

THE SYNTAX AND SEMANTICS OF MODIFICATION IN INUKTITUT:  
ADJECTIVES AND ADVERBS IN A POLYSYNTHETIC LANGUAGE

by

Richard James Compton

A thesis submitted in conformity with the requirements  
for the degree of Doctor of Philosophy

Department of Linguistics  
University of Toronto

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# The Syntax and Semantics of Modification in Inuktitut: Adjectives and Adverbs in a Polysynthetic Language

Richard James Compton

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University of Toronto

2012

## Abstract

This thesis explores the properties of adjectives and adverbs in Inuit (Eskimo-Aleut), with focus on the Inuktitut dialect group. While the literature on Eskimoan languages has claimed that they lack these categories, I present syntactic evidence for two classes of adjectives, one verb-like and another strictly attributive, as well as a class of adverbs. These categories are then employed to diagnose more general properties of the language including headedness, word-formation, adjunct licensing, and semantic composition.

In the first half of Chapter 2 I demonstrate that verb-like adjectives can be differentiated from verbs insofar as only the former are compatible with a particular copular construction involving modals. Similarly, verb-like adjectives can combine with a negative marker that is incompatible with genuine verbs. This contrast is further corroborated by an inflectional distinction between verb-like adjectives and verbs in the Siglitun dialect. A second class of strictly-attributive adjectives is argued for on the basis of stacking, variable order, optionality, and compositionality. The second half of the chapter examines semantic restrictions on membership in the strictly-attributive class whereby only adjectives with subsecutive and privative denotations are attested. These restrictions are explained by the proposal that Inuit lacks a rule of Predicate Modification,

with the result that only adjectives with semantic types capable of composing with nouns via Functional Application can compose directly with nominals. Furthermore, to explain why this restriction does not extend to verb-like adjectives it is proposed that when these modify nominals, they are adjoined DP appositives and compose via Potts's (2005) rule of Conventional Implicature Application.

In Chapter 3 I argue for a class of adverbs, presenting evidence including degree modification, variable ordering, speaker-oriented meanings, and the ability to modify additional categories. Finally, data from adverb ordering is used to compare syntactically oriented and semantically oriented approaches to adjunct licensing and verbal-complex formation. I present arguments in favour of a right-headed analysis of Inuit in which the relative position of adverbs inside polysynthetic verbal-complexes is primarily determined by semantics, supporting Ernst (2002), contra cartographic approaches such as Cinque (1999).

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## List of abbreviations

ABS = absolutive case

ACC = accusative case

ALL(AT) = allative case

BEC(AUS) = becausative mood

COND = conditional mood

COP = copula

DAT = dative case

DEC = declarative mood

DIST.PAST = distant past

ERG = ergative case

FRUSTR = frustrative

FUT = future

GEN = genitive case

HAB = habitual

IMPER = imperative mood

INDIC = indicative mood

INFRN = inferential evidential

INS(TR) = instrumental

INTENS = intensifier

INTERROG = interrogative (mood or form)

INTR = intransitive

LOC = locative

NEG = negation

NOM = nominalizer

OBL = oblique case

PART = participial mood

PASS = passive

PERF = perfect

PL = plural

POSS = possessive

REC.PAST = recent past

SG = singular

SIMIL = similis case

VIAL = vialis case

# Chapter 1

## Introduction

### 1.0 Lexical categories in Inuit

Eskimoan languages are often claimed to possess a different inventory of lexical categories than those found in Indo-European languages. Based on similarities in the paradigms of verbal agreement and possessive marking, Thalbitzer (1911, p. 1059) claims that “the Eskimo verb merely forms a subclass of nouns”. Advocating a similar lack of categorial distinctions, Lowe (1985, pp. 15, 19) claims that Inuit has “no parts of speech”. While Sadock (1999) argues convincingly against such positions, demonstrating clear criteria for distinguishing nouns and verbs (e.g. that nouns can combine directly with case morphology while verbs can combine directly with mood), Sadock’s (2003) grammar of West Greenlandic follows Thalbitzer (1911) and Fortescue (1984) in positing a class of particles, subsuming the set of uninflected forms in the language. In particular, such work (and the literature on Eskimoan languages generally) has claimed that these languages lack both adjectives and adverbs. Despite possessing elements expressing stereotypically adjectival and adverbial meanings, these have been cast as either derivational affixes, as illustrated in (1)-(2), or conflated with the class of verbs, as in (3).

- (1)    *ani-saaq-tuq*  
      go.out-*quickly*-DEC.3SG  
      ‘He/she left quickly / just left.’
- (2)    *aanniavik-tuqaq*  
      hospital-*old*(ABS.SG)  
      ‘the/an old hospital’
- (3)    *miki-juq*  
      *small*-DEC.3SG  
      ‘It is small.’

Although more recently Nagai (2006) and Lanz (2010) have proposed additional distinctions within the class of particles, including elements they refer to as adverbs, these might equally be labelled as demonstratives (employed adverbially) and interrogative pronouns. The following table summarizes the divergent inventories of categories proposed for Inuit (with illustrative examples from Inuktitut):<sup>1</sup>

	<b>Lowe (1985)</b>	<b>Fortescue (1984), Sadock (2003)</b>	<b>Nagai (2006)</b>	<b>Lanz (2010)</b>
<i>ani-juq</i> go.out-DEC.3SG	no parts of speech	verb	verb	verb
<i>miki-juq</i> small-DEC.3SG				
<i>ani-saaq-tuq</i> go.out-quickly-DEC.3SG				
<i>amma</i> and		particle	particle	conjunction
<i>ii</i> yes				interjection
<i>maani</i> here			(demonstrative and interrogative) adverbs	(demonstrative) adverb
<i>kina?</i> who		noun		pronoun
<i>uvanga</i> 1SG.ABS				
<i>tuktu</i> caribou(ABS.SG)			nominal	noun
<i>aanniavi-tuqaq</i> hospital-old(ABS.SG)				

**Table 1: Previous inventories of Inuit categories**

<sup>1</sup> I do not include Thalbitzer's (1911, p. 1007) classification as it both collapses and cuts across the expected categories, instead focusing on the presence and regularity of inflection. For instance, he collapses nouns and verbs into the class of "words with full typical inflection" while splitting the interrogative words *kina* 'who' and *qanga* 'when' between "words with atypical inflection" and "words without any inflection" because the former exhibits irregular case allomorphs while the latter is invariant.



Part of the reason for excluding adjectives and adverbs seems to be the following two assumptions about what a lexical category should “look like”. First, it is often assumed that parts of words cannot constitute lexical categories (i.e. that members of a lexical category should be able to stand on their own as separate phonological words). For instance, in the following example *jjuaq* ‘big’ is not considered to be an adjective because it cannot occur independently (i.e. as a separate phonological word):

(4)

- a. iglu-jjuaq  
house-big  
‘big house’
- b. \*jjuaq

Second, lexical categories are frequently expected to exhibit unique inflectional paradigms, thereby differentiating them from other categories. For instance, in English nouns mark number, verbs mark tense, and adjectives can bear comparative and superlative markers. Accordingly, Inuktitut predicates such as *taki* ‘tall’ in (5) are classified as verbs in the literature, since they bear the inflectional morphology found on verbs, as illustrated in (6):

- (5) taki-juq  
tall-DEC.3SG  
‘He/she/it is tall/long.’

- (6) sinik-tuq  
sleep-DEC.3SG  
‘He/she is sleeping.’

And yet, there are counter-examples to both of these generalizations about lexical categories. For instance, while in English lexical roots typically occur independently

from other words, we also observe compounds containing roots belonging to another lexical category:

- (7) [ [*black*]<sub>Adj</sub> [*board*]<sub>N</sub> ]<sub>N</sub>

Furthermore, we observe bound roots such as *vis-* in *visible* and *cran-* in *cranberry* that cannot stand alone as separate words:

- (8)  
a. visible (cf. \*vis)  
b. cranberry (cf. \*cran)

Despite this dependency, such items appear to constitute lexical roots,<sup>2</sup> suggesting that there is no one-to-one correspondence between (potential) phonological independence and status as a lexical root.

Regarding the use of inflectional paradigms as criteria for identifying lexical categories, the lack of distinct inflection is not enough to conclude that two sets of elements belong to a single category. For instance, in English conjunctions, prepositions, and interjections all lack inflection yet each belongs to distinct functional categories. Similarly, Bybee (1995, pp. 227-228) notes that in Mandarin “[n]ouns and pronouns do not change in form in subject and object functions, verbs do not agree with nouns, and there are no obligatory categories (inflections) marked on verbs or nouns or any word forms at all”. If a unique inflectional paradigm were a requirement for categorial status, this would suggest that such a language lacks any differentiation of lexical categories. In

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<sup>2</sup> For instance, Harley (2009) identifies √VIS as a root in the framework of Distributed Morphology.

sum, a shared paradigm of inflectional marking (or lack thereof) is not a necessary or sufficient condition for positing a single lexical category.<sup>3</sup>

If we set aside these assumptions about distinct inflection and phonological independence, is it correct that Inuktitut lacks both adjectives and adverbs? Recent work by Baker (2004) and Dixon (2004) has claimed that all languages possess an adjective class. Furthermore, Cinque (1999) argues for a universal hierarchy of adverb-licensing functional heads, suggesting that all languages contain dedicated adverb projections, at least covertly. In this thesis I examine how these claims fare with respect to Inuit data.

## 1.1 Goals of the thesis

The first goal of this thesis is to test the predictions concerning lexical categories made in such works as Baker (2004) and Dixon (2004) (i.e. their claim that all languages possess adjectives) with respect to Inuktitut. If this prediction were borne out in Inuktitut, it would broaden the empirical support for such claims. Furthermore, such empirical claims bear on theories of human language. On one hand, the theory of Universal Grammar (UG) (Chomsky, 1965) predicts a set of common properties to hold across all human languages. In particular, it has been argued that a basic inventory of lexical categories is provided by UG (Pinker & Bloom, 1990). Conversely, authors such as Evans & Levinson (2009) have essentially claimed that language universals are a myth. For instance, they point to Enfield's (2004) claim that adjectives are a subclass of verbs in Lao (south-western Tai) as evidence that adjectives are not universal.<sup>4</sup> Investigating the extent to which adjectives are universal may ultimately help to evaluate such

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<sup>3</sup> A committee member notes that what can be inferred from a lack of inflection across word classes is different than what can be inferred from shared inflection between them; i.e. the null hypothesis arising from shared inflection is a single category.

<sup>4</sup> See section 2.2.1.7 for discussion of Enfield's claim.

conflicting approaches. Furthermore, even within a theory of UG, the extent to which a class of adjectives can be discerned cross-linguistically will determine to what extent a language's stock of lexical categories is subject to parametric variation.

A second, similar goal is to determine whether Inuktitut possesses a category of adverbs. For the purpose of this thesis I avoid the question of whether adjectives and adverbs should form separate lexical categories or a single category cross-linguistically,<sup>5</sup> as the answer is likely dependant on a large body of cross-linguistic evidence. I assume them to be distinct; however, if future cross-linguistic investigation determines them to be a single category, this would nonetheless be largely compatible with the treatment of adverbs herein. Frameworks such as Cinque's (1999) universal hierarchy of adverb-licensing functional heads strongly suggest that adverbs should be universal, since the structures responsible for licensing them are mandated by UG.

Having argued in Chapter 2 for a class of attributive adjectives and a class of verb-like adjectives, additional objectives include examining and explaining semantic restrictions on class membership in the former set and the syntactic properties of the latter set. Similarly, after arguing for a class of adverbs in Chapter 3, I aim to test the empirical adequacy of two leading competing theories of adverb licensing—Cinque (1999) and Ernst (2002)—as applied to Inuktitut.

A further goal is to illuminate the morpho-syntactic structure of Inuktitut. Traditional analyses of Eskimoan languages have adopted a Lexicalist approach (see Selkirk, 1982; DiSciullo & Williams, 1987), treating words as the output of a morphological component, while syntax operates on these (often highly complex) words.

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<sup>5</sup> For instance, Ernst (2004, p. 30) assumes adverbs to be a "sub-type of adjective", while Baker (2004) treats adjectives and adverbs as belonging to the same category with adverbializers such as English *-ly* and Romance *-ment(e)* functioning as nouns (following Déchaine & Tremblay, 1996).

For instance, Fortescue (1980) and de Reuse (1994) both propose sets of morphological rules operating on roots, inflection, and derivational morphemes to account for the structure of polysynthetic words in West Greenlandic and Yupik, respectively (see sections 3.1.1.1-3.1.1.2). However, with the advent of Distributed Morphology (Halle & Marantz, 1994; Marantz, 1997; Harley & Noyer, 2000) comes the possibility of analysing morphologically complex structures as the output of a single syntactic component. Adopting Distributed Morphology's tenet of "syntactic hierarchical structure all the way down" (Halle & Marantz, 1994, p. 275), Compton & Pittman (2010a) propose an analysis of Inuit word-formation whereby the structure of words is predictable from syntactic structure in that CP and DP phases spell out as phonological words. Observing the highly polysynthetic nature of Inuit, the scarcity of phonologically free functional items (e.g. the fact that elements such as negation, modals, tense, light verbs, etc. are found only inside verbal complexes), the strong tendency for words to bear either case or mood, and the highly predictable nature of 'affixhood' in the language, they argue that DPs spell out as phonological words with the remaining material inside a clause spelling out as a CP word (i.e. the verbal complex). This analysis allows us to dispense with the idiosyncratic marking of vocabulary items as affixes since affixhood is predictable from syntactic structure.<sup>6</sup> One prediction falling out from Compton & Pittman's framework is that adjectival and adverbial elements (insofar as they exist) should be subsumed within DP-words and CP-words. While Compton & Pittman suggest the possibility of adjectival and adverbial elements inside polysynthetic words, in this dissertation I provide new evidence

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<sup>6</sup> Their analysis also offers an explanation for the phenomenon of root ellipsis (see examples (301)-(303) below) as the result of syntactic ellipsis. In a Lexicalist framework in which morphological rules apply to stems such examples would require the assumption of phonologically null roots.

for the existence of both adjectives and adverbs in Inuit, thus expanding the support for their analysis.

## 1.2 Overview of Inuit

### 1.2.1 Defining Inuit and Inuktitut

Inuit forms a dialect continuum across the Arctic, with varying levels of mutual intelligibility between dialects.<sup>7</sup> The language is part of the Eskimoan language family,<sup>8</sup> along with the Yupik languages, spoken in Alaska and Siberia, and Sirenikski, which is now extinct. According to Dorais (2003), these languages are divided into the dialect groups and dialects outlined below in Figure 1.

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<sup>7</sup> Dorais (2003, p. 29) notes that “all Inuit speakers [...] share a common means of communication and, with little effort, can understand each other”.

<sup>8</sup> Eskimoan is part of the larger Eskaleut family, which also includes Aleut.

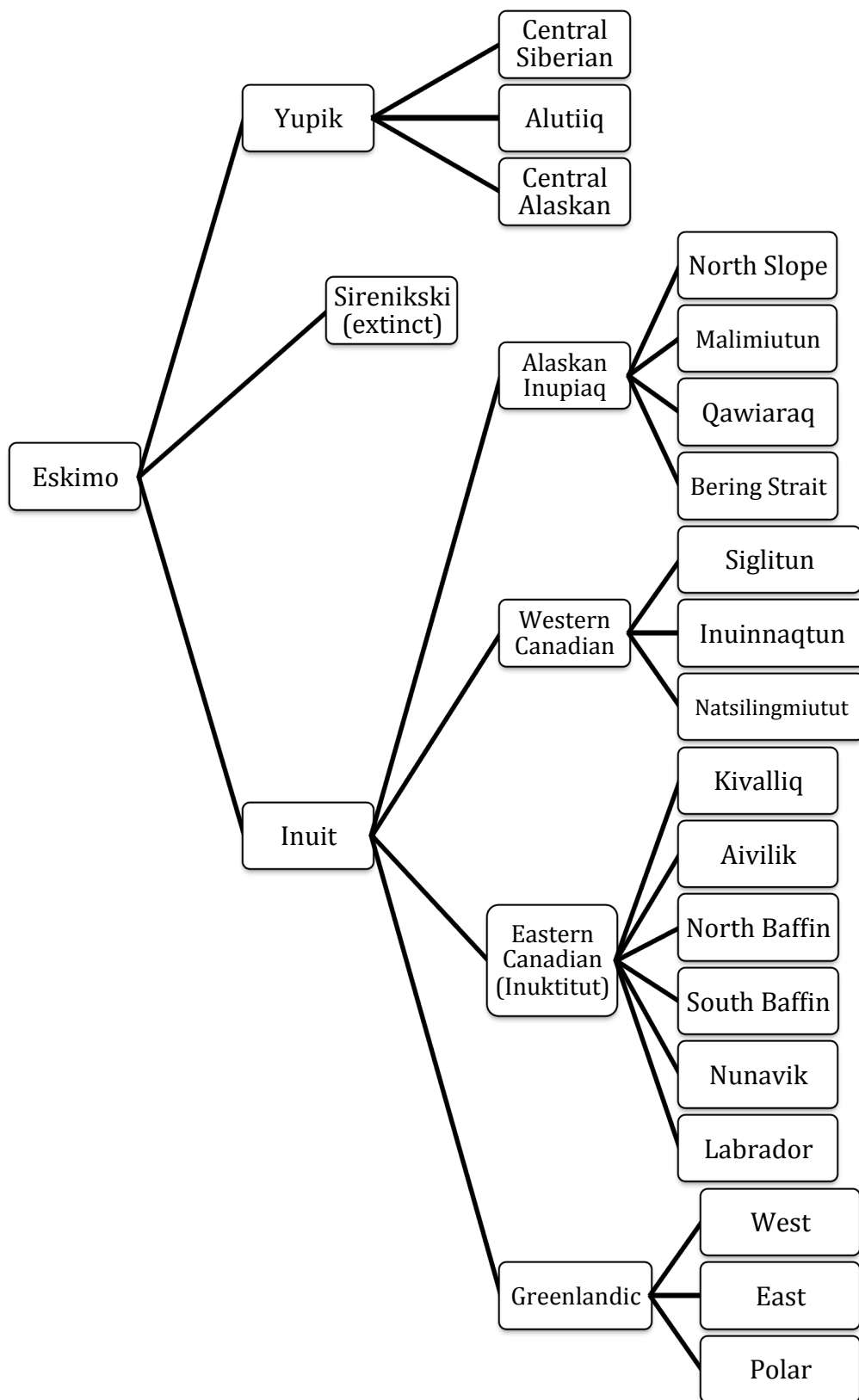


Figure 1: Eskimo language family and Inuit dialects

Among these, Inuktitut refers to the Eastern Canadian dialects of Inuit. In particular, this thesis focuses on the South Baffin dialect of Inuktitut, with a large body of data elicited from a speaker from Iqaluit, Nunavut. However, additional data is drawn from a variety of dialects. Furthermore, I believe the main findings herein extend to all of Inuit.

## 1.2.2 A primer on Inuit syntax

Inuit is a polysynthetic language, with words often containing multiple morphemes and corresponding to entire clauses in a language such as English. For instance, in (9) the object NP has been incorporated into the verb,<sup>9</sup> in (10) a number of restructuring verbs converge in a single phonological word, and in (11) we find both restructuring verbs and noun incorporation:

- (9)    uqalimaarvi-ralaa-qaq-tugut  
      library-small-have-DEC.1PL  
      ‘We have a small library.’
- (10)   niri-nngua-gasua-ruma-juq  
      eat-pretend-try-want-DEC.3SG  
      ‘He/she wants to try to pretend to eat.’
- (11)   iglu-liu-tuinna-ruma-junga  
      house-make-only-want-DEC.1SG  
      ‘I just want to make houses/igloos.’

These examples also illustrate that Inuit is a pro-drop language, with both subjects and objects being omitted when recoverable from pronominal agreement and the context.

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<sup>9</sup> My use of ‘object NP’ when referring to this instance of incorporation is deliberate. Compton & Pittman (2010a) argue that the incorporated element in Inuit incorporation is larger than a noun but smaller than a full DP. However, I continue to refer to the general phenomenon as ‘noun incorporation’.



The language possesses an ergative-absolutive case system, with agents of transitive verbs bearing ergative case, while both the objects of transitive verbs and the subjects of intransitive verbs bear absolutive case:

- (12)    arnaq                      ani-juq  
           woman(ABS.SG)        go.out-DEC.3SG  
           ‘The woman went out.’

- (13)    arna-up                    niri-janga                    aapu  
           woman-ERG.SG        eat-DEC.3SG.3SG        apple(ABS.SG)  
           ‘The woman is eating the apple.’

In the intransitive construction there is agreement with the subject while in the transitive construction we observe agreement with both the subject and the object.<sup>10</sup>

Inuit also has an anti-passive construction (see Spreng, 2012) in which (logically) transitive verbs take an absolutive subject and an object bearing oblique case:<sup>11</sup>

- (14)    Alana                    niri-juq                    paurngar-nit  
           A.(ABS.SG)        eat-DEC.3SG        berry-OBL.PL  
           ‘Alana is eating berries.’

Dialects vary in their preference between these two alternatives (i.e. (13) and (14)), with Johns (2001) noting that Eastern Canadian dialects tend towards the anti-passive pattern while Western dialects tend to employ the ergative-absolutive pattern.<sup>12</sup>

In addition to ergative and absolutive cases, the language also has six oblique cases, with case markers also encoding a three-way contrast between singular, dual, and

<sup>10</sup> My use of the term ‘construction’ here and throughout is simply a convenient descriptive label. I attribute no theoretical status to constructions.

<sup>11</sup> While most dialects of Inuit employ MODALIS case for anti-passive objects, the dialect of my consultant has collapsed this case with the ABLATIVE case. Throughout I have labelled this merged case as OBLIQUE.

<sup>12</sup> Some verbs require an anti-passive marker in the anti-passive construction.

plural. Dorais (2010, p. 71; modified) provides the following table of case forms from the Nunavik dialect:

CASE <sup>13</sup>	SINGULAR	DUAL	PLURAL	
ABSOLUTIVE	nuna	nuna-ak	nuna-it	
ERGATIVE	nuna-up	nuna-ak	nuna-it	
MODALIS	nuna-mik	nuna-annik	nuna-nik	merged (and labelled OBLIQUE) for most South Baffin speakers
ABLATIVE	nuna-mit	nuna-annit	nuna-nit	
LOCATIVE	nuna-mi	nuna-anni	nuna-ni	
ALLATIVE	nuna-mut	nuna-annut	nuna-nut	
VIALIS	nuna-kkut	nuna-akkut	nuna-tigut	
SIMILARIS	nuna-tut	nuna-attitut	nuna-titut	

Table 2: Non-possessed case forms

In addition, there are portmanteau forms that combine case, number, and the person and number of a possessor. For instance, Dorais (2003, p. 99; gloss added) gives the following example in which the ending encodes vialis case, singular or plural number (but not dual) of the referent, and a first person dual or plural possessor:

- (15) nuna-ttigut<sup>14</sup>  
land-1DU/PL.POSS.VIALIS.SG/PL  
‘through/across our land(s)’

See Dorais (2003) for the full possessive paradigms as well as phonological and paradigmatic differences between dialects.

<sup>13</sup> Whereas Dorais uses the terms Basic, Relative, Translative, and Simulative, I employ the labels ABSOLUTIVE, ERGATIVE, VIALIS, and SIMILARIS, respectively. I have also added hyphens to the forms in the table as well as the cell indicating the merged status of MODALIS and ABLATIVE in the dialect of my consultant.

<sup>14</sup> While this form deviates greatly from the unmarked (i.e. absolutive) possessive marker *-vut* ‘our’ and the unpossessed case form *-kkut* ‘VIALIS.SG’, other combinations of case and possessive marking such as the following can be viewed as the result of contextual allomorphy (2010, p. 74; glossing added):

(i)	umia-nganut	cf.	umia-nga	/	umia-mut
	boat-3SG.POSS.ALLAT.SG		boat-3SG.POSS		boat-ALLAT.SG
	‘to his/her boat’				

In this example *-mut* ‘ALLAT.SG’ becomes *-nut* in the environment of possessive marking.

As noted above, verbs in Inuit mark agreement with subjects as well as with transitive objects. Verbs also bear one of nine moods, as illustrated in the following forms from Dorais (2003, pp. 102-105; translations modified):

MOOD <sup>15</sup>	2SG FORM	TRANSLATION
<b>PARTICIPIAL (DECLARATIVE)</b>	taku-jutit	‘you (sg.) see’
<b>INDICATIVE</b>	taku-vutit	‘you (sg.) see’
<b>INTERROGATIVE</b>	taku-vit?	‘do you (sg.) see?’
<b>IMPERATIVE-OPTATIVE</b>	taku-git!	‘may you see!’
<b>BECAUSATIVE</b>	taku-gavit	‘when you saw; because you see’
<b>CONDITIONAL</b>	taku-guvit	‘when you see; if you see’
<b>DUBITATIVE</b>	taku-mmangaaqpit	‘[I wonder] if you see’
<b>CONTEMPORATIVE</b>	taku-llutit	‘you are/were V-ing while seeing’
<b>INCONTEMPORATIVE</b>	taku-lutit	‘you will be V-ing while seeing’

Table 3: Verbal moods

While in Greenlandic dialects the indicative mood is used in matrix declaratives and the participial mood is reserved for subordinate clauses, in Inuktitut the participial is the default mood in main clause declaratives. For this reason I employ the label DECLARATIVE for the participial mood in Inuktitut examples.<sup>16</sup>

A contributing factor to the polysynthetic nature of Inuit is noun incorporation. A closed class of verbs trigger obligatory incorporation of an object nominal. In the following example from Johns (2007), the object *pitsi* ‘dried fish’ must combine with the incorporating verb *tu(q)* ‘consume’ (p. 541; gloss modified):

<sup>15</sup> I adopt Allen’s (1996) terms BECAUSATIVE and CONDITIONAL for moods labeled by Dorais as ‘perfective’ and ‘imperfective’ since their meaning is orthogonal to aspect (and thus such terms could be misleading). Similarly, I employ Allen’s labels of CONTEMPORATIVE and INCONTEMPORATIVE for the moods Dorais terms ‘perfective appositional’ and ‘imperfective appositional’. According to Allen, the contemporative marks the “simultaneous occurrence of events” and the incontestative marks “the potential future simultaneous occurrence of events” (p. 18). Dorais also includes a ‘negative appositional’ mood, however I believe that this can be considered to be a portmanteau form combining mood and negation. I also use Allen’s translations for the contemporative and incontestative forms in the table.

<sup>16</sup> For verbal paradigms, including differences between dialects, see Dorais (2003).

- (16) pitsi-tu-vunga (Labrador)  
 dried.fish-consume-INDIC.1SG  
 ‘I’m eating dried fish.’

See Sadock (1980), (1986), Bok-Bennema & Groos (1988), Van Geenhoven (1998), and Johns (2007) for analyses of noun incorporation in Inuit.

### 1.2.3 Orthographic and phonological considerations

Throughout I employ the standard Roman orthography for Inuktitut. This orthography roughly corresponds to a broad IPA transcription, except that <jj> corresponds to [dɟ], <ng> corresponds to [ŋ], <nng> corresponds to [ŋŋ], <g> corresponds to [ɣ], and <r> corresponds to [ʁ]. In addition, some instances of word-initial <j> in borrowed words are pronounced [dɟ] instead of [j]. For Greenlandic examples I follow the standard West Greenlandic orthography, which differs primarily from Inuktitut in using <e> and <o> to indicate the retraction of [i] and [u], respectively, before uvulars.

Inuit dialects exhibit varying degrees of consonant cluster assimilation as well as context-sensitive morpheme-final truncation. However, such phonological changes usually do not impair the identification of morphemes, apart from an increased number of surface-homophonous forms.

A further phonological phenomenon found in Inuit is gradation. In Inuktitut this phenomenon is manifested in alternations between [p]~[v], [t]~[j], [k]~[ɣ], and [q]~[ʁ] in some allomorphs, such that the first member of each pair surfaces adjacent to another consonant while the second surfaces intervocalically. However, in Inuktitut this process appears to be fossilized (Compton, 2008).

Unless otherwise indicated examples are from the South Baffin Inuktitut dialect and were elicited by the author. Additional data was collected using National Research Council Canada's English-Inuktitut Parallel Corpus (2008); an online database and search engine of the Legislative Assembly of Nunavut's Hansard (see also Martin et al 2003).

## 1.3 Theoretical assumptions

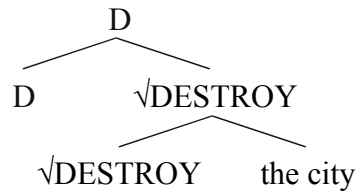
In this thesis I assume the Principles and Parameters framework of Transformational Grammar. In particular, I employ a Minimalist syntax (Chomsky, 1993; 1995; 2000). In addition, I approach the topics addressed herein from the perspective of Distributed Morphology (Halle & Marantz, 1994; Marantz, 1997; Harley & Noyer, 2000).

One of the claims of Distributed Morphology is that roots are category-neutral; i.e. that roots lack any inherent categorial specification and instead that their category is determined by the syntactic context into which they are inserted (Marantz, 1997; Harley & Noyer, 1999; Borer, 2003). For instance, Marantz (1997, pp. 218-9) proposes that the noun *destruction* and the verb *destroy* result from the insertion of the same root,  $\sqrt{\text{DESTROY}}$ , under a determiner or light verb, respectively:<sup>17</sup>

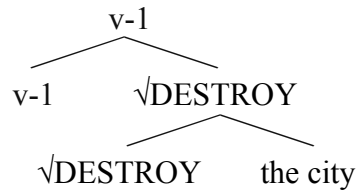
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<sup>17</sup> Marantz uses “v-1” to represent a functional head that “projects an agent” (p. 217).

- (17) the destruction of the city, the city's destruction



- (18) John destroyed the city



Subsequent work in Distributed Morphology has employed additional dedicated categorial functional heads such as ‘little *n*’ and ‘little *a*’, such that nouns, adjectives, and verbs can be construed as roots whose categories are determined configurationally in the following syntactic environments:

- (19)
- 
- Three syntactic tree diagrams illustrating functional determination. Each tree has a functional head (nP, aP, or vP) branching into a functional category (n, a, or v) and a root node (√ROOT).

Such approaches, in which lexical categories are wholly determined by syntactic context are termed “distributionalist” by Kornfilt & Whitman (2011, p. 1297), who contrast these with “essentialist” proposals in which lexical categories are determined by “extrasyntactic properties” such as semantics.

For instance, Davis & Matthewson (1999, p. 31) argue against what they call the “functional determination hypothesis” (i.e. that categories are determined by functional categories), drawing on evidence from English and the Salish language St’át’imcets that “roots must be specified as being either nouns or verbs before they merge with D or v,

and indeed independently of any syntactic environment they might appear in”. For instance, they argue that if roots are indeed category-neutral, we expect canonically adjectival predicates to appear as nominals (e.g. *\*a tall*), yet such nominalizations are for the most part absent. Furthermore, they argue that nominalizing suffixes appear “sensitive to the categorial status of the roots to which they attach”, citing data from Déchaine (1993) regarding the distribution of English nominalizers. Moreover, they present evidence from Salish that nominal status is independent from both D and nominalizers. For instance, they show that while “any root can appear as an argument if introduced by a determiner” in St’át’imcets, as illustrated in (20)-(21), only inherently nominal roots can head relative clauses, as shown in (22), (pp. 39, 44):

(20)

- a. [núk’w7-an-ts-as]                      ti=sqáycw=a  
[help-DIR-1SG.OBJ-3ERG] DET=man=EXIS  
‘The/a man helped me.’
- b. [sqaycw]    ti=nuk’w7-an-ts-ás=a  
[man]        DET=help-DIR-1SG.OBJ-3ERG=EXIS  
‘The one that helped me is a man.’

