988) is revised referring to the analysis (i.e., Noun Incorporation as XP movement) proposed by Barrie & Mathieu (2016).

Therefore, restrictions on verbs and nouns involved in Noun Incorporation are proposed, and the status of incorporated nominal elements is clarified by a comparison with Persian complex verb as proposed by Megerdoomian (2012).

To conclude, I put forth a novel analysis of the cases in which incorporation of both a modifier and a noun takes place.

### Kalaallisut (West Greenlandic)<sup>2</sup>

*Kalaallisut*, better known as West Greenlandic, is the main Greenlandic dialect, belonging to the Eskimo-Aleut family. Classified as *vulnerable* by the UNESCO Atlas of World's Languages in danger, it is spoken by the vast majority of the population (50'000 speakers) living in the west coast, especially in the area of Nuuk. It's important to stress the fact that the *West Greenlandic* label provides a false image of dialectal homogeneity. In fact, it would be more correct to see West Greenlandic as a *continuum* divided in further sub-dialects scattered along the coast.



1 Adapted from Fortescue (1984)

<sup>2</sup> FORTESCUE M., *West Greenlandic*, London: Croom Helm, 1984 pp.1-303

Other Greenlandic dialects are *Qanaaq* (North Greenlandic, spoken by 1'000 speakers) and *Tunumiit* (East Greenlandic, spoken by 3'000 speakers), both classified as *definitely endangered*.

Classified as *polysynthetic*, West Greenlandic has an *absolutive-ergative* alignment, and the unmarked word order is *subject-object-verb* (SOV). Both nouns and verbs are characterized by complex derivational morphology.

The language presents eight grammatical cases<sup>3</sup>:

*Absolutive*: subjects of intransitive verbs or the objects of transitive verbs

*Relative*: possession

*Instrumental*: the noun it marks is the means of the accomplishment of the action expressed by the clause.

*Allative*: motion to or toward the referent

*Ablative*: various meanings

*Locative*: location at the referent

*Prosecutive*: motion along or through the referent

*Equative*: likeness or identity to the referent

And twelve verbal moods:

Indicative, Conditional, Imperative, Optative, Intentional, Debitive, Potential, Epistemic, Authority of assertion, Consecutive, Causative, Subjective coloration, Contemporative.

The features of the language which are noteworthy for this study are the following (data from WALS – World Atlas of Language Structures Online<sup>4</sup>). These features are noteworthy because they are directly connected with word order within the DP domain (the domain that – wanting to study cases of phrasal incorporation involving nouns and modifiers – turns out to be of grater interest):

*Table 1*

<b>Word order</b>	Genitive – Noun Noun – Adjective Noun – Numeral Mixed order of demonstrative and noun
-------------------	--

<sup>3</sup> The definitions of the case are mostly from GLOSSARY OF LINGUISTIC TERMS: <https://glossary.sil.org/term> (20/02/2022) and Fortescue (1984)

<sup>4</sup> [https://wals.info/languoid/lect/wals\\_code\\_grw](https://wals.info/languoid/lect/wals_code_grw) (09-10-2021)

	Postpositions
<b>Position of Interrogative Phrases in Content Questions</b>	Not initial interrogative phrases
<b>Articles</b>	No definite or indefinite articles

West Greenlandic lacks of a system to mark definiteness and indefiniteness, which is derived through context.

The language also lacks of a system to encode grammatical tense, which is also derived from context and from temporal adverbs (e.g., *ipassaq*, yesterday). The following example provides an example of the lack of morphemes on the verb encoding grammatical tense:

(1) *Ipassaq viinnimik ataasitorama*

*Ipassaq*      *viinni-* *mik*    *ataasi-* *tor-*    *ama*  
Yesterday    wine- STR   one-    drink   1S.CAUS  
'Yesterday I drank a glass of red wine'

The verb *ataasitorama*, for example, is composed by the stem *tor-* (to consume) and the suffix *-ama* encoding 1<sup>st</sup> person singular and causative mood. The only possible way to understand the temporal collocation of the event described by this sentence is the temporal adverb *ipassaq* (yesterday), since there isn't any morpheme in the verb encoding grammatical tense.

### **Incorporation in Kalaallisut**

#### **Incorporating structures and denominal verbs**

Whether Kalaallisut presents incorporation or not is a matter of debate. Sapir (1911) claims that «Eskimo, a language particularly rich in suffixes that verbify nouns, has been termed polysynthetic, but has not been employed by serious students as a source of examples of noun incorporation». And, according to Fortescue (1985): «It is of course debatable whether incorporation is the Syntax best term to use here, since all verbalizing affixes like *-qar* are bound forms, never stems».

In both cases, the main concern regards the nature of the verbs hosting incorporation: according to Sapir (1911) denominative verbs formed from noun stems via derivative suffixes can't be considered instances of Noun Incorporation, and – on the contrary – should be compared to denominal verbs formed by the English verbalizing suffix *-ize* (and, consequently, to other English verbalizing affixes like *-ify*, *-ate*, *-Ø*, *en-*, *be-*).

However, incorporating structures and denominal verbs – at least, English denominal verbs – behave differently.

It is possible to apply to denominal verbs the same tests proposed in the previous sections of this study to demonstrate the differences between incorporating structures and English compounds (i.e., Excorporation, Pronominal resumption, Modifiability and *θ*-*role*). And, in detail:

- *Excorporation*: it is not possible to excorporate the noun stem of a denominal verb. On the contrary, it should be possible to excorporate an incorporated noun.

(1) I hardly scrutinized the results

(1b) I \*scrutiny hardly -ized the results

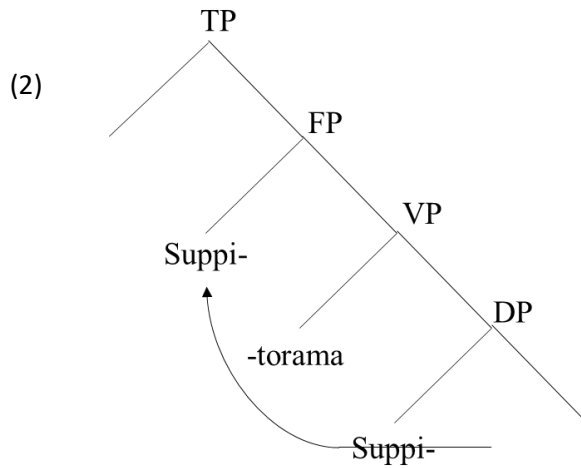
This – although possible in some languages (let's consider, for example, the example from Southern Tiwa provided at the beginning of this study) – is not possible in Kalaallisut. In detail, since – with some verbs – incorporation is mandatory, it is not possible to excorporate an incorporated element leaving these verbs in isolation. The only way to excorporated an incorporated element is by using a verb which do not require mandatory incorporation. (A more exhaustive analysis of the verbs requiring mandatory incorporation is postponed later in this study).

(2) Suppitorama

Suppi-tor-ama (the verb *-tor-* requires mandatory incorporation)

Soup-consume-1S.CAUS

'I eat a soup'

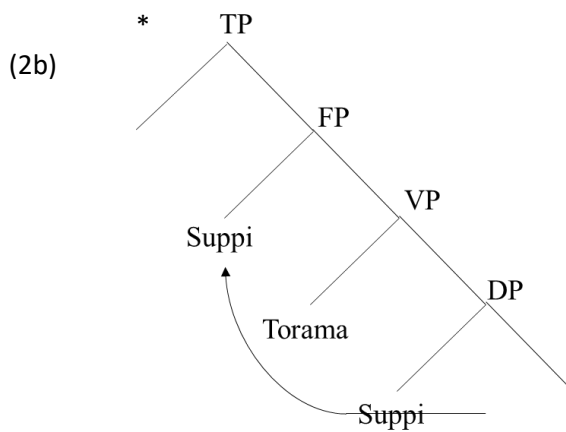


(2b) \*Suppi torama

Suppi tor-ama

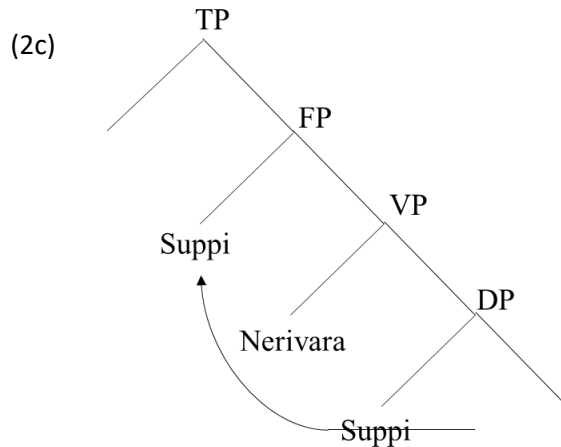
Soup consume-1S.CAUS

'I eat a soup'





(2c) Suppi nerivara  
 Suppi neri-vara  
 Soup eat-1S.3S.INDIC.  
 'I eat a soup'



Sentences (2), (2b) and (2c) clearly show the behaviour of the verbs requiring mandatory incorporation: the verbal stem *-tor-* (to consume) requires mandatory incorporation, and the only possible way to incorporate the noun *suppi* (soup) is by using a different verb. In this case, the verb used is *nerivara* (to eat).

- *Pronominal resumption*: it is not possible to pronominally resume the noun stem of a denominal verb. On the contrary, it is possible to resume an incorporated noun.

(1) \*I hammer<sub>i</sub>ed a nail. It<sub>i</sub> was heavy.

(2) Qimmerujoqarpunga.

Qimmi- ruju- qar- punga  
 Dog- big- have- 1S.IND  
 'I have a big dog'

(4b) Qimmiaraangallarami nipaattorjuunikuuvoq

Qimmiara- angalla-rami nipaatto- ruju-u- nikuu-voq  
Puppy- XXX-4S.CAUS quiet- very-be-PERF- 3SING.IND  
'When he was a puppy, my dog was very quiet'

The incorporated element in (4) *qimme-* (dog) is also the subject of (4b). If this incorporated noun behaved like the nominal stem of a denominal verb, one should expect it to be mandatorily repeated in (4b), for example:

(4c) I hammered a nail. The hammer was heavy

(4d) Qimmi- ruju- qar- punga  
Dog- big- have- 1S.IND  
'I have a big dog'

(4e) *Qimmeq* qimmiara- angalla-rami nipaatto-ruju-u- nikuu-voq  
*Dog* Puppy- XXX-4S.CAUS quiet- very-be -PERF-  
3SING.IND  
'When he was a puppy, my dog was very quiet'

Since this doesn't happen, one can assume that the incorporated noun in (4d) can act as a referent for the implied subject of (4e).

- *Modifiability*: the noun stem of a denominal verb can't be modified by an adjective, whereas it is possible to modify an incorporated noun. However, it is possible to modify the whole event expressed by a denominal verb with an adverbial modifier. Let's consider the following examples:

(3) I hammered a nail

(5b) \*I a good hammered a nail

(5c) I hardly hammered a nail

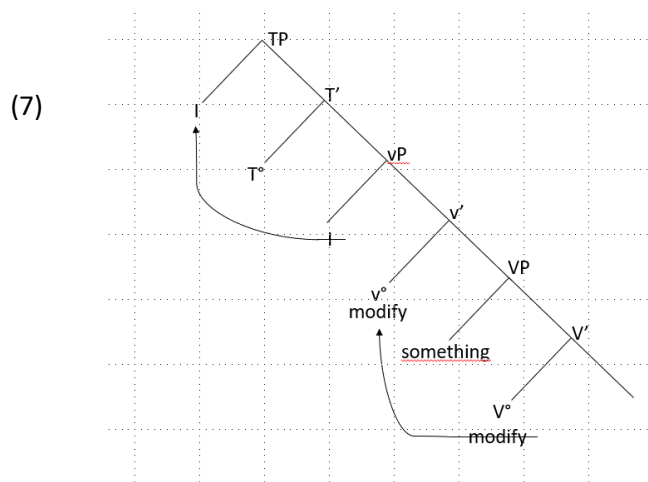
(4) Angisuumik qimmeqarpunga

Angisu- u- mik qimme- qar- punga  
Big- be- INSTR dog- have- 1S.IND

‘I have a big dog’

- *θ-role*: transitive denominal verbs allow the presence of an external direct object, since the nominal stem of the verb is not part of its argumental structure which, consequently, is not saturated. On the contrary, incorporating structures in which the incorporated noun is the direct object of the verb do not allow the presence of a second and external direct object, since the argumental structure of the verb is already saturated by the incorporated noun. Let’s consider the following examples:

(5) I modify something

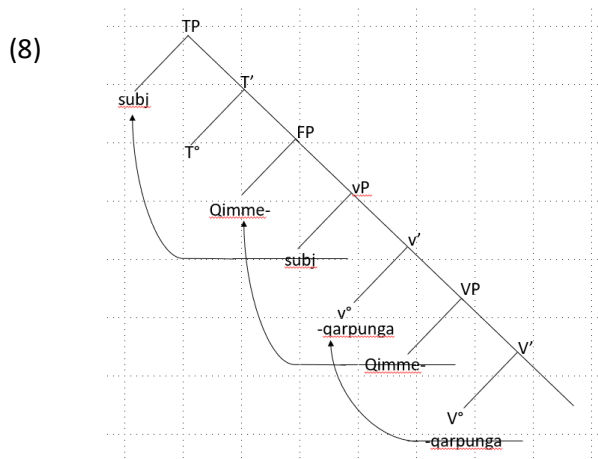


(6) Qimmeqarpunga

Qimme-qar-punga

Dog-have-1S.IND

‘I have a dog’



In (8) it is not possible to add an external direct object, since specVP is already filled by *qimme-* (dog) which is the direct object of the verbal stem *qar-* (to have).