(21)

- a. [t’ak]            ti=sécsec=a  
[go.along] DET=crazy=EXIS  
‘The/a crazy one goes along.’
- b. [sécsec]    ti=t’ák=a  
[crazy]       DET=go.along=EXIS  
‘The one going along is crazy.’

(22)

- a. ti=ats’x-en=án=a                      (ku)=sqaycw  
DET=see-DIR-1SG.CONJ=EXIS        (DET)=man  
‘the man who I saw’
- b. \*ti=sqáycw=a                      (ku)=áts’x-en=an  
DET=man=EXIS                      (DET)=see-DIR-1SG.CONJ  
‘the one I saw who is a man’

If the presence of D determines nominal category, the ungrammaticality of a relative clause headed by a verbal root in (22) is unexpected. Davis & Matthewson also address the possibility of a nominalizing functional projection below D (which they call NOM, but is presumably analogous to little *n*). They show that while St’át’imcets employs such a nominalizer with both nominal and verbal roots, as shown in (23), only nominal roots license possessive morphology in predicative position, as in (24):

(23)

- a. [áma]            ti=s-kúza7-**sw**=a  
     [good]        DET=NOM-child-**2SG.POSS**=EXIS  
     ‘Your child is good.’
- b. [áma]            ti=s=t’íq=**sw**=a  
     [good]        DET=NOM=arrive=**2SG.POSS**=EXIS  
     ‘Your arriving [i.e. the fact that you have arrived] is good.’

(24)

- a. [s-kúza7-**su**]                            ti =ámh=a  
     [NOM=child-**2SG.POSS**]    DET=good=EXIS  
     ‘The good one is your child.’
- b. \*[s=t’íq=**su**]                            ti=ámh=a  
     [NOM=arrive=**2SG.POSS**] DET=good=EXIS  
     ‘The good one is your arriving [i.e. the fact that you have arrived].’

Using this and additional morphological evidence Davis & Mathewson conclude that “Salish possess lexical categorial distinctions which are divorced from D (or from any functional head” (p. 51).

Another work adopting some aspects of Distributed Morphology (e.g. deriving the structure of words in the syntax) while espousing an essentialist view of lexical categories is Julien (2007). She proposes that the syntactic and semantic properties of verbs in North Saami are determined by the semantics properties of their roots. In particular, she argues that “deadjectival verbs mean ‘be Root’, ‘become Root’, or ‘cause



to be/become Root” while denominal verbs “mean ‘have Root’, ‘get Root’, or ‘cause to have Root’” (p. 138).

According to Kornfilt & Whitman (2011), Baker (2004) advances a framework that combines distributionalist and essentialist positions. On one hand, his claim that nouns possess a “criterion of identity” and are of type  $\langle e \rangle$  (at least initially) advances a semantic differentiation of nominal roots. Conversely, he proposes that verbs and adjectives are distinguished configurationally in that the former are essentially adjectives combined with light verbs (pp. 77-88).

While the data presented in this thesis appears compatible with either a distributionalist or essentialist approach to lexical categories, in particular given the lack of categorial flexibility exhibited in Inuit (as compared to languages like English or Salish), I assume that categories are assigned configurationally. Thus, for the purpose of determining if Inuit possesses a particular lexical category, this amounts to asking whether the language makes use of the relevant category head; e.g. whether or not Inuit employs a ‘little *a*’ (and perhaps a ‘little *adv*’, if these categories two are ultimately found to be distinct cross-linguistically).

Finally, in my discussion of the semantic properties of adjectives and adverbs, I assume a type-driven semantics (Klein & Sag, 1985).

## 1.4 Overview of chapters

I begin Chapter 2 by examining two potential adjective classes: a set of stative intransitives with prototypically adjectival translations and a set of nominal modifiers that are treated as derivational morphemes in the literature. While the set of stative intransitives pattern with verbs in a number of ways, I present evidence that compatibility

with a construction involving the copula and modals, compatibility with the negative marker *-it-*, and the form of mood markers in the Siglitun dialect distinguish them as a separate class of verb-like adjectives. Similarly, I present data from stacking, variable order, and compositionality showing that nominal modifiers form a class of strictly-attributive adjectives. Next, I examine a semantic restriction on the meanings of members of the strictly-attributive class whereby only subsecutive and privative denotations are attested. To account for this restriction I propose that the language lacks a rule of Predicate Modification resulting that only adjectives whose semantic types can compose with nouns via Functional Application can modify nouns directly. Finally, I argue that case-bearing nominal modifiers, including verb-like adjectives bearing case, are DP appositives and compose via Potts's (2005) rule of Conventional Implicature Application.

In Chapter 3 I first review and critique existing analyses of the adverbial elements inside polysynthetic Inuit words. I then present syntactic evidence including stacking, variable order, optionality, speaker-oriented meanings, overlap with the strictly-attributive adjective class, and the possibility of modifying additional categories to argue that these word-internal adverbial elements indeed form a class of adverbs. I also examine the possibility of two additional classes of adverbs: derived adverbials and particles. However, I argue there is insufficient evidence to classify derived adverbials as adverbs, instead concluding that they are DPs employed adverbially. Furthermore, I argue that the set of particles is better thought of as belonging to disparate syntactic categories including interjections, conjunctions, and demonstratives. Subsequently, I explore the adequacy of two leading theories of adverb ordering with respect to Inuit adverb ordering phenomena. I argue that Ernst's (2002) semantically-based system provides a superior

account of the data than Cinque's (1999) more syntactically-based framework. In particular, I argue that the variable order of adverbs inside polysynthetic words is problematic for Cinque's cartographic approach to adjunct-licensing and his assumption of universal left-headedness (Kayne, 1994).

Finally, in Chapter 4 I conclude by summarizing and discussing the findings of the previous chapters.

## Chapter 2

# Adjectives and Adjectival Modification

### 2.1 Background

The Eskimoan literature has traditionally only recognized two major lexical classes; nouns and verbs, plus a minor category of particles. For instance, in his description of West Greenlandic, Sadock (2003, p. 4) states that nouns and verbs are the only major classes:

The morphology of WG distinguishes between nominal and verbal forms. Patterns of inflection and derivation show that there are two major morphological classes in WG. To a large extent, these also correspond to the two major classes of words in the syntax [...] and will therefore be called nouns and verbs. There are subtypes of each of these major classes, but no other comparable morphological classes in WG.

Similarly, Fortescue (1984, pp. 202-3) distinguishes only the classes of nouns, verbs, and particles in his grammar of West Greenlandic:

West Greenlandic words (excluding enclitics) fall with few exceptions into three easily distinguishable major classes: nominals, which take number, case, and personal possession inflections; verbs, which take mood, person and number inflections; and particles, which remain uninflected.

Both Sadock and Fortescue make reference to “inflection” in concluding that Greenlandic possesses only nominal and verbal categories (plus a class of particles)<sup>18</sup>. However, despite not forming separate inflectional classes (i.e. having a unique inflectional distribution), could some members of either the nominal or verbal categories have a unique syntactic distribution? For instance, Baker (2004) predicts that languages that

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<sup>18</sup> Similarly de Reuse (1994), while not discussing lexical categories explicitly, appears to only posit nominal and verbal classes in Siberian Yupik. While Spalding’s (1979) pedagogical grammar of Inuktitut refers to adjectives, this division appears to be made solely based on their English translations. Furthermore, his adjective label may simply be describing adjectival uses, given his statement that “some of these [intransitive] forms can also take on the status of adjectives as well as of verbs” (p. 7). Spalding’s (1998) dictionary of Inuktitut also includes an adjective category but again the distinction may simply be based on the categorial status of the translations.

appear to lack an adjectival class will, upon closer inspection, possess a syntactic class that, while similar to either nouns or verbs (or both), will exhibit a morphosyntactic distribution that is distinct. Similarly, Dixon (2004, p. 1) “suggest[s] that a distinct word class ‘adjectives’ can be recognized for every human language” and furthermore “that there are always some grammatical criteria—sometimes rather subtle—for distinguishing the adjective class from other word classes”.

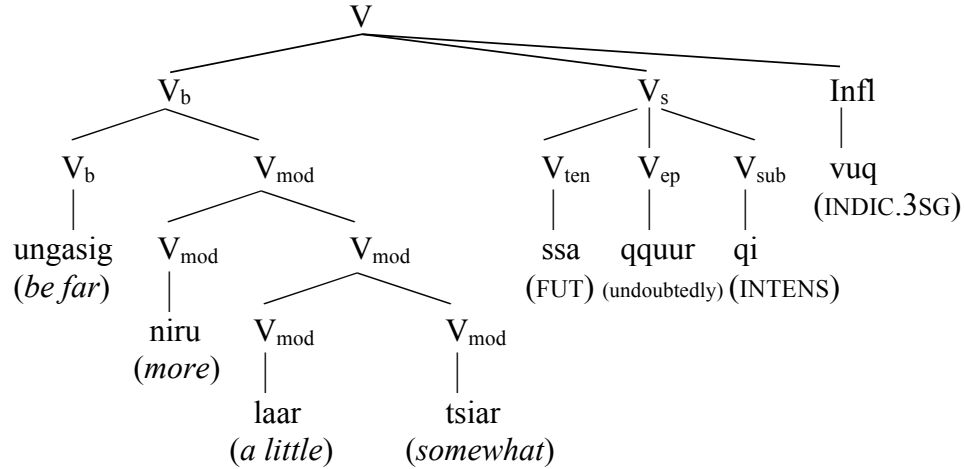
In addition to the possibility that some of the elements traditionally assumed to be nouns or verbs in Inuit are in fact adjectives, there is also the possibility that sub-parts of these morphologically complex words belong to an adjectival class. Much work on Eskimoan languages has implicitly assumed the Lexicalist Hypothesis (see Selkirk (1982), DiSciullo & Williams (1987), *inter alia*)<sup>19</sup> that words are formed in a separate generative morphological module of the grammar and inserted into the syntax as atomic units. Such a framework precludes the possibility that parts of words will belong to distinct lexical (or functional) categories from the words in which they are found. For example, Fortescue (1980, pp. 261-2) analyzes an utterance such as (25) from West Greenlandic as a ‘verb’, assigning it the structure in (26):

- (25) ungasinnirulaatsiassaqquuqaaq  
ungasig-niru-laar-tsiar-ssa-qquur-qi-vuq  
be.far-more-a.little-somewhat-FUT-undoubtedly-INTENS-INDIC.3SG  
‘It will undoubtedly be somewhat further off.’

---

<sup>19</sup> While Chomsky (1970) is often cited as the source of the Lexicalist Hypothesis, Marantz (1997) has argued that ‘Remarks on nominalization’ is in fact crucially anti-Lexicalist.

(26)



The structure in (26) treats the entire utterance as a verb in the syntax. Note that Fortescue’s labelling is more than a mere notational variant. In his system this structure is created via a set of complex derivational rules that are distinct from syntax.<sup>20</sup>

However, if we instead assume a model such as Distributed Morphology that argues for a single morpho-syntactic module deriving both syntactic and morphological structures (i.e. “Syntactic Hierarchical Structure All the Way Down”, Halle & Marantz (1994)), the possibility emerges that morphologically complex ‘words’ can contain constituents belonging to additional lexical categories such as ‘adjective’.<sup>21</sup>

In section 2 below I examine these two possibilities; arguing that some putative verbs are in fact adjectives and that parts of morphologically complex nominals are also adjectives.

<sup>20</sup> Although Fortescue uses the terms ‘internal syntax’ and ‘external syntax’ for morphology and syntax, respectively, his treatment seems essentially isomorphic with a Lexicalist analysis; derivational rules create morphologically complex words which are then inserted into the syntax.

<sup>21</sup> While, strictly speaking, roots are category-neutral in Distributed Morphology, we can refer to roots dominated in the syntax by nodes bearing the label ‘Adj’ or ‘little a’ as adjectives.

## 2.2 Potential adjective classes in Inuit

There are two promising candidates for an adjective class in Inuit. First, while traditionally categorized as verbs, a number of stative intransitives have prototypically adjectival denotations (i.e. meanings typically instantiated as adjectives cross-linguistically):<sup>22</sup>

(27) taki-juq  
tall-DEC.3SG<sup>23</sup>  
'He/she/it is tall.'

(28) angi-juq  
big-DEC.3SG  
'He/she/it is big.'

(29) sukka-juq  
fast-DEC.3SG  
'He/she/it is fast.'

Second, we observe a closed class of suffixal modifiers that appear on nouns. Within traditional morphology these have been considered to be derivational affixes. Fortescue's (1983, p. 54) comparative affix manual calls them "nominal modifiers":

(30) iglu-jjuaq  
house-big  
'a big house'

---

<sup>22</sup> Spalding's (1998) dictionary of the Aivilik dialect contains 296 entries labeled '(adj.)', although the basis of this determination is likely the English translation. Lowe's (2001) dictionary of the Siglit dialect contains a comparable number of entries bearing the variant of the declarative mood marker that I argue in section 2.2.1.6 marks adjectives in that dialect.

<sup>23</sup> Most literature on Eskimoan refers to this mood as PARTICIPIAL due to the fact that nominalized verbs and verbs modifying a noun bear this mood. Furthermore, this mood cannot be used in matrix clauses in West Greenlandic. However, in Inuktitut this mood can occur in matrix clauses and moreover it appears to be the default mood in declarative clauses. Accordingly, I have labelled it as DECLARATIVE in Inuktitut examples (in contrast with the INDICATIVE mood which is the default in West Greenlandic).

- (31) iglu-nnguaq  
house-pretend  
'a pretend house' (i.e. doll-house, soapstone carving of a house, etc.)
- (32) iglu-tsiavaq  
house-good  
'a well-built house'

In the next sections I examine whether either or both of these candidates constitute an adjective class in Inuit. First, I explore whether stative intransitive predicates exhibit a syntactic distribution distinct from verbs. Next, I investigate whether 'nominal modifiers' exhibit the syntactic properties we would expect of adjectives.

## 2.2.1 Stative intransitives as adjectives

Our first candidate for an adjective class in Inuktitut is the set of stative intransitives normally included in the category of verbs. In terms of their morphological distribution, they exhibit the same person, number, and mood possibilities as intransitive verbs:

- (33) Stative intransitive in declarative mood:

- a. sanngi-junga  
strong-DEC.1SG  
'I am strong'
- b. sanngi-jutit  
strong-DEC.2SG  
'You (sg) are strong'
- c. sanngi-juq  
strong-DEC.3SG  
'He/she/it is strong'



- d. sanngi-jugut  
strong-DEC.1PL  
'We are strong'
- e. sanngi-jusi  
strong-DEC.2PL  
'You (pl) are strong'
- f. sanngi-juit  
strong-DEC.3PL  
'They are strong'

(34) Verb in declarative mood:

- a. sinik-tunga<sup>24</sup>  
sleep-DEC.1SG  
'I am sleeping'
- b. sinik-tutit  
sleep-DEC.2SG  
'You (sg) are sleeping'
- c. sinik-tuq  
sleep-DEC.3SG  
'He/she/it is sleeping'
- d. sinik-tugut  
sleep-DEC.1PL  
'We are sleeping'
- e. sinik-tusi  
sleep-DEC.2PL  
'You (pl) are sleeping'
- f. sinik-tuit  
sleep-DEC.3PL  
'They are sleeping'

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<sup>24</sup> The *-tunga/-junga* alternation is part of a larger morpho-phonological phenomenon whereby /t/ and /j/ alternate at morpheme boundaries inside phonological words. While /j/ occurs intervocalically, /t/ occurs after consonants. The same alternation occurs between /p/~/v/ and between /k/~/γ/.

(35) Stative intransitive in interrogative mood:

- a. taki-viit?  
tall-INTERROG.2SG  
'Are you (sg) tall?'
- b. taki-vaa?  
tall-INTERROG.3SG  
'Is he/she/it tall?'
- c. taki-visii?  
tall-INTERROG.2PL  
'Are you (pl) tall?'
- d. taki-vaat?  
tall-INTERROG.3PL  
'Are they tall?'

(36) Verb in interrogative mood:

- a. ani-viit?  
go.out-INTERROG.2SG  
'Did you (sg) go out?'<sup>25</sup>
- b. ani-vaa?  
go.out-INTERROG.3SG  
'Did he/she go out?'
- c. ani-visii?  
go.out-INTERROG.2PL  
'Did you (pl) go out?'
- d. ani-vaat?  
go.out-INTERROG.3PL  
'Did they go out?'

(37) Verb in imperative mood:

- a. ani-git  
go.out-IMPERATIVE.2SG  
'(You sg.) go out!'

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<sup>25</sup> Hayashi & Spreng (2005) note that while durative verbs receive a progressive interpretation in the present tense, punctual verbs receive a recent past interpretation. See also Hayashi (2011).

- b. ani-gitsi  
go.out-IMPERATIVE.2PL  
'(You pl.) go out!'
- (38) Stative intransitive in imperative mood:
  - a. sukka-git  
fast-IMPERATIVE.2SG  
'(You sg.) be fast!'
  - b. sukka-gitsi  
fast-IMPERATIVE.2PL  
'(You pl.) be fast!'
- (39) Verbs in becausative<sup>26</sup> mood (Dorais, 2003, p. 102):
  - a. sinik-kama  
sleep-BECAUS.1SG  
'when I slept; because I sleep'
  - b. taku-gama  
see-BECAUS.1SG  
'when I saw; because I see'
- (40) Stative intransitives in becausative mood:
  - a. sukka-gama                      quviasuk-tunga  
fast-BECAUS.1SG                  happy-DEC.1SG  
'I'm happy that I'm fast.'
  - b. sanngi-gama                      quviasuk-tunga  
strong-BECAUS.1SG                happy-DEC.1SG  
'I'm happy that I'm strong.'

Furthermore, like verbs, stative intransitives are compatible with recent past and distant past tense morphemes (see Hayashi (2011) for an analysis of the Inuktitut tense system).

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<sup>26</sup> While Dorais (2003, p. 102) calls this mood "perfective (causative)", Nowak (1996, p. 38) calls this terminology "unfortunate [...] since it evokes associations with tense" and since the term causative "is already reserved for causative verbs and affixes". For these reasons she states that Mallon's (1986) "becausative" label is more appropriate.

(41) Recent past tense:

- a. sukka-qqau-juq  
fast-REC.PAST-DEC.3SG  
'He/she/it was fast.' (earlier/today/\*yesterday)
- b. sanngi-qqau-juq  
strong-REC.PAST-DEC.3SG  
'He/she/it was strong.' (earlier/today/\*yesterday)

(42) Distant past tense:

- a. sukka-lauq-tuq  
fast-DIST.PAST-DEC.3SG  
'He/she/it was fast.' (yesterday/last week/\*today)
- c. sanngi-lauq-tuq  
strong-DIST.PAST-DEC.3SG  
'He/she/it was strong.' (yesterday/last week/\*today)

Stative intransitives are also compatible with near future and distant future tense markers, as illustrated in the following examples.<sup>27,28</sup>

- (43) sukka-langa-junga  
fast-NEAR.FUT-DEC.1SG  
'I am going to be fast.' (today/tonight/\*tomorrow)

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<sup>27</sup> Hayashi (2011) argues that *langa* is a "prospective aspect marker" while *niaq* is "ambiguous between a hodiernal future tense marker and a modal marker" (p. 75).

<sup>28</sup> The speaker suggested that this is something someone might say "in a skidoo race". It is interesting to note that this context bypasses the potential pragmatic blocking that one's inherent speed will not change in the near future. This would seem to bear on examples (46)-(48) below and the accompanying discussion. The speaker also indicated that she preferred to use the following construction containing the declarative marker and the copula when combining future tense markers with this predicate, as shown in (i), but this preference did not extend to other stative intransitives, as shown in (ii)-(iii):

- (i) sukkak-tu-u-langa/niaq/laaq-junga  
fast-DEC-COP-NEAR.FUT/NEAR.FUT/DIST.FUT-DEC.1SG  
'I am going to be fast.'
- (ii) sukkai-langa/niaq/laaq-junga  
slow-NEAR.FUT/NEAR.FUT/DIST.FUT-DEC.1SG  
'I am going to be slow.'
- (iii) quviasu-langa/niaq/laaq-junga  
happy-NEAR.FUT/NEAR.FUT/DIST.FUT-DEC.1SG  
'I am going to be happy.'

- (44) sukka-niaq-tunga  
fast-NEAR.FUT-DEC.1SG  
'I am going to be fast.'  
(today/tonight/\*tomorrow)
- (45) sukka-laaq-tunga  
fast-DIST.FUT-DEC.1SG  
'I am going to be fast.'  
(tomorrow/next week/\*today)

However, there appears to be pragmatic interference with certain combinations, as illustrated in (46)-(48):

- (46) taki-laaq-tunga                      angi-li-guma  
tall-DIST.FUT-DEC.1SG              big-become-CONDITIONAL.1SG  
'I will be tall when I grow up.'
- (47) #taki-niaq-tunga  
tall-NEAR.FUT-DEC.1SG|  
Intended: 'I will be tall.'
- (48) taki-niaq-tuq  
tall-NEAR.FUT-DEC.3SG  
'It will be tall/long'  
(“if you’re going to make something that’s going to be tall or long”)

While becoming ‘tall’ in the distant future is possible, and thus judged grammatical in (46), since becoming ‘tall’ in the near future (i.e. by the end of day) is not (normally) possible, the utterance in (47) is illicit. However, if we change the person so that the utterance refers to an inanimate object of variable height/length (such as one that we are about to construct), this pragmatic interference disappears. In sum, stative intransitives show the same tense possibilities as verbs, although pragmatics may block certain combinations.<sup>29</sup>

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<sup>29</sup> Note that while the pragmatic effects observed here involving tense are likely due to the status of *taki* ‘tall’ as an individual-level predicate (see Carlson 1977), the individual-level versus stage-level distinction does not correlate with the adjective/verb distinction argued for below. For instance, both stage-level

### 2.2.1.1 Attributive modification by stative intransitives

Baker (2004, p. 194) states that the ability to modify nouns attributively is considered “characteristic of adjectives” (albeit not a “defining property” of adjectives).<sup>30</sup> In terms of their syntactic distribution, stative intransitives can modify nouns attributively, agreeing in case and number with the modified noun:

- (49)    anguti            taki-juq            taku-qqau-juq  
         man(ABS.SG) tall-DEC(ABS.SG)    see-REC.PAST-DEC.3SG  
         arnar-mit            nait-tu-mit  
         woman-OBL.SG       short-DEC-OBL.SG  
         ‘The tall man saw the short woman.’
- (50)    taki-ju-up            arna-up            niri-janga            aapu  
         tall-DEC-ERG.SG    woman-ERG.SG    eat-DEC.3SG.3SG    apple(ABS.SG)  
         ‘The tall girl is eating the apple.’

The subject in (49) is in the absolutive case (which in the singular is null), so we cannot observe any overt agreement with its modifier. However, we see an overt oblique case marker on both the noun of the object and the stative intransitive that modifies it. Similarly in (50) we see ergative case both on the noun of the subject and the stative intransitive that modifies it. However, we see the same behaviour with verbs. They can also modify nouns as long as they are in the declarative/participial mood and agree with the nouns in case and number.

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predicates such as *salumma* ‘clean’ and individual-level predicates such as *angi* ‘big’ will be shown to exhibit syntactic properties that differentiate them from verbs.

<sup>30</sup> In Baker’s (2004) analysis of lexical categories (in which nouns bear referential indices and verbs project a specifier), only adjectives are compatible with direct modification of nouns because other lexical categories possess “a special property that conflicts with this role” (p. 200). Thus, according to his analysis, while adjectives possess no special property that allows them to act as attributive modifiers, they (normally) lack any semantic or syntactic requirements that would prevent them from acting in this role.

- (51) anguti                      uglak-tuq                      taku-qqau-juq  
 man(ABS.SG) run-DEC(ABS.SG) see-REC.PAST-DEC.3SG  
 sinik-tu-mit                      arnar-mit  
 sleep-DEC-OBL.SG woman-OBL.SG  
 ‘The man who is running saw the woman who is sleeping.’
- (52) ani-ju-up                      arna-up                      niri-janga                      aapu  
 go.out-DEC-ERG.SG woman-ERG.SG eat-DEC.3SG.3SG apple(ABS.SG)  
 ‘The girl who went<sup>31</sup> out is eating the apple.’  
 (‘The one who went out, the girl, is eating the apple.’)

In (51) we see oblique case on both the object noun and its verbal modifier, while in (52) we see ergative case on both the subject noun and its verbal modifier. So, in terms of their ability to modify nouns, stative intransitives appear to behave like verbs in Inuktitut.

### 2.2.1.2 Compatibility of stative intransitives with comparatives and superlatives

If stative intransitives are adjectives we might expect them to occur in comparative and superlative constructions. For instance, although comparative and superlative constructions are not confined to adjectives, Doetjes (2008, p. 126) notes that “comparative and superlative morphemes [...] usually combine with adjectives only”, as opposed to analytic comparatives, which she states “tend to have a larger distribution”. In fact, two constructions exist for both comparatives and superlatives; one without<sup>32</sup> a copula and one with a copula and mood/agreement morphology.

- (53) Jaan    taki-niqsaq                      Miali-mit  
 John    tall-COMPARATIVE                      Mary-OBL.SG  
 ‘John is taller than Mary.’

<sup>31</sup> Hayashi & Spreng (2005) demonstrate that achievement verbs without any overt tense marking obtain an immediate past interpretation in Inuktitut (i.e. ‘a moment ago’).

<sup>32</sup> Such constructions may contain a phonologically null copula. Johns (p.c.) observes that the distribution of null copular constructions is restricted; not all nominals can serve as the predicative element.

- (54) Jaan taki-niqsa-u-juq Miali-mit  
 John tall-COMPARATIVE-COPULA-DEC.3SG Mary-OBL.SG  
 ‘John is taller than Mary.’
- (55) Jaan taki-niqpaaq  
 John tall-SUPERLATIVE  
 ‘John is the tallest.’
- (56) Jaan taki-niqpaa-ngu-juq<sup>33</sup>  
 John tall-SUPERLATIVE-COPULA-DEC.3SG  
 ‘John is the tallest.’
- (57) Jaan taki-niqpaaq asivaqti-nit  
 John tall-SUPERLATIVE hunter-OBL.PL  
 ‘John is the tallest of the hunters.’
- (58) Jaan taki-niqpaa-ngu-juq asivaqti-nit  
 John tall-SUPERLATIVE-COPULA-DEC.3SG hunter-OBL.PL  
 ‘John is the tallest of the hunters.’

However, verbs also participate in the same comparative and superlative constructions, both with and without the copula (and its accompanying mood/agreement morphology).

- (59) Jaan sining-niqsaq asivaqti-mit  
 John sleep-COMPARATIVE hunter-OBL.SG  
 ‘John slept more than the hunter.’
- (60) Jaan sining-niqsa-u-juq asivaqti-mit/-nit  
 John sleep-COMPARATIVE-DEC.3SG hunter-OBL.SG/-OBL.PL  
 ‘John slept more than the hunter/hunters.’
- (61) Jaan sining-niqpaaq asivaqti-nit  
 John sleep-SUPERLATIVE hunter-OBL.PL  
 ‘John slept the most of all the hunters.’
- (62) Jaan sining-niqpaa-ngu-juq asivaqti-nit  
 John sleep-SUPERLATIVE-COPULA-DEC.3SG hunter-OBL.PL  
 ‘John slept the most of all the hunters.’  
 (“That day the other hunters got up before John.”)

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<sup>33</sup> The segment ‘ng’ [ŋ] is inserted before the noun-incorporating copula ‘u’ to avoid a phonologically illicit sequence of three vowels.



Consequently, comparative and superlative constructions do not help us distinguish between intransitive statives and verbs.

### 2.2.1.3 Compatibility of stative intransitives with degree heads

Another difference we might expect between an adjectival class and verbs is the ability to be modified by degree adverbs such as ‘too’ or ‘so’. Baker (2004) states that “another distinctive property of adjectives is that they are selected by a certain class of functional heads, known as degree heads” (p.212).<sup>34</sup> Conversely, degree heads cannot directly modify nouns and verbs. Baker gives the following illustrative examples from English (p. 212):

(63)

- a. Mary is too intelligent (to make such a mistake). (degree plus adjective)  
... as intelligent as Einstein  
... so intelligent that she solved the problem immediately.  
How intelligent is Mary?
- b. \*Mary is too (a) genius (to make such a mistake). (degree plus noun)  
\*... as (a) genius as Einstein  
\*... so (a) genius (that she solved the problem immediately).  
\*How (a) genius is Mary?
- c. \*Mary too hungers (to think straight). (degree plus verb)  
\*Mary as hungers as John.  
?Mary so hungers that she could eat a horse.  
\*How hunger does Mary?

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<sup>34</sup> In addition to attributive modification and compatibility with degree heads, Baker (2004, pp. 191, 219) states that a third characteristic property of adjectives is that they occur as resultative secondary predicates. While secondary predicates do not occur in Inuktitut, this can be seen as the convergence of two factors. First, the stative intransitives discussed in this section must bear mood/agreement, and thus each forms its own CP. If we compare this with an English resultative like (i) or a depictive such as (ii) we see that while these adjectives may be predicative, they cannot project a full clause.

(i) She hammered the metal (\*is/be) flat.

(ii) He ate the fish (\*is/be) raw.

Second, the “suffixal” adjectives discussed in section 2.2.2 can only be used attributively. However, notice that in English, strictly-attributive adjectives cannot be secondary predicates. For instance:

(iii) They buried him alive/\*live. (cf. The live/\*alive specimen. He is alive/\*live.)

Since Inuktitut adjectivals either (a) project clausal structure or (b) are solely attributive, they are thus excluded from secondary predication.

While Doetjes (2008) demonstrates that compatibility with degree expressions is not confined to adjectives cross-linguistically, and that degree modification instead forms a continuum across subtypes of adjectives, nouns, and verbs, she nevertheless presents two types of degree expressions which distinguish between gradable adjectives and other elements; English *very* and French *beaucoup*.

One potential degree head in Inuktitut that can modify stative intransitives is *luaq*, which Fortescue (1983, p. 42) glosses as ‘much/too/more than’.<sup>35</sup>

- (64) ikkua            saa-t            taki-luaq-tuit            piarar-nut  
 DEMONST.PL   table-ABS.PL   tall-DEGREE-DEC.3PL   child-ALLAT.PL  
 ‘Those tables are too tall for (the) children.’

- (65) jappa            angi-luaq-tuq  
 coat(ABS.SG)   big-DEGREE-DEC.3SG  
 ‘The coat is too big.’

- (66) qarlii-t<sup>36</sup>            miki-luaq-tut  
 pants-ABS.PL   small-DEGREE-DEC.3PL  
 ‘The pants are too small.’

- (67) nunasiuti            sukka-luaq-tuq  
 car(ABS.SG)   fast-DEGREE-DEC.3SG  
 ‘The car is too fast.’

- (68) sikituuq            sukka-i-luaq-tuq  
 skidoo(ABS.SG)   fast-NEG<sup>37</sup>-DEGREE-DEC.3SG  
 ‘The skidoo is too slow.’

<sup>35</sup> This morpheme is listed in the Tarramiut (northeastern Quebec) dialect as *luar* by Fortescue.

<sup>36</sup> In dialects with dual number inflection this word normally bears dual number; i.e. *qarliik* ‘pair of pants or trousers’ (Spalding, 1998, p. 110). My consultant’s dialect lacks the dual.

<sup>37</sup> This negation marker, used here to create the antonym of ‘fast’, is different from the default negation marker that appears between tense and mood/agreement. It is discussed in section 2.2.1.5 below.

However, this morpheme also appears to be compatible with at least some verbs in Inuktitut. For instance, it is directly compatible with the verbs *sinik* ‘sleep’ and *pukta* ‘float’ in (69)-(70) below.

- (69) *sini-luaq-tuq*  
 sleep-DEGREE-DEC.3SG  
 ‘He/she is sleeping too long/much.’
- (70) *nuluaq*                      *pukta-luaq-tuq*  
 fish.net(ABS.SG)          float-DEGREE-DEC.3SG  
 ‘The fish net is floating too much.’

But in order to use *luaq* with verbs like *ani* ‘go out’ and *igla* ‘laugh’ we must add a habitual morpheme to avoid ungrammaticality, as shown below.

- (71) \**ani-luaq-tuq*  
 go.out-DEGREE-DEC.3SG
- (72) *ani-kata-luaq-tuq*  
 go.out-HABITUAL-DEGREE-DEC.3SG  
 ‘He/she is going out constantly.’
- (73) \**igla-luaq-tuq*  
 laugh-DEGREE-DEC.3SG
- (74) *igla-kata-luaq-tuq*  
 laugh-HABITUAL-DEGREE-DEC.3SG  
 ‘He/she is constantly laughing.’

This incompatibility may simply be due to aspectual constraints on the verbs in question (e.g. the inability to ascribe degrees to non-statives like ‘go out’), however it is more difficult to distinguish aspectual differences between ‘sleep’ and ‘laugh’.<sup>38</sup> In any case, it

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<sup>38</sup> If this verb glossed as ‘laugh’ meant something akin to ‘let out a laugh’ or ‘burst out laughing’ we might be able to explain the aspectual differences between verbs directly compatible with *luaq* ‘too (much)’ and those requiring a habitual morpheme as being between activity verbs and achievement verbs. Support for this hypothesis may come from Japanese where the verb meaning ‘laugh’ may be an achievement verb:

seems that *luaq* ‘too (much)’ is compatible with at least some verbs and thus may in fact correspond to Doetjes’s Type B degree expressions, such as Dutch *erg*, which can combine with gradable adjectives, gradable nominal predicates, and gradable verbs.<sup>39</sup>

#### 2.2.1.4 Compatibility of stative intransitives with modals

Another potential difference between stative intransitives and verbs is their compatibility with modals. Note for instance that in English modals cannot combine directly with adjectives (in either attributive or predicative constructions):

(75) \*a can/could tall building (cf. a potentially tall building)

(76) \*the must meeting (cf. the obligatory meeting)

(77) The building should \*(be) tall.

(78) The meeting will \*(be) important.

We might expect a similar situation in Inuktitut, with modals being compatible with real verbs but not adjectives. First, consider the modal *lluaq* ‘should’ (not to be confused with *luaq* ‘too/excessively’ above). We see in the following examples that it can be used with verbs:

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(i)	?/*ni-ji-kan	zutto	wara-tta	(Kenji Oda, p.c.)
	two-hour-duration	entire	laugh-PAST	
(ii)	ni-ji-kan	zutto	wara-tte	i-ta
	two-hour-duration	entire	laugh-PARTICIP.	AUX-PAST
	‘I laughed for two whole hours.’			

<sup>39</sup> Spalding’s (1998, p. 87) dictionary contains a sub-entry for *luar* with the dummy verb *pi* in the main entry for *pijunniirtuq* ‘he no longer does or gets *s.t.*’ (glossing and hyphens added, original translation):

- (i) pi-luar-tuq  
do-DEGREE-DEC.3SG  
‘he does to excess or overdoes something’

- (79) ani-lluaq-tuq  
go.out-should-DEC.3SG  
'He/she should go out.'
- (80) niri-lluaq-tuq            natsir-mit  
eat-should-DEC.3SG    seal-OBL.SG  
'He/she should eat seal.'
- (81) sini-lluaq-tuq  
sleep-should-DEC.3SG  
'He/she should sleep.'

However, with stative intransitives such as *sanngi* 'strong' and *taki* 'tall/long' the use of *lluaq* is judged to be marginal:

- (82) ?sanngi-lluaq-tuq  
strong-should-DEC.3SG  
Intended: 'He/she should be strong.'
- (83) ?taki-lluaq-tuq  
tall-should-DEC.3SG  
Intended: 'He/she should be tall.'

In both cases the consultant had to nominalize<sup>40</sup> the adjectives using the declarative (participial) mood in order to use *lluaq*:

- (84) sanngi-ju-[u]-lluaq-tuq  
strong-DEC-COPULA-should-DEC.3SG  
'He/she/it should be strong' (e.g. "the coffee should be stronger")
- (85) taki-ju-[u]-lluaq-tuq  
tall-DEC-COPULA-should-DEC.3SG  
'He/she/it should be tall.'

While the consultant thought that this vowel was not long (i.e. suggesting the presence of only the nominalizing *ju(q)* mood marker but not the copula *u*), I believe this could be

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<sup>40</sup> For (82) and (83) respectively, the consultant stated that "that's when the *ju* comes around" and "that's when you add the *ju* again".

due to the fact that the long /uu/ vowel sequence followed by the geminate /ll/ creates an (underlyingly) super-heavy syllable; /...juul.luaq.tuq/ and thus the vowel sequence is shortened.<sup>41</sup>

If robust, the inability to be directly modified by *lluaq* could constitute a test for distinguishing a class of adjectives. However, there appear to be exceptions to this generalization, with other stative intransitives such as *sukka* ‘fast’ being compatible with *lluaq* without the need for nominalization:

- (86) *sukka-lluaq-tuq*  
 fast-should-DEC.3SG  
 ‘He/she should be fast.’

In sum, compatibility with the modal *lluaq* is not a reliable diagnostic to differentiate stative intransitives from verbs.

Another modal, *gunnaq* ‘can’, shows a similar pattern. It is compatible with verbs such as *ani* ‘go out’ and *kiu* ‘answer/respond’.

- (87) *ani-gunnaq-tunga*  
 go.out-can-DEC.1SG  
 ‘I can go out.’

- (88) *ila-inna-ngagut*                      *kiu-gunnaq-tunga*  
 part-only-3SG.POSS.VIALIS.SG respond-can-DEC.1SG  
 ‘I can respond partially.’                      (Legislative Assembly of Nunavut, 2004g, p. 351)

As we observed with the modal *lluaq* ‘should’, the use of *gunnaq* with stative intransitives is judged to be marginal.

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<sup>41</sup> To test this we can observe that *lluaq* requires the copula to directly modify a noun like *isimataq* ‘boss’ (which does not have /u/ as its final vowel):

(i) *isumata-\*(u)-lluaq-tuq*  
 boss-COPULA-should-DEC.3SG  
 ‘He/she should be the boss.’

(89) ?sanngi-gunnaq-tunga  
strong-can-DEC.1SG  
'I can be strong.'

(90) ?sukka-gunnaq-tunga  
fast-can-DEC.1SG  
'I can be fast.'

While nominalizing 'strong' in (89) made the utterance grammatical, as shown in (91) below, the same was not possible with (90), which the consultant deemed to be worse with nominalization, as shown in (92).

(91) sanngi-ju-u-gunnaq-tunga  
strong-DEC-COPULA-can-DEC.1SG  
'I can be strong.'

(92) ??sukka-ju-u-gunnaq-tunga  
fast-DEC-COPULA-can-DEC.1SG  
'I can be fast.'

Interestingly, when I asked whether (92) (despite its marginal status) could be used in the context of, for instance, a child requesting to run a quick errand before dinner is served, the consultant offered that she would use the verb *tuaviq* 'hurry' instead. Note that, given the nominalization involved, (92) literally means something like 'I can be a fast one'. If *sukka* 'fast' typically refers to a one's inherent speed it is likely that the problem with (92) (and why it is judged worse than (90)) is that this speed is not within one's control and thus incompatible with a modal meaning 'can'.<sup>42</sup> Conversely, in addition to referring to physical strength, *sanngi* 'strong' can refer to emotional strength, which arguably is more within one's control, and thus compatible with such a modal. Assuming this explanation of the marginality of (92) is correct, it appears that we may have arrived at a

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<sup>42</sup> Alternatively, the meaning of "(being) intentionally fast" may simply be blocked by *tuaviq* 'hurry'.

potential diagnostic to distinguish stative intransitives and verbs; the need to use nominalization and a copula in order to combine with modals such as *gunnaq* ‘can’.

As we might predict if the need to nominalize and employ a copula with modals like *gunnaq* is due to a categorial distinction between stative intransitives and verbs, it appears that (regular) verbs do not occur in this construction (i.e. with both the copula and a modal). In particular, a search of the Nunavut Hansard found only four instances of ...*juugunna(q)*... ‘... can be (nominalization)’. Three, (93)-(95), are presumably stative intransitives, while the fourth in (96), though appearing to contain a related lexeme to the stative intransitive *akitu* ‘expensive’ in (94) and (95), is more complex and may be a nominalization in its entirety, given the original English text and its allative case ending.

- (93) sanngi-ju-u-gunna-qu-llugit  
strong-DEC-COPULA-can-tell-INCONTEMPORATIVE.(1SG).3PL<sup>43</sup>  
‘for them to be strong’ (Legislative Assembly of Nunavut, 2004c, p. 330)
- (94) akitu-ju-u-gunnaq-suni  
expensive-DEC-COPULA-can-INCONTEMPORATIVE.3SG  
‘[...] could be quite costly’ (Legislative Assembly of Nunavut, 2005d, p. 1307)
- (95) akitu-ju-u-gunnaq-tut  
expensive-DEC-COPULA-can-DEC.3PL  
‘[they can be expensive]’<sup>44</sup> (Legislative Assembly of Nunavut, 2005g, p. 1884)
- (96) akiliqsui-qatau-ju-u-gunnaq-tu-mut<sup>45</sup>  
pay-together-DEC-COPULA-can-DEC-ALLAT.SG  
‘[to] her potential client’ (Legislative Assembly of Nunavut, 2004f, p. 99)

<sup>43</sup> Dorais (2003) calls this mood “imperfective appositional”. I use Allen’s (1996) “incontemporative” instead.

<sup>44</sup> The original translation was much less transparent. Below is the larger context, my consultant’s translation for each word of the two words, and then the original translation:

(i)	kiinauja-liur-uta-u-gunnaq-tut	akitu-ju-u-gunnaq-tut
	money-make-tool.for-COPULA-can-DEC.3PL	expensive-DEC-COPULA-can-DEC.3PL
	‘they can make money out of it’	‘they can be expensive’
	“Potential investments could be natural capital, [...]”	

<sup>45</sup> This example is a translation from English to Inuktitut.



In addition to ...*juugunna(q)*... not occurring with any verbs in the Hansard (as compared to the 3,380 instances in which ...*gunnaq*... appears in total), the following examples further demonstrate that this construction, while compatible with stative intransitives, as shown in (97)-(99), is not compatible with real verbs, as illustrated in examples (100)-(104):

- |       |  |   |
|-------|--|---|
| (97)  | taki-ju-u-qu-guviuk<br>tall-DEC-COPULA-want-COND.2SG.3SG<br>'If you'd like it to be tall, it can be tall.'                   | taki-ju-u-gunnaq-tuq<br>tall-DEC-COPULA-can-DEC.3SG   |
| (98)  | angi-ju-u-qu-guviuk<br>big-DEC-COPULA-want-COND.2SG.3SG<br>'If you want it to be big, it can be big.' (e.g. cooking bannock) | angi-ju-u-gunnaq-tuq<br>big-DEC-COPULA-can-DEC.3SG    |
| (99)  | akitu-ju-u-qu-guviuk<br>expensive-DEC-COPULA-want-COND.2SG.3SG<br>'If you want it to be expensive, it can be expensive.'     | akitu-ju-u-gunnaq-tuq<br>exp.-DEC-COPULA-can-DEC.3SG  |
| (100) | ani-qu-guviuk<br>go.out-want-COND.2SG.3SG<br>'If you'd like him/her to go out, he/she can go out.'                           | ani-gunnaq-tuq<br>go.out-can-DEC.3SG                  |
| (101) | sini-qu-guviuk<br>sleep-want-COND.2SG.3SG<br>'If you want him/her to sleep, he/she can sleep.'                               | sini-gunnaq-tuq<br>sleep-can-DEC.3SG                  |
| (102) | pukta-qu-guviuk<br>float-want-COND.2SG.3SG<br>'If you want it to float, it can float.'                                       | pukta-gunnaq-tuq<br>float-can-DEC.3SG                 |
| (103) | *ani-ju-u-qu-guviuk<br>go.out-DEC-COPULA-want-COND.2SG.3SG   | ani-ju-u-gunnaq-tuq<br>go.out-DEC-COPULA-can-DEC.3SG  |
| (104) | *sini-ju-u-qu-guviuk<br>sleep-DEC-COPULA-want-COND.2SG.3SG   | sini-ju-u-gunnaq-tuq<br>sleep-DEC-COPULA-can-DEC.3SG  |
| (105) | *pukta-ju-u-qu-guviuk<br>float-DEC-COPULA-want-COND.2SG.3SG  | pukta-ju-u-gunnaq-tuq<br>float-DEC-COPULA-can-DEC.3SG |

However, while stative intransitives were uniquely compatible with the copular construction, it is still possible to find examples of stative intransitives that can be combined directly with *gunnaq* ‘can’:

- (106) taki-qu-guviuk                      taki-gunnaq-tuq  
 tall-want-COND.2SG.3SG      tall-can-DEC.3SG  
 ‘If you want it to be tall, it can be tall.’      (e.g. building shelves)

Consequently, while the need to use nominalization and the copula with *gunnaq* is not a reliable diagnostic, the compatibility of roots with this construction does appear to be unique to stative intransitives (see Baker 2004 for similar arguments using copular particles as evidence for adjectives in other languages). Even verbs like *sinik* ‘sleep’ and *pukta* ‘float’ which we might have expected to have similar aspectual properties to stative intransitives cannot occur in this environment (as shown above).<sup>46</sup> Given this distinct distribution, stative intransitives appear to at least be a subtype of verb in Inuktitut, and may in fact form a separate category.

#### 2.2.1.5 Compatibility of stative intransitives with the negation marker *-it-*

Another distributional difference between stative intransitives and verbs involves the negation marker *it*. While all verbs and stative intransitives are compatible with the (default) negation marker, *nngit*, they vary in their compatibility with the marker *it*. An examination of Spalding’s (1998) dictionary of the Aivilingmiut dialect of Inuktitut

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<sup>46</sup> For instance, both activity verbs and statives are considered durative and atelic (see Comrie 1976). Notably, both pattern together in Inuktitut in terms of tense marking and temporal interpretation. Activity verbs and statives without overt tense marking receive a present (progressive) interpretation, while punctual verbs without overt tense marking receive an immediate past interpretation (see Hayashi & Spreng 2005).

reveals many examples of antonym pairs created using *it* (pp. 4, 32, 82, 83, 126, 132, original translations, glosses added).

(107)

- a. akau-juq  
good-DEC.3SG  
'it is good'
- b. aka-it-tuq  
good-NEG-DEC.3SG  
'it is bad'

(108)

- a. akɬu-juq<sup>47</sup>  
poor-DEC.3SG  
'he is poor'
- b. akɬu-it-tuq  
poor-NEG-DEC.3SG  
'he is rich'

(109)

- a. isɬuar-tuq  
beneficial-DEC.3SG  
'it is good or beneficial; it is useful or helpful; it is appropriate, prudent, or wise'
- b. isɬu-it-tuq  
beneficial-NEG-DEC.3SG  
'it is evil or malign; harmful or destructive; foolish'

(110)

- a. piala-juq  
deft-DEC.3SG  
'he is quick, light, deft, in his movements'
- b. piala-it-tuq  
deft-NEG-DEC.3SG  
'he is heavy, slow, clumsy, in his movements'

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<sup>47</sup> While Spalding uses '&' to represent the voiceless lateral fricative, I use the IPA symbol /ɬ/. This sound is often represented by 'ɬ' in orthography, however given that 'ɬ' is used to represent a velarized alveolar lateral approximant in the IPA, which could be misleading those familiar with the IPA, I prefer to use the phonetically precise symbol.

(111)

- a. piggu-juq  
strong-DEC.3SG  
'he is strong'
- b. piggu-it-tuq  
strong-NEG-DEC.3SG  
'he is weak'

(112)

- a. salumma-juq  
clean-DEC.3SG  
'it is clean; it is free of marks or smears or dirt'
- b. salumma-it-tuq  
clean-NEG-DEC.3SG  
'it is filthy; fouled with dirt or scum'

(113)

- a. sikkik-tuq  
clear-DEC.3SG  
'it is clear; it is clean and sparkling (as glass, water)'
- b. sikki-it-tuq  
clear-NEG-DEC.3SG  
'it is clouded or muggy'

In addition to stative intransitives, *it* may also appear on nouns, giving an adjectival with a meaning roughly equivalent to English 'N-less' (pp. 9, 24, 102, 120, 160, 189).

(114)

- a. annuraaq  
'piece of clothing; garment'
- b. annura-it-tuq  
garment-NEG-DEC.3SG  
'he is in a state of undress; has no clothes on'

(115)

- a. imaq  
'water; liquid; juice'
- b. ima-it-tuq  
water-NEG-DEC.3SG  
'it is bone dry'

- (116)
- a. pukiq  
‘stripe or white marking on a caribou garment; garment stripe or marking’
  - b. puki-it-tuq  
stripe-NEG-DEC.3SG  
‘fur garment or other without markings or stripes; deerskin without belly fur’
- (117)
- a. qula-a  
above-3SG.POSS.ABS.SG  
‘its above (the space above it); its ceiling; its upstairs (of a house or building or of a decked boat); its upper deck (naut.)’
  - b. qula-it-tuq  
above-NEG-DEC.3SG  
‘it has no above; no ceiling; no upstairs or upper deck; *spec.*: boat with no deck’
- (118)
- a. tipi  
‘flavour; scent; aroma; odour (taste and smell)’
  - b. tipa-it-tuq<sup>48</sup>  
flavour-NEG-DEC.3SG  
‘it is flavourless or tasteless; it is odourless’
- (119)
- a. uqaq  
‘tongue (human or animal)’
  - b. uqa-it-tuq  
tongue-NEG-DEC.3SG  
‘dumb or mute person (*lit.* - tongueless)’

However, with (real) verbs we only observe *it* modifying other modifiers, not the verbs themselves.<sup>49</sup> In the examples below it negates the meaning of an adverbial modifier or a modal (pp. 83, 86).

<sup>48</sup> The vowel alternation between *tipi* in (118) and *tipa...* in (118) is due to the fact that Proto-Eskimo possessed a fourth vowel, \*ə, and this vowel occurred in the proto-form \*təpə ‘smell’ (Fortescue et al. p. 342). In dialects that have lost this vowel it normally underwent surface neutralization with [i] but in some phonological environments it became [a]. Dorais (2003) notes that \*ə “has generally merged with /i/ when followed by a consonant, with /a/ when followed by a vowel, and it has disappeared when occurring in word-final position, after consonant /t/” (p. 33 forward-slashes added around phonemes).

<sup>49</sup> Note that while some verbs listed in Spalding’s dictionary such as *kalittuq* ‘he brushes himself against’ (p. 38) might appear to contain the negator *it*, this is simply part of the verbal root, as can be confirmed by examining their proto-forms; \*kaləγ- ‘brush up against’ (Fortescue et al. 1994 p. 154).

(120)

- a. pi-gajuk-tuq  
do-frequently-DEC.3SG  
'he does *s.t.* or gets *s.t.* frequently or always'
- b. pi-gaju-it-tuq  
do-frequently-NEG-DEC.3SG  
'he does *s.t.* or gets *s.t.* hardly ever or seldom'

(121)

- a. pi-junnar-tuq  
do-can-DEC.3SG  
'he is able to do *s.t.* or able to get *s.t.*; he can do *s.t.* or get *s.t.*'
- b. pi-junna-it-tuq  
do-can-NEG-DEC.3SG  
'he is unable to or can't do anything'

Fortescue et al (1994, p. 419) also appear to observe that *it* combines with nouns and stative intransitives, listing its meaning as “lack, have no” and “be without” but further stating that it is “also [the] contrary neg[ator] of ‘adjectival’ bases”. If stative intransitives were simply a subset of the verbal category we would not expect them to pattern with nouns in their compatibility with *it*.

#### 2.2.1.6 An inflectional difference in the Siglitun dialect

While most dialects make no inflectional distinction between stative intransitives and verbs, Schöneborn (2002, pp. 106-7) observes that at least one dialect, Siglitun, exhibits an inflectional difference in the form of the declarative mood marker when the two are used predicatively, as illustrated in the following examples:<sup>50</sup>

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<sup>50</sup> Whereas elsewhere I have treated mood and agreement morphology as portmanteau morphemes (since the form of the agreement depends on the mood) here I following Schöneborn's glossing for expository purposes. However, I continue my use of the label DECLARATIVE instead of his INDICATIVE (which I continue to reserve for the *puq/vuq*/etc. mood). Also, I continue to use <j> in the orthography instead of his <y> for the IPA /j/.

(122) *ani-jua-q*  
 go.out-DEC-3SG  
 ‘he went out’

(123) *nakuu-ju-q*  
 be.fine-DEC-3SG  
 ‘it is fine, good’

In (122) we find the form *jua* with the verb *ani* ‘go out’, while in (123) we find the variant form *ju* with the stative intransitive (Schöneborn’s “Property Denoting Lexeme”) *nakuu* ‘be fine’.

According to Lowe’s (1985) grammar of Siglitun, this dialect distinguishes between “action words” which express “an action or a state” (p. 113) and “quality words” expressing “qualities and properties” (p. 261). While the form of the declarative mood marker for “action words” is *jua/tua* in the first and third persons (singular and plural) and *ju/tu* in the second person (singular and plural), for “quality words” it is *ju/tu* across all persons, as summarized in the following table:

	with “action words”	with “quality words”
1 <sup>st</sup>	<i>jua/tua</i>	<i>ju/tu</i>
2 <sup>nd</sup>	<i>ju/tu</i>	
3 <sup>rd</sup>	<i>jua/tua</i>	

Table 4: Forms of the declarative marker in Siglitun

While Lowe notes the similarity of “quality words” to English adjectives, he maintains that they “are not grammatically distinct in Siglitun from action words” (p. 261) because, like verbs, they bear mood marking and the same person/number agreement marking as verbs. However, this difference in the form of the declarative mood marker picks out the same class of stative intransitives argued for above. For instance, the same set of Baffin

dialect predicates that were compatible with the copular modal constructions in section 2.2.1.4 above also share the *ju* declarative mood form in Siglitun, while those predicates which were not compatible with that construction in Baffin bear the *jua* forms (in first and third person) in Siglitun, as illustrated in the following examples from Lowe (1984):

- (124)
- |    |                |         |
|----|----------------|---------|
| a. | taki-juq       | (p. 59) |
|    | ‘is long’      |         |
| b. | angi-juq       | (p. 56) |
|    | ‘is big’       |         |
| c. | akitu-juq      | (p. 56) |
|    | ‘is expensive’ |         |
- (125)
- |    |            |         |
|----|------------|---------|
| a. | ani-juaq   | (p. 31) |
|    | ‘went out’ |         |
| b. | sinik-tuaq | (p. 41) |
|    | ‘sleeps’   |         |
| c. | pupta-juaq | (p. 38) |
|    | ‘floats’   |         |

Additional examples of this contrast can be found throughout Lowe (1984), (1985), and (2001). Crucially, this phenomenon picks out the same set of stative intransitives already identified above in more eastern dialects (e.g. Baffin; Aivilik).<sup>51, 52</sup>

<sup>51</sup> Both Schöneborn and Lowe note that a different pattern emerges when predicates are used as attributive modifiers of nouns. Instead of marking a categorial distinction, *jua/tua* versus *ju/tu* marks a definiteness distinction, as illustrated in the following examples from Lowe (1985, p. 262; I gloss his ‘modalis’ case as ‘oblique’):

- |      |                                      |                       |                  |
|------|--------------------------------------|-----------------------|------------------|
| (i)  | saving-mik                           | miki- <i>ju</i> -mik  | aittu-gaa        |
|      | knife-OBL.SG                         | small-DEC-OBL.SG      | give-DEC.3SG.3SG |
|      | ‘he gave him <i>a</i> small knife’   |                       |                  |
| (ii) | saving-mik                           | miki- <i>jua</i> -mik | aittu-gaa        |
|      | knife-OBL.SG                         | small-DEC-OBL.SG      | give-DEC.3SG.3SG |
|      | ‘he gave him <i>the</i> small knife’ |                       |                  |

<sup>52</sup> One might suspect that this difference in forms could be due to the status of predicates as either stage-level or individual-level (see Carlson, 1977). However, the “quality word” class appears to cut across the stage/individual-level distinction, possessing (presumably) stage-level meanings such as *arittuq* ‘wet’ (Lowe, 1984, p. 56) and *paniqtuq* ‘dry’ (p. 58) as well as individual level meanings such as *ausuktuq* ‘red’ (p. 56) and *qubyuqtuq* ‘is blond’ (p. 58). Similarly, one could ask if this might be an aspectual contrast (e.g. with “quality words” simply being durative or stative). However, we find durative members of the “action



Furthermore, Lowe's grammar outlines what appears to be an adjectivizer, *naq*, which when applied to a verb causes it to take the adjectival form of the declarative mood marker (1985, p. 265; hyphens added):

(126)

- a. *iqsi-juaq*  
'he is scared'
- b. *iqsi-naq-tuq*  
'it is scary'

(127)

- a. *qaujaqit-tuaq*  
'he slipped and fell'
- b. *qaujaqin-naq-tuq*  
'it is slippery'

(128)

- a. *yara-juaq*  
'he is tired'
- b. *yara-naq-tuq*  
'it is tiring'

In each of the above examples the addition of *naq* yields *tuq*, the adjectival variant of the declarative mood marker, instead of the verbal variant *tuaq/juaq*.

Both the existence of an inflectional difference between verbs and stative intransitives, if only in one dialect, as well as the existence of an adjectivalizer support the hypothesis that stative intransitives form a separate category of adjectives.

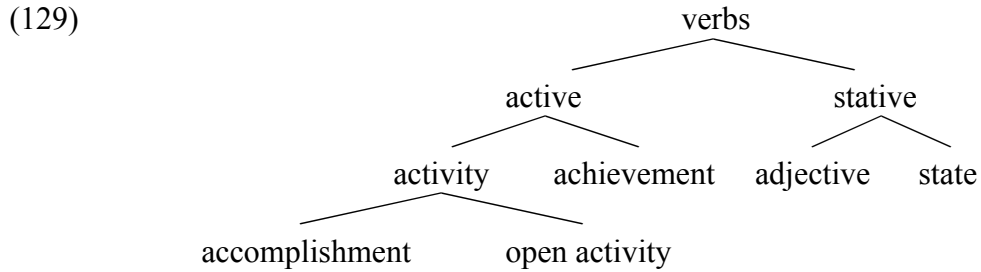
### 2.2.1.7 Class versus sub-class

A potential counter-argument to the claim that stative intransitives form an adjective class in Inuit is the possibility that they are merely a sub-class of verbs. Enfield

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word" class as well, such as *anniaqtuaq* 'is sick' (p. 31) *inuujuaq* 'is alive' (p. 38), *pijumajuaq* 'wants', and *puptajuaq* 'floats', and stative members such as *ilisimajuaq* 'knows' (Lowe, 2001, p. 31) and *ukpirusuktuaq* 'believes someone, something; trusts someone, something' (p. 163).

(2004) argues for just such a scenario in Lao (south-western Tai), claiming that the adjectives in that language form a sub-type of verbs. He presents the following taxonomy of verb sub-types (p. 329):



Enfield notes that while Lao adjectives exhibit differences with respect to reduplication, comparative and superlative constructions, and modification by intensifiers, they also exhibit the properties held by verbs such as compatibility with markers of aspect and modality, occurring alone as “affirmative responses to polar questions” (p. 328), the use of a particular relativizer, and modification by ideophones. He concludes from these shared properties that Lao adjectives are a sub-type of verbs.

However, Enfield’s taxonomy is peculiar in that while all of the other distinctions between verbal sub-types are aspectual in nature (e.g. involving telicity, durativity, etc.), it is not clear what differentiates his “adjective” verbs from “state” verbs. If both sub-types are stative, it is not clear what distinguishes them, other than lexical category.

A similar argument can be made for stative intransitives in Inuit. Despite my use of the label ‘stative intransitive’ for the class of predicates I have argued to be adjectives, there appear to exist stative predicates that are genuinely verbs such as *qaujima* ‘know’ and *uppirusu* ‘believe’ which can be distinguished from these adjectives by their incompatibility with mood marking followed by a copula in the modal context examined

(130) taki-ju-u-qu-guviuk                      taki-ju-u-gunnaq-tuq  
tall-DEC-COPULA-want-COND.2SG.3SG    tall-DEC-COP-can-DEC.3SG  
'If you'd like it to be tall, it can be tall.'

- (132)
- |    |   |                           |
|----|---|---------------------------|
| a. | *uppirusuk-tu-u-qu-guviuk                             | uppirusuk-tu-u-gunnaq-tuq |
|    | know-DEC-COP-want-COND.2SG.3SG                        | know-DEC-COP-can-DEC.3SG  |
| b. | uppirusu-qu-guviuk                                    | uppirusu-gunnaq-tuq       |
|    | believe-want-COND.2SG.3SG                             | believe-can-DEC.3SG       |
|    | 'If you want him/her to believe, he/she can believe.' |                           |

(133) taki-juq (Lowe, 1984, p. 59)  
 long-DEC.3SG  
 'it is long'

- (134) *ilisima-juaq* (Lowe, 2001, p. 471)  
 know-DEC.3SG  
 'he/she knows'

- (135) ukpirusuk-tuaq  
belive-DEC.3SG  
'he/she believes'

(Lowe, 2001, p. 163)

Insofar as stative intransitive predicates and genuine stative verbs share aspectual properties (e.g. in contrast with punctual verbs which receive a recent past interpretation in the absence of overt tense marking; see Hayashi & Spreng 2005) and given the lack of evidence for verbal declension classes in Inuit, I conclude that this contrast is categorical in nature.

#### 2.2.1.8 Summary of differences between verbs and stative intransitives

To summarize, we observe at least three differences between stative intransitives and (real) verbs. First, while stative intransitives can appear in copular constructions with modals (sometimes even requiring such structures), regular verbs are not compatible with the copular construction. Even verbs with similar lexical aspect to stative intransitives (e.g. an activity verb such as *sinik* 'sleep' and an activity verb such as *pukta* 'float' which are both durative and atelic) are incompatible with this type of copular construction.

Second, while a number of stative intransitives have antonyms that are created by the negator *it*, we do not observe verbs being directly modified by *it*. While one might counter that these antonym pairs are lexicalized, i.e. that the stative intransitives containing *it* have formed distinct roots (or idioms corresponding to structures larger than roots in a theory like DM), this simply shifts the distinction to an earlier stage of the language. Even if these are lexicalizations, there still must have been a distinction between stative intransitives and verbs at the point when the use of *it* was still productive, otherwise we would expect lexicalized combinations of *it* with verbs.

Third, in the Siglit dialect verbs and stative intransitives exhibit differences in the form of the declarative mood marker (in the first and third person). Importantly, this variant form of the declarative mood marker picks out the same set of stative intransitives as the copular construction and the *it* negator.

In both their compatibility with the copular construction and the negator *it*, stative intransitives pattern with nouns. There is no clear reason why a subtype of verbs should pattern with nouns in these two respects. However, if stative intransitives form an adjective class we can simply state that the negative marker *it* selects both nouns and (predicative) adjectives but not verbs. Similarly, the inability to use the copula with real verbs while it is compatible with stative intransitives and nouns essentially parallels the situation in English or Japanese where the copula is compatible with adjectives and nominals but not verbs:

(136)

- a. John is tall.
- b. John is a journalist.
- c. \*John is run.

(137) Japanese (Kenji Oda, p.c.)