## Incorporating structures and compounds

As stated in the previous sections of this study, the syntactic or lexical origin of incorporating phenomena is a matter of debate and some scholars, among which Mithun (date), have compared incorporating structures to instances of compounds, in order to support the hypothesis of the lexical origin of NI phenomena.

It is possible to apply to English compounds the same tests proposed in the previous sections of this study to demonstrate the differences between them and NI (i.e., Excorporation, Pronominal resumption, Modifiability and  $\theta$ -role). And, in detail:

- *Excorporation*: it is not possible to excorporate the nominal element of a N-V compound:

- 1) I babysat for the deOrios last week
- 1b) \*I sat the baby for the deOrios last week

On the contrary, it should be possible to excorporate an incorporated noun. As previously stated, this is not possible in Kalaallisut because of some peculiar characteristics of this language (i.e., the presence of verbs requiring mandatory incorporation). In order to provide an example of Excorporation, let's consider the data from Southern Tiwa proposed at the beginning of this study.

- *Pronominal resumption*: it is not possible to pronominally resume the nominal element of a compound. On the contrary, it is possible to resume an incorporated noun:

- 2) \*I baby<sub>i</sub>sat for the deOrios last week. He<sub>i</sub> took a long nap

- 3) Qimmerujoqarpunga.

Qimmi- ruju- qar- punga  
Dog- big- have- 1S.IND  
'I have a big dog'

- 3b) Qimmiaraangallarami nipaattorujuunikuuvoq

Qimmiara-angalla-rami nipaatto-ruju-u- nikuu-voq  
Puppy- XXX-4S.CAUS quiet-very-be-PERF- 3SING.IND  
'When he was a puppy, my dog was very quiet'

- *Modifiability*: the noun stem of a compound can't be modified by an adjective, whereas it is possible to modify an incorporated noun. However,

it is possible to modify the whole event expressed by a denominal verb with an adverbial modifier:

4) \*I the big babysat for the deOrios last week

5) I hardly babysat for the deOrios last week

6) Angisuumik qimmeqarpunga.

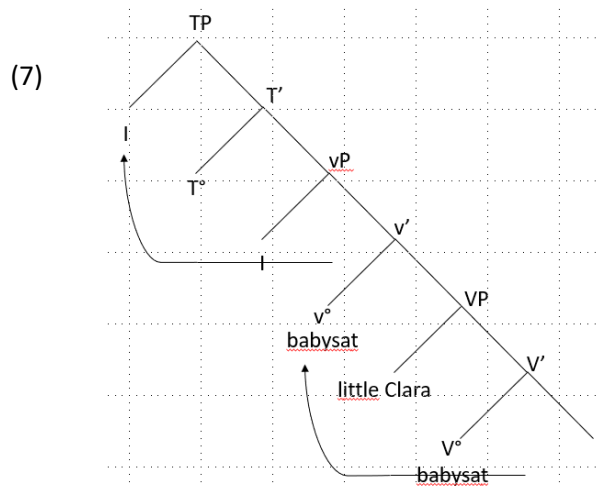
Angisu- u- mik qimme- qar- punga

Big- be- STR dog- have- 1S.PRES

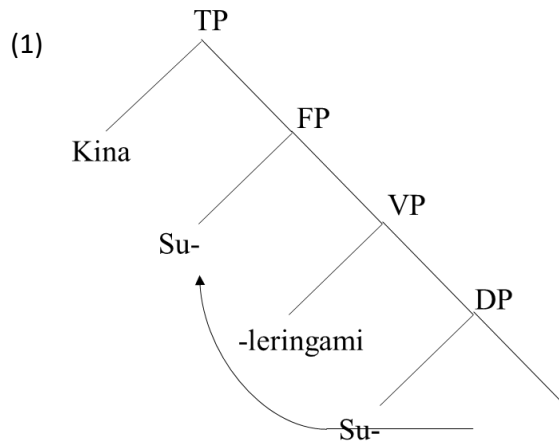
'I have a big dog'

- *θ*-role: transitive N-V compounds allow the presence of an external direct object, since the nominal stem of the verb is not part of its argumental structure which, consequently, is not saturated. On the contrary, incorporating structures in which the incorporated noun is the direct object of the verb do not allow the presence of a second and external direct object, since the argumental structure of the verb is already saturated by the incorporated noun. Let's consider the following examples:

7) I babysat little Clara



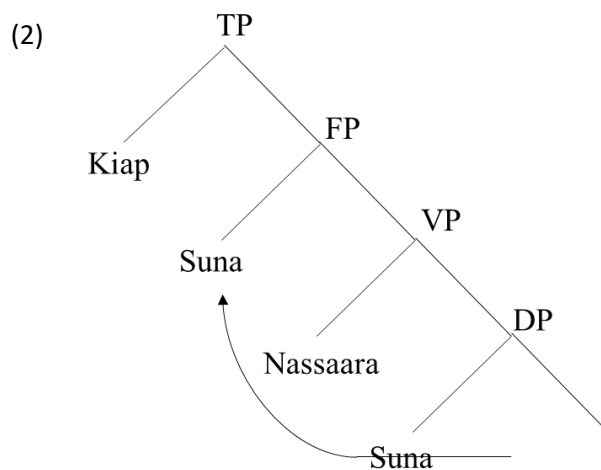




(2) Kiap suna nassaaraa?

Kia-p	suna	nassaa	raa
Who-REL	what	find	3S-3S.IND

‘Who found what?’



In these sentences, the non-verbal element involved is the same (*su-/suna*, what), but in (1) it undergoes incorporation, something which doesn't happen in (2), since the verb *nassaa* (to find) doesn't require mandatory incorporation.

### **Status of the incorporated element: a comparison between Kalaallisut and Persian Complex verb (Megerdoomian, 2012)**

In order to better understand the status of the incorporated nouns, I will provide a comparison between incorporating structures in Kalaallisut and Persian complex verb, following the analysis proposed by Megerdoomian (2012).

In Persian it is possible to build complex predicates by adjoining a noun and a verb. Even if equal under the superficial point of view, these constructions behave in two different ways according to the status of the nominal element involved.

In detail, it is possible to distinguish between:

- **Complex verb A:** the noun (A) and the verb behave like a semantic unit. These nominal forms combine with light verbs with a bleached semantic, providing the core meaning of the verbal complex. On the contrary, the light verb involved is just the overt realization of the functional v-head. These constructions seem to resemble Incorporation I (i.e., lexical compounding), as classified by Mithun (1984).
- **Complex verb B:** the noun (B) is an internal argument of a thematic verb with a complex semantics.

These constructions (A and B) were analysed in the same ways by various scholars, which claimed noun (A) and noun (B) to occupy the same projection in the syntactic structure. Nevertheless, since Complex verb A can coexist with an external argument (B) the two nouns can't occupy the same projection.

Megerdooonian claims these two complex verb A and B to be originated by different structures, and proposes five features which display different characteristics depending on the status of the nominal element (i.e., whether it is a nominal form combined with a light verb or the argument of a proper thematic verb).

*Table 2*

<b>Test</b>	<b>Complex verb A (N + light verb)</b>	<b>Complex verb B (N + thematic verb)</b>
<b>Interrogability</b>	It is not possible to create questions about these nouns.	It is possible to create questions about these nouns.
<b>Number</b>	These nouns do not have a proper number, singular or plural.	These nouns – even if bare – can be interpreted as singular or plural depending on the contest.



<b>Definiteness</b>	These nouns are indefinite and they do not have a definite counterpart.	These nouns can have a definite counterpart.
<b>Modifiability</b>	It is not possible to directly modify these nouns. An external modifier can just modify the entire event as an adverb.	It is possible to directly modify these nouns.
<b>Cooccurrence</b>	These nouns can cooccur with nouns which are part of the argumental structure of the verb (like B-nouns).	These nouns can cooccur just with nouns which are part of a complex verb A. On the contrary, they can't appear with another B-noun with the same $\theta$ -role, since the dedicated syntactic projection is already filled.

Incorporated Noun in Kalaallisut seems to behave like Persian B-nouns (i.e., arguments of the verb hosting incorporation). And, in detail:

Incorporated nouns are interrogable:

(13)<sup>5</sup> Kina illumut sorlermukarpa?  
 Kina illu- mut solerq- mu- kar- pa (or solerq-mukar-pa)  
 Who.SING house- ALL which- ALL- go- 3s.IND  
 ‘Who went to which house?’

(14) Ataaseq aatama illuliarisimasaanukarpoq.  
 Ataaseq aata- ma Illu- liar- sima- saa-nu-kar- poq  
 One grandfather- my.REL house- go.to- PERF- go.to- 3.S.PERF  
 ‘One of them went to the house my grandfather built’

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<sup>5</sup> These numbers refer to the data I collected through fieldwork. These data are presented in the next section of this study

It is possible to interpret incorporated nouns as plural:

- (40) Qamuterpassuaqarnikuullungalu.  
Qamuter- passua- qar- nikuu- llunga=lu.  
Sledge- a.lot.of- have- PERF- 1S.CONTEMPORATIVE=and  
I had also many wooden sledges.

Incorporated nouns can have a definite counterpart:

- (26) Toronto-p qanittuaniittumut illumukarama  
Toronto-p qanit- tu- aniittu- mut illu- muka- rama  
Toronto-REL be.near- INTR.PART.- XXX- ALL house- go.to 1S.CAUS  
'I went to an house near Toronto'
- (27) Illoq taanna inoqannginnerummat  
Illoq taanna inoqanngi-nner-u-mmat  
House that isolate-more-be -3S.CAUS  
'Because that house is more isolated'

Incorporated nouns can be externally modified:

- (36B) Angiummik qimmeqarpunga  
Angisuu-mik qimme- qar- punga.  
Big-INSTR dog- have 1s.Ind  
'I have a big dog'

According to Fortescue (1984), nouns which are stranded arguments of the verb can cooccur just with the dummy stem *pi-* (something), and – since incorporated nouns are part of the argumental structure of the verb hosting incorporation – they can't cooccur with another noun having the same  $\theta$ -role.

### NI typology

Marianne Mithun (1984) – although claiming NI not to be a syntactic phenomenon – argues for the existence of four different kinds of Noun Incorporation. This typological

classification – regardless of the approach with which the author analyses NI – is important to mention, at least because it allows us to distinguish between the different manifestations of the phenomenon:

*I: Lexical compounding* (i.e., «the derivation of a complex lexical item from a combination of two or more stem»<sup>6</sup>)

N<sub>1</sub> + V constitutes a verbal complex which stands for a unique concept or activity.

N<sub>1</sub> has no relevance in the argumental structure of V;

E.g., He is off *mountain climbing*

*II: Manipulation of case*

An external N<sub>2</sub> (oblique argument) is advanced into the case position left by the incorporated N<sub>1</sub>;

E.g., (1) Iihpokón-sskaawa nóko'sa [Blackfoot, Frantz (1971)]

ball-acquire.he my.child

'My child got a ball'

(1b) Nít-ohpokón-sskoawa nóko'sa

I-ball-acquire.him my.child

'I provided my child with a ball'

*III: Manipulation of discourse structure*

The incorporated N is already known in the discourse and has already been mentioned before as a non-incorporated N;

E.g., (2) askeman ti-'-kwa nakatl [Huahtla Nahuatl]

never you-it-eat meat

'You never it meat'

(2b) na' ipanima ni-naka-kwa

I always I-meat-it

'I eat it (meat) all the time'

*IV: classificatory NI*

The incorporated N<sub>1</sub> is specified by an external N<sub>2</sub>

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<sup>6</sup> Mithun (1984)

This classification seems to proceed in an implicational way (i.e., IV→III→II→I).