- a. Kenji        wa        yumei    desu  
    K.           TOP     famous COPULA  
    'Kenji is famous.'
- b. Kenji        wa        gakusei   desu  
    K.           TOP     student COPULA  
    'Kenji is a student.'
- c. \*Kenji        wa        hashiru   desu  
    K.           TOP     run        COPULA

Without any explanation of why a sub-type of verb would pattern with nouns, and furthermore given that the roots in question possess denotations that are typically

instantiated as adjectives in other languages, it seems fair to conclude that stative intransitives constitute an adjective class in Inuktitut. Given their verb-like syntax, I will henceforth refer to the class of stative intransitives as VERB-LIKE ADJECTIVES (employing Dixon's (2004) label for adjective classes that can act as intransitive predicates).

## 2.2.2 Nominal modifiers as adjectives

The other potential adjective class in Inuktitut is the closed class of nominal modifiers. While the Eskimoan literature has often assumed them to be derivational morphemes (in particular within the Lexicalist framework), they exhibit properties normally associated with attributive adjectives.

### 2.2.2.1 Position of nominal modifiers

In terms of their syntactic distribution, nominal modifiers occur between nouns and their case, number, and possessor marking:

(138) nanu-ralaa-t  
polar.bear-small-ABS.PL  
'little polar bears'

(139) nanuq-jjua-p                      taku-janga                      nanu-ralaaq  
polar.bear-big-ERG.SG   see-DEC.3SG.3SG   polar.bear-small(ABS.SG)  
'The big polar bear sees the little polar bear.'

(140) ulug-jjua-ra  
ulu-big-1SG.POSS.ABS.SG  
'my big ulu (a traditional woman's knife)'

- (141) *niqi*                      *tuni-qqau-jara*                      *uvanga* *nanuq-jjua-nganut*  
 meat(ABS.SG) give-REC.PAST-DEC.1SG.3SG 1SG<sup>53</sup> p.b.-big-(3SG).POSS.ALL.SG  
 ‘I gave meat to my big polar bear.’
- (142) *niri-qqau-jugut*                      *niqi-mit*                      *uvanga*                      *iglu-ralaa-ngani*  
 eat-REC.PAST-DEC.1PL meat-OBL.SG 1SG house-small-(3SG).POSS.LOC  
 ‘We ate meat in my small house.’
- (143) *pisuk-tunga*                      *kuu-ralaa-kkut*  
 walk-DEC.1SG river-small-VIALIS.SG  
 ‘I’m walking across the little river.’

Assuming that case and number belong to functional projections above NP and that possessor morphology belongs to PossP or some other functional projection (e.g. Csirmaz (2006, p. 83) assumes “that it is the functional head *Poss*(essed) that hosts [...] agreement suffixes”), the position of nominal modifiers between these elements and the noun is consistent with an analysis in which they are AdjP adjuncts inside the NP.

### 2.2.2.2 Incompatibility of nominal modifiers with degree heads and resultatives

Of the three syntactic environments that Baker (2004, p. 191) argues are restricted to adjectives—(i) direct attributive modification of nouns, (ii) complement of degree heads, and (iii) resultative secondary predication<sup>54</sup>—nominal modifiers participate only in attributive modification. They are presumably excluded from being the complements of

<sup>53</sup> Due to a phonological change that neutralized first and second person singular possessive forms (in certain cases) a periphrastic structure has emerged to express the first person possessor in these environments using the first person pronoun *uvanga* and (presumably unmarked) third person possessor marking on the noun (Dorais, 2003, p. 95-6). For instance, Dorais gives the examples of *nuna-nni* ‘in my land’ and *nuna-ngni* ‘in your land’, which, in dialects that no longer along velar-alveolar clusters, are both neutralized to *nuna-nni* due to regressive place assimilation. So, to disambiguate the first and second person contexts, the first person is realized as *uvanga nuna-ngani* ‘in its land of mine’.

<sup>54</sup> See sections 2.2.1.1 and 2.2.1.3, and footnote 34 above for discussion of these criteria as applied to verb-like adjectives.

degree heads<sup>55</sup> and resultative secondary predicates because they are strictly attributive.

That these nominal modifiers cannot be used predicatively was illustrated in Compton &

Pittman (2010a, pp. 2178-9) with the following examples:

- (144) umingma-jjuaq  
 muskox-big(ABS.SG)  
 √‘the/a big muskox’  
 \*‘The/a muskox is big.’
- (145) iglu-viniq  
 house-old/former(ABS.SG)  
 √‘the/an old house’  
 \*‘The/an house is old.’
- (146) \*jjuaq-tuq  
 big-DEC.3SG  
 Intended: ‘It is big.’

Notice that strictly-attributive adjectives in English such as *mere*, *main*, and *former* are similarly incompatible with degree heads:

- (147)
- |                                 |                                   |
|---------------------------------|-----------------------------------|
| a. the (*so/too) mere/main idea | (cf. *The idea is mere/main.)     |
| b. the (*so/too) former capital | (cf. *The capital is/was former.) |

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<sup>55</sup> To a limited extent nominal modifiers can be modified by *vijjuaq* ‘really/damn’ which appears to be intermediate between an expressive modifier and an intensifier.

- (i) arna-tsiava-vijjuaq  
 woman-good-really  
 ‘a really good woman’
- (ii) qimmi-tuqa-vijjuaq  
 dog-old-really  
 ‘a really old dog’

Pragmatic considerations appear to affect the interpretation of *vijjuaq* as either expressive or intensifying:

- (iii) ningauma-junga niuvir-mat iglu-tuqa-vijjuar-mit  
 angry-DEC.1SG buy-BECAUSATIVE.3SG house-old-really-OBL.SG  
 ‘I’m angry that he/she bought a *damn* old house.’
- (iv) quviasuk-tunga niuvir-mat iglu-tuqa-vijjuar-mit  
 happy-DEC.1SG buy- BECAUSATIVE.3SG house-old-really-OBL.SG  
 ‘I’m happy that he/she bought a *really* old house.’



Furthermore, in English only predicative adjectives appear to be able to function as resultatives. Strictly-attributive adjectives appear to be excluded from the resultative construction:

(148)

- a. He hammered the metal flat. (cf. The metal is flat.)
- b. He made<sup>56</sup> Kim happy. (Huddleston & Pullum, 2002, p. 251)
- c. The new report made the debate insignificant/\*mere.
- d. The new report made the proposal primary/\*main.

Accordingly, the inability to combine with degree heads and occur as resultatives does not preclude nominal modifiers in Inuktitut from being adjectives, as the same restrictions apply to strictly-attributive adjectives in a language like English, yet these are still widely regarded as adjectives (e.g. Baker, 2004, p. 210; Huddleston & Pullum, 2002, pp. 553-559).<sup>57</sup>

### 2.2.2.3 Stacking and variable order of nominal modifiers

One property we might expect of adjectives is to allow stacking. Nominal modifiers in Inuktitut conform to this prediction insofar as two, three, or even four of them can modify a single noun, as illustrated in the following examples:

- (149) nanu-ralaa-nngua-t  
 polar.bear-small-pretend-ABS.PL  
 ‘small pretend polar bears’

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<sup>56</sup> While Huddleston & Pullum treat such clauses containing verbs such as *make* or *render* and an adjective as resultatives (which they classify as a type of predicative complement), Baker would likely exclude them from the class of resultatives as he specifically argues that only adjectives are compatible with (at least his interpretation of) the resultative construction, yet such verbs appear to allow nominal secondary predicates:

(i) The publicity made Kim a liability. (Huddleston & Pullum 2002, p. 252; original underscore)

However, whether or not such constructions are indeed resultatives (and consequently whether or not resultative secondary predication is indeed confined to adjectives as argued by Baker), the inability of strictly-attributive adjectives to occur as secondary predicates (of any kind) appears robust.

<sup>57</sup> Huddleston & Pullum label these adjectives as “attributive-only”.

- (150) qarisaugat-tsiavat-jjuaq  
computer-good-big(ABS.SG)  
'big good computer'
- (151) nunasiuti-nnguaq-jjuaq  
car-pretend-big(ABS.SG)  
'big pretend car'  
(consultant provided this form when asked if *nunasiuti-jjuaq* could be used to refer to a large snow sculpture of a car)
- (152) nanu-ttsiava-kulu-nnguaq  
polar.bear-good-adorable-pretend  
'good adorable pretend polar bear'
- (153) nunasiuti-ttsiava-tuqa-nnguaq  
car-good-old-pretend  
'good old pretend car'
- (154) una      nunasiuti-kulu-nngua-tuaq  
DEM.SG car-adorable-pretend-only  
'this one (is) the single adorable pretend car'
- (155) qarisauga-ralaa-kulu-tuqa-nnguaq  
computer-small-adorable-old-pretend  
'old adorable small pretend computer' (e.g. in a toy store)

While some combinations of adjectives require or prefer a particular relative order, others allow variable order. For instance, the following pairs were judged to have the same meaning:

- (156)
- a. iglu-ralaa-nnguaq  
house-small-pretend  
'pretend small house'
  - b. iglu-nngua-ralaaq  
house-pretend-small
- (157)
- a. iglu-tsiava-kuluk  
house-good-adorable  
'good adorable house'

- b. iglu-kulu-tsiavaq  
house-adorable-good

(158)

- a. qarisaujat-tsiava-ralaaq  
computer-good-small  
'small good computer'
- b. qarisauja-ralaat-tsiavaq  
computer-small-good

(159)

- a. iglu-ttsiava-kulu-nnguaq  
house-good-adorable-pretend  
'good adorable pretend house'
- b. iglu-kkulu-ttsiava-nnguaq  
house-adorable-good-pretend

While works such as Cinque (1994) and Scott (2002) have proposed a series of functional projections for various subtypes of adjectives (e.g. colour, shape, size, quality, etc.), which would predict a strict (default) ordering of attributive adjectives, Truswell (2009) argues against such analyses, showing that actual language data exhibits much greater variation than such theories predict and that alternate orders do not appear to have been derived via movement.<sup>58</sup> Such findings appear consistent with the behaviour of nominal modifiers in Inuktitut, which exhibit similar variation in order.

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<sup>58</sup> For instance, Scott (2002, p. 114) proposes the following ordering of attributive adjectives in English:

(i) determiner > ordinal number > cardinal number > subjective comment > ?evidential > size > length > height > speed > ?depth > width > weight > temperature > ?wetness > age > shape > color > nationality/origin > material > compound element > NP

However, Truswell demonstrates that much more robust generalizations would be that subjective adjectives dominate intersectives and that the position of modal adjectives such as *possible* is determined by scope. Such an analysis mirrors Ernst's analysis of adverb-ordering which also employs scope in addition to type-driven semantics. Ernst's framework is examined in Chapter 3.

#### 2.2.2.4 Most noun-modifier combinations are compositional

While some combinations of nominal modifiers and nouns appear to have become idiomatic, as shown in (160)-(162), most appear to be clear cases of compositional modification, as illustrated in (163)-(165):

- (160) qimmiq-jjuaq  
dog-big  
'horse' (also: 'big dog')

- (161) pi-nnguaq (Spalding, 1998, p. 92)  
thing-pretend  
'plaything; toy; doll'

- (162) ataata-ttiaq (Spalding, 1998, p. 13)  
father-beautiful/fine<sup>59</sup>  
'grandfather'

- (163) uqalimaarvi-jjuaq  
library-big  
'big library'

- (164) qarisaujat-tsiavaq  
computer-good  
'a very good computer'

- (165) aanniavi-tuqaq  
hospital-old  
'old health facility'  
(Legislative Assembly of Nunavut, 2005f, p. 1783 translation from English)

Notably, while the nonce forms containing multiple nominal modifiers presented in (156)-(159) above showed no change in meaning when the order of the modifiers was altered, idiomatic combinations of a noun and nominal modifier with an additional

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<sup>59</sup> The gloss for *ttiaq* was chosen based on the meaning of *pi-ttiaq* 'beautiful or fine thing' in Spalding (1998). Note that the cognate morpheme *tsiar* 'somewhat' in West Greenlandic in (25)-(26) appears to have acquired a divergent meaning.

nominal modifier lose their idiomatic meaning when the order of the modifiers is changed:

- (166) anaana-tsia-kuluk (cf. anaana-tsiaq ‘grandmother’)  
 mother-good-adorable  
 ‘dear/adorable grandmother’
- (167) ?anaana-kulut-tsiaq<sup>60</sup>  
 mother-adorable-good  
 √‘good, adorable mother’  
 \*‘adorable grandmother’

Again, we see the same type of idiomatic adjective-noun combinations in English, with similar results when another adjective intervenes:

- (168) nice little person  
 √‘nice dwarf’  
 √‘little, nice person’
- (169) little nice person  
 \*‘nice dwarf’  
 √‘little, nice person’

Similarly, Mithun (1999) gives the following examples from the related Yupik language of idiomatic modifier-noun combinations:<sup>61</sup>

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<sup>60</sup> The speaker preferred to use *tsiavaq* ‘good’ here instead of *tsiaq* ‘good’.

<sup>61</sup> Mithun describes this phenomenon in terms of scope, with the outer modifier taking scope over the inner modifier. However, notice in English that *big little person* is grammatical with the meaning ‘big dwarf’ while *little big person* is odd, since *big person* lacks an idiomatic (non-compositional) meaning, leaving *little* and *big* to contradict each other. Similarly, the following were ungrammatical for my consultant, presumably since the combinations are not idiomatic/lexicalized in her dialect and furthermore because a contrastive reading is unavailable (possibly due to the lack of productive contrastive intonation):

- (i) \*inuk-pa-ralaaq (cf. inukpaq ‘big person’)  
 person-big-small
- (ii) \*inu-ralaa-paq (cf. inuralaaq ‘small person’)  
 person-small-big

(170) yugpacuaq  
yug-pag-cuar  
person-big-little  
'little giant'

(171) yucuarpak  
yug-cuar-pag  
person-little-big  
'big midget'

Here too we see that while a modifier adjacent to the noun can form an idiom with that noun, subsequent modification is compositional, which is consistent with the behaviour of adjectives in languages like English.

#### 2.2.2.5 Optionality

Another property expected of adjectives is optionality. Except for the idiomatic combinations illustrated above, all nominal modifiers are syntactically optional: no syntactic construction selects for them. This property serves to differentiate them from functional projections insofar as functional heads are often subject to selection by higher projections (see, e.g., Wiltschko 2008 regarding optionality as a diagnostic for the adjoined, non-functional status of number in Halkomelem). However, while syntactically optional, there are at least two contexts in which these modifiers satisfy a pragmatic requirement. First, *viniq* 'former' distinguishes a living animal from its meat (e.g. *tuktuviniq* 'caribou meat') and second, *nnguaq* 'fake, pretend' is required to distinguish toys, carvings, images, etc. from the things they represent (e.g. *nanu-nnguaq* 'a polar bear carving, toy polar bear'). Since violating these restrictions results not in ungrammaticality but in unintended meanings, we can maintain the generalization that these modifiers are syntactically optional – a property predicted of adjectives.

#### 2.2.2.6 Summary of evidence for nominal modifiers being adjectives

While nominal modifiers cannot be used with degree heads or in resultative constructions, they share these properties with attributive-only adjectives in other languages, such as English. Furthermore, they can be stacked, they are optional, they exhibit variable ordering, and, although usually compositional, they sometimes become part of idiomatic combinations with nouns (e.g. *great-grandmother*). Moreover, they perform the characteristic function of adjectives, that of modifying nominals, and cannot serve as either predicates or arguments. Insofar as they possess the characteristics of at least of subtype of adjectives, I conclude that they form a class of STRICTLY-ATTRIBUTIVE ADJECTIVES and will henceforth refer to them as such.

### 2.3 Class membership and restrictions on semantic types

Given that Inuit possesses two adjective classes, one strictly-attributive and one verb-like, we might expect these two syntactic classes to have a similar membership in terms of semantics. In other words, the default assumption might be that particular semantic subtypes of adjectives should be equally likely to belong to both classes. However, while membership in the verb-like class appears relatively unrestricted, membership in the strictly-attributive class appears constrained on semantic grounds.

#### 2.3.1 Meaning range of verb-like adjectives

Dixon's (2004) typological survey of adjectives lists the following "semantic types typically associated with the word class adjective" (pp. 3-5):

(172)

- a. DIMENSION – ‘big’, ‘small’, ‘long’, ‘tall’, ‘short’, ‘wide’, ‘deep’, etc.
- b. AGE – ‘new’, ‘young’, ‘old’, etc.
- c. VALUE – ‘good’, ‘bad’, ‘lovely’, ‘atrocious’, ‘perfect’, ‘proper(/real)’, etc.
- d. COLOUR – ‘black’, ‘white’, ‘red’, etc.
- e. PHYSICAL PROPERTY – ‘hard’, ‘soft’, ‘heavy’, ‘wet’, ‘rough’, ‘strong’, ‘clean’, ‘hot’, ‘sour’, etc.
- f. HUMAN PROPENSITY – ‘jealous’, ‘happy’, ‘kind’, ‘clever’, ‘generous’, ‘cruel’, ‘proud’, ‘ashamed’, ‘eager’, etc.
- g. SPEED – ‘fast’, ‘quick’, ‘slow’, etc.
- h. DIFFICULTY – ‘easy’, ‘difficult’, ‘tough’, ‘hard’, ‘simple’, etc.
- i. SIMILARITY – ‘like’, ‘unlike’, ‘similar’, ‘different(/strange)’, ‘other’, etc.
- j. QUALIFICATION – ‘definite’, ‘true’, ‘probable’, ‘possible’, ‘likely’, ‘usual’, ‘normal’, ‘common’, ‘correct’, ‘appropriate’, ‘sensible’, etc.
- k. QUANTIFICATION – ‘all(/whole)’, ‘many’, ‘some’, ‘few’, ‘only’, ‘enough’, etc.
- l. POSITION – ‘high’, ‘low’, ‘near’, ‘far/distant’, ‘right’, ‘left(/strange)’, ‘northern’, etc.
- m. CARDINAL NUMBERS (In some languages these constitute a separate word class.) And ‘first’, ‘last’ (together with other ordinal numbers).

Dixon states that while DIMENSION, AGE, VALUE, and COLOUR are normally associated with both large and small adjective classes, medium and large classes often include members denoting PHYSICAL PROPERTY, HUMAN PROPENSITY, and SPEED, with the remaining types in (h)-(m) appearing in larger classes in some languages. If we compare these semantic classes with the set of verb-like adjectives in Inuit we find that verb-like adjectives possess a wide range of meanings and that most of Dixon’s classes are well-represented.

To begin, there are a number of verb-like adjectives that correspond to Dixon’s first class; DIMENSION. The following examples<sup>62</sup> are from Spalding’s (1998) multi-dialectal Inuktitut dictionary (original translations, glosses added):

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<sup>62</sup> All of these examples were labelled as “adj.” in Spalding, which he uses as an abbreviation for “adjective or adjectival” (p. ix), with no further explanation. While Spalding’s categorization may be based on English translations, the syntactic contrasts between verb-like adjectives and verbs presented above in section 2.2.1 seem to correlate closely with proto-typically adjectival meanings.



- (173) angi-juq (p. 9)  
big-DEC.3SG  
'it is big'
- (174) miki-juq (p. 55)  
small-DEC.3SG  
'it is small'
- (175) taki-juq (p. 150)  
tall/long-DEC.3SG  
'it is long; it is tall'
- (176) nait-tuq (p. 60)  
short-DEC.3SG  
'it is short (as short man, short pencil, short piece of string, etc.)'
- (177) silik-tuq (p. 134)  
wide-DEC.3SG  
'it is wide or broad'

For the second semantic class of AGE we find only one<sup>63</sup> verb-like adjective in Spalding's dictionary, but Lowe's (1984) dictionary of the Uummarmiut dialect includes two examples corresponding to 'old':

- (178) makkuk-tuq (p. 51)  
young-DEC.3SG  
'he is young; youthful'
- (179) aaquaq-tuq (Lowe, 1984, p. 61)  
old-DEC.3SG  
'is old (of a woman)'
- (180) angajuqaaq<sup>64</sup>-tuq (Lowe, 1984, p. 61)  
old-DEC.3SG  
'is old (of a man)'

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<sup>63</sup> The scarcity of verb-like adjectives of AGE may be due to the fact that many concepts related to age are instead expressed using nouns. Furthermore, other languages often have relatively few adjectival roots expressing age. For instance, in English we find: *new*, *young*, *old*, and *ancient* while most others are derived from nouns and verbs: e.g. *elder* > *elderly*, *age* > *teenage*, *middle-aged*, *youth* > *youthful*, etc.

<sup>64</sup> While this form is related to *angajuk* 'older brother or sister' (p. 61) it's not clear whether the relationship is synchronically compositional or historic (i.e. idiomatic/lexicalized).

Verb-like adjectives also instantiate meanings that Dixon classifies under the label *VALUE*, for instance:

(181) akau-juq (Spalding, 1998, p. 4)  
good-DEC.3SG  
'it is good'

(182) piktau-juq (p. 88)  
good-DEC.3SG  
'it is good; pleasant; to one's liking'

(183) isɬuar-tuq (p. 32)  
good-DEC.3SG  
'(very gen.) it is good or beneficial; it is useful or helpful; it is appropriate, prudent, or wise'

In addition to these forms we also find antonyms created using the negator *it* that was examined above in section 2.2.1.5. If these forms have become lexicalized as new roots (i.e. *akait* 'bad', *isɬuit* 'evil') they constitute additional instances of the *VALUE* class:

(184) aka-it-tuq (p. 4)  
good-NEG-DEC.3SG  
'it is bad'

(185) isɬu-it-tuq (p. 32)  
good-NEG-DEC.3SG  
'it is evil or malign; harmful or destructive; foolish'

We also observe a number of verb-like adjectives whose denotations correspond to Dixon's semantic class of *COLOUR*:

- (186) qirnir-tuq (p. 117)  
 black-DEC.3SG  
 ‘black; the colour black; it is black or dark colour (not light)’
- (187) qakur-tuq (p. 107)  
 white-DEC.3SG  
 ‘white; colour white; it is white or light in colour’
- (188) tungur-tuq (p. 170)  
 purple-DEC.3SG  
 ‘purple; the colour purple; it is purple’
- (189) qursur-tuq (p. 122)  
 yellow-DEC.3SG  
 ‘yellow; the colour yellow; it is yellow’

Similarly, there are many forms that could be classified as expressing PHYSICAL PROPERTY. Here are a few illustrative examples from this class:

- (190) siti-juq (p. 138)  
 hard-DEC.3SG  
 ‘it is hard (physical substance)’
- (191) uqit-tuq (p. 190)  
 light-DEC.3SG  
 ‘it is light in weight’
- (192) qausir-tuq (p. 112)  
 wet-DEC.3SG  
 ‘it is wet’
- (193) aqit-tuq (p. 11)  
 soft-DEC.3SG  
 ‘it is soft or mushy in texture (as snow, fruit)’
- (194) ipik-tuq (p. 28)  
 sharp-DEC.3SG  
 ‘it is sharp (as knife, saw, etc.)’

The HUMAN PROPENSITY class also appears to be well represented in Inuktitut by verb-like adjectives:

- (195) quviasuk-tuq (p. 122)  
happy-DEC.3SG  
‘he is happy or joyful’
- (196) kanngusuk-tuq (p. 40)  
embarrassed-DEC.3SG  
‘he is embarrassed; flustered’
- (197) tapa-juq (p. 152)  
persistent-DEC.3SG  
‘he is persistent (*gen.* - in demands, in course, in doing)’

Verb-like adjectives whose denotations pertain to SPEED are likewise represented:

- (198) kinir-tuq (p. 44)  
slow-DEC.3SG  
‘it is slow or sluggish in its movement due to friction [...], or, due to thickness of consistency or viscosity [...]
- (199) piala-juq (p. 82)  
quick-DEC.3SG  
‘he is quick, light, deft, in his movements’

We observe at least one member in each of the semantic classes of DIFFICULTY<sup>65</sup>, SIMILARITY,<sup>66</sup> and QUALIFICATION:

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<sup>65</sup> Additional verb-like adjectives with DIFFICULTY meanings such as ‘easy’ may be subject to semantic blocking by the presence of an analogous suffixal/infixed adverbial, *ttiriar*, which Spalding (1998) describes as the “infix of easy accomplishment”:

- (i) pi-ttiriar-tuq  
do-easily-DEC.3SG  
‘it is easily done or it is easily gotten’
- (ii) tiki-ttiriar-tuq  
arrive-easily-DEC.3SG  
‘it is or can be easily reached or arrived at’

<sup>66</sup> Perhaps one reason for the lack of verb-like adjectives with meanings such as ‘like’ and ‘similar’ is the existence of the SIMILARIS case which can encode these meanings.

- (i) inuk-titut  
person/Inuk-SIMIL.PL  
‘Inuktitut; Inuit language’ (*lit.* like people/Inuit)

- (200) nalunak-tuq (DIFFICULTY, p. 63)  
 confusing-DEC.3SG  
 ‘thing or situation which is unclear; perplexing; confusing’
- (201) suqqiik-tut (SIMILARITY, p. 144)  
 alike-DEC.3PL  
 ‘they are alike; they are the same’
- (202) naamak-tuq (QUALIFICATION, p. 59)  
 enough-DEC.3SG  
 ‘it is enough; adequate; sufficient; suitable; close enough or good enough’

We find at least two verb-like adjectives belonging to the class QUANTIFICATION:<sup>67</sup>

- (203) unur-tut (p. 186)  
 numerous-DEC.3PL  
 ‘they are many or numerous’
- (204) amigar-tut (p. 7)  
 few-DEC.3PL  
 ‘they are too few’

And finally, we observe examples of the POSITION class among verb-like adjectives:

- (205) kingit-tuq (p. 44)  
 high-DEC.3SG  
 ‘it is high (in relative position)’
- (206) naqit-tuq (p. 65)  
 low-DEC.3SG  
 ‘[...] (Sense 2) (adj.) - it is low (in relative position not in height)’
- (207) qanit-tuq (p. 108)  
 near-DEC.3SG  
 ‘it is near; it is close’

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<sup>67</sup> Of the examples Dixon lists in the semantic category of QUANTIFICATION, meanings such as ‘all’ and ‘some’ are potentially lexicalized as determiners or quantifiers in some languages (or, perhaps, in the sense of Distributed Morphology, correspond to the phonological exponent of a set of features belonging to multiple syntactic heads).

- (208) ungasik-tuq  
 far-DEC.3SG  
 ‘it is far or distant’

(p. 186)

Inuktitut appears to lack CARDINAL NUMBER verb-like adjectives. As Dixon suggests is common cross-linguistically, cardinal numbers appear to form a distinct class in Inuktitut, possibly belonging to the noun category since they combine directly with nominal inflection (i.e. case, number) instead of requiring mood like verb-like adjectives. Compare the numeral and the verb-like adjective in the example below:

- (209) niri-qqau-junga            marrung-nit            angi-jur-nit  
 eat-REC.PAST-DEC.1SG    two-OBL.PL            big-DEC-OBL.PL  
 ‘I’ve eaten two (of them) that are big (ones)’  
 (e.g. in response to: *niriqqauviit apumit?* ‘did you eat the/an apple?’)

In summary, verb-like adjectives in Inuktitut instantiate almost all of the meaning classes outlined by Dixon. In the next section I show that strictly-attributive adjectives are much more constrained in their range of meanings.

## 2.3.2 Meaning range of strictly-attributive adjectives

Turning now to the set of strictly-attributive adjectives, Fortescue (1980, p. 278) presents a list of forty-six of these (his “nominal modifiers”) from West Greenlandic.<sup>68</sup> Applying Dixon’s (2004) classification to Fortescue’s list we find that only the semantic classes of DIMENSION, AGE, VALUE, QUANTIFICATION, and possibly QUALIFICATION are

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<sup>68</sup> Note that a number of strictly-attributive adjectives have different meanings in West Greenlandic than other Inuit dialects. For instance, *nnguaq* is translated as ‘small, dear’ by Fortescue but appears to mean ‘fake, imitation’ in Baffin Island Inuktitut. However, shifts in meaning between dialects are not unexpected given the time depth involved. For instance, Fortescue et al (1994) suggest that “[Proto-Inuit] can be dated to around a thousand years ago” (p. xi). Such shifts appear to obey the semantic generalizations proposed later in this section involving intersectivity.

represented, with some of Fortescue's glosses suggesting membership in more than one of these classes:

(210) DIMENSION:

araq	'small'
kkajaaq	'rather big'
kullak	'rather big/clumsy'
kuluk	'bad/small/dear'
kuluuq	'big'
ngaaq	'considerable/large'
nnguaq	'small/dear'
(nnguujuk)	'little'
ralaannguaq	'tiny'
(r)suaq	'big/bad'
rujuk	'bad/big'
rujussuaq	'enormous'
tsiannguaq	'good little/usable'
tsiaq	'fair-sized'

(211) AGE:

kasik/kassak	'bad/dear old'
nnguakkuluk	'poor old'
taa	'new'
tuqaq	'old'

(212) VALUE:

kasik/kassak	'bad/dear old'
kuluk	'bad/small/dear'
pajuk/piluk	'bad'
nnguaq	'small/dear'
palaaq	'bad'
palaarsuaq	'damn'
rajuq(suaq)	'bad/damn'
ralak/rajaq	'bad/miserable'
(r)piaq	'real'
rujuk	'bad/big'
(r)suaq	'big/bad'
(r)suannguaq	'naughty'
tsialak	'good/nice'
tsiannguaq	'good little/usable'
vvaarik	'particularly good'

vik                    ‘real’

(213) QUANTIFICATION:

innaq                ‘only’  
(pa)aluit           ‘a few/group of’  
(r)paat/passuit   ‘many/crowd of’  
tuaq                ‘the only’

(214) QUALIFICATION:

(kanniq)           ‘almost/more or less’<sup>69</sup>

Of the remaining strictly-attributive adjectives in West Greenlandic listed below in (215), none appear to fall under Dixon’s typologically common classes of COLOUR, PHYSICAL PROPERTY, HUMAN PROPENSITY, SPEED, DIFFICULTY, SIMILARITY, or POSITION.

(215) Fortescue’s “nominal modifiers” falling outside Dixon’s classification:

(gi)galuaq        ‘something which otherwise/formerly’  
liaq                ‘something made’  
ngajak            ‘almost’  
nnaq/nnaaq       ‘main/favorite’  
qat<sup>70</sup>              ‘fellow’  
(q)ut              ‘possessed by’  
siaq                ‘bought/found’  
ssamaaq          ‘intended’  
ssaq                ‘future’  
ssa(tsia)rsuaq   ‘something that should have been’  
taq                ‘pertaining to’  
ugaluaq          ‘previous/deceased’  
uniq                ‘highest/chief’

Notably, despite Dixon’s observation that COLOUR is one of the four semantic classes common to even small adjective classes, no strictly-attributive adjective has a colour

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<sup>69</sup> This form could potentially be grouped in Dixon’s QUANTIFICATION class. Fortescue places this form and *nnguujuk* in (210) above in parentheses because they are “rather less productive (but common)” (p. 273).

<sup>70</sup> Fortescue also lists *qat* as a nominalizer with the meaning ‘fellow in/at’ (p. 278). The adjectival use/meaning may be derived from this.



meaning. Conversely, while Dixon states that QUANTIFICATION and QUALIFICATION are typically associated with larger adjective classes, we observe such adjectives in this (relatively) small class of adjectives, while semantic classes common to even smaller medium-sized adjective classes such as PHYSICAL PROPERTY are not represented.

Expanding our view beyond West Greenlandic, we find a similar situation in other Inuit dialects. Fortescue's (1983) comparative affix manual lists the strictly-attributive adjectives (his "nominal modifiers") in Tarramiut (Arctic Quebec), Copper (Inuinnaqtun spoken in Kugluktuk, Nunavut), and North Slope (Alaskan Iñupiaq). Of the fifty entries for Tarramiut he notes three adjectives without West Greenlandic equivalents (p. 54):<sup>71</sup>

(216)	limaaq	'all'
	qutit	'little – exclamatory'
	tsaaq	'second/spare'

From the twenty-seven adjectives listed for Copper, only one lacks a West Greenlandic correlate (p. 55):

(217)	nahiq	'nasty/miserable'
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Finally, among the thirty-four adjectives from North Slope, four had no equivalent in West Greenlandic (p. 55):

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<sup>71</sup> Fortescue uses a superscript percentage sign '%' to indicate that an affix "has no exact equivalent in W[est] Greenlandic" (p. 4). By "exact equivalent", he appears to be referring exclusively to meaning since analogous adjectives in the other dialects which have distinct phonological forms are not marked with this diacritic.

(218)	<i>ajaaq</i>	‘young/half-breed’
	<i>gšižžun/gšiusiaq</i>	‘received as gift’
	<i>kaa</i>	‘usual’
	<i>paluk</i>	‘what a big!’

As with the adjectives from West Greenlandic examined above, most of these additional adjectives fall into the same classes of DIMENSION (*qutit* ‘little – exclamatory’, *paluk* ‘what a big!’), AGE (*ajaaq* ‘young/half-breed’), VALUE (*nahiq* ‘nasty/miserable’<sup>72</sup>), QUALIFICATION (*kaa* ‘usual’), and QUANTIFICATION (*limaaq* ‘all’), with *tsaaq* ‘second/spare’ presumably belonging to the class of CARDINAL NUMBERS<sup>73</sup> and *gšižžun/gšiusiaq* ‘received as gift’ falling outside Dixon’s typology. Once again, we do not find adjectives belonging to the other semantic classes such as COLOUR and PHYSICAL PROPERTY.

The presence of strictly-attributive adjectives expressing AGE, VALUE, and DIMENSION in all of these dialects, along with the absence of such adjectives expressing COLOUR or PHYSICAL PROPERTY, can be (preliminarily) explained by the generalization that this class appears to lack members with intersective denotations. According to Partee (2007), intersective adjectives satisfy the following meaning postulate for any noun (p. 151 original italics):

$$(219) \quad \llbracket \textit{carnivorous } N \rrbracket = \llbracket \textit{carnivorous} \rrbracket \cap \llbracket N \rrbracket \quad (\text{intersective})$$

In other words, the denotation of a noun modified by an intersective adjective is the intersection of the denotations of the adjective and the noun. Consequently, an intersective adjective such as *carnivorous* maintains the same interpretation regardless of

<sup>72</sup> The adjective *nahiq* ‘nasty/miserable’ could also belong to Dixon’s HUMAN PROPENSITY class.

<sup>73</sup> Dixon includes ordinal numbers in his semantic class of CARDINAL NUMBERS (see (172) above).

the noun it modifies. The strictly-attributive class in Inuktitut appears to lack adjectives which would satisfy the meaning postulate in (219), e.g. colours, geometric shapes, substances, nationalities, styles, etc. Instead, we seem to find only adjectives with subsective and privative denotations in this class. Partee provides the following meaning postulates for subsective adjectives and privative adjectives (p. 151):

(220)  $\llbracket \textit{skillful } N \rrbracket \subseteq \llbracket N \rrbracket$  (subsective)

(221)  $\llbracket \textit{counterfeit } N \rrbracket \cap \llbracket N \rrbracket = \emptyset$  (privative)

Essentially, subsective adjectives such as *skillful* pick out a subset of the denotation of the nouns they modify while privative adjectives such as *counterfeit* actually “entail[...] the negation of the noun property”.<sup>74</sup>

Potential exceptions to the generalization that the set of strictly-attributive adjectives in Inuktitut lacks intersective members include the following:

(222) *liaq* (West Greenlandic)  
‘something made’

(223) *siaq* (West Greenlandic)  
‘bought/found’

(224) *gšižžun/gšiusiaq* (North Slope Iñupiaq)  
‘received as gift’

However, *liaq*, *siaq*, and *gšiusiaq* all appear to be passive participles. For instance, Fortescue et al (1994, p. 405) lists the proto-Eskimoan form *\*li(C)ar* ‘made thing’ alongside a note suggesting it is a conflation of *\*li* ‘make’ and *\*ar* ‘passive participial’ marker (or the modern *jaq*). Similarly, *siaq* appears to be a contraction of *\*si* ‘acquire, get,

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<sup>74</sup> Early discussion of intersective, subsective, and privative adjectives appear in Montague (1970) and Higgenbotham (1985).

buy, find’ and the passive participial marker. Furthermore, *gšiusiaq* ‘received as gift’ appears to subsume *siaq*, which already includes the participial morpheme. The other variant of *gšiusiaq* in (224), *gšižžun*, while lacking the participial ending, appears to contain the nominalizer *\*un* ‘means for doing’,<sup>75</sup> suggesting that *gšižžun* may in fact be a nominalizer. Consequently, “nominal modifiers” with potentially intersective denotations turn out to be either passive participles or nominalizers<sup>76</sup> whose denotations likely involve more complex semantic types than those of intersective adjectives. For instance, Kratzer (2001, p. 14) assigns the English participle *emptied* the following denotation encompassing variables for event *e*, state *s*, and interval of time *t*:

(225)  $\lambda x \lambda t \exists e \exists s [\text{empty}(x)(s) \ \& \ \text{cause}(s)(e) \ \& \ \tau(e) \subseteq t]$

Similarly, nominalizers presumably change the semantic type of the constituent with which they compose, and thus cannot be construed intersectively, suggesting that intersective denotations are indeed lacking from the set of strictly-attributive adjectives.

## 2.3.3 Analysis

### 2.3.3.1 Predicate Modification

I propose that the lack of intersective denotations in the class of strictly-attributive adjectives is not merely an accidental gap in lexicalization (i.e. that all intersective denotations just happen to have been instantiated as verb-like adjectives instead of

<sup>75</sup> The form *gšižžun* ‘received as gift’ appears to be derived from *(a)gšit* ‘give to’ (Fortescue 1983, p. 37) and either *\*un* ‘means for doing’ (Fortescue et al 1994, p. 430) or *\*ci(C)un* ‘instrument for -ing’ (p. 395).

<sup>76</sup> Both *liaq* and *siaq* also appear to have uses as nominalizers in Inuktitut. For instance, *sikuliaq* ‘(n. meteor) - new fairly thin ice which is possible to walk on’ appears to be combination of *siku* ‘ice; sea ice’ and *liaq* ‘something made’ (Spalding 1998, p. 132). Similarly, *ikajuusiaq* ‘subsidy, benefit’ appears to be a combination of the verb *ikajurtuq* ‘he helps’ and *siaq* ‘bought/found’ (Legislative Assembly of Nunavut, 2001b, p. 349; 2002d, p. 1054; 2004e, p. 792; translations into Inuktitut from English).

strictly-attributive adjectives). Specifically, I propose that intersective strictly-attributive adjectives are not attested because Inuktitut lacks a rule of Predicate Modification.

Heim & Kratzer (1998, p. 65) propose a rule of Predicate Modification to handle cases of modification in which both the modifier and the modified element share the same semantic type; i.e.  $\langle e, t \rangle$ . They formalize the rule of Predicate Modification as follows (*italics in original*):

(226) *Predicate Modification* (PM)

If  $\alpha$  is a branching node,  $\{\beta, \gamma\}$  is the set of  $\alpha$ 's daughters, and  $\llbracket \beta \rrbracket$  and  $\llbracket \gamma \rrbracket$  are both in  $D_{\langle e, t \rangle}$ , then

$$\llbracket \alpha \rrbracket = \lambda x \in D_e . \llbracket \beta \rrbracket(x) = \llbracket \gamma \rrbracket(x) = 1.$$

For instance, they note that in the string *city in Texas* both the noun *city* and the PP modifier *in Texas* are of type  $\langle e, t \rangle$  and thus composition via Functional Application, (whereby one node acts as a functor taking the other as its semantic argument), is impossible since both nodes are of the same type. Instead, their rule of Predicate Modification conjoins the denotations of the noun and its modifier (original boldface, *ibid.*):

(227)  $\llbracket \mathbf{city\ in\ Texas} \rrbracket$

$$= \lambda x \in D_e . \llbracket \mathbf{city} \rrbracket(x) = \llbracket \mathbf{in\ Texas} \rrbracket(x) = 1$$

$$= \lambda x \in D_e . x \text{ is a city and } x \text{ is in Texas.}$$

Predicate Modification is also used to compute the denotations of nouns modified by intersective adjectives such as *gray*, which are also of type  $\langle e, t \rangle$ , in the same manner. For instance, the denotation of *gray cat* in (228) conjoins the denotations of the branches (in the same manner as outlined for *city in Texas* in (227) above) while maintaining the semantic type  $\langle e, t \rangle$ .

$$\begin{array}{c}
 (228) \quad \llbracket \text{gray cat} \rrbracket : \langle e, t \rangle \\
 \swarrow \quad \searrow \\
 \llbracket \text{gray} \rrbracket : \langle e, t \rangle \quad \llbracket \text{cat} \rrbracket : \langle e, t \rangle
 \end{array}$$

However, they also note that Functional Application could be used to compute such denotations if we assign such modifiers the type  $\langle \langle e, t \rangle, \langle e, t \rangle \rangle$ , thereby allowing them to compose with type  $\langle e, t \rangle$  nouns. But, given that intersective adjectives can also act as main predicates, as in *Julius is gray* (p. 67), they admit that this solution requires that we assign the copula an ambiguous denotation; on one hand shifting type  $\langle \langle e, t \rangle, \langle e, t \rangle \rangle$  adjectives to type  $\langle e, t \rangle$  when they act as main predicates, while elsewhere the copula would be semantically inert (e.g. with predicate nominals such as in *Julius is a cat*). Alternatively, they consider allowing intersective adjectives to have an ambiguous denotation;  $\langle e, t \rangle$  when acting as main predicates and  $\langle \langle e, t \rangle, \langle e, t \rangle \rangle$  elsewhere, although this would arguably add considerable complexity into the lexicon (i.e. having two denotations listed for each adjective of this type) or require a type-shifting rule. Finally, they offer the possibility that adjectival predicates may contain additional “non-overt functional structure” such as a covert pronoun, meaning that *Julius is gray* would have an underlying structure roughly equivalent to *Julius is (a) gray (one)*.

Despite Heim & Kratzer’s lack of certainty about Predicate Modification as a distinct mode of composition, later work has made use of it to explain a variety of phenomena. For instance, Keshet’s (2008) analysis of *de re/de dicto* intensionality relies on Predicate Modification, introducing a constraint or generalization that the “two nodes combined via Predicate Modification must be evaluated at the same world and time” (p.

3).<sup>77</sup> Another example is Katz (2008) who argues that “manner modification of state verbs is a highly constrained phenomenon which receives a better analysis as classical predicate modification” (p. 247). Yet another example is Pylkkänen (2002, p. 28) who uses Predicate Modification in the composition of depictive secondary predicates.

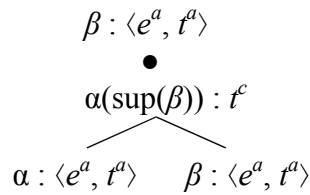
Both Chung & Ladusaw (2006) and Morzycki (2008) propose modified versions of Predicate Modification. Chung & Ladusaw name their version *Modify* and define it as an operation that combines two properties “by creating a new property from their intersection”, as illustrated in (229) below for *black cat*.

$$(229) \text{ MODIFY}(\lambda x[\text{cat}'(x)], \text{black}') = \lambda x[\text{cat}'(x) \wedge \text{black}'(x)] \quad (\text{p. 337})$$

They go on to argue that while *Modify* is a “nonsaturating operation that composes the property content of an NP with the property content of a modifier” it also introduces an asymmetry and is thus more complex than simple Predicate Modification. Similarly, Morzycki proposes the rule of Expressive Predicate Modification in (230) below (building on the framework in Potts 2005 presented in section 2.3.3.3 below) in order to account for the meanings of non-restrictive modifiers.

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<sup>77</sup> Imposing a similar constraint on Functional Application would be problematic, as it would presumably prevent derivations from containing multiple times/worlds. While such a constraint could be restricted to specific syntactic categories or environments, this would be rather stipulative and defeat the purpose of Keshet’s generalization, which cuts across a number of syntactic constructions by constraining a single semantic rule.



This rule allows an expressive modifier  $\alpha$  to modify a node  $\beta$  non-restrictively, creating a supplementary (i.e. comment-like) expression in which “the *sup[renum]* operator picks out the largest plural individual in the extension of the modified expression ( $\beta$ )” and this plural individual acts as the argument of  $\alpha$ . Concurrently, the rule also outputs  $\beta$  unmodified (so as to be available to subsequent composition in a larger structure). Morzycki argues that this rule can account for non-restrictive readings of sentences such as the following (p. 103; original emphasis):

- (231) Every *unsuitable word* was deleted.
- a. **Restrictive:** Every word that was unsuitable was deleted.
  - b. **Nonrestrictive:** Every word was deleted; they were unsuitable.

While diverging from Heim & Kratzer’s instantiation of Predicate Modification in various respects, both of these analyses involve composing two constituents of the same semantic type, yielding an object of identical type (with Morzycki’s Expressive Predicative Modification rule also producing an extra semantic object in a secondary expressive dimension of meaning).

Finally (and bearing directly on the present analysis of adjectival modification) Svenonius (2008) employs Predicate Modification in his analysis of adjective ordering in English and cross-linguistically. First, he notes that Muromatsu (2001) and Truswell (2004) argue that dimension adjectives “must merge above the head which creates



countable entities out of masses (Borer's Cl, Truswell's Div, [his] SORT" (pp. 37-38)). He argues that since mass nouns lack such a head, they are incompatible with dimension adjectives, as he illustrates in the examples below:

(232)

- a. red liquid, expensive liquid, French mustard
- b. \*big liquid, \*tiny salt, \*long mustard

Furthermore, he points out that "dimension adjectives consistently precede color, origin, and material adjectives", providing the following examples:

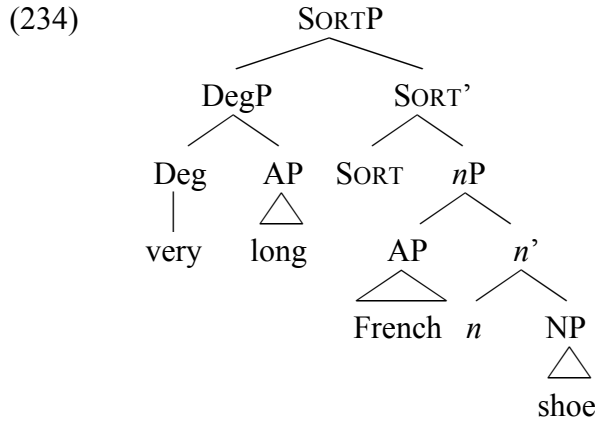
(233)

- a. a big expensive vase; \*?an expensive big vase
- b. tiny red hats; \*?red tiny hats
- c. long French shoes; \*?French long shoes

Beyond English, Svenonius notes that "the order of prenominal adjectives tends to be similar cross-linguistically", while languages with post-nominal adjectives either exhibit the English pattern or its mirror (p. 34). To account for these facts he proposes that while intersective adjectives combine with *nP* via Predicate Modification<sup>78</sup>, modification by subsective adjectives (such as dimension adjectives) must occur above the SORT head that makes nouns countable (and also involves a Degree head), as illustrated in the following tree diagram (p. 38):

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<sup>78</sup> While not naming Predicate Modification specifically, his statements that this modification is "essentially intersective" (p. 38) and furthermore that "only predicates of the same semantic type as *nP* can modify it" appear to unambiguously pick out this mode of composition.



So, while *French* in (234) combines with the *nP* containing *shoe* via Predicate Modification, the DegP *very long*, presumably instantiating a more complex semantic type, must combine with SORTP using Functional Application.

In summary, while the existence of Predicate Modification as a separate mode of semantic composition is not universally accepted, based on its use in the various works cited above (some of which crucially depend on it) and in particular Svenonius' use of intersective modification to help explain the distinct positions of intersective and subsecutive adjectives cross-linguistically, I will assume that it exists (at least parametrically) as a distinct mode of semantic composition separate from Functional Application. Furthermore, following Svenonius, I assume that modification by intersective adjectives occurs via Predicate Modification.<sup>79</sup>

<sup>79</sup> Cinque (2010) argues for a very different analysis of adjective ordering that splits adjectives into two classes: "direct modification adjectives" and those resulting from reduced relative clauses. In his framework the former set are argued to be functional and licensed by multiple dedicated functional heads above the NP (in a manner analogous to his analysis of adverbs, see Chapter 3), while the latter set (contained with reduced relative clauses) are merged in a higher base position. While Cinque assigns adjectives confined to attributive usage and belonging to closed classes in languages such as Yoruba to his "direct modification" class, Inuit strictly-attributive adjectives exhibit considerable variation in ordering that is not predicted under an analysis in which they are licensed by (or belong to) a fixed hierarchy of functional heads (see examples (156)-(159) above).

Accordingly, if a language were to lack a rule of Predicate Modification, we would expect it to lack attributive modification by intersective adjectives. I argue that this is the case in Inuktitut, as there is no real attributive modification by intersective adjectives.<sup>80</sup> The strictly-attributive class of adjectives lacks members with intersective denotations (as discussed above in section 2.3.2) and I argue in the following section that when verb-like adjectives modify nouns they are actually appositives and that, consequently, their semantic composition does not involve Predicate Modification.

### 2.3.3.2 Appositive modification by verb-like adjectives

I propose that when verb-like adjectives modify a noun they are in fact DPs in apposition with the noun.<sup>81</sup> Evidence for this analysis includes (i) case marking on these modifiers (including the possibility of case mismatches), (ii) the similarity of the syntax of such modifiers to that of unambiguously nominal appositives, (iii) the fact that the head noun can be omitted and the modifier can stand as an argument, (iv) the possibility of discontinuity between a noun and its modifier, and (v) the behaviour of such modifiers in noun-incorporation. I examine each of these types of evidence below.

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<sup>80</sup> Conversely, such a language could still use adjectives predicatively (e.g. with a semantically vacuous copula as in English or Baker's PRED), since they will be able to compose with a type  $\langle e \rangle$  subject via Functional Application.

<sup>81</sup> While the appositive status of these modifiers was more or less assumed in Compton & Pittman (2010a), here I argue it much more extensively.

### 2.3.3.2.1 Case-marking and case mismatches

Potts (2005, p. 107) provides the following examples of the case-marking of appositives in German (the latter two of which come from Durrell (1995, p. 37; glosses modified)).<sup>82</sup>

- (235) Wir sprachen mit Jan, dem welterühmten Radfahrer.  
we spoke with Jan the.DAT world.famous.DAT cyclist  
'We spoke with Jan, the world famous cyclist.'
- (236) Ich sah meinen Freund, den Pfarrer.  
I saw my.ACC friend, the.ACC parson  
'I saw my friend, the parson.'
- (237) nach dem Tod meines Onkels, des früheren  
after the death my.GEN uncle.GEN the.GEN former.GEN  
Bürgermeisters der Stadt  
mayor.GEN the.GEN city  
'after the death of my uncle, the former mayor of the city,'

He notes that in (235) the appositive DP *dem welterühmten Radfahrer* matches the (phonologically null) dative case of *Jan* (assigned by *mit*), in (236) both the object *meinen Freund* and its appositive modifier *den Pfarrer* bear accusative case, and in (237) the modifier *meines Onkels* and its appositive share genitive case.

If Inuktitut verb-like adjective modifiers are in fact appositives, we might expect a similar pattern, with case-marking on both head nouns and their modifiers, since each modifier constitutes a separate DP. As illustrated in section 2.2.1.1, when verb-like adjectives and verbs modify a noun they normally bear the same case as that noun (in addition to declarative/participial mood). The following examples are repeated from (49)-(52):

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<sup>82</sup> I have also made the following two corrections. Potts's *Radfather* has been corrected to *Radfahrer*. Similarly, while Potts's version of Durrell's second sentence contains *Todes*, I have reverted to the original *Tod*.

- (238) anguti taki-juq taku-qqau-juq  
 man(ABS.SG) tall-DEC(ABS.SG) see-REC.PAST-DEC.3SG  
 arnar-mit nait-tu-mit  
 woman-OBL.SG short-DEC-OBL.SG  
 ‘The tall man saw the short woman.’
- (239) taki-ju-up arna-up niri-janga aapu  
 tall-DEC-ERG.SG woman-ERG.SG eat-DEC.3SG.3SG apple(ABS.SG)  
 ‘The tall girl is eating the apple.’
- (240) anguti uglak-tuq taku-qqau-juq  
 man(ABS.SG) run-DEC(ABS.SG) see-REC.PAST-DEC.3SG  
 sinik-tu-mit arnar-mit  
 sleep-DEC-OBL.SG woman-OBL.SG  
 ‘The man who is running saw the woman who is sleeping.’
- (241) ani-ju-up arna-up niri-janga aapu  
 go.out-DEC-ERG.SG woman-ERG.SG eat-DEC.3SG.3SG apple(ABS.SG)  
 ‘The woman who went out is eating the apple.’  
 (Consultant: “The one who went out, the girl, is eating the apple.”)

In (238) we see oblique case on both the object noun and its verb-like adjective modifier. Similarly in (240), both the object noun and its verbal modifier bear oblique case. In both of these examples we do not see any overt case marking on the modifiers of the nouns in absolutive case, but this is expected since absolutive singular is phonologically null. Finally, in both (239) and (241) we find ergative case on both the subject nouns and their verb-like adjective and verbal modifiers, respectively. Such examples are consistent with the hypothesis that these modifiers are appositives DPs.

In addition to ergative, absolutive, and oblique cases, we also observe allative and vialis case marking on verb-like adjectives, as in (242) and (243):

- (242) anguti pisuk-tuq iglu-mut taki-jur-mut  
 man(ABS.SG) walk-DEC.3SG house-ALLAT.SG tall/long-DEC-ALLAT.SG  
 ‘The man is walking to(ward) the tall/long house.’

- (243) anguti            pisuk-tuq            kuu-kkut            taki-ju-kkut  
 man(ABS.SG) walk-DEC.3SG river-VIALIS.SG tall/long-DEC-VIALIS.SG  
 ‘The man is walking across the long river.’

However, in some instances we observe a case mismatch between the noun and the adjective. For instance, in (244)-(245) the object nouns bears allative case while the adjectives modifying them bear oblique case:

- (244) anguti            pisuk-tuq            quviasuk-tu-mit    arnar-mut  
 man(ABS.SG) walk-DEC.3SG happy-DEC-OBL.SG woman-ALLAT.SG  
 ‘The man is walking to(ward) the happy woman.’
- (245) anguti            pisuk-tuq            sanngi-ju-mit        paliisi-mut  
 man(ABS.SG) walk-DEC.3SG strong-DEC-OBL.SG police.officer-ALLAT.SG  
 ‘The man is walking to(ward) the strong police officer.’

The possibility of this type of case mismatch between the noun and the adjective further supports an analysis whereby such modifiers are DP appositives, since if case-marking on modifiers is merely concord within a single DP we would expect the same case to appear on both elements. Interestingly, Potts cites similar instances of case-mismatches in German as reported by Durrell. For instance, Potts notes that “a genitive anchor usually takes a nominative or dative appositive” and that “a weekday given as the object of the preposition *am* (‘on.DAT’) can take a dative or accusative appositive date” (p. 107).

In summary, case-marking on verb-like adjective modifiers and the possibility of mismatches coincides with analogous case patterns of apposition in German, suggesting that these too are appositive constructions consisting of two DPs.

### 2.3.3.2.2 Comparison with noun-noun apposition in Inuktitut

Further support for verb-like adjective modifiers (and verbal modifiers) being appositives can be garnered by a comparison with unambiguously nominal appositives in Inuktitut, such as those in (246) and (247):

- (246) qallunaa-p                      ilisaiji-up                      niri-janga                      aapu  
white.person-ERG.SG   teacher-ERG.SG   eat-DEC.3SG.3SG   apple(ABS.SG)  
‘the white person, the teacher, is eating an apple’

- (247) asivaqti-up                      ilisaiji-up                      niri-janga                      aapu  
hunter-ERG.SG   teacher-ERG.SG   eat-DEC.3SG.3SG   apple(ABS.SG)  
‘the hunter, the teacher, is eating an apple’  
(when asked to translate into English: “little bit odd in English”)

We see the same pattern with these nominal appositives as we saw with verb-like adjectives in (238)-(239); case and number is marked on both nouns. This fits with the hypothesis that verb-like adjectives are in fact appositive DPs. Further evidence that these noun-noun apposition constructions contain two DPs (and not merely a noun or NP modifier inside a single DP) comes from the possibility of both nouns bearing possessive morphology for distinct possessors:<sup>83</sup>

- (248) nuka-ga                                      anaana-it                                      ani-juq  
jr.sibling-POSS.1SG(ABS.SG)   mother-POSS.2SG(ABS.SG)   go.out-DEC.3SG  
‘my younger sibling (of same gender)<sup>84</sup>, your mother, went out’

- (249) akka-ga                                      nuka-it                                      ani-juq  
uncle-POSS.1SG(ABS.SG)   jr.sibling-POSS.2SG(ABS.SG)   go.out-DEC.3SG  
‘my uncle, your younger sibling (of same gender), went out’

<sup>83</sup> Note that with verb-like adjectives, however, possessive marking only occurs on the head noun:

(i) sana-lauq-tuq                      angi-jur-mit                      iglu-ganit  
build-DIST.PAST-DEC.3SG   big-DEC-OBL.SG   house-3.POSS.OBL.SG  
‘He/she built his/her big house.’

While the possibility of possessive marking on verb-like adjective modifiers would have strengthened the analysis that these are separate DPs, such data is analogous to the Salish example presented in (23) above in which only DPs headed by a genuine nominal root can host possessive marking in predicative contexts.

<sup>84</sup> The term *nukaq* means “younger brother of a man or younger sister of a woman” (Spalding 1998, p. 74).

Again, such data would be difficult to account for if we were to posit only a single DP. Conversely, the possibility of two distinct possessor positions falls out naturally from two DPs in apposition.<sup>85</sup>

### 2.3.3.2.3 Ability of case-marked verb-like adjectives to stand as arguments

Further evidence for verb-like adjectives being DP appositives comes from the fact that these modifiers can also be used as arguments without nouns and without adding any additional morphology to nominalize them. In other words, the head nouns in constructions like (239) and (241) can be dropped without altering the remaining surface string:

- |       |  |                               |                       |
|-------|--|-------------------------------|-----------------------|
| (250) | taki-ju-up<br>tall-DEC-ERG.SG<br>‘the tall one is eating an apple’           | niri-janga<br>eat-DEC.3SG.3SG | aapu<br>apple(ABS.SG) |
| (251) | ani-ju-up<br>go.out-DEC-ERG.SG<br>‘the one who went out is eating the apple’ | niri-janga<br>eat-DEC.3SG.3SG | aapu<br>apple(ABS.SG) |

The fact that the nouns can be elided without affecting the remaining structure is consistent with the hypothesis that verb-like adjective modifiers are actually appositive DPs. The ability of verb-like adjectives and verbs bearing declarative/participial mood to act as arguments has even led some authors (e.g. Mallon, 1995) to treat the *-juq/-tuq* mood marker as homophonous with a *-juq/-tuq* nominalizer meaning ‘one who/something that does the action’.

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<sup>85</sup> Note that even if the DP appositive is contained within the DP of the head noun (e.g. as an adjunct), this still provides a second position for an additional possessor.



#### 2.3.3.2.4 Discontinuity between nouns and verb-like adjective modifiers

Additional evidence for verb-like adjectives being appositive DPs comes from their ability to be discontinuous from the nouns they modify, as in (252), or even to be discontinuous from another modifier while the noun is elided, as illustrated in (254) as compared to (253).

(252) apu-mit            niri-qqau-junga            angi-jur-mit  
apple-OBL.SG eat-REC.PAST-DEC.1SG big-DEC-OBL.SG  
'I ate a big apple.'

(253) niri-qqau-junga            marrung-nit            angi-jur-nit  
eat-REC.PAST-DEC.1SG two-OBL.PL            big-DEC-OBL.PL  
'I ate two big ones.'  
(e.g. in response to: niriqqauviit apumit? 'Did you eat an apple?')

(254) marrung-nit            niri-qqau-junga            angi-jur-nit  
two-OBL.PL            eat-REC.PAST-DEC.1SG big-DEC-OBL.PL  
'I ate two big ones.'

Positing that these modifiers are all (coindexed) DPs offers an explanation as to why they can be discontinuous. Notice that while English permits parenthetical DPs to be discontinuous from the nouns they modify (or are co-referential with), adjectives cannot be discontinuous in this way:

(255) A pumpkin fell off my truck; a big one.

(256) \*A pumpkin fell off my truck; big.

Presumably (256) is not possible because English adjectives cannot stand alone as (parenthetical) DPs.<sup>86</sup> Conversely, the ability of verb-like adjectives to be discontinuous in Inuktitut suggests that they are in fact DPs.

### 2.3.3.2.5 Stranded modifiers bear case in noun-incorporation constructions

Finally, the fact that in noun-incorporation constructions the incorporated NP bears no case marking while a stranded verb-like adjective modifier bears the case that we would have expected<sup>87</sup> on an unincorporated object noun suggests that case marking on such modifiers is more than just (surface) case concord:

- (257)    angi-jur-mit                    iglu-liu-lauq-tunga                    (Compton, 2008)  
           big-DEC-OBL.SG            house-make-DIST.PAST-DEC.1SG  
           ‘I made a big house.’
- cf.       iglu-mit            angi-jur-mit            sana-lauq-tunga  
           house-OBL.SG    big-DEC-OBL.SG       build-DIST.PAST-DEC.1SG  
           ‘I build a big house.’

In accounts of noun-incorporation such as Baker (1996) and Johns (2007) incorporated nouns are not assigned case. Accordingly, claiming that case on stranded modifiers is due to concord with the incorporated noun would be implausible. For instance, in Baker’s account, case assignment and incorporation are in complementary distribution (since both are methods of satisfying his Morphological Visibility Condition). Similarly, Johns’s account does not predict case concord between incorporates and their modifiers. She proposes that clauses in Inuit has an EPP-ROOT feature that can only be satisfied by a

<sup>86</sup> While this may be because English lacks covert N/N’, the possibility of discontinuous verb-like adjectives in Inuktitut suggests that they are, at the very least, nominalizations.

<sup>87</sup> Specifically, noun-incorporating verbs behave like verbs in the anti-passive; agreeing with only the absolutive subject (which is covert in (257) above).

lexical root. Since noun-incorporating verbs are light verbs in her system, a nominal root incorporates to satisfy this feature. But, since the incorporated element is smaller than a DP (as indicated by its inability to bear case, number, and possessive marking), we would not expect it to be able to be assigned case, and thus case concord is not predicted.<sup>88</sup>

Yet another treatment of noun-incorporation in Inuit is presented in Compton & Pittman (2010a). While most accounts analyze noun-incorporation as movement, Compton and Pittman argue that wordhood in Inuit is syntactically determined with DP and CP phases mapping into phonological words. Accordingly, a bare NP object as in (257) above will incorporate (i.e. be spelled out in the same phonological word as the CP containing it) while its adjoined DP modifier will be spelled out as a distinct phonological word.<sup>89</sup> As in Baker's and Johns's analyses, the incorporated NP is caseless and thus the case marking on the modifier cannot be due to concord. However, an analysis of stranded modifiers whereby the head noun and its modifier in such incorporation constructions are actually a bare NP and an adjoined DP appositive, as illustrated in (258), will provide an alternative explanation for why only the NP is incorporated and why it does not bear case.