Since incorporated Ns in Kalaallisut are of course part of the argumental structure of the verb hosting incorporation, I can't assume Kalaallisut to have only Incorporation I. Instead, since with *qar-* (to have) it is possible to incorporate the empty stem *pi-* (something) leaving outside a direct object in the instrumental case (Fortescue, 1984), one can assume Kalaallisut to have Incorporation IV and, consequently, Incorporation III, II and I. I can't assume incorporation in West Greenlandic to just behave like the II and I types proposed by Mithun, since – during my research – I wasn't able to find any case where a generic incorporated N<sub>1</sub> accompanied by an external N<sub>2</sub> hyponym of N<sub>1</sub> (e.g., I have a caribou animal-killed).



### 3. Preparation of the fieldwork

#### Preparation of the 1st test

In order to provide new empirical arguments for the existence of Phrasal Incorporation, I prepared a test based on a *translation task*, which was submitted via email to two native speakers of West Greenlandic previously contacted via social media.

Table 3

Informant A	Raised in Ilulissat and living in Denmark, native speaker of Kalaallisut and Danish, English L2
Informant B	Raised and living in Nuuk, native speaker of Kalaallisut, Danish and Italian, English L2,

The aim of the test was to elicit the production of sentences involving the incorporation of XP elements in interrogative and declarative clauses. In detail, the XP elements present in the sentences were:

- Noun + Adjective
- Noun + Possessive
- Noun + Quantifier
- Noun + Wh-element

The choice of both the verbal and nonverbal elements to be tested was mostly based on Fortescue (1984): studying the examples provided in this grammar, I collected a list of “apparently-always-incorporating” verbs and a list of “apparently-always-incorporated” non-verbal elements. In detail:

Table 4

Verbal elements	Adjectives	Possessives	Quantifiers	Wh-elements
go	good	her	one	who
find	salty	my	nobody	where
take	big – the biggest		a lot of	how
do	black		four	which
drink	funny		two	what

eat	near		all	
be	very quiet		many	
watch	more aggressive		too much	
come	faster			
have	wooden			
catch	small			

The 1<sup>st</sup> version of the test required the translation of 25 sentences (11 interrogative clauses and 14 declarative clauses).

I submitted this first version of the test to Informant A, but she rejected it saying that it was not possible for her to translate these sentences without an appropriate context, because they were too vague.

Taking into account this suggestion, I prepared a second version of the test, in which the same 25 sentences were preceded by a short story: both the story and the sentences were presented in English.

### **The 1st test (final version)**

Dear XXXXXX,

Thank you for your time and collaboration. I'll briefly explain how this translation task is organised. You will find a short story (in cursive) useful to give you a minimum context to frame the sentences. Do not worry! You will not have to translate everything, but only the sentences written in black.

*CONTEXT: yesterday ten tourists arrived in Nuuk and decided to have a walk, in order to explore the city. They visited a bookshop, and then they went to a restaurant. In the evening, they reached the houses they rented.*

#### **Translate the following sentences**

1. Who went where?
2. How did they find the meal?
3. Which book did they take?
4. What did they do?
5. Who drank a beer?
6. What was where?

7. Where did they go?
9. What did they eat? I ate a good salty soup at the restaurant
10. Who did what?
11. Who went to which house? One of them went to the house my grandfather built.
12. Who found what?
13. Nalaaq is sick. I made a big scarf to keep him warm.
14. Yesterday there was a black seal on the beach
15. Nobody was home. There was my sister at the port
16. I watched TV yesterday evening. There were a lot of funny people at the show
17. A new ship came to the port. There were four English flags on the deck
18. I was on holiday last summer. I went to a house near Toronto. That house was more isolated. I had two Canadian friends there.
19. I saw Arnaq yesterday. I went to her house
20. I went to Arnaq's house for lunch.
21. Yesterday I was at the pub. The guys all drank too much beer
22. The fishermen all went to the port for the market. John caught the biggest fish.
23. Yesterday I was at the restaurant. The tourists all ate Greenlandic food
24. I have a big dog. When he was a puppy, my dog was very quiet. Now he has become more aggressive than yours
25. When I was young, I had a car faster than yours. I had also many wooden sledges.

### **Some notes on the 1st test**

I am aware of the limitations related to the way this test was conducted: first of all, I decided not to work on oral data and – consequently – I do not have information regarding prosody and *phonological words*. I could only work on written data and, therefore, on *orthographic words*. The decision not to work on oral data was due to the following reason: my Greenlandic competence is still too limited and, working on oral data, I could have made transcription errors and compromise this study.

Secondly, I was able to find very little information from a pragmatic point of view, since I didn't have the possibility to see real interactions between native speakers.

Finally, the limited number of informants involved and, consequently, of data collected doesn't allow any reliable generalization: nevertheless, since I didn't have any direct contact with Greenland before the beginning of this work, I tried to reach people through social media. However, since only very few people answered my appeals, I had to settle for



an accidental sample of informants, choosing the first West Greenlandic speakers that decided to participate in the study. In any case, this study was conceived as a preventive survey to guess tendential rules to be deepened with further research.

### **Data collected through the 1<sup>st</sup> test**

Data collected from Informant A are now presented. Data from Informant B are presented only where significantly different, (i.e., when the differences directly concern the portion of the sentence regarding noun incorporation).

(1) Kina sumunngarsimava?

Kina sumunngar- sima- va

Who.SING where.go- PERF- 3S.INT

'Who went where?'

(2) Nerisimasartik mamarivaat?

Neri- sima- sa- rtik mamar- i- vaat?

Eat- PERF- PASS.PART- 4PL good-1/2.TRANS- 3P.3S.IND

'Did they think what they ate tasted good?'

(3) Atuangaq sorleq tingusimavaat?

Atuangaq sorleq tingu- sima- vaat

Book which take- PERF- 3P-3S-IND

'Which book did they take?'

(4) Sulerisimappat?

Su- leri- sima- ppat?

What- be.concerned.with PERF- 3PL.INT

What did they do?' (on a day)

(5) Sungamik?

Su- ngamik?

What- 4PL.CAUS

'What did they do?'

- (6) Kina immiaarartorsimava?  
 Kina immiaq- arat- toq- sima- va  
 Who.SING beer- little.one- drink- PERF- 3S.INT  
 'Who drank a beer?'
- (7) Suna sumiissimava?  
 Suna sumi- sima- va  
 What where- PERF- 3S.INT  
 'What was where?'
- (8) Sumunngarsimappat?  
 Summungar- sima- ppat (or. Sumi-ngar-sima-ppat)  
 Where.go- PERF- 3P.INT  
 'Where did they go?'
- (9) Sutorpat?  
 Su- tor- pat?  
 What- eat- 3PL.INT  
 'What did they eat?'
- (10) Neriniartarfimmi suppi tarajornittoq, mamartoq nerivara.  
 Neriniartarfi- mmi suppi tarajorni-ttoq, mamar-toq neri-vara.  
 Restaurant- ALL soup salty- 3S.PART tasty- 3S.PART eat- 1S.3S.INDIC.  
 'I ate a tasty salty soup at the restaurant'
- (10B) Neriniartarfimmi tarajornittunik mamartunik suppitorama.  
 Neriniartarfi-mmi tarajornitt-u-nik mamart-u-nik suppi-tor-ama.  
 Restaurant-ALL salty-be-INSTR tasty-be-INSTR Soup-consume-1S.CAUS  
 'I ate a tasty salty soup at the restaurant'
- (11) Kina suleringami?  
 Kina su- leri- ngami  
 Who.SG what- be.concerned.with- 4S.CAUS  
 'Who did what?' (on a day?)

- (12) Kina sungami?  
 Kina su- ngami?  
 Who.SG what- 4s.CAUS  
 'Who did what?'
- (13) Kina illumut sorlermukarpa?  
 Kina illu- mut solerq- mu- kar- pa (or solerq-mukar-pa)  
 Who.SING house- ALL which- ALL- go- 3S.IND  
 'Who went to which house?'
- (14) Ataaseq aatama illuliarisimasaanukarpoq.  
 Ataaseq aata- ma illu- liar- sima- saa-nu-kar- poq  
 One grandfather- my.REL house- go.to- PERF- go.to- 3.S.PERF  
 'One of them went to the house my grandfather built'
- (15) Kiap suna nassaaraa?  
 Kia-p suna nassaa- raa  
 Who-REL what bring- 3s-3s.IND  
 'Who found what?'
- (16) Nalaaq napparsimavoq. Qungaseqummik angisuumik sanangama  
 Nalaaq nappar- sima- voq. Qungasequ- mmik angisuu-mik sanang- ama  
 Nalaaq sick- PERF- 3S.IND Scarf- STR big- STR make- 1S.CAUS  
 'Nalaaq is sick. I made a big scarf'
- (16A) kissas-simaar-niassa-mmat.  
 be.warm-PERF-FUTURE-3S.CAUS  
 'To keep him warm'
- (16B) Nalaaq nappar-sima-voq. Qungasequ-siuuk-kakku  
 Nalaaq sick- PERF- 3S.IND Scarf-make-1S.3S.CAUS  
 'Nalaaq is sick. I made a big scarf'

- (17) Kissas-simaar-niassa-mmat.  
 be.warm-PERF- FUTURE-3S.CAUS  
 'To keep him warm'
- (18) Ippassaq puisimik qernertumik sissamiittoqarami  
 Ippassaq puisimik qernertumik sissaq- miitto- qar- ami  
 Yesterday seal-STR black- STR beach- be.in- have.EXS 4S-CAUS  
 'Yesterday there was a black seal on the beach'
- (19) Angerlarsimasoqanngilaq,  
 Angerlarsima- so- qa- nngil-aq  
 Be.at.home- PART- have.EXS not- 3s.IND  
 'There is nobody home,'
- (20) qatanngutinga talittarfimmiikkami  
 qatanngut-in-ga talittarvi- miik- kami  
 sibling-POSS-my harbour- be.in- 4S.CAUS  
 'because my sibling is at the dock'
- (21) Ippassaq unnukkut isiginnaarummik isiginnaarama  
 Ippassaq unnukkut isiginnaar-ummik isiginnaar-ama  
 Yesterday evening watch.can-STR watch.can-1s.CAUS  
 ' I watched TV yesterday evening'
- (22) Inuit quianartorpassuit isiginnaangassiamiikkamik  
 Inuit quianarto- rpassuit isiginnaan-gassia- miik- kamik  
 People amusing- many watch.can-xxx- ALL- 4P.CAUS
- (23) Umiarsuaq nutaaq talittarfimmukarami. Sisamanik tuluit erfalasoqarluni  
 Umiarsuaq nutaaq talittarvi- mmuka- rami.  
 Ship new harbour- go.into- 4S.CAUS  
 'A new ship came to the port'

- (24) Sisamat-nik tuluit erfalaso-qar- luni  
 Four- INST.PL english flag- have- 4S.CONT  
 'With four english flags'
- (25) Aasaq kingullermi sulinngiffeqarninni.  
 Aasaq kingullermi sulinngiffe- qar- ni- nni  
 Summer last holiday -have- NOM.- 1S
- (26) Toronto-p qanittuaniittumut illumukarama  
 Toronto-p qanit- tu- aniittu- mut illu- muka- rama  
 Toronto-REL be.near- INTR.PART.- XXX- ALL house- go.TO 1S.CAUS  
 'I went to an house near Toronto'
- (26B) Torontop qanitt-u-anut illumut ornigukkama.  
 Toronto-p qanitt-u-anut illu-mut orni-gukk-ama.  
 Toronto-REL be.near-PART-ALL house-ALL come-1S.3S.COND-CAUS  
 I went to a house near Toronto
- (27) Illoq taanna inoqannginnerummat  
 Illoq taanna inoqannginneru-mmat  
 House that XXXX- 3S.CAUS  
 because that house is more isolate'
- (28) Arnaq takungakku. Illuanukarama.  
 Ippassaq Arnaq taku- ngakku. Illu- anu-ka- rama.  
 Yesterday Arnaq see- 1S.3S.CAUS house- his-have.EX- 1S.CAUS  
 I saw Arnaq yesterday. I went to her house
- (28B) Ippassaq Arnaq takuara. Illuanut ornippara  
 Ippassaq Arnaq taku-ara. Illu-a-nut orni-ppara  
 Yesterday Arnaq see-1S.3S.IND House-her-ALL come-1S.3S.IND  
 I saw Arnak yesterday. I went to her house.