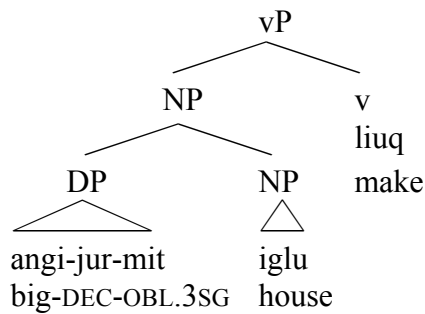
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<sup>88</sup> Rosen (1989) proposes a Lexicalist account of modifier stranding in noun-incorporation, suggesting instead that the head noun is null and that the incorporated noun is functioning similar to a classifier. However, part of her argument is based on incorporation not affecting transitivity. This criterion is difficult to test in Inuit languages where incorporation is always either obligatory or impossible (i.e. we cannot test a particular verb's transitivity vis-à-vis noun-incorporation because its incorporation status is invariant). Accordingly she notes that West Greenlandic (the variant of Inuit included in her study) "do[es] not, on the face of it, fit perfectly into the theory proposed in [her] paper" (p. 309).

<sup>89</sup> Note that my use of 'NP' instead of 'noun' here is intentional. In Inuktitut the incorporated element is larger than a root or a noun. This is evidenced by the fact that the incorporated element can include strictly-attributive adjectives (i.e. NP-internal APs):

- (i) nunali-ralaa-vinir-taqar-mat (Legislative Assembly of Nunavut, 2001d, p. 1974)  
camp-little-old/former-have/exist-BECAUSATIVE.3SG  
'There is an old [small] campsite, because [...]'
- (ii) iglu-jjuaq-liu-ruma-junga  
house-big-build-want-DEC.1SG  
'I want to build a big house.'
- (iii) 'Barbie-doll' iglu-tsiava-nngua-qaq-tuq  
B.(ABS.SG) house-great-fake-have-DEC.3SG  
'Barbie has a nice [toy] house.'

(258)



Treating verb-like adjective modifiers as appositive DPs avoids the problem of explaining how case concord could occur with incorporated NPs that lack case. Furthermore, it explains why there is case on the stranded modifier.<sup>90</sup>

In addition to the evidence presented above that verb-like adjective modifiers are appositives, other researchers examining Inuit languages have made observations that further support the apposition analysis. For instance, Fortescue (1984, p. 49) also observes that verbal modifiers behave like nominals:

The borderline between relative clauses and nominal constituents in simple apposition within a complex NP is not clear-cut since there is no morphological category of adjective in West Greenlandic nor any specific marker of relative clauses.

Similarly, in describing the structure of noun phrases in Greenlandic, Sadock (1985) states that “[t]he modifier is formally a nominal” (p. 394). Creider (1978) also treats such modifiers as nominalizations in Inuktitut stating that “[w]ith the Active Participle [i.e. my declarative mood] the R[elative] C[laus]e is nominalized, and if the head noun is case-marked then the RC verb is also case-marked in agreement with the head noun” (p. 98). Johns (1987) also treats these elements as nominals, calling them “verbal noun[s]” (p.

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<sup>90</sup> Furthermore, treating such modifiers as DPs follows from Compton and Pittman’s claim that phonologically free words are DPs, CPs, or interjections.

159) and stating that a “derived nominal may [...] appear as a nominal in a clause [...], or in apposition with another nominal [...]” (p. 161).

In sum, an analysis in which verb-like adjective (and verbal) modifiers of nouns are appositive DP adjuncts provides an explanation for their syntactic independence from the head noun illustrated above (i.e. case mismatches, incorporation, and discontinuity), their ability to stand alone as arguments without any additional machinery (since they are already DPs), and for why they exhibit the same case marking as pairs of nouns in apposition. Furthermore, such an approach coincides with descriptions of these modifiers in the literature which characterize them as nominal in nature.

In the next subsection I employ the appositive status of these modifiers to explain why, despite the lack of Predicate Modification proposed above, their lexical meanings are not restricted in the same way as the meanings of the strictly-attributive adjectives are.

### 2.3.3.3 Apposition as CI-Application: Potts (2005)

In section 2.3.3.1 I proposed that Inuit lacks Predicate Modification, resulting in a lack of intersective strictly-attributive adjectives. However, as shown in section 2.3.1, the set of verb-like adjectives includes members with intersective denotations which would presumably be composed with the nouns they modify via Predicate Modification (following Svenonius’s (2008) account of adjective ordering cross-linguistically presented in 2.3.3.1). If Predicate Modification is absent, how are these adjectives composed with the nouns they modify? Below I introduce Potts’s (2005) framework to explain their semantic composition in the absence of a rule of Predicate Modification.

Potts proposes a logic for Conventional Implicatures (CIs), arguing that supplements (e.g. appositives, supplementary relatives, and speaker-oriented adverbs)

and expressives (e.g. expressive attributive adjectives, epithets, and honorifics) should be analyzed in a multidimensional semantics that treats CI content as compositionally independent from the regular ‘at-issue’ content. He demonstrates that a standard one-dimensional semantics cannot account for properties of supplements and expressives such as scopelessness and independence of truth values.

Examining the phenomenon of scopelessness, Potts observes that in the following example the nominal appositive *a big-shot executive* is not negated by the matrix predicate *false*, despite the fact that it appears to be within its (syntactic) scope as part of the embedded clause (p. 114):

(259) It’s false that Alonzo, a big-shot executive, is now behind bars.

Potts states that such “supplements are always interpreted as though they took widest (primary) scope”. Accordingly, he notes that the sentence in (259) cannot receive the following reading:

(260)  $\neg \left( \begin{array}{l} \text{behind - bars}(\text{alonzo}) \wedge \\ \text{big - shot - executive}(\text{alonzo}) \end{array} \right)$

While previous treatments of supplements have attempted to account for such facts by proposing a non-standard syntax in which the supplement is not syntactically integrated (e.g. McCawley’s (1998) proposal for root-level adjunction), Potts points out the lack of “narrowly syntactic” evidence for such analyses, arguing that “issues of constituency,

case marking, and language-specific structural restrictions<sup>91</sup> point to a modifier structure” (p. 114).

Similarly, Potts observes that regular at-issue content and CI content possess independent truth values, as illustrated in the following example (p. 32):

(261) Lance Armstrong, an Arkansan, has won the 2003 Tour de France!

While the CI content is false, given that Armstrong is actually a Texan, Potts notes that the at-issue content that Armstrong won the 2003 Tour de France can still be recovered. He argues that this intuition can be explained if the at-issue content and CI content possess independent truth values, such that the truth value of the proposition in (261) is neither  $\langle 1 \rangle$  nor  $\langle 0 \rangle$  but rather  $\langle 1, 0 \rangle$ ; i.e. the at-issue content is true while the CI content is false.

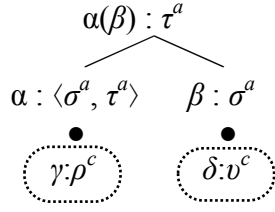
To account for phenomena such as these, Potts augments the standard set of types with CI types, separating these from at-issue types. Specifically, he defines  $e^a$ ,  $t^a$ , and  $s^a$  as at-issue types (for entities, truth values, and situations, respectively) and  $e^c$ ,  $t^c$ , and  $s^c$  as CI types (plus additional combinations<sup>92</sup> of these types, e.g.  $\langle e^a, t^c \rangle$ ). Furthermore he modifies the standard rule of Functional Application, calling it At-issue Application (i.e. a rule of Functional Application involving at-issue types) (p. 64):

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<sup>91</sup> For instance, he notes that languages such as Turkish which ban right-adjunction also lack nominal appositives (p. 106).

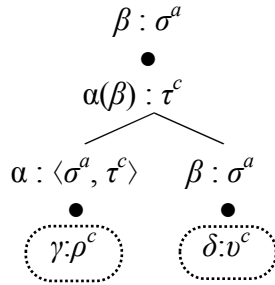
<sup>92</sup> Potts specifically excludes types which would take CI content as their arguments. This follows from his claim that “CI meanings apply to at-issue meanings to produce CI meanings” (p. 58). See Potts (pp. 58-61) for arguments that at-issue content never applies to CI content and that CI content never applies to CI content.

(262) At-issue Application:



This rule subsumes the standard rule of Functional Application while adding the possibility of optional CI content (as indicated by the dotted lines)<sup>93</sup> inherited from an earlier stage of semantic composition. Next he proposes the following rule of CI application (i.e. a rule of Functional Application involving a CI functor) (p. 64):

(263) CI application:



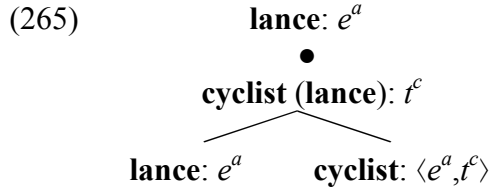
Effectively, this rule allows a CI operator,  $\alpha : \langle \sigma^a, \tau^c \rangle$ , to apply to at-issue content,  $\beta : \sigma^a$ , outputting the CI content as applied to the at-issue content,  $\alpha(\beta) : \tau^c$ , while simultaneously outputting the at-issue content unmodified. Once again, this rule allows CI content to be inherited from lower nodes. For instance, a nominal appositive such as (264) is analyzed as in (265) below (p. 65):

(264) Lance, a cyclist, ...

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<sup>93</sup> Potts employs the bullet ‘•’ as a “metalogical device for separating lambda expressions” (p. 63).

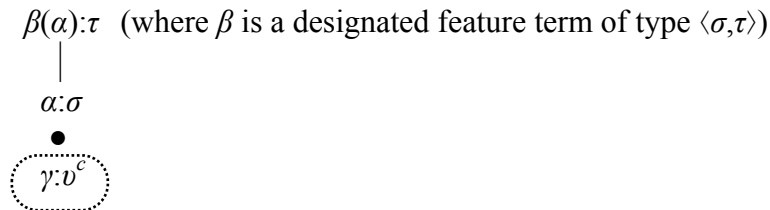




Subsequently, by using the at-issue application rule, **lance** can be used again as an argument (e.g. by the main predicate of the sentence) while the CI proposition **cyclist(lance)** is also interpreted, yielding a separate CI truth value.<sup>94</sup>

Given that many CIs, such as nominal appositives and supplementary relatives, are comprised of material that would normally be at-issue, Potts introduces a rule of feature semantics, represented below in (266), as well as a feature called COMMA (which correlates roughly with comma-intonation in English) which can shift at-issue types to CI types (p. 98):

(266) Feature semantics

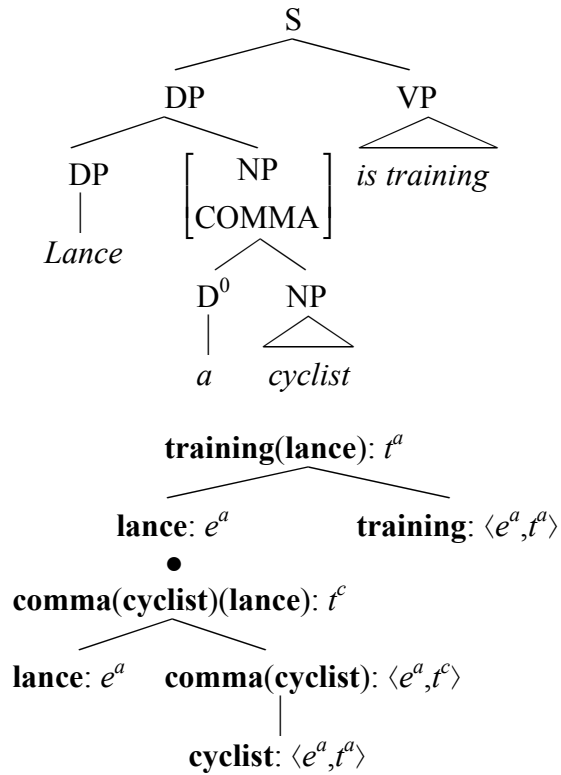


(267)  $\text{COMMA} \rightsquigarrow \lambda f \lambda x. f(x) : \langle \langle e^a, t^a \rangle, \langle e^a, t^c \rangle \rangle$

Taken together, this rule and the COMMA feature allow the material in nominal appositives and supplementary relatives which would normally have at-issue types to take on CI types. Potts provides the following illustrative example of a nominal appositive whose at-issue type is shifted to a CI-type by the COMMA feature (p. 97):

<sup>94</sup> Potts discusses three possibilities for how CIs in parsetrees are interpreted (p. 68); (i) expressions of type  $t^c$  are inherited up to the root node, (ii) such expressions are gathered in some type of CI store, and (iii) parsetrees are interpreted in their entirety. Potts advocates for the third option.

(268) Lance, a cyclist, is training.



This system provides Potts with machinery to account for the properties of CI material. His logic predicts the scopelessness of CI content, since CI content is composed locally and separately from higher at-issue content. This system also captures the independence of CI truth values, since CI items will yield distinct CI truth values in addition to the at-issue truth value at the root of the matrix clause.

#### 2.3.3.4 Semantic composition of verb-like adjectives in Inuktitut

Applying Potts's CI logic to Inuktitut, if verb-like adjective modifiers are appositives (as argued above in section 2.3.3.2) and thus compose with the nouns they modify via his rule of CI application, this would explain why they are not semantically restricted in the same way that strictly-attributive adjectives are. Regardless of their

initial status as either intersective or subsective, verb-like adjective modifiers are nominalized, yielding the semantic type  $\langle e^a, t^a \rangle$  which can then be shifted by the Inuktitut equivalent<sup>95</sup> of COMMA to the CI type  $\langle e^a, t^c \rangle$  that can compose via CI application with the head noun. Since verb-like adjective modifiers compose with the nouns they modify via CI application, the lack of Predicate Modification, which would otherwise be required to compose intersective adjectives with nouns, does not affect the range of possible denotations. In contrast, since strictly-attributive adjectives are DP-internal APs (i.e. not appositives), we find only subsective and privative denotations in this set, since only these can combine directly with nouns (or nominal projections of type  $\langle e^a, t^a \rangle$ ) by Functional Application.

To see how this system would work, consider the following example containing both a strictly-attributive adjective and an appositive verb-like adjective modifying the object (both of which translate as ‘big’):

- (269) taku-junga      nanur-jjuar-mit      angi-jur-mit<sup>96</sup>  
           see-DEC.1SG    polar.bear-big-OBL.SG    big-DEC-OBL.SG  
           ‘I see a big polar bear that is so big.’

Focusing on the modifiers of the object, the strictly-attributive adjective *jjuaq* ‘big’ is a subsective DP-internal AP of type  $\langle \langle e^a, t^a \rangle, \langle e^a, t^a \rangle \rangle$ ,<sup>97</sup> which can combine directly with the nominal by Functional Application. Conversely, the verb-like adjective *angi-jur-mit* ‘(is)

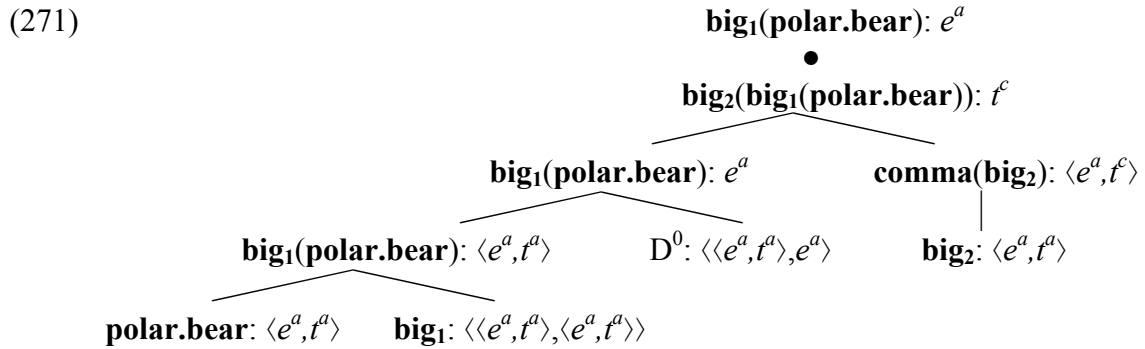
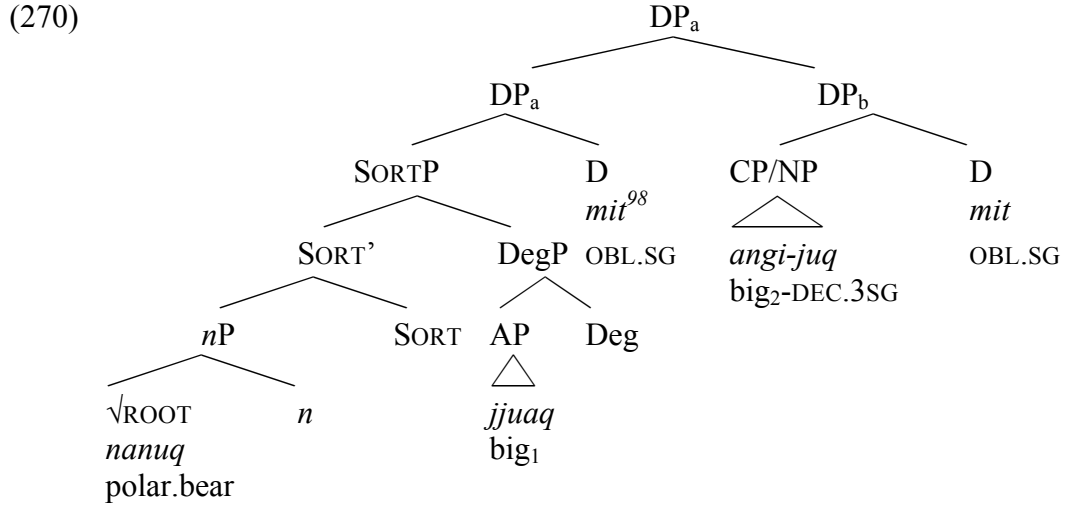
<sup>95</sup> There may not be a phonological/prosodic exponent of COMMA in Inuktitut. Instead, it may be a language-specific phonologically covert type-shifting rule. In a Minimalist Syntax COMMA could be a functional projection (that in English spells out at PF as comma intonation).

<sup>96</sup> The speaker noted that she preferred to include *aluk* ‘very’ inside *angi-jur-mit*:

(i) taku-junga      nanur-jjuar-mit      angi-ju-alung-mit  
           see-DEC.1SG    polar.bear-big-OBL.SG    big-DEC-very-OBL.SG

<sup>97</sup> Alternatively, following Kennedy & McNally (2005) who argue that the type of gradable adjectives contains a degree type, subsective adjectives in Inuktitut could have the type  $\langle d, \langle \langle e^a, t^a \rangle, \langle e^a, t^a \rangle \rangle \rangle$ , where  $d$  is a degree type. What is crucial for my analysis is simply that these adjectives compose via Functional Application, not Predicate Modification.

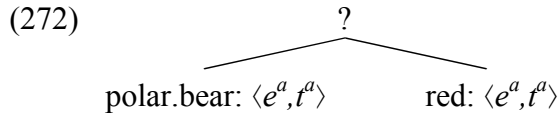
big' is a nominal appositive adjoined to the object DP and composing with it in the semantics via CI application. The syntactic structure and semantic parsetree are included below:



Such an analysis correctly predicts that intersective denotations will be absent from the set of strictly-attributive adjectives, since without Predicate Modification only subjective and privative adjectives, which possess more complex types, will be able to compose

<sup>98</sup> I have put the oblique singular case marker *mit* in D to avoid unnecessary structural complexity, however, while there is a correlation between case and definiteness in Inuktitut, nominals bearing this case can be either definite or indefinite. Accordingly, case should not be construed as an actual determiner in the syntax or the semantics. Given that Inuktitut lacks definiteness marking, it is not clear whether the nominal appositive is definite or indefinite. However, Potts (2005, pp. 110-111) shows that definite determiners heading nominal appositives do not possess the uniqueness presupposition normally associated with definite determiners.

directly with the nominal. For instance, ‘red’ could not be a strictly-attributive adjective in Inuktitut, since with type  $\langle e^a, t^a \rangle$  it could not compose with a noun without Predicate Modification, as schematized below:



Furthermore, this analysis correctly leaves the denotations of verb-like adjectives unconstrained (in terms of intersectivity), since as nominalizations their types will be  $\langle e^a, t^a \rangle$ , which is then shifted to  $\langle e^a, t^c \rangle$  (by the Inuktitut equivalent of COMMA) to compose with the modified noun via CI application.

### 2.3.3.5 Testing for CI semantics

Given Potts’s logic for CI content whereby such content possess separate truth values from at-issue content, these elements should exhibit scopelessness and non-restrictiveness. Beginning with scopelessness, he demonstrates that appositives do not scope under negation in examples such as the following, repeated from (259) above (Potts, 2005, p. 114):

(273) It’s false that Alonzo, a big-shot executive, is now behind bars.

Under no reading of (273) is the appositive *a big-shot executive* negated. Similarly, appositive modifiers in Inuktitut do not appear to be in the scope of negation:

- (274) uppirusu-nngit-tunga      Richard      qallunaaq  
 believe-NEG-DEC.1SG      R.(ABS.SG)      white.person(ABS.SG)  
 niri-lauq-tuq      aapu-mit  
 eat-DIST.PAST-DEC.3SG      apple-OBL.SG  
 ‘I don’t believe<sup>99</sup> (that) Richard, the/a European/Caucasian, ate an apple.’

When asked, the consultant said that there could be many people named *Richard*, of which one was a *qallunaaq*, or there could be only one person named *Richard* (e.g. if the listener didn’t know my name but had seen a *qallunaaq* around town). In either case, though, *Richard* is a *qallunaaq*, suggesting the appositive is not scoping under negation. We observe similar results with a verb-like adjective modifier, as illustrated in the following example:

- (275) uppirusu-nngit-tunga      ilisaiji      taki-juq  
 believe-NEG-DEC.1SG      teacher(ABS.SG)      tall-DEC.3SG(ABS)  
 niri-lauq-tuq      aapu-mit  
 eat-DIST.PAST-DEC.3SG      apple-OBL.SG  
 ‘I don’t believe that the teacher, {who is tall}/{the tall one}, ate the apple.’

According to the consultant the *teacher* in this example is still *tall*. Further consistent with the independence of truth values inherent to Potts’s system, the consultant agreed that it was possible for a second person to respond to (275) as follows:

- (276) ii,      kisiani      ilisaiji      taki-nngit-tuq  
 yes      but      teacher(ABS.SG)      tall-NEG-DEC.3SG  
 ‘Yes, but the teacher isn’t tall.’

<sup>99</sup> I attempted to elicit a sentence closer in form to “it’s false that...” but corresponding verbs such as *sulin-nngit-tuq* ‘(it’s) not true’ and *saglu-juq* ‘(it’s) a lie’ were not compatible with a subsequent clause, suggesting perhaps that the language does not allow sentential subjects:

(i) \*suli-nngit-tuq      Richard      qallunaaq      tigu-jau-sima-juq  
 true-NEG-DEC.3SG      R.(ABS.SG)      white.person(ABS.SG)      grab-PASS-PERF-DEC.3SG  
 INTENDED: It’s not true that Richard, the/a European/Caucasian, is locked up.

This would appear to be at least consistent with the appositive yielding independent truth values in that the response addresses each truth value separately. Similarly, Potts notes that appositives scope out of verbs like *believe* (pp. 114-5):

- (277) Sheila believes that the agency interviewed Chuck, a confirmed psychopath, just after his release from prison.  
 (≠ Sheila believes that Chuck is a confirmed psychopath and that the agency interviewed Chuck just after his release from prison.)

In a similar construction my consultant judged that an appositive need not be part of what the subject believes (i.e. the appositive could be speaker-oriented):

- (278) Sheila            uppirusuk-tuq            palisi-kkut            apirusu-laur-mata  
           S.(ABS.SG)       believe-DEC.3SG       police-VIAL.SG       question-DIST.PAST-BEC.3PL  
           Chuck-mit       tunganaq-tu-mit  
           C.-OBL.SG       friendly-DEC-OBL.SG  
           ‘Sheila believes the police questioned Chuck, (who is) a nice person.’

Again, this is consistent with these modifiers being scopeless.

Moving next to the predicted property of non-restrictiveness, Potts gives the following example of the expressive/CI use of an adjective in English (p. 19):

- (279) Edna is at her friend Chuck’s house. Chuck tells her that he thinks all his red vases are ugly. He approves of only the blue ones. He tells Edna that she can take one of his red vases. Edna thinks the red vases are lovely, selects one, and returns home to tell her housemate,  
           ‘Chuck said I could have one of his lovely vases!’

In a similar context using *Jaan* and *sanannguaga(q)* ‘carving’, my consultant was able to employ the appositive modifier *piujummarialungmit* non-restrictively:

- (280) Jaan                    uqa-lauq-tuq                    sanannguaga-nganit  
          J.(ABS.SG)        say-DIST.PAST-DEC.3SG        carving-POSS.3SG.OBL.SG  
          piu-ju-mmari-alung-mit                    pi-gunnaq-tunga  
          good-DEC-really-DEGREE-obl.sg        have-can-DEC.1SG  
          ‘John said I could have one of his adorable carvings.’

One confounding factor when attempting to test restrictiveness in Inuit is that arguments do not mark definiteness. Elements bearing ERGATIVE and ABSOLUTE case can potentially be interpreted as definites or specific indefinites. This complicates testing for restrictiveness since definite nominal appositives appear able to restrict, as illustrated in the following example:

- (281) The man, the tall one, wants a drink.<sup>100</sup>

Potts notes that the uniqueness presupposition typically associated with the definite article appears not to hold in appositives and instead suggests the following discourse condition on definite nominal appositives (p. 119):

- (282) If a speaker chooses a definite article to head an NA’s appositive, then the proposition expressed by that NA is deemed essential by the speaker to determining the referent of the anchor.

While this may not be the same as restrictiveness, it seems to tread rather close. Furthermore, non-specific indefinite parentheticals such as *a red pen* in the following example also appear to serve a restricting function:

- (283) John is looking for a pen, a red one, to grade the homework.

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<sup>100</sup> This example could constitute a parenthetical, but parentheticals are subsumed in Potts’s logic and share the speaker-orientation, scopelessness, etc. of appositives and supplementary relative clauses.



Analogous examples in Inuktitut whose contexts favour non-specific indefinite readings also appear to exhibit restriction:

- (284) Miali                      angi-li-guni                      uini-guma-juq  
 Mary(ABS.SG) big-become-COND.4SG<sup>101</sup> take.a.husband-want-DEC.3SG  
 anguting-mit      taki-jur-mit  
 man-OBL.SG      tall-DEC-OBL.SG  
 ‘When Mary grows up she wants wants to marry a tall man.’

Definitive tests that appositive modifiers in Inuit necessarily employ CI semantics will need to determine whether such modifiers are in fact confined to non-restrictive readings in contexts that exclude both the possibility of definite readings as well as parenthetical readings of the type illustrated in (283). Insofar as the ability of non-specific indefinite parentheticals to restrict is unexplained (even in English), I leave this question unresolved herein.<sup>102</sup>

### 2.3.3.6 Further evidence

The lack of Predicate Modification in Inuit is further supported by the absence of constructions that have been argued to employ it in other languages. The language lacks depictives, intersective compounds such as *bittersweet* (which might arguably compose via PM) are not attested since the language lacks compounds altogether, and nominal

<sup>101</sup> While this agreement pattern is often labeled as 3<sup>rd</sup> and 4<sup>th</sup> person in the literature, Swift (2004, p. 17) describes it in terms of switch reference. Subordinate moods (except for the contemporative and incommptemporative moods) distinguish between ‘disjoint reference’ (3<sup>rd</sup> person) and ‘third person coreference’ (4<sup>th</sup> person) with respect to the main clause. Accordingly, this form could alternative be glossed as ‘COND.3SG.SAME.SUBJECT’.

<sup>102</sup> A further complication involves parentheticals under negation. While such examples are odd in English (without adding an additional qualifier such as *anyway*), they appear fine in Inuktitut:

- (i) Mary doesn’t want to marry a man, a tall one #(anyway).  
 (ii) Miali                      angi-li-guni                      uini-guma-nngit-tuq  
 Mary(ABS.SG) big-become-COND.4SG      take.a.husband-want-NEG-DEC.3SG  
 anguting-mit      taki-jur-mit  
 man-OBL.SG      tall-DEC-OBL.SG

modifiers (including relative clauses and demonstrative pronouns) are nominal appositives.

## 2.4 Conclusion

In this chapter I have argued for two adjective classes in Inuktitut; a strictly-attributive class and a verb-like class. Evidence for the verb-like class includes compatibility with constructions combining a copula and a modal, compatibility with the negator *it*, which selects for either nouns or adjectives, but not verbs, and the existence of an inflectional difference in the Siglit dialect whereby the form of declarative marker is distinct (in the first and third person) for verb-like adjectives and genuine verbs. Evidence for the strictly-attributive class of adjectives includes that they are optional, that they can be stacked, that they exhibit variable order, and that they perform the characteristic function of adjectives: that of modifying nominals.

Furthermore, I have argued that semantic restrictions on the strictly-attributive class can be explained if the language lacks Predicate Modification. Instead I have proposed that subsecutive and privative strictly-attributive adjectives compose directly with nominals via Functional Application, while external modifiers (including nominals, verbs, and verb-like adjectives) are DP appositives and compose via Potts's CI application. Syntactic properties consistent with such modifiers being appositive DPs include the fact that they exhibit the same case-marking as unambiguous nominal appositives, the possibility of case mismatches (as observed by Potts with German appositives), the potential discontinuity between the appositive and modified nominal, and the fact that stranded modifiers in noun incorporation constructions still bear case (suggesting that their case marking is not merely surface case concord). Semantic

evidence pointing to the CI status of these modifiers included scopelessness and non-restrictive readings, although further research is necessary to exclude alternative readings in appropriate contexts.

## Chapter 3

### Adverbs and Adverbial Modification

#### 3.1 Introduction

As with adjectives, past research on Eskimoan languages has for the most part excluded adverbs as a lexical category, except perhaps for a small class of “particles”. Fortescue (1984, pp. 202-3) includes particles as a third major class alongside nouns and verbs in West Greenlandic. Sadock (2003, p. 5) describes these particles in the following way:

The Lexicon of W[est] G[reenlandic] contains a number of full words that are neither nouns nor verbs, often called particles. [...] Since particles are words and derivational and inflectional affixes attach to stems, such lexically listed words are, with a few exceptions to be mentioned, derivationally and inflectionally inert.

Similarly, de Reuse (1994, p. 28) refers to a class of “demonstrative adverb bases” in Central Siberian Yupik that “occur very commonly as particles without case inflection”.

Some examples of potential particles in Inuktitut include the following:

(285) *suli*      *niri-suuq*      *paurngar-nit*  
still    eat-HAB.3SG    berry-OBL.PL  
‘He/she still eats berries.’

(286) *pisuk-tuq*      *manna maani*  
walk-DEC.3SG    now    here  
‘He/she is walking here now.’

(287) *qai-guvit*      *kisiani*      *quviasung-niar-tuq*      (Spalding, 1998, p. 46)  
come-COND.2SG    only.if      happy-FUT-DEC.3SG  
‘she will be happy only if you come’

Eskimoan languages also include a number of elements frequently translated into English as adverbs but traditionally analysed as derivational affixes by Eskimologists and called

postbases in the literature. More recently, Cook & Johns (2009) argued that such postbases are functional heads. Examples of postbases with adverbial meanings include the following from Inuktitut:

- (288) ani-*saaq*-tuq  
go.out-*quickly*-DEC.3SG  
'He/she left quickly.'
- (289) qimmir-mit      tilli-*mmarit*-tuq  
dog-OBL.SG      steal-even-DEC.3SG  
'He/she even stole a dog.'
- (290) puijjura-gunna-*ngaa*-lauq-sima-nngit-tuq  
swim-can-*instead*-DIST.PAST-PERF-NEG-DEC.3SG  
'He/she was not able to swim instead.'
- (291) sini-*gajuk*-tuq  
sleep-*frequently*-DEC.3SG  
'he sleeps a lot or he's always sleeping'
- (Spalding, 1998, p. 83)

Additionally, we observe verb-like adjectives, *wh*-words, and nouns bearing oblique cases functioning as adverbials, as illustrated below:

- (292) nipikik-tu-mit      pisuk-tuq  
quiet-DEC-OBL.SG      walk-DEC.3SG  
'He/she is walking quietly.'
- (293) kassunga-ju-mik<sup>103</sup>      qai-juq  
slow-DEC-OBL.SG      come-DEC.3SG  
'he comes slowly; at a crawl'
- (Spalding, 1998, p. 40)
- (294) sukali-ju-mik      ingirra-jut  
fast-DEC-OBL.SG      travel-DEC.3PL  
'they travel swiftly'
- (Spalding, 1998, p. 142)

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<sup>103</sup> While the Aivilingmiut dialect in Spalding (1998) distinguishes between the case marked on objects in the anti-passive construction (i.e. *-mit/-nit*) and the ablative (i.e. *-mik/-nik*), the variety of the Baffin dialect of my consultant has collapsed the two into *-mit/-nit*.

- (295) qakku-tikkut (Spalding, 1998, p. 106)  
 when-VIAL.PL<sup>104</sup>  
 ‘sometimes’
- (296) kingullir-mi (Spalding, 1998, p. 45)  
 descendant/successor-LOC.SG  
 ‘later; afterwards; in the end’

I proposed in chapter 2 that the reasons for excluding an adjective class in previous work included (i) the assumption that subparts of words do not constitute lexical categories (i.e. the Lexicalist hypothesis) and (ii) the assumption that distinct lexical categories will exhibit distinct inflectional paradigms. These assumptions have also meant that a number of elements that might correspond to adverbs in other languages are analysed as derivational affixes, (derived) case-bearing nouns, and particles in Inuktitut.

In this chapter I examine these potential adverb classes, arguing that those described in previous work as derivational affixes are in fact adverbs. I begin by presenting previous analyses of post-bases with adverbial meanings, arguing that such accounts are problematic. Next, I present evidence for an adverb class in Inuit. Finally, I examine Inuit adverbs in the larger context of the theoretical debate on adverb licensing and ordering, arguing that Inuit adverb ordering data is problematic for Cinque’s (1999) framework of adverb licensing and instead supports Ernst’s (2002) semantically-based approach.

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<sup>104</sup> While the modern exponent of VIALIS PLURAL on regular nouns in eastern dialects is *-kkut*, this glossing is supported by Fortescue et al (2010) where this form is reconstructed in Proto-Inuit as *\*qakutiyun* and labeled ‘vialis case pl’ (p. 304). The form of the case/number marker resembles both the Proto-Eskimo *\*təkun* (p. 488) and its modern variant *-tigun* in Siglit and Inuinnaqtun (Dorais, 2003, p. 64).

### 3.1.1 Previous analyses of adverbial elements in Inuit and Yupik

In this section I consider adverbial post-bases in Fortescue's (1980) analysis of morpheme order in West Greenlandic, adverbials in de Reuse's (1994) treatment of Central Siberian Yupik, Cook & Johns's (2009) analysis of verbal post-bases, and Compton & Pittman's (2010a) treatment of adverbial elements.

#### 3.1.1.1 Fortescue (1980)

To account for West Greenlandic morpheme order Fortescue (1980) proposes a system that he describes as being “not incompatible with a version of the Lexicalist Hypothesis” (p. 260). He distinguishes between an “external syntax” which operates on words and an “internal syntax” which creates words, including complex polysynthetic words. His system of “internal syntax” employs the following derivational rules (p. 261):<sup>105</sup>

(297)

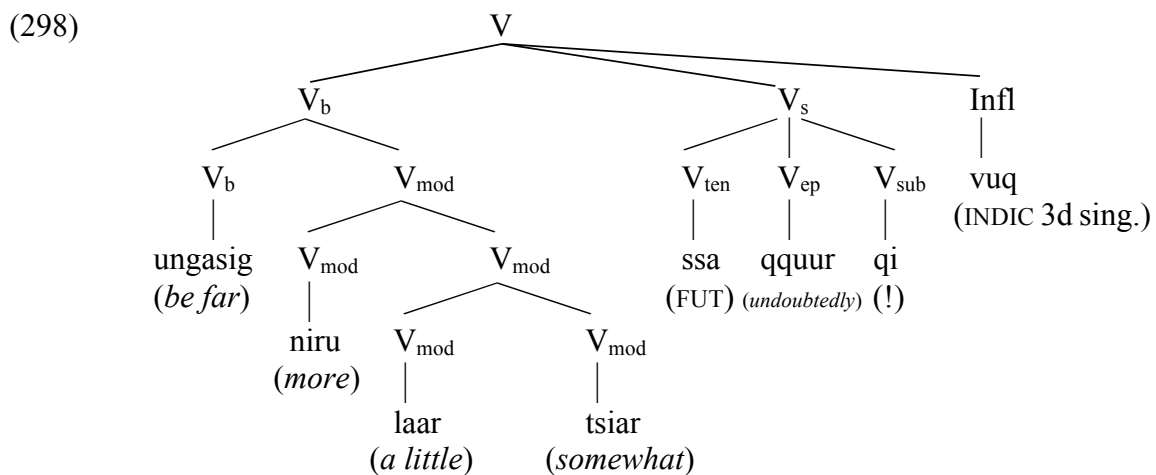
- a.  $V \rightarrow V_b (+V_s) + \text{Infl}$
- b.  $V_b \rightarrow \left\{ \begin{matrix} V_b \\ N_b + V_r \end{matrix} \right\} (+V_e) (+V_{\text{neg}}) (+V_{\text{mod}})$
- c.  $V_s \rightarrow (V_{\text{ten}})(+V_{\text{ep}}) \left\{ \begin{matrix} (+V_{\text{neg}}) (+V_{\text{sub}}) \\ (+V_{\text{conj}}) \end{matrix} \right\}$
- d.  $V_{\text{mod}} \rightarrow V_{\text{mod}} (+V_{\text{mod}})$
- e.  $V_{\text{sub}} \rightarrow V_{\text{sub}} (+V_{\text{sub}})$
- f.  $N_b \rightarrow \left\{ \begin{matrix} N_b \\ V_b + N_r \end{matrix} \right\} (+N_e) (+N_{\text{mod}})$
- g.  $N_{\text{mod}} \rightarrow N_{\text{mod}} (+N_{\text{mod}})$

The first rule creates verbs (V) from a verbal base ( $V_b$ ), optional “sentential verbal affixes” ( $V_s$ ), and obligatory inflection (Infl). The second rule creates a verbal base from either a

<sup>105</sup> Fortescue uses the plus sign ‘+’ to indicate the possibility of iterating an affix type.

verbal base or a nominal base ( $N_b$ ) accompanied by a “verbalizing affix” ( $V_r$ ), which can be followed by (potentially iterated) “verbal extenders” ( $V_e$ ), negation ( $V_{neg}$ ), and affixes of “verbal modification” ( $V_{mod}$ ). The third rule specifies that sentential verbal affixes (perhaps better thought of, for the moment, as an affix group) can include tense, affixes of “epistemic modality” ( $V_{ep}$ ), and either the possibility of negation and/or an affix of “subjective/narrative coloration” ( $V_{sub}$ ), or instead a “conjunctive affix” ( $V_{conj}$ ). The fourth and fifth rules simply ensure that affixes of “verbal modification” and those of “subjective/narrative coloration” can be applied recursively. The final two rules cover nominals, with the penultimate rule allowing nominal bases ( $N_b$ ) to contain either a nominal base or a verbal base combined with a nominalizer ( $N_r$ ), which can be followed by “nominal base-expanding affix” ( $N_e$ ) and “nominal modifiers” ( $N_{mod}$ ). The last rule allows “nominal modifiers” to apply recursively (i.e. the strictly attributive adjectives of chapter 2).

Fortescue uses these rules to generate morphologically complex “verbs” like the one below (p. 262):



‘It will undoubtedly be somewhat further off.’



In addition to the derivational rules in (297), Fortescue employs a “global scope rule” (p. 259) whereby affixes take scope over morphemes to their left “when more than one affix is chosen in sequence from one slot in the expansion of  $V_b$  or  $V_s$ ” (such as the multiple  $V_{mod}$  affixes in (298) above). He also makes use of “semantic filtering” to prevent over-generation of strings that would “contradict (presumably universal) semantic principles of coherence” (p. 263).

Several aspects of this analysis are problematic. Firstly, the rules and categories of affixes that Fortescue proposes, while providing a powerful descriptive schema, lack explanatory force. For instance, why should “verbal modification” and “subjective/narrative coloration” affixes be able to modify each other recursively while other affix types cannot? Fortescue’s system fails to connect the semantics of such affix classes to their morpho-syntactic behaviour. In particular, recent research has recast a number of these affix classes in light of analogous cross-linguistic phenomena. Johns (2007) has argued that Fortescue’s “verbalizing affixes” are in fact noun-incorporating light verbs. Pittman (2009) has proposed that a number of “verbal extenders” are better analysed as restructuring verbs (i.e. verbs selecting vP and TP complements). Similarly, Johns (1999) analysed at least one “verbal extender”, *guma* ‘want’, as a modal. Furthermore, a number of morphemes that Fortescue includes in the class of “verbal extenders” such as the passive and causative have been argued to be functional heads in clausal structure cross-linguistically (e.g. Kratzer (1994), Harley (1995), Pytkäinen (1997)).

Another potential criticism of Fortescue’s system of “internal syntax” is that it fails to explain why the structure of polysynthetic “verbs” mirrors the hierarchy of functional projections in the clauses of more analytic languages. Compton & Pittman (2010a) note that Fortescue’s rules (ignoring the possibility of recursion of affix types) spell out the maximal ordering in (299), which they argue corresponds to the hierarchy of syntactic heads in (300).

(299) verbal base > verbal extender > negation > verbal modifier > tense > epistemic modality > negation > subjective/narrative > inflection

(300) V > V/v > Neg > Adv > T > Modal > Neg > Adv > Infl<sup>106</sup>

However, nothing in Fortescue’s system explains why this should be the case; i.e. why affix ordering inside the verbal complex should mirror the standard hierarchy of functional projections. Fortescue himself notes that his affix categories “relate rather well to Jackendoff’s categories for English adverbials, in particular with regard to the distinction between  $P_{\text{manner}}$  (corresponding to certain  $V_{\text{mod}}$  affixes generated under  $V_b$ ) and  $P_{\text{speaker}}$  (corresponding to affixes generated under  $V_s$ )” (p. 271). Once again, Fortescue’s system does not provide a satisfactory account of why the positions of different types of affixes with adverbial meanings should correlate with the positions of adverb classes in English (e.g. why both English  $P_{\text{manner}}$  adverbs and analogous Inuktitut  $V_{\text{mod}}$  affixes should occur closer to the verb).

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<sup>106</sup> Since verbal inflection in Inuit is a portmanteau morpheme marking both mood and agreement, and since Chomsky (2007, p. 10) argued that agreement features originate in C, it is plausible to assume that these morphemes are part of an articulated CP domain (Rizzi, 2004), and thus their position of outermost scope at the right edge of the word is predicted.

Yet another potential problem for Fortescue's analysis is the existence of stem ellipsis in Arctic Quebec Inuit. Dorais (1988, p. 10) gives the following examples of bases being elided when recoverable from prior discourse:

(301) -juujar-tuq  
-seem-DEC.3SG  
'looks like'

(302) -jja-ngit-tuq  
-really-NEG-DEC.3SG  
'does not really'

Swift & Allen (2002) find similar examples, including instances such as (303) where the missing base is supplied by the context, instead of prior discourse (p. 136; gloss modified):

(303) Laurlangali.  
Ø-lauq-langa=li  
Ø-DIST.PAST<sup>107</sup>-IMPER.1SG=and  
'My turn' (*lit.*, 'Please let me')

Such forms are problematic for Fortescue's account since the derivational rules in (297) require a verbal base on which to attach successive affixes. If the base can be omitted, in what sense is the following morpheme a derivational affix? Swift & Allen note that "[t]hese elliptical structures consist only of postbases and endings, providing striking counterexamples to the standard linguistic view of word formation in Eskimo languages" (p. 1).

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<sup>107</sup> Swift & Allen's original example uses the glossing 'ZBASE-POL-IMP.1SS=and'. Although *lauq* is used here to convey politeness, as indicated by their glossing, I have glossed it according to its regular 'distant past tense' meaning.

A further problem with Fortescue's analysis is that morphemes in polysynthetic Inuit words do not exhibit the properties normally attributed to derivational morphemes cross-linguistically. In particular, de Reuse (2009) points out that while derivational morphemes are typically not fully productive<sup>108</sup> and invariant in their ordering, the majority of morphemes found in complex polysynthetic words in Eskimoan languages are fully productive<sup>109</sup> and often exhibit variable ordering (although both productivity and variability in ordering are subject to semantic constraints). To illustrate the phenomenon of full productivity de Reuse gives the following example from Siberian Yupik Eskimo (p. 23; emphasis in original):<sup>110</sup>

- (304) *neghyaghtughyugumayaghpetaa*  
 negh-yaghtugh-yug      -uma-yagh   -pete   -aa  
 eat   -go.to.V   -want.to.V-PAST-FRUSTR-INFRN-IND.3SG.3SG  
 'It turns out s/he wanted to go eat it, but...'

He notes that only the root *negh-* 'eat' and the inflectional mood/person marker *-aa* are obligatory; any or all of the remaining morphemes can be removed with all of the logically possible combinations being grammatical. Similarly, de Reuse notes that variable morpheme ordering, while typical in polysynthetic languages, is not normally a property of derivational morphology cross-linguistically. This variability is exemplified

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<sup>108</sup> De Reuse argues for a distinction between derivational morphology and what he calls "productive noninflectional concatenation" (PNC), a third type of morphology in addition to derivation and inflection that shares a number of properties with syntax. He argues that morphemes which are typically considered derivational that exhibit full productivity are in fact PNC elements.

<sup>109</sup> This productivity is further supported by the fact that affix manuals (e.g. Fortescue, 1983; Harper, 1979) typically only need to specify which category a particular element selects for (e.g. nouns) while additional criteria are generally syntactic (e.g. transitivity).

<sup>110</sup> I replace de Reuse's abbreviation 'singular' with SG, as I've used throughout. Note that de Reuse uses the abbreviations FRUSTR for "frustrative: 'but..., in vain'" and INFRN for "inferential evidential, often translatable as 'it turns out'" (p. 32). I employ his orthography for Yupik.

in the following two examples, which, despite the change in morpheme order, share the same meaning (p. 25; emphasis in original):

(305) *aananiitkaa*  
 aane **-nanigh** **-utke** -aa  
 go.out-cease.to.V-V.on.account.of-IND.3SG.3SG  
 ‘He ceased going out on account of it.’

(306) *aanutkenanighaa*  
 aane **-utke** **-nanigh** -aa  
 go.out-V.on.account.of-cease.to.V-IND.3SG.3SG  
 ‘He ceased going out on account of it.’

Accordingly, characterizing Inuit polysynthesis in terms of derivational morphology, as Fortescue does, obscures the fact that it shares more properties with syntax than with the traditional view of derivational morphology.<sup>111</sup>

In sum, Fortescue’s analysis of polysynthesis (including verb-internal morphemes with adverbial meanings) as being the result of derivational affixes belonging to language-specific affix categories which are combined according to language-specific rules fails to explain the similarities between the elements and structures inside polysynthetic words and analogous elements and structures in more analytic languages. Furthermore, stem ellipsis, productivity, and variable ordering differentiate polysynthetic structures from more traditional views of derivational morphology.

### 3.1.1.2 de Reuse (1994)

To explain the structure of Central Siberian Yupik Eskimo (CSY) (part of the Yupik branch of Eskimoan),<sup>112</sup> de Reuse (1994) adapts Fortescue’s (1980) system of

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<sup>111</sup> De Reuse also states that while derivational morphology in some languages is non-concatenative (e.g. in Semitic languages), polysynthesis appears to be strictly concatenative in attested languages. Furthermore, he distinguishes between derivational elements and productive noninflectional concatenation (PNC) elements in terms of recursion and interaction with syntax.

derivational rules and combines these with Sadock's framework of Autolexical Syntax (1991) in which syntax, semantics, morphology, and phonology are computed in autonomous modules. In the morphological module he employs the following derivational rules (p. 95):

(307)

- a.  $V \rightarrow V_{base}^{-4} INFL^{-1}$
- b.  $V_{base}^{-4} \rightarrow V_{base}^{-3}(NEG)$
- c.  $V_{base}^{-3} \rightarrow V_{base}^{-2}(CLASS-FREE)$
- d.  $V_{base}^{-2} \rightarrow V_{base}^{-1}(PreAUX)$
- e.  $V_{base}^{-1} \rightarrow V_{base}(PreAUX_{vce})$
- f.  $PreAUX \rightarrow PreAUX \left\{ \begin{array}{l} (PreAUX_{vce}) \\ (PreAUX) \end{array} \right\}$
- g.  $NEG \rightarrow NEG (CLASS-FREE)$
- h.  $CLASS-FREE \rightarrow CLASS-FREE (CLASS-FREE)$
- i.  $INFL^{-1} \rightarrow (AUX) INFL$
- j.  $AUX \rightarrow (MODAL) (PST) (PROG) \left\{ \begin{array}{l} (FUT)(EVIDENTIAL) \\ (FRUSTRATIVE) (IMPUTATIVE^{-1}) \\ (NEG) \end{array} \right\}$
- k.  $IMPUTATIVE^{-1} \rightarrow IMPUTATIVE (MODAL) (PST) (PROG)$
- l.  $INFL \rightarrow MOOD \text{ Person markers}$

The first five rules set out five major position classes within CSY polysynthetic verbs. Rule (a) states that verbs must contain a verbal base and inflection, rule (b) allows for the presence of negation alongside a verbal base, rule (c) allows for a set of 'class-free' modifiers with adverbial meanings to modify a verbal base, rule (d) adds a position for a variety of pre-auxiliary elements (covering both adverbial and verbal meanings), and rule

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<sup>112</sup> Although Yupik and Inuit belong to separate branches of the Eskimo language family, the two possess analogous syntactic structures. For instance, Dorais (2003, p. 22) notes that "the grammar of Yupik languages is very similar to that of the Inuit dialects".

(e) adds a positions for elements affecting transitivity, which de Reuse terms Voice PreAux elements (e.g. causative markers, transitivizers, detransitivizers, etc.). Next, rules (f)-(h) allow pre-auxiliary, negation, and ‘class-free’ postbases to be applied recursively and be modified. Finally, rules (i)-(l) specify the potential contents of the inflectional position.

This system appears susceptible to the same criticisms outlined above against Fortescue’s system, including those highlighted in de Reuse (2009) regarding productivity and variable order differentiating polysynthetic morphology from derivational morphology.

Focusing on the system’s treatment of morphemes with prototypically adverbial meanings, these are distributed across several affix classes. The PreAUX class includes numerous members with adverbial translations, as illustrated in (308) below<sup>113</sup> (pp. 145-159), as well as a number of elements whose Inuit cognates Pittman (2009) has argued to be restructuring verbs, illustrated in (309), and a small number of comparative markers (not shown).

(308)

- a. -ugh- ‘to V completely’
- b. -ughagh- ‘to V repeatedly or continuously, with some thoroughness or force’
- c. -ragkiigh- ‘to V quickly’
- d. -qagh- ‘to briefly; to V for a short while’
- e. -msug- ‘to casually, nonchalantly V’
- f. -lqusiigh- ‘to V angrily’
- g. -llgu- ‘to V well’
- h. -neghllug- ‘to V wrongly or with difficulty’
- i. -yiilliqe- ‘to V poorly, to have trouble V-ing’
- j. -laghate- ‘to V already’
- k. -msag- ‘to finally V, to V at last’
- l. -laataqu- ‘to luckily have V-ed well’

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<sup>113</sup> Diacritic indicators of morpho-phonological behaviour included on the CSY forms have been omitted.

(309)

- |                 |  |
|-----------------|--|
| a. -yaghtugh-   | ‘to be about to V, to go somewhere to V’ |
| b. -naqe-       | ‘to try to V’                            |
| c. -yug-        | ‘to want to V’                           |
| d. -kayugughte- | ‘to become able to V, to become a V-er’  |
| e. -iiraagh-    | ‘to play at V-ing’                       |

These adverbial elements, restructuring verbs, and comparative markers appear to have been grouped together based solely on their position inside the verbal complex. Similarly, the set of CLASS-FREE morphemes appears to be grouped together based on their potential positions, although this class seems to be more semantically homogeneous, containing only adverbial elements, many of which express degree. Some members of this class are illustrated below.

(310)

- |                  |  |
|------------------|--|
| a. -pallag-      | ‘to V too much, so much, intensively, excessively’                 |
| b. -ghhiinagh-   | ‘to only a little V’   |
| c. -pigesnagh-   | ‘to V in vain, to V for naught; to finally V’                      |
| d. -raaghinagh-  | ‘to only V, to nothing but V; to not be very V’                    |
| e. -(ngw/w)aagh- | ‘to diligently V, to thoroughly V’                                 |
| f. -kanigh-      | ‘to be rather V, to be fairly V’                                   |
| g. -vyiigh-      | ‘to V carelessly, in a rough way, or under conditions of hardship’ |
| h. -sugnite-     | ‘to seem to be V-ing’  |

Finally, the AUX class includes two subclasses with potential adverbial members. First, the FRUSTRATIVE class is comprised of a single member, shown in (311), while the EVIDENTIAL class has two members, shown in (312).

(311) -yagh-            ‘to V but...; to V in vain; to V without the desired results’

(312)

- |                |  |
|----------------|--|
| a. -fte-/pete- | ‘to evidently V, to appear to V; I find that...’ |
| b. -yengagh-   | ‘it looks like V’                                |



A problem that cuts across all of these classes is that elements with prototypically adverbial meanings are collapsed with elements arguably belonging to other classes based solely on position. While de Reuse's derivational rules and classification provide a valuable descriptive framework for the positions of adverbial elements, his system does not explain why adverbial postbases appear where they do or tie their behaviour to that of adverbials cross-linguistically.

### 3.1.1.3 Cook & Johns (2009)

In their examination of polysynthesis in Inuit, Cook & Johns (2009) argue that postbases, including those with adverbial (and adjectival) meanings, are all functional heads. They adopt Johns's (2007) analysis of noun-incorporation and word-formation in which Inuit words require a lexical root and furthermore that "there is only one root per word" (p. 154). As a result of this one-root-per-word approach, functional material is necessarily dependent on a lexical stem/root.<sup>114</sup>

Cook & Johns observe that postbases include elements typically categorized as functional, such as tense, negation, aspect, voice markers, etc. In addition, they cite Johns (1999, 2007) analyses of Fortescue's  $V_r$  and  $V_e$  postbases as light verbs and modals, which are also typically considered to be functional projections. Furthermore, they argue that while postbases include adverbial elements, these appear to be restricted in their range of meanings such that they "do not add any kind of encyclopedic semantics to the verb complex, but merely quantify or restrict the semantics of the preceding stem" (p. 156). Since encyclopedic meaning is typically considered a property of lexical roots (i.e. l-morphemes) in frameworks such as Distributed Morphology, they take this as evidence

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<sup>114</sup> Cook & Johns also adopt Compton & Pittman's (2010a) phase-based analysis of Inuit word-formation in which DP and CP phases spell out as phonological words.

that these elements are functional (i.e. f-morphemes). Specifically, they “contend that all postbases are f-morphemes in the sense of Harley & Noyer” (2000). Moreover, they note that the order of adverbials matches Cinque’s (1999) proposed universal hierarchy of adverbial functional heads.<sup>115</sup>

While I agree that a large number of postbases correspond to functional categories, I disagree with Cook & Johns in their assessment of adjectival and adverbial postbases. First, Harley & Noyer’s description of f-morphemes characterizes them as being chosen deterministically on the basis of feature bundles on syntactic nodes, with “no choice as regards vocabulary insertion” (p. 355). Conversely, Inuit adverbial and adjectival postbases are generally optional (see section 3.2.1.3 below) and not predictable from the larger syntactic environment. For instance, I am not aware of any construction or context that would require *saaq* ‘quickly’ or *ngaaq* ‘instead’. Furthermore, such forms do not seem reducible to a subset of the morphosyntactic features made available by Universal Grammar. In particular, Harley & Noyer attribute “truth-conditional force” (p. 355) to l-morphemes, and yet elements such as *saaq* ‘quickly’ or *ngaaq* ‘instead’ arguably affect truth conditions<sup>116</sup>, suggesting that they too are l-morphemes. Moreover, unlike other functional heads whose absence is interpreted contrastively (e.g. plural number in English), most adjectival and adverbial postbases cannot be interpreted contrastively when absent (e.g. not marking a noun with an adjectival postbase meaning ‘big’ leaves its size undefined).<sup>117</sup>

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<sup>115</sup> In addition to arguing that postbases correspond to functional categories, Cook & Johns also attribute the polysemous nature of postbases to their functional status, claiming that this polysemy is actually the result of semantic underspecification.

<sup>116</sup> For example, Ogihara’s (2000, p. 125) denotation of *instead* in English contributes truth-conditional meaning.

<sup>117</sup> There are parallels here with Wiltschko’s (2008) analysis of number marking in Halkomelem. She demonstrates that such properties as the optionality of number marking, its “absence [not being] associated

Another potential problem for their analysis is that of variable order. Typically, functional heads do not exhibit variable order with respect to each other.<sup>118</sup> While it could be the exception that adjectival and adverbial elements are susceptible to variation in their relative orders, if they are functional heads and part of a universal hierarchy of functional projections, as argued by Cinque (whose system Cook & Johns adopt), then variations in order will be subject to the Head Movement Constraint (HMC) (see Travis (1984), Baker (1988)). However, the following data from Inuktitut suggests that the ordering of adverbial postbases is not subject to the HMC.

(313)

- a. *niri-mmari-qattaq-quuq-tuq*  
eat-even-regularly-probably-DEC.3SG  
'He/she is probably even eating.'
- b. *niri-mmari-quu-qattaq-tuq*  
eat-even-probably-regularly-DEC.3SG
- c. *niri-qatta-mmari-quuq-tuq*  
eat-regularly-even-probably-DEC.3SG
- d. *niri-qattaq-quu-mmari-tuq*  
eat-regularly-probably-even-DEC.3SG
- e. *niri-qquu-qatta-mmari-tuq*  
eat-probably-regularly-even-DEC.3SG
- f. *niri-qquu-mmari-qattaq-tuq*  
eat-probably-even-regularly-DEC.3SG

(314)

- a. *ani-kasa-kkanni-ngaaq-tuq*  
go.out-almost-again-instead-DEC.3SG  
'He/she almost left instead again.'
- b. *ani-kasa-ngaa-kkanniq-tuq*  
go.out-almost-instead-again-DEC.3SG
- c. *ani-kkanni-kasa-ngaaq-tuq*  
go.out-again-almost-instead-DEC.3SG

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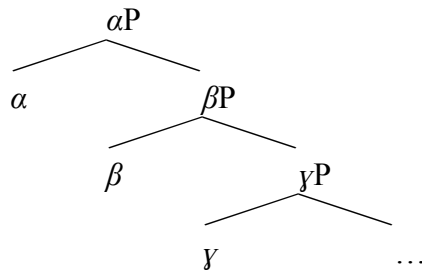
with meaning" (p. 689), and the fact that it is not subject to selection (e.g. by determiners) coincide with number being a modifier in Halkomelem and not a functional head.

<sup>118</sup> For instance, in both English and Inuktitut the relative base order of C, T, Neg, and *v* appears fixed. While Neg is likely higher than T in Inuktitut (due to parametric variation), language-internally the relative order of these functional heads is fixed.

- d. ani-*kkanni-ngaa-kasak*-tuq  
go.out-again-instead-almost-DEC.3SG
- e. ani-*ngaa-kkanni-kasak*-tuq  
go.out-instead-again-almost-DEC.3SG
- f. \*/?ani-*ngaa-kasa-kanniq*-tuq  
go.out-instead-almost-again-DEC.3SG

Notice that of the six logically possible orders of the adverbial postbases *mmarik* ‘even’, *qattaq* ‘regularly, habitually’, and *qquuq* ‘probably’ in (313), all six orders were fully grammatical with no observable change in meaning. Similarly, among the various ordering of the adverbial postbases *kasak* ‘almost’, *kkanniq* ‘again’, and *ngaaq* ‘instead’ in (314), only one order is ungrammatical, again with no observable change in meaning among the grammatical orders. An analysis of adverbial postbases as heads would predict (at least) two orders to be ungrammatical, since, given any three heads,  $\alpha$ ,  $\beta$ , and  $\gamma$ , only four orders can be derived via head-movement (including the base order) without violating the HMC. This is illustrated in (315)-(316) below.

(315)



(316)

- |    |                         |   |
|----|-------------------------|---|
| a. | $\alpha \beta \gamma$   | (underlying order)                                  |
| b. | $\alpha \gamma \beta$   | (head-movement of $\gamma$ to $\beta$ )             |
| c. | $\gamma \beta \alpha$   | (head-movement of $\gamma$ to $\beta$ to $\alpha$ ) |
| d. | $\beta \alpha \gamma$   | (head-movement of $\beta$ to $\alpha$ )             |
| e. | * $\gamma \alpha \beta$ | (not possible)                                      |
| f. | * $\beta \gamma \alpha$ | (not possible)                                      |

Consequently, the existence of five or six possible orderings of three adverbial postbases suggests that these elements are not heads.<sup>119</sup>

Finally, Cook & Johns point to the fact that adverbial postbases in Inuit form a closed class and exhibit “impoverished or underspecified” (p. 157) meanings as evidence of their functional status. Muysken (2008, p. 32) considers the criterion of open versus closed class in distinguishing lexical classes from functional ones and points out that while “adjectives and adverbs in many languages form an open class, [...] in some languages [they form] a small closed class” such as Yoruba. He concludes that “the criterium of closedness is not easy to apply in many cases”. Similarly, Muysken examines whether functional categories possess “special abstract meaning” (p. 43). Here too he notes that “abstractness of meaning is not something limited to functional categories”. Conversely, he observes that many functional elements such as *that* and *of* appear to lack a semantic interpretation, which appears to contrast with the relatively much more contentful adverbial and adjectival postbases in Inuit.

#### 3.1.1.4 Compton & Pittman (2010)

Compton & Pittman argue that wordhood in Inuit is predictable from syntactic structure; DPs and CPs constitute phases in Inuit and these phases are spelled out as phonological words at PF, thereby eliminating the need for idiosyncratic marking of affixal status of vocabulary items (since, except for clitics, affixation is predictable from syntactic structure) and permitting a syntactic account of polysynthetic words (in the sense of Distributed Morphology).

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<sup>119</sup> One alternative to treating alternative orders as instances of movement would be to claim that there are homophonous functional heads. However, Cinque’s proposed functional hierarchy assigns distinct meanings to each functional head, that are universal. Consequently, homophonous functional heads would necessarily have distinct meanings in his system.

Part of this analysis includes the proposal that case-marked elements functioning as adverbials are DPs in the syntax (based primarily on the presence of case morphology). Compton & Pittman also note a rough correspondence between the set of adverbial postbases and the set of functional heads proposed in Cinque's (1999) framework. For instance, they note that a number of postbases correspond to Cinque's proposed Asp heads (e.g. *Asp<sub>habitual</sub>*, *Asp<sub>frequentative</sub>*, *Asp<sub>repetitive</sub>*, etc.).<sup>120</sup> However, Compton & Pittman leave the status of adverbial postbases as either heads or adjuncts unresolved, concluding that either structure would conform to their phase-based word-formation analysis since both would spell out as part of the CP phase containing them. Similarly, they mostly assume that postbases with prototypically adverbial translations are in fact adverbs syntactically. Beside their translations and similar ordering to Cinque's functional heads, no empirical evidence for a lexical category of adverbs is provided.