- (29) Arnakkunnut ulloqqqasiorartorama.  
 Arnakk-unnut ulloqqqa- sior- iarto- rama.  
 Arnaq-ALL midday- celebrate- come.and 1S.CAUS  
 'I went to Arnaq's house for lunch'
- (30) Ippassaq imerniartarfimmiikkama.  
 Ippassaq imerniartarfi- mmiik- kama.  
 Yesterday pub- ALL- 1S.CAUS  
 'Yesterday I was at the pub'
- (31) Allat tamarmik immiaarartorpallaarsimapput  
 Allat tamar-mik immia- arar- tor- palla- arsima- pput  
 Others all-STR beer- little.one- drink- too.much- apparently- 3PL.IND  
 'It turns out that all the others drank too much beer'
- (32) Aalisartut tamarmik talittarfiliaramik.  
 Aalisartu- t tamar- mik talittarfi- liar- amik.  
 Fisherman- PL.REL all- 4P harbour- go.to- 4P.CAUS  
 'The fishermen all went to the port'
- (33) John aalisakkamik anginersamik pisaqarpoq.  
 John aalisakka- mik angi- nersa- mik pisa- qar- poq.  
 John fish- STR big- most- STR catch- pass.PART 3S.IND  
 John caught the biggest fish
- (33B) Johnip aalisagaq pisaa anginerpaavoq.  
 Johni-p aalisaga-q pisaa angi-nerpaa-voq.  
 John-REL fish-ABS catch big-most-3S.IND  
 John caught the biggest fish
- (34) Ippassaq neriniartarfimmiikkama.  
 Ippassaq neriniartarfi- mmiik- kama.  
 Yesterday restaurant- ALL- 1S.CAUS  
 'Yesterday I was at the restaurant'

- (35) Takornariat tamarmik kalaaliminertortut takuakka  
 Takornaria-t tamar-mik kalaali- mi- ner-tor-tut taku-akka  
 Strangers-PL all-STR Greenlandic-xx-food-eat-3PL.PART see-1S.3PL.IND  
 'I saw all the tourist eating greenlandic food'
- (36) Qimmerujoqarpunga.  
 Qimmi- ruju- qar- punga  
 Dog- big- have- 1S.IND  
 'I have a big dog'
- (36B) Angisuumik qimmeqarpunga.  
 Angisu-u-mik qimme-qar-punga.  
 Big-be-Instr dog-have-1S.IND  
 I have a big dog
- (37) Qimmiaraangallarami nipaattorjuunikuuvoq  
 Qimmiara- angalla-rami nipaattorjuunikuu-voq  
 Puppy- XXX- 4S.CAUS  
 'When he was a puppy, my dog was very quiet'
- (38) Massakkulli illit qimmiuterniik qaasunnerulernikuuvoq.  
 Massakkulli illit qimmi-uterniik qaasun- neru- lernikuu-voq.  
 Thou.REL dog XXX aggressive- more- XXX- 3S.IND  
 'but now he is more aggressive than your dog'
- (39) Inuusukkallarama biileqarnikuuvunga, illit biilerniik sukkanernik  
 Inuusuk-kallar-ama biile-qar-niku-uvunga, illit biiler-niik sukka-ner-nik  
 Young- for.time.being-1S.CAUS car-have-PERF.-1S.IND thou.REL car-STR fast-er-  
 STR  
 When I was young, I had a car faster than yours.
- (40) Qamuterpassuaqarnikuullungalu.  
 Qamuter- passua- qar- nikuu- llunga=lu.

Sledge- a.lot.of- have- PERF- 1s.CONTEMPORATIVE=and

I had also many wooden sledges.

(40B) Aamma qisunnik sanaanik amerlasuunik qamuteqarnikuuvunga.

Aamma qisu-u-nnik Sanaa-nik amerlasu-u-nik qamute-qar-niku-uvunga.

Also wood-be-INSTR made-be many-be-INSTR sledge-have- PERF-  
1s.CONTEMPORATIVE

I had also many wooden sledges (lit. I also had sledges which were many which were made of wood)

A summary of Noun Incorporation phenomena in these sentences is now presented in *Table 5*. In detail, information regarding the verb, the 1<sup>st</sup> and 2<sup>nd</sup> non-verbal elements (if present) is summarized here. The notion of “first” and “second” non-verbal elements refers to the linear order in which they appear in the clause.

*Table 5*

N°	VERB	1 <sup>st</sup> N.V. E	2 <sup>nd</sup> N.V. E	NOTES ON INCORPORATION
1	Go	Who	Where	Incorporation of Where
2	Think	---		--
3	Take	Which	Book	Both excorporated
4	Do	What		Incorporation of What
5	Do	What		Incorporation of What
6	Consume (drink)	Little one	Beer	<b>Both incorporated</b>
7	Be	What	Where	Incorporation of Where
8	Go	Where		Incorporation of Where
9	Consume (eat)	What		Incorporation of What
10	Eat	Tasty Salty	Soup	All excorporated
10B	Consume (eat)	Tasty Salty	Soup	Incorporation of Soup
11	Do	Who	What	Incorporation of What
12	Do	Who	What	Incorporation of What
13	Go	House	Which	Incorporation of Which
14	Go	House		Incorporation of House



15	Find	Who	What	Both excorporated
16	Make	Scarf	Big	Both excorporated
16B	Make	Scarf	Omission of "Big"	Incorporation of Scarf
17				
18	Be in	Beach		Incorporation of Beach
19	Be in	Be at home		Incorporation of Be at home
20	Be in	Harbour		Incorporation of Harbour
21	Watch	Television		Excorporated
22	Watch	Many	People	Both excorporated
23	Go into	Harbour		Incorporation of Harbour
24	Have	Four	Flag	Incorporation of Flag
25	Have	Holiday		Incorporation of Holiday
26	Go to	House		Incorporation of House
26B	Come	House		Excorporation of House
27				
28	Go to	House	Her	<b>Both incorporated</b>
28B	Come	House	Her	Both excorporated
29	Come and celebrate	Midday		Incorporation of Midday
30	Be in	Pub		Incorporation of Pub
31	Consume (drink)	Little one	Beer	<b>Both incorporated</b>
32	Go to	Harbour		Incorporation of Harbour
33	Catch	Biggest	Fish	Both excorporated
33B	Catch	Biggest	Fish	Incorporation of Biggest
34	Be in	Restaurant		Incorporation of Restaurant
35	Consume (eat)	Greenlandic	Food	<b>Both incorporated</b>
36	Have	Dog	Big	<b>Both incorporated</b>
36B	Have	Dog	Big	Incorporation of Dog
37	Be	Quiet	Very	<b>Both incorporated</b>
38	Be	Aggressive	More	<b>Both incorporated</b>
39	Have	Car	Faster	Incorporation of Car
40	Have	A lot of	Sledge	<b>Both incorporated</b>

<b>40B</b>	Have	A lot of wooden made	Sledge	Incorporation of Sledge
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### Preparation of the 2<sup>nd</sup> test

In order to check the correctness of the translated sentences, I prepared a 2<sup>nd</sup> test based on a *grammaticality judgment task*. In detail, informants were asked to rate a sample of eleven sentences – chosen among the 25 sentences translated in the 1<sup>st</sup> test – with a score from 0 to 2, basing on the following criteria:

*Score 0 (zero)*: the sentence is completely wrong and I can't use it in any situation

*Score 1 (one)*: I have doubts about the sentence, and I don't know if I would use it

*Score 2 (two)*: I would definitely use it.

Informants who assigned a score of 0 (zero) or 1 (one) were given the possibility to provide their own version of the translation.

The test was submitted to two informants (Informant C and Informant D), all native speakers of Kalaallisut, raised around the area of Nuuk. Since these informants were not the same which previously translated the sentences, I decided to place at the beginning of the test the same short story used to provide contextual information in the 1<sup>st</sup> test: I was afraid that, without an appropriate context, they wouldn't be able to rate the sentences.

### The 2<sup>nd</sup> test

Table 6

<p>1. Kina immiaarartorsimava? 'Who drank a beer?'</p> <p><input type="checkbox"/> 0 (zero)   <input type="checkbox"/> 1 (one)   <input type="checkbox"/> 2 (two)</p>
<p>2. Kina illumut sorlermukarpa? 'Who went to which house?'</p> <p><input type="checkbox"/> 0 (zero)   <input type="checkbox"/> 1 (one)   <input type="checkbox"/> 2 (two)</p>
<p>3. Ippassaq Arnaq takungakku. Illuanukarama. 'I saw Arnaq yesterday. I went to her house'</p> <p><input type="checkbox"/> 0 (zero)   <input type="checkbox"/> 1 (one)   <input type="checkbox"/> 2 (two)</p>
<p>4. Qimmerujoqarpunga. 'I have a big dog'</p>

<input type="checkbox"/> 0 (zero) <input type="checkbox"/> 1 (one) <input type="checkbox"/> 2 (two)
<p>5. Inuusukkallarama biileqarnikuuvunga, illit biilerniik sukkanernik. Qamuterpassuaqarnikuullungalu. ‘When I was young, I had a car faster than yours. I had also many wooden sledges’</p> <input type="checkbox"/> 0 (zero) <input type="checkbox"/> 1 (one) <input type="checkbox"/> 2 (two)
<p>6. Ippassaq imerniartarfimmiikkama. Allat tamarmik immiaarartorpallaarsimapput. ‘Yesterday I was at the pub. It turns out that all the other drank too much beer’</p> <input type="checkbox"/> 0 (zero) <input type="checkbox"/> 1 (one) <input type="checkbox"/> 2 (two)
<p>7. Ippassaq neriniartarfimmiikkama. Takornariat tamarmik kalaaliminertortut takuakka ‘Yesterday I was at the restaurant. I saw all the tourist eating Greenlandic food’</p> <input type="checkbox"/> 0 (zero) <input type="checkbox"/> 1 (one) <input type="checkbox"/> 2 (two)
<p>8. Atuangaq sorleq tingusimavaat? ‘Which book did they take?’</p> <input type="checkbox"/> 0 (zero) <input type="checkbox"/> 1 (one) <input type="checkbox"/> 2 (two)
<p>9. Sulerisimappat? ‘What did they do?’</p> <input type="checkbox"/> 0 (zero) <input type="checkbox"/> 1 (one) <input type="checkbox"/> 2 (two)
<p>10. Kiap suna nassaaraa? ‘Who found what?’</p> <input type="checkbox"/> 0 (zero) <input type="checkbox"/> 1 (one) <input type="checkbox"/> 2 (two)
<p>11. Kina sumunngarsimava? ‘Who went where?’</p> <input type="checkbox"/> 0 (zero) <input type="checkbox"/> 1 (one) <input type="checkbox"/> 2 (two)

### Results of the 2nd test

The score assigned to the sentences by Informant C and Informant D are now presented (see *Table 7*).

Table 7

Clause	Score Informant C	Score Informant D
1	2	2
2	1	2
3	1	1
4	1	2
5	2	2
6	1	2
7	2	2
8	2	1
9	2	2
10	2	2
11	2	2

Informants C and D responded in the same way in most cases and, in detail

- No sentence was rated 0 (i.e., completely wrong);
- sentence 1, 3, 5, 7, 9, 10, 11 were rated in the same way by both informants. In detail, with the exception of sentence 3, all the others were rated 2 (definitely correct).
- Informants C and D provided a different response with respect to sentence 2, 4, 6 and 8.
- Informants C and D were invited to provide their own version of the clause rated 1: in all cases, the corrections didn't affect the part of the clause regarding noun incorporation but minimum lexical variations.

### Data collected through further interviews

During a second round of interviews with Informant C and Informant D I was able to collect further useful information regarding various topics. In detail:

- I asked Informant C to translate the following sentence from Kalaallisut to English:

(36) Qimmeqarpunga  
 Qimme- qar- punga  
 Dog- have 1s.IND

‘I have a dog’

Since Informant C was struggling with the translation, I asked her if it would have been possible to translate the sentence as *I am a dog-owner*. She replied that this would have been the most suitable translation, confirming the incorporated element to be indefinite without any doubt. This apparently trivial clarification is, in fact, noteworthy, because it shows the clear difference between incorporation phenomena and compounding: as in compounding, the non-verbal element has an indefinite nature but, differently from compounding, in this case the incorporated element can be externally modified without any problem, as shown in (36B);

(36B) Angiumik qimmeqarpunga

Angisuu-mik qimme- qar- punga.

Big-INSTR dog- have 1S.IND

‘I have a big dog’

Since the most suitable translation for *Qimmeqarpunga* is *I am a dog-owner*, we could assume the best translation for (30) to be something like *I am a big-dog-owner*, something not attested in English (see Harley, 2008).

- I asked Informant C if there were any difference between (36) – clause with both noun and modifier incorporated – and (36B) – clause with an external modifier – under any point of view. She replied that she perceived (36) as “more dialectal”, whereas (36B) was described as “translated in standard Greenlandic”;



#### 4. Analysis

##### Analysis: interrogative clauses with transitive and unaccusative verbs

The next table (*Table 8*) provides an overview of the verbal elements and the interrogative words involved and of their behaviour with respect to incorporation in interrogative clause.

*Table 8*

N°	Verb	1 <sup>st</sup> Wh- word	Incorporation	2 <sup>nd</sup> Wh- Word	Incorporation	Notes
1	To go	Who	No	Where	Yes	
7	To be (in a certain place)	What	No	Where	Yes	
8	To go	Where	Yes	--	--	
6	To consume (drink)	Who	No	--	--	Incorporated DO
3	To take	Which	No	--	--	Excorporated DO
15	To find	Who	No	What	No	
12	To do	Who	No	What	Yes	
13	To go	Who	No	Which	Yes	
4	To do	What	Yes	--	--	
5	To do	What	Yes	--	--	

With respect to movement verbs and verbs with a locative argument (to be in a certain place) it is possible to identify a clear pattern: the WhP encoding locative meaning always undergoes incorporation, regardless of the nature of the other WhP involved. To conclude:

- WhP *where* always undergoes incorporation with movement verbs;
- WhP *who* and *what* do not undergo incorporation if a locative WhP is present in the same clause.

- Clause 13: the locative argument of the close is the complex XP *which house*. In this case, the WhP *which* is incorporated, whereas the NP *house* is excorporated.
- **To be tested:** interrogative sentences with a movement verb and a single WhP (*who* or *what*).

Questions involving transitive verbs show different behaviour with respect to NI. In detail:

- In clauses 12-4-5, which involve the verb *to do*, the direct object *what* always undergoes incorporation;
- In clauses 3 and 15, which involve the verbs *to take* and *to find*, the direct object doesn't undergo incorporation, regardless of its nature (NP in (15) and WhP in (16));
- In clause 6, which involve the verb *to consume*, the direct object undergoes incorporation;
- In no case the subject of the clause – regardless of its nature – undergoes incorporation.

#### **Analysis: declarative clause with unaccusative verb**

Sentence 28 involves a movement verb and its locative argument: informant A and informant B provided different translations:

*Table 9*

<b>N°</b>	<b>Verb</b>	<b>Locative</b>	<b>Incorporation</b>	<b>Note</b>
<b>26</b>	To go/be in	House	Yes	
<b>26B</b>	To come	House	No	
<b>28</b>	To go/to be in	Her house	Yes	Both the noun and the possessive element undergo incorporation
<b>28B</b>	To come	Her house	No	Both the noun and the possessive element do not undergo incorporation

These two couplets of sentences show an interesting pattern. While in (26) and (28) the nominal element “house” always undergo incorporation, this doesn't happen in (26B) and



(28B). In the sentences translated by informant A the verbal stem used is *-mukar-* (to go) in both cases, whereas in those provided by informant B the verbal stem is *orni-* (to come).

As attested in Fortescue (1984) it is possible to incorporate possessive morphology (28), but the same element (Noun + possessive) appears excorporated in (28B).

### Analysis: declarative clauses with transitive verbs

The next table (*Table 10*) provides an overview of the verbal and non-verbal elements involved, and of their behaviour with respect to Noun Incorporation.

*Table 10*

N°	Verb	Direct object	Incorporation
<b>33</b>	To catch	The biggest fish	No
<b>33b</b>	To catch	The biggest fish	Incorporation (?) of the modifier
<b>36</b>	To have	Big dog	Both modifier and noun incorporated
<b>36B</b>	To have	Big dog	Only the noun undergoes incorporation
<b>40</b>	To have	Many sledges (omission of “wooden”)	Both modifier and noun incorporated
<b>40B</b>	To have	Many sledged made (of) wood	Only the noun undergoes incorporation
<b>35</b>	To consume (eat)	Greenlandic food	Both modifier and noun incorporated
<b>10</b>	To eat	A tasty salty soup	No
<b>10B</b>	To consume (eat)	A tasty salty soup	Only the noun undergoes incorporation
<b>30</b>	To consume (drink)	Too much beer	Both modifier and noun incorporated; Incorporation (not expected) of another modifier
<b>K</b>	To consume (drink)	A glass of (red) wine	Noun excorporated; Modifier omitted; Incorporation (not expected) of a numeral
<b>31</b>	To have	Some cars	Both modifier and noun incorporated

Declarative clauses involving transitive verbs show different patterns with respect to noun incorporation. In detail:

- The verb *to catch* (clauses 33 and 33B) presents two different behaviours. In (33) both the noun and the modifier do not undergo incorporation, whereas (33B) shows a different pattern. In detail, the verbal stem *pisaa* (to catch) appears in isolation, whereas the adjective “biggest” appears inflected.
- The verb *to have* (clauses 36-36B-40-40B-31) always allow incorporation of the direct object. In detail, nouns and modifiers are always incorporated in 36-40-31, whereas in 36B and 40B only the noun undergoes incorporation.
- The verb *to consume* (*drink or eat*) allows incorporation of the direct object in clauses 35-10B-30-J), but some clarifications are necessary:
  - Clause 35: both the modifier and the noun undergo incorporation;
  - Clause 10B: only the noun undergoes incorporation;
  - Clause 30: both the modifier and the noun undergo incorporation, but another modifier (not present in the original sentence submitted to the informants) appears within the verbal complex. I want to stress the fact that this modifier *-arar-* (little one) appears also in (14): it is intellectual correctness to consider the possibility of this element not to be a real modifier, but rather that the entire nominal complex *immiaarar-* (little beer) could be a frozen lexicalized form;
  - Clause J: also in this case, some clarifications are necessary:
    - the modifier (red) included in the original sentence submitted to the informants doesn’t appear in the translation. It may be the case that the generic term for wine indicates red wine by default. This hypothesis could be easily verified submitting to informants the same clause, with the only modification of the term *white wine*.
    - the term for wine, *viinnimik*, is excorporated;
    - since the verb used requires mandatory incorporation, something must appear within the verbal complex as an incorporated element: in this case, the quantifier *ataasi-* (one), not included in the original version of the clause submitted to the informants.

- The verb carrying the specific meaning of *eating something* (and not the generic *to consume something*) in sentence 10 doesn't require mandatory incorporation: in fact, the direct object is entirely excorporated. The nominal element and both the modifiers appear as independent elements outside the verbal complex.



## 5. Some food for thought

Later on in my research, I was able to get in touch with an Italian native speaker who learned Kalaallisut as a foreign language (Informant E).

I asked him to translate some sentences from Kalaallisut from Italian, because I wanted to see if there would have been any difference undetectable in the translation from English to Kalaallisut and vice versa.

In detail, the most interesting information regarded the pair of sentences (36) and (36B):

(36B) Angiumik qimmeqarpunga

Angisuu-mik	qimme-	qar-	punga.
Big-INSTR	dog-	have	1S.IND
‘I have a big dog’			

(36) Qimmerujoqarpunga.

Qimmi-	ruju-	qar-	punga
Dog-	big-	have-	1S.IND
‘I have a big dog’			

These sentences were translated in the following way:

(36B) Io ho un cane grande

Io	ho	un	cane	grande
I	have.1S	a	dog	big
‘I have a big dog’				

(36b) Io ho un cagnone

Io	ho	un	cagnone
I	have.1S	a	dog.AUG
I have a big dog			

Informant E added that in (36) the part of the sentence encoding the information regarding the size of the dog (*-ruju-*, big) should have been considered «part of the name *dog*, rather than a proper adjective».

Evidently, the alterative morphology present in the translation from Kalaallisut to Italian gets lost in the translation to English.

Since I wanted to verify the truthfulness and reliability of this information, I asked Informant B (native speaker of Kalaallisut, Danish *and Italian*) if, according to her, these

were the most suitable translation for both the sentences or if it would be better to translate them in a different way. She confirmed all the translations and information provided by Informant E.

Taking into account this information, I decided to check whether there was any parallelism – in terms of distribution – between Italian alterative morphology and Greenlandic incorporated modifier.

In Italian as in different languages «the notions of ‘small’ and ‘big’, and the affective notions ‘nice/lovely’ and ‘bad/ugly’ [...] appear to find a specific grammatical encoding through diminutive, endearing, augmentative and pejorative morphemes»<sup>7</sup>.

For example:

*Table 11*

<b>Alterative morphology</b>	<b>Sentence</b>	<b>Morpheme</b>
<b>Diminutive</b>	Io ho un cagnol.ino I have a dog.DIM	-ino
<b>Endearing</b>	Io ho un cagn.etto I have a dog.END	-etto
<b>Augmentative</b>	Io ho un cagn.one I have a dog.AUG	-one
<b>Pejorative</b>	Io ho un cagn.accio I have a dog.PEJ	-accio

The first reason why I decided to make such a comparison between Greenlandic incorporated modifiers and Italian alterative morphology is perhaps a trivial one: in Italian, alterative morphemes differ – from the mere lexical point of view – from the adjectives conveying the same meaning (e.g., the augmentative suffix *-one* differs from the adjective *grande*; the suffix *-ino* differs from the adjective *piccolo* and so on).

In Italian, something like “Io ho un can-grande” (I have a dog-big) instead of “Io ho un cagnone” (I have a dog.AUG) is not attested. In Kalaallisut, the external modifier (*Angisu-*) and the incorporated one (*-ruju-*) differ under the lexical point of view, and it is not possible to have something like “Qimme-angisu-qar-punga” (Dog-big.ADJ-have-1S.IND), whereas it is possible to have “Qimme-ruju-qar-punga” (Dog-AUG<sup>8</sup>-have-1.S.IND)

<sup>7</sup> Cinque

<sup>8</sup> Assuming the analysis of incorporated modifiers as alterative morphology to be true

Secondly, I asked Informant B which could have been the most suitable *division* - I was deliberately generic and ambiguous to give her full freedom – of the sentence “Qimmerujuqarpunga”. She told me that, from the point of view of the “conceptual units”, the sentence could have been divided into three parts:

- 1) Qimme-: the part of the sentence which says that there is a dog;
- 2) -ruju-: the part of the sentence which says that this dog is a big;
- 3) -qarpunga: the part of the sentence which says who is the owner (in this case, 1st person singular) of the dog.

She then added that – even if conveying a different meaning – that *-ruju-* was somehow “conflated” or “fuse” with *qimme-*, and that these two portions of the sentence were strongly connected.

Thirdly, I checked all the cases of incorporated modifiers in the data I collected and I noticed something interesting. *Table 14* shows data regarding those sentences in which a noun and a modifier are both present:

*Table 12*

N°	VERB	1 <sup>st</sup> N.V. E	2 <sup>nd</sup> N.V. E	NOTES ON INCORPORATION
3	Take	Which	Book	Both excorporated
6	Consume (drink)	Little one	Beer	<b>Both incorporated</b>
10	Eat	Tasty Salty	Soup	All excorporated
10B	Consume (eat)	Tasty Salty	Soup	Incorporation of Soup
13	Go	House	Which	Incorporation of Which
16	Make	Scarf	Big	Both excorporated
22	Watch	Many	People	Both excorporated
24	Have	Four	Flag	Incorporation of Flag
28	Go to	House	Her	<b>Both incorporated</b>
28B	Come	House	Her	Both excorporated
31	Consume (drink)	Little one	Beer	<b>Both incorporated</b>
33	Catch	Biggest	Fish	Both excorporated
33B	Catch	Biggest	Fish	Problematic
35	Consume (eat)	Greenlandic	Food	<b>Both incorporated</b>
36	Have	Dog	Big	<b>Both incorporated</b>

<b>36B</b>	Have	Dog	Big	Incorporation of Dog
<b>37</b>	Be	Quiet	Very	<b>Both incorporated</b>
<b>38</b>	Be	Aggressive	More	<b>Both incorporated</b>
<b>39</b>	Have	Car	Faster	Incorporation of Car
<b>40</b>	Have	A lot of	Sledge	<b>Both incorporated</b>
<b>40B</b>	Have	A lot of wooden made	Sledge	Incorporation of Sledge

Let's examine in detail these results:

1. In five sentences (3-10-16-22-33) incorporation doesn't take place at all, since the verb involved (to take, to eat, to make, to watch, to catch) does not require mandatory incorporation; On the contrary, in eleven sentences some kind of incorporation is possible;
2. In four sentences (13-24-39-K) canonical incorporation of a single element takes place:

Clause 13: incorporation of the indefinite element Which and excorporation of the noun House;

Clause 24: incorporation of the noun Flag and Excorporation of the quantifier Four;

Clause 39: incorporation of the noun Car and Excorporation of the adjective Faster.

Clause K: incorporation of the numeral One and Excorporation of the noun Wine.

3. In eight sentences (6-28-31-35-36-37-38-40) phrasal incorporation (i.e., incorporation of both a noun and its modifier) takes place;

Clauses 6 and 31: incorporation both of the noun Beer and of the modifier Little one;

Clause 28: incorporation of the both the noun House and of the possessive adjective Her;

Clause 35: incorporation of both the noun Food and of the adjective Greenlandic;

Clause 36: incorporation of both the noun Dog and of the adjective Big;

Clauses 37 and 38: incorporation of both predicative and adverbial modifiers;

Clause 39: incorporation of both the noun Sledge and of the quantifier A lot of.

During my research I noticed that not all the modifier seemed to be suitable for phrasal incorporation.



With the exception of the adjective Greenlandic (sentence (35)) the other incorporated modifiers are restricted to two semantic fields: those expressing the size of the item and those (quantificational) expressing the amount of item involved in the sentence.

Exactly like these Greenlandic incorporated modifiers, Italian augmentative and diminutive morphemes convey information regarding the size of the item. With respect to the amount of item involved, I would like to outline a parallelism with an Italian derivative morpheme which could be fruitful, even if this morpheme is not alterative *strictu sensu*. In detail, I'm talking about the collectivizing suffix *-ame*:

Table 13

Collectivizing suffix	Noun	Collective noun
<i>-ame</i>	Foglia Leaf	Fogli-ame Leaf-COLL (group of leaf)

This suffix can also add a negative subjective nuance to the noun to which it is attached:

Table 14:

Collectivizing suffix	Noun	Collective noun
<i>-ame</i>	Ferro Iron	Ferr-ame Iron-COLL (amount of object made of iron, with a negative meaning (e.g., those items maybe useless, broken and so on))

It might be possible to compare incorporated modifiers providing information about the number of items involved to this Italian collectivizing suffix. For example:

- (40) Qamuterpassuaqarnikuullungalu.  
 Qamuter- **passua**- qar- nikuu- llunga=lu.  
 Sldege- **a.lot.of**- have- PERF- 1S.CONTEMPORATIVE=and  
 I had also many wooden sledges

The affix *-passua-* (a lot of) might be interpreted as a sort of collectivizing Italian suffix (without the negative nuance). Something which, translated from West Greenlandic to Italian, could give this kind of output:

Table 15

	Suffix	Noun	Collective noun
<b>English</b>	-----	Sledge	A lot of sledges
<b>West Greenlandic</b>	-passua-	Qamuter-	Qamuterpassua-
<b>Italian</b>	-ame	Slitta	Slittame <sup>9</sup>

Considering the parallelisms between the Italian alterative morpheme *-one* and the Greenlandic incorporated element *-ruju-*, I decided to check my data and those in the literature to see if there were sentences with similar distribution and meaning of the incorporated modifier (i.e., I expected to find sentences with incorporated modifier conveying the same meaning of Italian alterative morphemes).

I wasn't able to find in the data I collected any example – with the exception of those mentioned above conveying information regarding the size of the item – of incorporated modifiers comparable to Italian endearing and pejorative alterative morphemes.

Anyway, Fortescue (1984) talks about some «nominal modifiers of size, affection or disapproval, such as *kasig*, which expresses either mild disdain or humorous complicity or sympathy or (in the first person) self-belittlement, and *nnguar*, which expresses affection or (especially in the first person) comfort/ease (cf. nominal modifiers *kasik*, naughty/bad/poor/ dear (old) and *nnguaq* dear/little)». These affixes are also defined (Fortescue, 1984) «extensions of nominal affixes [...] capable of expressing subjective coloration». For example:

- (1) Tusarusuttunnguuvaa  
 Tusa-rusut-tu-nngu-u-vaa  
 Hear-want-INTR.PART-little-be-3S.3S.INDIC.  
 He is so curious to hear about it, the little dear

Unfortunately, in this sentence the nominal modifier *-nngu-* is not attached to a noun, so that it is not possible to really understand its behaviour in Noun Incorporation phenomena. Anyway, I was able to find other data, for example:

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<sup>9</sup> Non attested but well formed word

(2) qujagisa-*nngua*-mi-nik sirniga-luni [Fortescue, 1984]  
 dear-one little her-REFL. INSTR. protect 4S-CONT.  
 ‘Protecting her dear one’

(3) Silarlirni- li
qaaq [Bittner]<sup>10</sup>  
 sila-*rluk*-lir-niar-lir-qi-pu-q  
 wheather-bad-begin-be.about.to-begin-EMPLH-IND.IV-3.SG  
 ‘It was the beginning of a big storm building up’

In these two sentences, the incorporated nominal modifier (in italics) can be compared to Italian endearing and pejorative suffixes. And, in detail:

Table 16 – Endearing

	Suffix	Noun	Altered noun
<b>English</b>	-----	Dear one	Little dear one
<b>West Greenlandic</b>	-nngua-	Qujagisa-	Qujagisanngua-
<b>Italian</b>	-etto/uccio	Piccolo/Caro	Piccoletto/Caruccio

Table 17 – Pejorative

	Suffix	Noun	Altered noun
<b>English</b>	-----	Weather	A lot of sledges
<b>West Greenlandic</b>	-rluk-	Sila-	Silarluk-
<b>Italian</b>	-accio	Tempo	Tempaccio

Of course, I am aware of the fact that this analysis is not much more than a speculation, since the scarcity of data in my possession doesn’t allow any reliable generalization. Nevertheless, I think it would be important to collect these hints and develop them with further research, because they could offer a starting point for analysis not yet attempted.

<sup>10</sup> I could not find the correct reference. This example is taken from an interlinear version of the Naya Nuki’s tale, studied by Maria Bittner.



## 6. Formal analysis of Incorporation

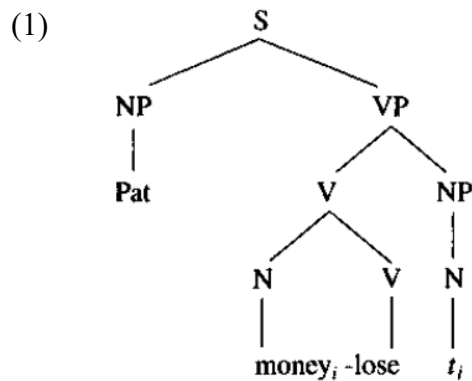
### Baker's analysis (1988): NI as $X^\circ \rightarrow X^\circ$ movement.

The formal analysis proposed by Baker (1988) explains NI phenomena as originated by  $X^\circ \rightarrow X^\circ$  (head-to-head) movement, where the moved noun root leaves a trace in its base position:

(1) Pet wa?-ha-**hwist**-ahtu-?t-a? [Onodaga, Woodbury (1975a), in Baker (1988)]

Pat PAST-3M.S.-**money**-lost-CAUS-ASP

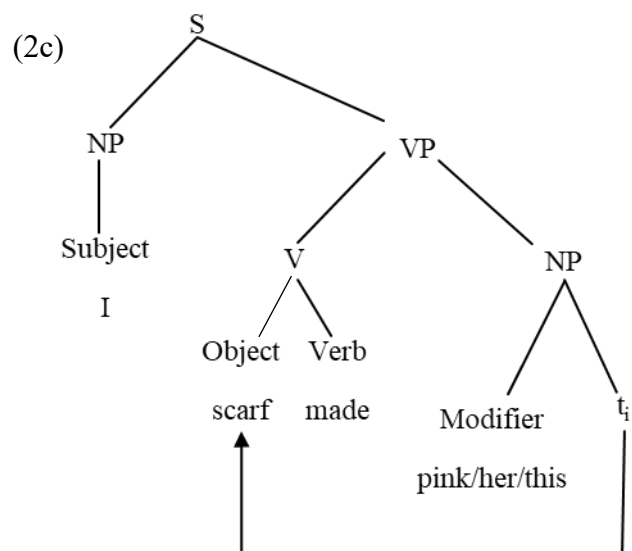
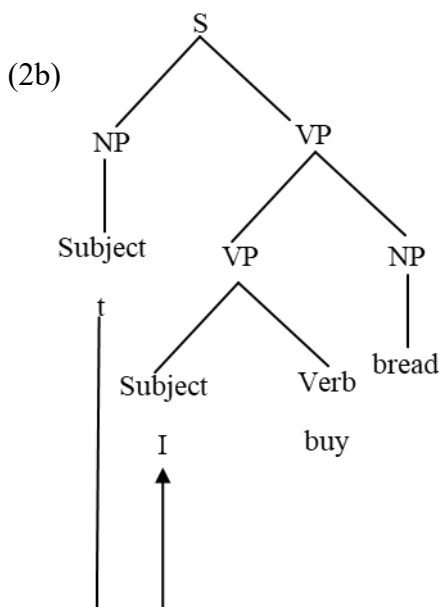
'Pat lost money'



This representation explains the so-called *subject-object asymmetry* and the *stranding of modifiers (determiners, numerals, possessives and possessives)*<sup>11</sup>.

(2b) I-buy bread

(2c) I made a pink/her/this scarf



<sup>11</sup> I decided to represent the different cases with a single structure (adjectives, determinants, possessives, etc.), since the functioning is the same.

In (2b) the subject *I* moves to a lower position in the VP domain, violating ECP: the trace  $t_i$  is not c-commanded by its antecedent like in (1). In (2c) only the nominal element *scarf* moves to a higher position: since the movement of an entire XP to a  $X^\circ$  position is not allowed, the modifier appears in isolation in its base position.

### **Barrie & Mathieu’s analysis (2016): incorporation as XP movement**

Baker’s account (1988) is perfect to formalize cases in which elements not bigger than a single noun undergo incorporation. However, there is widespread crosslinguistic evidence (Sadock, 1980; Spencer, 1995; Barrie & Mathieu, 2012; Barrie & Mathieu 2016) for the existence of incorporation of elements “bigger” than a single head or, in general, bigger than elements usually identified by a single orthographic word. For example:

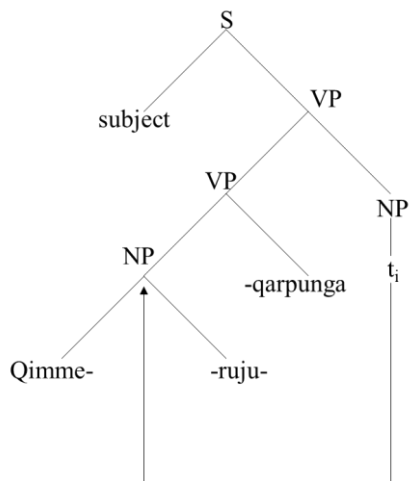
(1) tə-tor=tan=pəlwəntə=pojgə=pəla-rkən [Chukchi. Skorik (1961) in Spencer (1995)]  
 1SG.s-new=good=metal=spear=leave-PRES  
 ‘I’m leaving a good, new metal spear’

(2) Biliersualiorsimavoq [Kalaallisut. Sadock (1980) in Barrie & Mathieu (2016)]  
 Bili-ersua-lior-sima-voq  
 Car-big-make-PST-3SG.S  
 ‘He has made a big car’

(3) Qimmerujoqarpunga. [Kalaallisut]  
 Qimmi- ruju- qar- punga  
 Dog- big- have- 1S.IND  
 ‘I have a big dog’

Evidently, it is not possible to explain cases like these involving the movement of a mere  $X^\circ$ .

The formal analysis proposed by Barrie & Mathieu explains cases like (5) as the result of the movement of an entire XP towards a specifier position.



In my opinion, this formalization is better than the one proposed by Baker (1988): while Baker's formalisation only works well with cases of incorporation of a single element, Barrie and Mathieu's formalisation comprehend both incorporation of a single element and incorporation of more than one element (e.g., a noun and a modifier).

### A proposal

Following the analysis proposed by Barrie and Mathieu, I want to suggest a refinement of the portion of the syntactic tree regarding the DP involved. In detail, I will formalise the three possible ways in which incorporation can manifest in Kalaallisut according to the size of the incorporated XP. And, in detail:

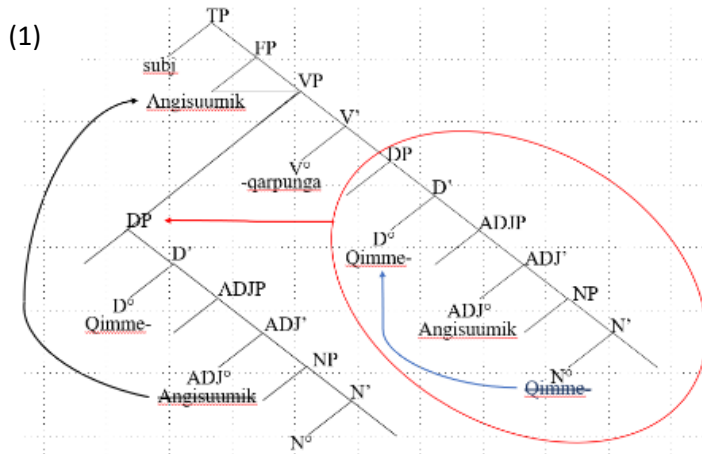
- a) incorporation of a nominal element with an excorporated modifier;

Angisuumik qimmeqarpunga

(1) Angisu- u- mik **qimme-** qar- punga.

Big- be- INSTR **dog-** have- 1S.IND

'I have a big dog'



Ni takes place with a three-step movement:

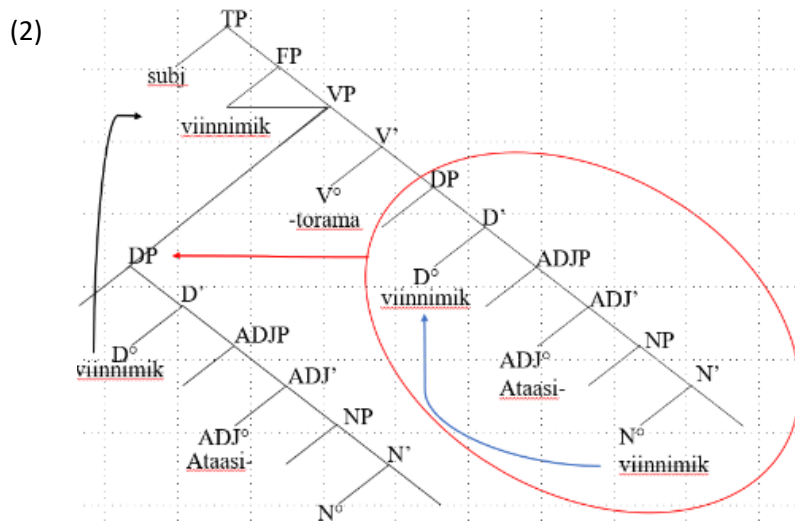
1. movement of  $N^{\circ}$  to  $D^{\circ}$ ;
2. movement of the entire DP to the specifier of VP;
3. movement of  $ADJ^{\circ}$  to a higher functional projection in order to obtain the excorporated configuration.

b) incorporation of a modifier with an excorporated nominal element;

(2) Ipassaq viinnimik ataasitorama

Ipassaq	viinni-	mik	ataasi-	tor-	ama
Yesterday	wine-	STR	one-	consume	1s.CAUS

'Yesterday I drank a glass of red wine'



Also in this second case, NI takes place with a three-step movement:



1. movement of  $N^{\circ}$  to  $D^{\circ}$ ;
  2. movement of the entire DP to the specifier of VP;
  3. movement of  $N^{\circ}$  to an higher functional projection in order to obtain the excorporated configuration.
- c) incorporation of an entire XP including a nominal element and its modifier.

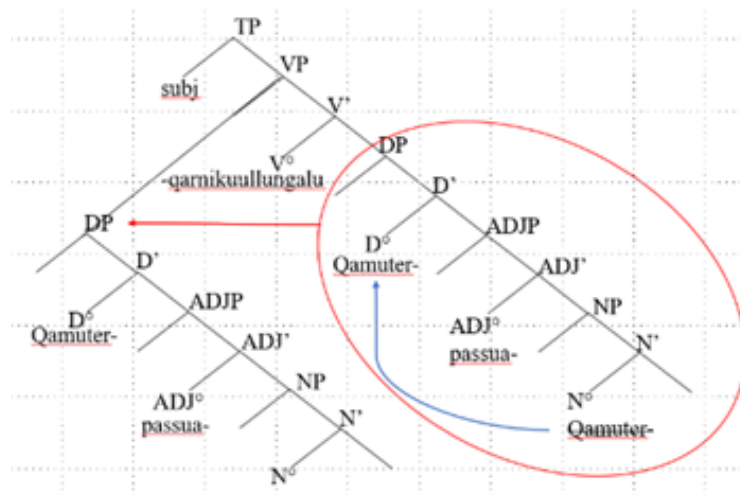
(3) Qamuterpassuaqarnikuullungalu.

Qamuter- passua- qar- nikuu- llunga=lu.

Sledge- a.lot.of- have- PERF- 1S.CONTEMPORATIVE=and

'I had also many wooden sledges'

(3)



In this case, NI takes place with a two-step movement:

1. movement of  $N^{\circ}$  to  $D^{\circ}$ ;
2. movement of the entire DP to the specifier of VP;



## 7. Restrictions on Noun Incorporation

In this section, two restrictions on NI are presented. In detail, the first restriction regards the verb hosting incorporation, whereas the second one regards the nominal element involved.

### Restriction on the verb hosting incorporation

Let's recall data presented in *Table 10* with respect to the verbal element involved:

*Table 10*

Verbal element	Incorporation
Have	Yes
Do	Yes
Go to	Yes
Be in	Yes
Consume (eat or drink)	Yes
Take	No
Eat	No
Find	No
Make	No
Watch	No
Catch	No (?)
Come	No

As mentioned above, incorporation in Kalaallisut is mandatory just with a handful of verbs, among which those mentioned in *Table 9*: to have, to do, to go, to be in and to consume (eat or drink depending on the nominal element involved).

Which could be the main difference between these verbs and the other – not requiring mandatory incorporation – mentioned in *Table 9* (to take, to eat, to find, to make, to watch and to catch)?

All the verbs requiring mandatory incorporation seem to belong to the *light verbs*' category, verbs having little semantic content which are somehow “specified” thanks to the incorporation of a non- verbal element.

Let's examine the following pair of sentences:

(10) Neriniartarfimmi suppi tarajornittoq, mamartoq nerivara.

Neriniartarfi- mmi suppi tarajorni-ttoq, mamar-toq neri-vara.

Restaurant- ALL soup salty- 3S.PART tasty- 3S.PART eat- 1S.3S.INDIC.

'I ate a tasty salty soup at the restaurant'

(35) Takornariat tamarmik kalaaliminertortut takuakka

Takornaria-t tamar-mik kalaali- mi- ner-tor-tut taku-akka

Strangers-PL all-STR Greenlandic-xx-food-consume-3PL.PART see-1S.3PL.IND

'I saw all the tourist eating Greenlandic food.'

The most suitable translation for the always incorporating verb *-tor-*, as mentioned above, is *to consume something for nutritional purpose*. This verb doesn't carry the specific meaning of *drinking something* or *eating something* per se; this restriction of the meaning is due to the nominal element incorporated within the verbal complex. Which means:

- The verb *-tor-* plus a nominal element referring to food conveys the meaning of eating this food;
- The verb *-tor-* plus a nominal element referring to beverage conveys the meaning of drinking this beverage, as in (30) and in (J).

To resume, the incorporated element somehow enriches the semantic content of this verb.

On the contrary, the verb used in (10), *nerivara*, conveys the specific meaning of *eating something* per se, and it doesn't require mandatory incorporation in order to enrich its semantic content.

### **Restriction on the incorporated element: $\theta$ -role**

With respect to the incorporated element, it is clear that the principles governing incorporation are manifold.

It is well established that the possibility to incorporate an element depends on its role in the argumental structure of the verb involved. In detail, according to Baker (1988) it shouldn't be possible to incorporate an agentive subject, whereas incorporation of themes, patients and locatives is widespread.

The data collected for the purpose of this study seems to confirm this assumption, since no agentive subjects undergo incorporation, whereas patients and locatives do. Information

regarding the  $\theta$ -role of the incorporated (and non-incorporated) elements is provided in

Table 18:

Table 18

N°	Verb	1 <sup>st</sup> n.v.e	2 <sup>nd</sup> n.v.e	Notes on incorporation	$\theta$ -role of the incorporated element
1	Go	Who	Where	Incorporation of Where	Locative
2	Think	---		--	--
3	Take	Which	Book	Both excorporated	Patient
4	Do	What		Incorporation of What	Patient
5	Do	What		Incorporation of What	Patient
6	Consume (drink)	Little one	Beer	<b>Both incorporated</b>	Patient
7	Be	What	Where	Incorporation of Where	Locative
8	Go	Where		Incorporation of Where	Locative
9	Consume (eat)	What		Incorporation of What	Patient
10	Eat	Tasty Salty	Soup	All excorporated	Patient
11	Do	Who	What	Incorporation of What	Patient
12	Do	Who	What	Incorporation of What	Patient
13	Go	House	Which	Incorporation of Which	Locative
14	Go	House		Incorporation of House	Locative
15	Find	Who	What	Both excorporated	Patient (?)
16	Make	Scarf	Big	Both excorporated	Patient
17					
18	Be in	Beach		Incorporation of Beach	Locative
19	Be in	Be at home		Incorporation of Be at home	Locative
20	Be in	Harbour		Incorporation of Harbour	Locative
21	Watch	Television		Excorporated	Patient
22	Watch	Many	People	Both excorporated	Patient

23	Go into	Harbour		Incorporation of Harbour	Locative
24	Have	Four	Flag	Incorporation of Flag	Patient
25	Have	Holiday		Incorporation of Holiday	Patient
26	Go to	House		Incorporation of House	Locative
27					
28	Go to	House	Her	<b>Both incorporated</b>	Locative
29	Come and celebrate	Midday		Incorporation of Midday	Patient?
30	Be in	Pub		Incorporation of Pub	Locative
31	Consume (drink)	Little one	Beer	<b>Both incorporated</b>	Patient
32	Go to	Harbour		Incorporation of Harbour	Locative
33	Catch	Biggest	Fish	Both excorporated	Patient
34	Be in	Restaurant		Incorporation of Restaurant	Locative
35	Consume (eat)	Greenlandic	Food	<b>Both incorporated</b>	Patient
36	Have	Dog	Big	<b>Both incorporated</b>	Patient
37	Be	Quiet	Very	<b>Both incorporated</b>	Predicative
38	Be	Aggressive	More	<b>Both incorporated</b>	Predicative
39	Have	Car	Faster	Incorporation of Car	Patient
40	Have	A lot of	Sledge	<b>Both incorporated</b>	Patient

### Restriction on the incorporated element: case

According to Fortescue (1984) «Whereas transitive verbs take absolutive case external objects, the object may be de-emphasized/made indefinite by placing it in the instrumental case and inflecting the verb intransitively. A common sub-class of verbal base incorporates the object head but maintains any modifier externally to the verb. An underlying absolutive case modifying constituent appears preceding or following the main verb in the instrumental case».

In the data I collected, suffix marking case are clearly identifiable in nine sentences. The following table offers an overview of these grammatical cases and their behaviour with respect to Noun Incorporation:

Table 19

N°	Case	Incorporation
10	Absolutive	No
10B	Instrumental	Yes
16	Instrumental	No
23	Instrumental	Yes
31	Instrumental	Yes
33	Instrumental	Yes
33B	Absolutive	No
36B	Instrumental	Yes
40	Instrumental	Yes
40B	Instrumental	No

I have intentionally left out all the sentences in which a locative or an allative – incorporated or not – is present. The reason behind this choice is the following: the affixes marking locative and allative are respectively *-mi* and *-mut*.

These affixes, even if clearly identifiable in sentences like (1) and (13), have always been glossed as below, as if they were a sort of “preposition” attached to the verb.

- (1) Kina sumunngarsimava?  
 Kina **sumunngar-** sima- va  
 Who.SING where.go- PERF- 3S.INT  
 ‘Who went where?’

- (13) Kina illumut sorlermukarpa?  
 Kina illu- mut solerq- **mukar-** pa (or solerq-mukar-pa)  
 Who.SING house- ALL which- go.to- 3S.IND  
 ‘Who went to which house?’

For this reason, taking into account the traditional analysis of these elements, I prefer not to treat them as they were a sort of “incorporated case mark”.

### **Restriction on the incorporated element: cognate object**

The nature of the incorporated element could be somehow related to the notion of *cognate object* as presented in Melloni & Masini (2017), an object semantically or morphologically related to the verb whose argumental structure it is part of. The reasons behind this analysis are the following:

- a) the word for “food” in (35) is *-ner-*, which is of course related to the verb *nerivara* (to eat) in sentence (10);
- b) while a cognate object is perceived as redundant, it is always possible to add a hyponym object, thus restricting the semantic field of the verbal complex (e.g., *to dance a dance* vs *to dance a quadrille*). In (6), it is precisely the addition of the term *-ner-* (food) which gives to the generic verb *-tor-* (to consume) the more restricted meaning of *eating something*;
- c) verbs with mandatory incorporation legitimize the presence of an object only if incorporated, since it can’t stand as an independent constituent of the clause. Likewise, unergative and unaccusative verbs legitimize an object only if it is a cognate object.

Nevertheless, it is not possible to fully explain NI phenomena recalling only the notion of *cognate object* since – even if the semantic and morphologic relation between *-ner-* and *-nerivara-* is evident – it is not the same, for elements like *qimme-* (dog), *biili-* (car), *qamuter-* (sledge) and *qar-* (have) in sentences like (36), (39) and (40).

Unfortunately, the data in my possession does not allow for a generalization related to this analysis, and further research is needed.





## 8. Conclusions and further research

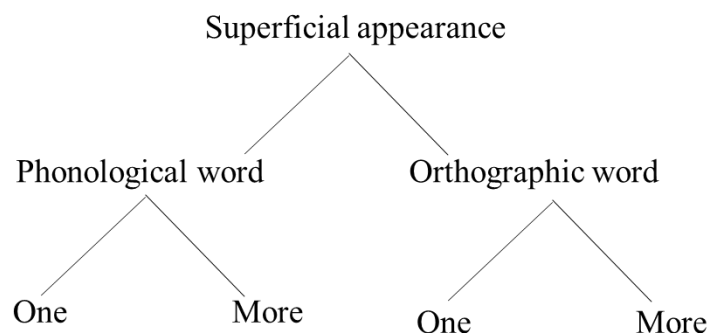
Since Noun Incorporation phenomena seems to involve movement and affect the argumental structure of the verb hosting incorporation, it would be an understatement to analyse them as lexical phenomena.

Taking into account the different perspectives of analysis listed up to there, it is impossible to consider NI phenomena as something monolithic and with clearly defined contours. In detail, several factors of different nature must be taken into consideration in order to provide a more in-depth and complete analysis of NI phenomena:

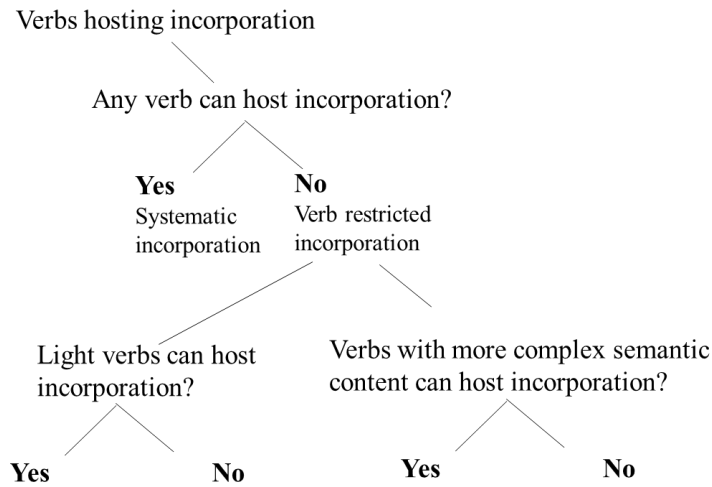
- The superficial appearance of the N+V structure (i.e., one or more orthographic/phonological word);
- Nature of the verb hosting incorporation;
- Nature of the incorporated noun;
- Modifiability of the incorporated noun;
- Pragmatic aspects (i.e., definiteness/indefiniteness of the incorporated element, focalization or topicalization and so on);

In my opinion, starting from the most permissive definition possible of NI phenomena as N+V units, it would be useful to analyse Noun Incorporation in a crosslinguistic perspective, in order establish a typological classification of this phenomenon. The following diagrams summarize the different factors that, in my opinion, should be considered when analysing cases of NI:

- **Superficial appearance:**

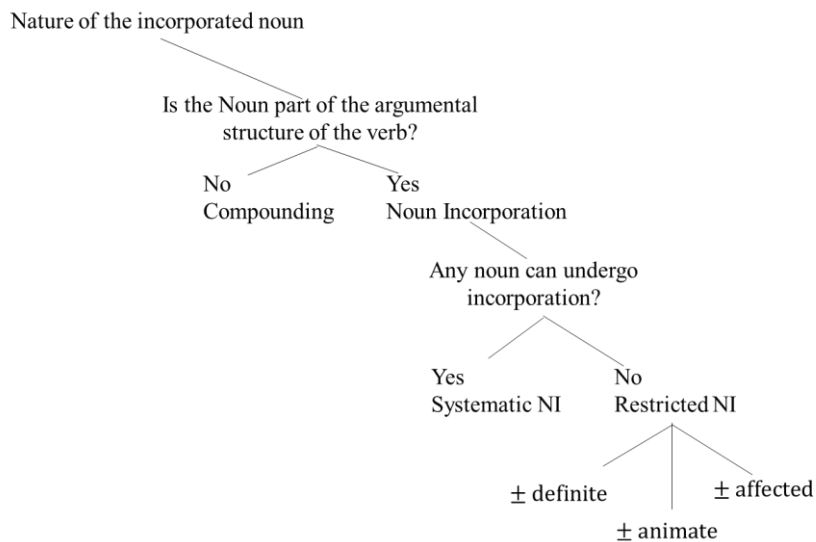


- **Nature of the Verb hosting incorporation**



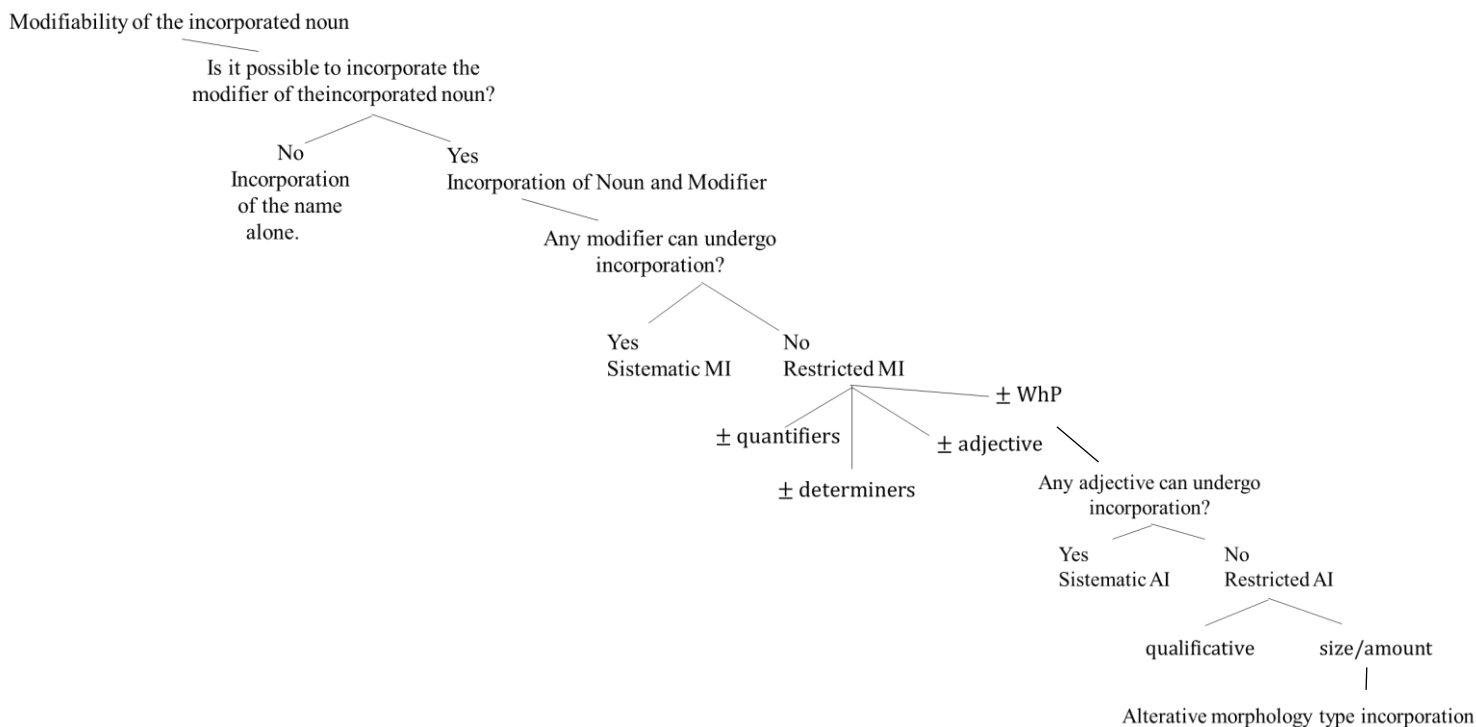
**To be determined:** do verb-based restrictions have an implicational nature? If so, which one? In my opinion: Complex Verbs incorporation > Light Verbs incorporation (but not vice versa).

- **Nature of the Incorporated Noun**



**To be determined:** whether and in what ways the restrictions on incorporation affect each other; if there are other intervening factors of different nature still unidentified.

- **Modifiability of the incorporated noun**



**To be determined:** do adjectival-based restrictions have an implicational nature? If so, which one? In my opinion: Qualificative > Size/Amount incorporation (but not vice versa).

It would be also interesting to collect further data through a proper fieldwork, in order to acquire information regarding:

A) *phonological features* of Incorporating structures (i.e., if the single N+V orthographic word overlaps with a single phonological word, or if there is a prosodic boundary between the Noun and the Verb. If the noun and the verb were to constitute phonological entities, why they are represented with a single orthographic word);

B) *pragmatic aspects impossible to be noticed otherwise*: in detail, it would be important to observe real case of interaction between native speakers in a natural contest, in order to examine contextual information regarding definiteness/indefiniteness of the entity identified by the incorporated (or non-incorporated) noun and so on;

C) *language acquisition* (i.e., whether incorporation is acquired or taught. If acquired, from what age does it appear; if taught, in what terms.);

D) it would be interesting to *compare NI in West Greenlandic with NI in more isolated varieties* (North and East Greenlandic), in order to see if the minor or no influence of English and Danish (languages morphologically different from Greenlandic) have any effect on incorporation phenomena.

E) it would be interesting to *deepen the analysis of incorporated modifiers as alterative morphology*. Nevertheless, I am aware of the fact, in order to carry out such a study, other bilingual speakers of West Greenlandic and a language with an alterative morphology similar to the Italian one would be needed.

Is it possible to consider NI in West Greenlandic as *the* prototypical case on Noun Incorporation? Of course, this is not possible.

It would be extremely reductive to take the manifestation of a phenomenon in a specific language as paradigmatic of something which is composite in nature: Noun Incorporation exists, and its different manifestations exist as well. NI in West Greenlandic – as in every other language – must be considered a real case of Noun Incorporation, and the peculiar characteristics of this particular manifestation must be considered worthy of being analysed in order to better understand this phenomenon in general (without pretending NI in West Greenlandic to be the only true case of NI).

Differences among languages of course exist and, in my opinion, the willing to collect different manifestation of a phenomenon under a single restrictive flag is a blind perspective, since unifying do not allow to fully appreciate variation.

Of course, the study of languages which are "*far*" from those usually analysed by the dominant paradigms in Linguistics provides new challenges, but also new food for thought to the discipline.

The next one may be considered a trivial consideration: empirical data are real, but theoretical approaches are real only if adequately supported by data. Bending data to theory leads to mere speculation.

My hope is to see theoretical approaches capable of really accounting for the characteristics of languages which present evident uniqueness, without claiming of unifying them.

Furthermore, we must not forget the documentary value of studies relating to endangered languages and languages that have been endangered by colonization. Collected

data are saved testimonies of languages, people and cultures which should be everyone's categorical imperative to protect and preserve.



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