### 3.1.2 Outline of the rest of the chapter

In section 2 I will present evidence that adverbial postbases in Inuit do constitute a lexical category of adverbs. Furthermore, I will argue for an analysis along the lines of Ernst (2002) and (2007) in which adverbials are adjoined and their position is determined primarily by semantics, not by a series of dedicated adverbial functional projections mandated by UG. Following this, I will examine the set of derived adverbials (i.e. case-marked phrases that function as adverbials). Finally, I will examine whether particles in Inuit should be classified as adverbs.

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<sup>120</sup> While Cinque does not explicitly claim that all adverbial elements inside polysynthetic words are functional heads, he categorizes a number of postbases in Inuit, Aleut, and Central Alaskan Yup'ik as instances of the functional heads proposed in his framework (pp. 158, 192).

## 3.2 Potential adverb classes

Inuit has three potential classes of adverbs; (i) post-bases with adverbial translations, (ii) case-bearing elements which are used adverbially (which could be construed as a class of derived adverbs, analogous to *-ly* adverbs in English), and (iii) a small class of uninflected particles. In the following subsections I argue that only the set of adverbial postbases constitute a lexical category of adverbs, while derived case-bearing adverbials are best treated as DPs (used adverbially). Furthermore, I argue that particles are merely a set of disparate categories including interjections, conjunctions, and pronominals.

### 3.2.1 Evidence for a class of adverbs within the verbal complex

#### 3.2.1.1 Function

The first piece of evidence suggesting that adverbial postbases are adverbs is that they perform the characteristic function of adverbs, that of modifying verbs. Payne, Huddleston, and Pullum (2010) lay out the “distributional cores” of adjectives and adverbs in English by stating that while (attributive) adjectives can typically occur between a determiner and a noun, adverbs can typically occur between a subject and a verb, which they illustrated as follows (p. 37):

- (317)
- |    |      |   |   |                 |
|----|------|---|---|-----------------|
| a. | Det  | X | N | (X = ADJECTIVE) |
| b. | Subj | Y | V | (Y = ADVERB)    |

Similarly, it is possible to discern the distributional cores of adverbial postbases in Inuit insofar as they can modify a verbal root directly, whereas adjectives cannot:

(318) ani-*saaq*-tuq  
go.out-*quickly*-DEC.3SG  
'He left quickly.'

(319) niri-*qattaq*-tuq  
eat-*regularly*-DEC.3SG  
'He eats (regularly).'

(320) \*ani-*tuqaq*-tuq  
go.out-*old*-DEC.3SG

(321) \*niri-*kuluk*-tuq  
eat-*adorable*-DEC.3SG

Conversely, adverbial postbases cannot typically modify nouns in the same way, even when the resulting combination is (potentially) interpretable:

(322) \*ukali-*saaq*  
arctic.hare-*quickly*

(323) \*sikituu-*saaq*  
skidoo-*quickly*

(324) \*iglu-*qattaq*  
house-*regularly*

(325) \*iglu-*kasak*  
house-*almost*

Adverbial postbases are thus (at least in these positions) in complementary distribution with the strictly attributive adjectives examined in Chapter 2, although we will see in section 3.2.1.5 that there is some overlap between the two categories.

In addition, adverbial postbases can be distinguished from nouns used adverbially since unlike genuine nouns they cannot stand on their own, as illustrated below:



- (326) \*qattaq / \*kasak / \*saaq (cf. nanuq ‘polar bear’)  
regularly almost quickly

Furthermore, the fact that they do not bear case distinguishes them from nominals.

### 3.2.1.2 Stacking and variable order

Like adjectives, adverbs can often be stacked, as illustrated by Cinque using the following data from Italian (1999, p. 45; glosses added):

- (327) Da allora, non hanno di solito mica più  
since.then NEG have.2PL *usually* *at.all/in.the.least*<sup>121</sup> *any.longer*  
sempre completamente rimesso tutto bene in ordine.  
*always completely* put.PAST.PART everything well in.order  
‘Since then, they haven’t usually not any longer always put everything well in order.’

In this example the adverbial *di solito*<sup>122</sup> ‘usually’ and the adverbs *mica* ‘at all’, *più* ‘any longer’, *sempre* ‘always’, and *completamente* ‘completely’ are stacked together between the auxiliary verb and the past participle.<sup>123</sup>

Similarly in Inuit, it is possible to stack multiple adverbial postbases, as illustrated in examples (328)-(330) from Inuktitut and (331) from West Greenlandic:

- (328) tigusi-kalla-gunniq-qattaq-tuq  
grab-quickly-any.more-regularly-DEC.3SG  
‘He/she’s not grabbing things (so) quickly any more.’

<sup>121</sup> Except for the extra ‘not’ in the English translation of this sentence, Cinque does not provide a concrete translation for *mica*, instead calling it a “negative adverb” (p. 4). I’ve used dictionary translations instead.

<sup>122</sup> Although *di solito* is presumably a PP being used adverbially, Cinque lists adverbs such as *abitualmente* and *usualmente* (pp. 8, 11) which he claims exhibit the same syntactic distribution.

<sup>123</sup> Such possibilities appear to be a natural consequence of Cinque’s analysis. Given the number of potential specifier positions available for adverbs, his theory predicts stacking (unless adverbs belong to the same position class, in which they would be mutually exclusive, assuming a ban on multiple specifiers; see e.g. Cinque 1999, p. 184, note 8).

- (329) *aiksi-inna-tuinna-mmari-qattaq-tuq*  
 fetch-merely-always-really/even-regularly-DEC.3SG  
 ‘He/she is constantly getting something’
- (330) *ani-qatta-tsia-runniq-tuq*  
 go.out-regularly-really/well-any.more-DEC.3SG  
 ‘He/she doesn’t really go out anymore.’
- (331) *ungasig-niru-laar-tsiar-ssa-qquur-qi-vuq* (Fortescue, 1980, pp. 45-6)  
 be.far-more-a.little-somewhat-FUT-undoubtedly-INTENS<sup>124</sup>-INDIC.3SG  
 ‘It will undoubtedly be somewhat further off.’

Another property of adverbs (also exhibited by adjectives) is variable positioning. For instance, Ernst (2002, p. 2) notes that the distribution of some subtypes of adverbs appears quite free:

- (332) (Stupidly,) they (stupidly) have (stupidly) been (stupidly) buying hog futures  
 (, stupidly).

As we would thus expect if adverbial postbases are indeed adverbs, they too exhibit variable order, as illustrated in the following examples (of which the first two are repeated from (313) and (314) above), without any noticeable differences in meaning (see section 3.3.1 below for evidence against the possibility of focus movement).

- (333)
- a. *niri-mmari-qattaq-quuq-tuq*  
 eat-even-regularly-probably-DEC.3SG  
 ‘He/she is probably even eating.’
  - b. *niri-mmari-quu-qattaq-tuq*  
 eat-even-probably-regularly-DEC.3SG
  - c. *niri-qatta-mmari-quuq-tuq*  
 eat-regularly-even-probably-DEC.3SG
  - d. *niri-qattaq-quu-mmari-tuq*  
 eat-regularly-probably-even-DEC.3SG

<sup>124</sup> Fortescue glosses the morpheme *qi* with an exclamation mark but describes it as an intensifier. It may also be an adverb.

- e. *niri-qquu-qatta-mmari-tuq*  
eat-probably-regularly-even-DEC.3SG
- f. *niri-qquu-mmari-qattaq-tuq*  
eat-probably-even-regularly-DEC.3SG

(334)

- a. *ani-kasa-kkanni-ngaaq-tuq*  
go.out-almost-again-instead-DEC.3SG  
'He/she almost left instead again.'
- b. *ani-kasa-ngaa-kkanniq-tuq*  
go.out-almost-instead-again-DEC.3SG
- c. *ani-kkanni-kasa-ngaaq-tuq*  
go.out-again-almost-instead-DEC.3SG
- d. *ani-kkanni-ngaa-kasak-tuq*  
go.out-again-instead-almost-DEC.3SG
- e. *ani-ngaa-kkanni-kasak-tuq*  
go.out-instead-again-almost-DEC.3SG
- f. *\*/?ani-ngaa-kasa-kanniq-tuq*  
go.out-instead-almost-again-DEC.3SG

(335)

- |    |   |  |                     |
|----|---|--|---------------------|
| a. | Alana   | <i>niri-tuinna-qatta-mmari-nngit-tuq</i> | <i>palaugar-mit</i> |
|    | A.(ABS.SG)  | eat-only-regularly-even-NEG-DEC.3SG      | bread-OBL.SG        |
| b. | Alana   | <i>niri-tuinna-mmari-qatta-nngit-tuq</i> | <i>palaugar-mit</i> |
|    | A.(abs.sg)  | eat-only-even-regularly-NEG-DEC.3SG      | bread-OBL.SG        |
|    | 'Alana doesn't even only (regularly) <sup>125</sup> eat bread.' |  |                     |

In (333) the adverbial postbases *mmarik* 'really/even', *qattaq* 'regularly', *qquuq* 'probably' exhibit variable ordering with respect to each. Similarly, in (334) *kasak* 'almost', *kkanniq* 'again', and *ngaaq* 'instead' exhibit variable ordering. Finally, in (335) *qattaq* 'regularly' and *mmarik* 'really/even' can be inverted with respect to each other.

We can also observe variable ordering of adverbial postbases with respect to what appear to be modal elements such as *gunnaq* 'can' and *giaqaq* 'should':

<sup>125</sup> Although the consultant didn't include 'regularly' in the translation, this is because in English the present tense is normally compatible with a habitual/generic interpretation, while in Inuktitut present tense results in either a progressive or immediate past reading (see Hayashi 2011). So, in order to achieve a habitual interpretation, *qattaq* must be added.

(336)

- a. puijjura-gunna-*kasa*-lauq-tuq  
swim-can-*almost*-DIST.PAST-DEC.3SG  
'She almost could swim.'
- b. puijjura-*kasa*-gunna-lauq-tuq  
swim-*almost*-can-DIST.PAST-DEC.3SG  
'She could almost swim.'

(337)

- a. ani-giaqa-*qquuq*-tuq  
go.out-should-*probably*-DEC.3SG  
'He probably should go out.'
- b. ani-*qquu*-giaqaq-tuq  
go.out-*probably*-should-DEC.3SG  
'He should probably go out.'

In (336) the adverbial postbase *kasak* 'almost' can appear on either side of the modal element *gunnaq* 'can/be able to' with no discernible effect on the meaning. Similarly, in (337) the adverbial postbase *qquuq* 'probably/maybe' can appear on either side of the modal postbase *giaqaq* 'should'. Ernst observes similar alternations between modals and adverbs English, as shown in (338) (p. 45), as does Cinque, as in (339) (p. 109; italics added):

(338)

- a. They *probably* could have gone a long way before stopping.
- b. They could *probably* have gone a long way before stopping.

(339)

- a. George *probably* will have read the book.
- b. George will *probably* have read the book.

While other types of adverbials such as PPs and nominal adverbials also permit stacking and variable ordering in other languages, Inuit lacks prepositions (and thus PPs) and does

not allow nominal adverbials such as *ippattsaq* ‘yesterday’ and *maani* ‘here’ inside verbal complexes:<sup>126</sup>

(340)

- a. niri-lauq-tuq                      ippattsaq  
eat-DIST.PAST-DEC.3SG      yesterday  
‘He/she ate yesterday.’
- b. \*niri-ippattsaq-lauq-tuq  
eat-yesterday-DIST.PAST-DEC.3SG

(341)

- a. maani              niri-lauq-tuq  
here              eat-DIST.PAST-DEC.3SG  
‘He/she ate here.’
- b. \*niri-maani-lauq-tuq  
eat-here-DIST.PAST-DEC.3SG

Thus, if we can discern adverbial postbases from nominal adverbials (which cannot occur inside verbal complexes) and from adverbial PPs (since prepositions appear to be lacking from Inuit), the properties of stacking and variable ordering appear to uniquely pick out a set of adverbs.<sup>127</sup>

In sum, with respect to both stacking and variable ordering, adverbial postbases in Inuktitut exhibit similar behaviour to that of adverbs in languages like English and Italian.

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<sup>126</sup> Evidence that *ippattsaq* and *maani* are nominals includes that fact that both can undergo noun incorporation, as illustrated in the following examples:

- (i) ippaksa-u-lauq-tuq                      (Legislative Assembly of Nunavut, 2005a, p. 1160)  
yesterday-COP-DIST.PAST-3SG  
‘the other day’
- (ii) maani-u-ngit-tuq                      (Legislative Assembly of Nunavut, 2005c, p. 1240)  
here-COP-NEG-DEC.3SG  
‘instead of over here’

Furthermore, the following example from my consultant containing the sentential negator *nngit* suggests that the form for ‘the other day’ in (i) above is not merely a fixed expression:

- (iii) ippaksa-u-lau-nngit-tuq  
yesterday-COP-DIST.PAST-NEG-DEC.3SG  
‘It was not the other day.’

<sup>127</sup> While stacking and variable order are also properties of the strictly-attributive adjectives examined in Chapter 2, their syntactic distribution is distinct in that they appear inside NPs (or, at least, below case, number, and possession marking).

Once again, while these properties are ascribed to adverbials generally, independent criteria (i.e. the lack of prepositions and the inability to undergo noun-incorporation) exclude adverbial postbases from belonging to other lexical categories.

### 3.2.1.3 Optionality

Another property typically ascribed to adverbs (and adverbials generally) is optionality. While functional projections such as determiners, prepositions, complementizers, etc. are often obligatory in particular grammatical constructions<sup>128</sup> in languages such as English, adverbs are never required by the larger construction (except perhaps for *more* and *most* in periphrastic comparative and superlative constructions, which are arguably much more functional than other adverbs). Chomsky (1965, pp. 101, 103) notes that “time and place adverbials can occur quite freely with various types of verb phrase” and also that “verbs generally take manner adverbials freely”. While Jackendoff (1972) notes that some verbs “require an adverbial of some sort to be present”, this need not be an adverb, as illustrated in the following examples (p. 64):

(342)

- a. John worded the letter carefully.
- b. John worded the letter in such a way as to confuse everyone.
- c. \*John worded the letter.

(343)

- a. Steve dresses elegantly.
- b. Steve dresses in such a way as to attract attention.
- c. \*Steve dresses.

---

<sup>128</sup> For instance, in the following examples the functional elements in parentheses are required by the larger syntactic construction.

- (i) She sent \*(the) letter.
- (ii) He has a fear \*(of) spiders.
- (iii) I wonder \*(if) they left.

As expected if they are true adverbs, adverbial postbases in Inuit are never obligatory. For instance, while the morpheme *qattaq* ‘regularly/frequently’ could potentially be construed as marking habitual aspect, since it is often used to override the default punctual/progressive aspect of Inuit verbs (see Hayashi 2011 for an account of verbal aspect in Inuktitut), when other adverbial postbases conveying habitualness are present, *qattaq* is not required:

- (344) *sini-qattaq-tuq*  
 sleep-regularly-DEC.3SG  
 ‘He/she sleeps regularly.’
- (345) *sini-katak-tuq*  
 sleep-frequently-DEC.3SG  
 ‘He/she sleeps frequently.’
- (346) *niri-innaq-tuq*  
 eat-only-DEC.3SG  
 ‘He/she is constantly eating.’

Similarly, *qattaq* is not required with what appears to be the more grammaticalized habitual marking; the portmanteau habitual and declarative mood/agreement morpheme *suuq*:<sup>129</sup>

- (347) *asiva-suuq*  
 hunt-HAB.DEC.3SG  
 ‘He/she hunts.’

Another potential exception to the generalization that adverbial postbases are always optional in Inuktitut is the need for either *mi* ‘also’ or the enclitic *tauq* ‘too’ (or both of these elements) in some constructions involving *pi*, which Compton & Pittman (2010b)

<sup>129</sup> In fact, the consultant found using *qattaq* with *suuq* to be redundant:

(i) *#mumi-qatta-suuq*  
 dance-regularly-HAB.DEC.3SG

argue to be similar to the English pro-form *do (so)*. For instance, in (348) either *mi* or *=taug* (or both) is required. If both are absent, as in (349), the result is marginal:

- (348) tiivi-taa-qqau-junga                      amma Miali    pi-gunnar-mi-juq=tauq  
TV-get-REC.PAST-DEC.1SG    and    Mary    PI-can-also-DEC.3SG=*too*  
'I got a TV and Mary can do so too.'
- (349) ?/#tiivi-taa-qqau-junga                      amma Miali    pi-gunnaq-tuq  
TV-get-REC.PAST-DEC.1SG and    Mary    PI-can-DEC.3SG

However, this appears to be due to pragmatic factors. We see a similar requirement with *do so* in English:

- (350) (Winterstein, 2011, p. 337)
- a. John came and Mary did too.
- b. #John came and Mary did.

Winterstein (2011) argues that *too* in English contributes both a presupposition and “information pertaining to the similarity of its host and the antecedent” (p.340). As such, the need for either the additive adverbial postbase *mi* ‘also’ or the enclitic *taug* ‘too’ in examples such as (348) above may lie outside of the narrow syntax. Consequently, it appears that we can maintain the generalization that no construction in Inuit requires an adverbial postbase, but rather that such propositions exhibit a pragmatic or information structure requirement that can only be met by these additive elements.

In summary, as predicted if these elements are indeed adverbs, adverbial postbases are optional modifiers.



### 3.2.1.4 Degree modifiers

The prototypical modifiers of adverbs are degree adverbs. As expected if they are adverbs, adverbial postbases can be modified by a degree marker.<sup>130</sup> In the following examples the degree marker *vijjuaq* modifies a preceding adverbial postbase:

(351)

- a. sini-tsiaq-tuq  
sleep-*well*-DEC.3SG  
'He/she is sleeping well.'
- b. sini-tsia-vijjuaq-tuq  
sleep-*well-very*-DEC.3SG  
'He/she is sleeping very well.'

(352)

- a. ugla-saa-gunnaq-tuq  
run-*quickly*-can-DEC.3SG  
'He/she can run quickly.'
- b. ugla-saa-vijjua-gunnaq-tuq  
run-*quickly-very*-can-DEC.3SG  
'He/she can run very quickly.'

(353)

- a. tigu-si-kallak-tuq  
grab-AP-*quickly*-DEC.3SG  
'He/she is grabbing (it) quickly.'
- b. tigu-si-kalla-vijjuaq-tuq  
grab-AP-*quickly-very*-DEC.3SG  
'He/she is grabbing (it) very quickly.'

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<sup>130</sup> This degree modifier is also compatible with some strictly attributive adjectives (as an expressive or intensifier; see footnote 55) and verb-like adjectives, as pointed out in Chapter 2, as well as verbs:

- (i) iglu-tuqa-vijjuaq  
house-old-*very*  
'very old house'
- (ii) nipiki-vijjuaq-tu-mit      pisuk-tuq  
quiet-*very*-DEC-OBL.SG      walk-DEC.3SG  
'He/she's walking very quietly.'
- (iii) igla-vijjuaq-tuq  
laugh-*very*-DEC.3SG  
'He/she is laughing so hard.'

Although the degree word *vijjuaq*, as seen in (iii) is not limited to modifying adjectives and adverbs, Doetjes (2008) notes similar degree expressions in other languages (e.g. *erg* in Dutch) which can also modify "gradable verbs" (p. 125).

(354)

- a. sini-katak-tuq  
sleep-*frequently*-DEC.3SG  
'He/she sleeps frequently.'
- b. sini-kata-vijjuaq-tuq  
sleep-*frequently-very*-DEC.3SG  
'He/she sleeps constantly.'

Furthermore, the degree marker itself is arguably an adverb. Fortescue (1980) lists a number of degree expressions in West Greenlandic, which he collapses with (adverbial) postbases of "manner", "phase of completion", and "frequency and duration" under the label  $V_{\text{mod}}$  (see section 3.1.1.1 for a summary of his system). Although it is difficult to discern from his discussion what these degree expressions can modify,<sup>131</sup> he lists *tsiar* 'fairly, a bit'<sup>132</sup> as a degree expression and employs it in the following example in which it modifies another degree expression, *laar* 'a little', which in turn appears to be modifying *niru* 'more' (repeated from (331)):

- (355) ungasig-niru-laar-tsiar-ssa-qquur-qi-vuq (pp. 45-6)  
be.far-more-a.little-somewhat-FUT-undoubtedly-INTENS<sup>133</sup>-INDIC.3SG  
'It will undoubtedly be somewhat further off.'

Insofar as these degree expressions appear able to modify other elements with adverbial meanings, they appear to be degree adverbs.

In summary, the data present above from Inuktitut as well as data from Fortescue (1980) suggests that adverbial postbases can be modified by degree expressions, which is consistent with their being adverbs. Furthermore, their ability to allow modifiers (though

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<sup>131</sup> This is due to the fact that Fortescue's derivation rules allow  $V_{\text{mod}}$  postbases to modify each other recursively, yet no distinction is made in his rules between degree expressions and other types of adverbial postbases.

<sup>132</sup> This is the West Greenlandic cognate of Inuktitut *tsiaq* 'good, well'.

<sup>133</sup> Fortescue glosses the morpheme *qi* with an exclamation mark but describes it as an intensifier. It may also be an adverb.

only simple ones, cf. Travis (1988)) suggests that these combinations are phrasal. I explore this possibility in section 3.3 where I argue that adverbial postbases are best analyzed as adjoined AdvPs.

### 3.2.1.5 Overlap with adjectives

Another property exhibited by adverbs in some languages is that of overlap with the adjective class. Dixon (2004, p. 11) states that “in some languages adjectives may also modify verbs, either in plain form or via a derivational process”. For instance, in English some elements are classified as both adjectives and adverbs (Payne, Huddleston, & Pullum, 2010, p. 64):

(356)

- a. a hard worker
- b. she works hard

Similarly, in Inuit a subset of strictly attributive adjectives are also classified as adverbial postbases. In the following examples, an element that is otherwise used adjectivally can also be used adverbially:

(357)

- a. iglu-jjuaq  
house-*big*  
‘a big house’
- b. niri-jjuaq-tuq  
eat-*big*-DEC.3SG  
‘He/she ate a lot.’

(358)

- a. qimmi-tsiaq  
dog-*good*  
‘a good dog’

- b. sini-tsiaq-tuq  
sleep-*good*-DEC.3SG  
'He/she is sleeping well.'

However, as illustrated above in section 3.2.1.1, this is not true of all strictly-attributive adjectives (repeated from (318) and (319)):

- (359) \*ani-tuqaq-tuq  
go.out-*old*-DEC.3SG

- (360) \*niri-kuluk-tuq  
eat-*adorable*-DEC.3SG

Nevertheless, some of these same adjectives that cannot modify verbal roots directly (and some that can, such as *jjuaq* 'big/well') can appear at the right periphery, attached to the verbal complex's mood/agreement morphology, with a concomitant change in meaning:

- (361)
  - a. ani-ju-tuqaq  
go.out-DEC.3SG-*old*  
'He/she left a long time ago.'
  - b. niri-ju-tuqaq  
eat-DEC.3SG-*old*  
'He/she ate a long time ago.'

- (362)
  - a. niri-ju-kuluk  
eat-DEC.3SG-*adorable*  
'He/she is eating (e.g. directed to a baby).'<sup>134</sup>
  - b. ani-ju-kuluk  
go.out-DEC.3SG-*adorable*  
'(Happily?), he/she left (e.g. happy that someone is out of hospital).'

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<sup>134</sup> Harper (1979) describes this morpheme as expressing either "endearment" or "smallness". He give the following examples (he uses a variant of the morpheme lacking the final consonant but his entry for *kuluk* points back to *kulu*; morpheme boundaries added):

- (i) nutara-kulu 'a sweet little baby'
- (ii) qikiqta-kulu 'a small island'
- (iii) pisuk-tu-kulu 'The dear little thing is walking.'
- (iv) tikit-tu-kulu 'They (whom we like) have arrived.'

(363)

- a. niri-ju-jjuaq  
eat-DEC.3SG-*big*  
'Unfortunately, he ate.'
- b. tikit-tu-jjuaq  
arrive-DEC.3SG-*big*  
'Unfortunately, he arrived.'<sup>135</sup>

To summarize, the ability of a subset of strictly-attributive adjectives to act as adverbial postbases mirrors the situation in languages such as English where there is an overlap between the categories of adjective and adverb.<sup>136</sup>

### 3.2.1.6 Modifying additional categories

Another potential identifying property of adverbs is the ability to modify additional categories beyond verbs, adjectives, and (other) adverbs. For instance, Payne Huddleston, and Pullum (2010) give the following examples of an adverb modifying prepositions, determiners, and DPs<sup>137</sup> (pp. 39, 41, 59; brackets and labels added to c-f):

(364)

- a. *visibly* [<sub>P</sub> up]
- b. *visibly* [<sub>D</sub> few]
- c. *hardly* [<sub>D</sub> any] doctors
- d. *absolutely* [<sub>D</sub> no] money
- e. *exactly* [<sub>DP</sub> the wrong reason]
- f. *barely* [<sub>DP</sub> a complaint]

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<sup>135</sup> My consultant initially translated this as "I didn't want him to arrive, but he did" which seems to encapsulate the meaning of *unfortunately* (i.e. the assertion that the proposition is true combined with the speaker-oriented meaning) (see Ernst, 2002; Potts, 2005).

<sup>136</sup> Note that while some have taken the overlap between adjectives and adverbs as evidence for them constituting a single category (e.g. Baker, 2004), Payne, Huddleston, and Pullum (2010) provide a number of arguments against collapsing the two categories.

<sup>137</sup> Payne, Huddleston, and Pullum employ 'NP' instead of 'DP'. However, if we assume the DP hypothesis then these would be DP adjuncts.

Although Inuit lacks prepositions and determiners, some adverbial postbases can modify a conjunction, a nominal quantifier, the interjection *ii* ‘yes’, or proper nouns and deictic time nominals (which are presumably DPs):

- (365) amma=lu-kkanniq                      (Legislative Assembly of Nunavut, 2001a, p. 134)  
       and=and-*again*  
       ‘in addition’
  
- (366) tamarmi-kasak                      (Legislative Assembly of Nunavut, 2004d, p. 445)  
       all-*almost*  
       ‘most’
  
- (367) ii-mmarik                              (Legislative Assembly of Nunavut, 1999a, p. 117)  
       yes-*even*  
       ‘Yes, most definitely; Yes, very much’
  
- (368) qallunaatitu-innaq                  (Legislative Assembly of Nunavut, 2005a, p. 985)  
       English-*only*  
       ‘English only; only English’
  
- (369) inuktitu-innaq                      (Legislative Assembly of Nunavut, 2007, p. 2015)  
       Inuktitut-*only*  
       ‘Inuktitut only; only Inuktitut’
  
- (370) ippatsa-tuinnaq                      (Legislative Assembly of Nunavut, 2005d, p. 1314)  
       yesterday-*only*  
       ‘just yesterday’
  
- (371) maanna-mmarik                      (Spalding, 1998, p. 50)  
       now-*even*  
       ‘right now’

Such examples appear to mirror the ability of adverbs in languages like English to modify additional categories beyond verbs, adjectives, and other adverbs, further suggesting that these adverbial postbases belong to a lexical category of adverbs in Inuit.

### 3.2.1.7 Speaker-oriented meanings

Yet another property of adverb classes in a number of languages is that some members have speaker-oriented meanings. Ernst (2002), following Jackendoff (1972), identifies three types of speaker-oriented adverbs: speech-act adverbs, which “function as manner adverbs modifying a covert predicate of expression” (p. 70); epistemic adverbs, which subsume modal or evidential adverbs; and evaluative adverbs, which “represent the speaker’s evaluation of some state of affairs” (p. 76). Ernst gives the following examples of each type (p. 69; italics added):

(372)

- |    |  |              |
|----|--|--------------|
| a. | <i>Honestly</i> , who would do such a thing?                     | (speech-act) |
| b. | The markets will <i>perhaps</i> respond to lower interest rates. | (epistemic)  |
| c. | <i>Unbelievably</i> , she decided to buy a camel.                | (evaluative) |

Potts (2005) includes speaker-oriented adverbs in his examination of Conventional Implicature (CI) content, arguing that their independence from at-issue meanings (i.e. their comment-like status) and their speaker-orientation fall out from his logic. For instance, he gives the following example of the speaker-oriented adverb *amazingly* (p. 6):

- (373) After first agreeing to lend me a modem to test, Motorola changed its mind and said that, *amazingly*, it had none to spare.

He states that *amazingly* in this example exhibits both speaker-orientation (since it cannot be construed as part of what Motorola said<sup>138</sup> and must be attributed to the speaker) and is independent from the clause’s at-issue meaning (since “amazingly” is interpreted as a comment associated with the proposition expressed by “it had none to spare”).

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<sup>138</sup> One committee member notes that the at-issue meaning is still available to her, even with the comma intonation. Crucially, however, the speaker-oriented meaning is *also* available.

Similarly, adverbial postbases in Inuktitut exhibit what appears to be speaker-orientation. In the following examples *ruluujaq* ‘finally; thankfully; luckily’ appears to be attributed to the speaker, not the subject of the clause:<sup>139</sup>

- (374) ani-ruluujaq-tuq  
go.out-finally/thankfully/luckily-DEC.3SG  
‘Thank God he/she went out.’
- (375) nanu-ruluujaq-Ø-tuq  
polar.bear-finally/thankfully/luckily-get-DEC.3SG  
‘Luckily, he/she caught a polar bear.’

Furthermore, in the following examples, repeated from (363), *jjuaq* (which is normally a strictly-attributive adjective meaning ‘large’ or an adverbial postbase expressing degree, as shown in (357)) appears to exhibit speaker-orientation:

- (376)
- a. niri-ju-jjuaq  
eat-DEC.3SG-*big*  
‘Unfortunately, he/she ate.’
  - b. tikit-tu-jjuaq  
arrive-DEC.3SG-*big*  
‘Unfortunately, he/she arrived.’

The alternation between the non-speaker-oriented adverbial meaning and the speaker-oriented meaning of *jjuaq* mirrors Potts’s treatment of adverbs such as *luckily*, which have regular at-issue meanings and yet can be type-lifted to have speaker-oriented

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<sup>139</sup> Cook & Johns (2009) also observe what appears to be speaker-orientation in examples such as the following from the Utkuhsalingmiut dialect (gloss modified):

- (i) aqilruq-paluk-tuq  
lead-look.like-DEC.3SG  
‘aluminum foil’ (literally ‘it looks like lead’)
- (ii) uqallak-tu-qpaluk-tuq  
say-DEC-seem-DEC.3SG  
‘I think she said (something).’

They note that “the speaker is communicating a personal impression” using the incorporating verb *qpaluk* ‘seem like; looks like’.



meanings. Potts contrasts the utterances in (377) with those in (378), attributing the difference in meaning to the adverb having been lifted to a Conventional Implicature (CI) type (see section 2.3.3.3) by the operator *COMMA*, which is shown in (379) (pp. 139-140):

(377)

- a. Luckily, Willie won the pool tournament.
- b. Willie, luckily, won the pool tournament.
- c. Willie won the pool tournament, luckily.

(378)

- a. Willie luckily won the pool tournament.
- b. Willie won the pool tournament luckily.

(379)  $\text{COMMA} \rightsquigarrow \lambda P.P : \langle \langle t^a, t^a \rangle, \langle t^a, t^c \rangle \rangle$

While the sentences in (378) illustrate the default at-issue use of *luckily* (e.g. as a manner adverb), in the examples in (377) *luckily* has been type-shifted by the comma intonation to a comment-like CI type yielding concomitant speaker-orientation.<sup>140</sup> Likewise, the difference in meaning between the two adverbial uses of *jjuaq*, one at-issue and another speaker-oriented, could be attributed to a type-shifting operator.

In summary, both the existence of adverbial postbases with speaker-oriented meanings and the alternations between at-issue and speaker-oriented meanings exhibited by elements such as *ruluujaq* and *jjuaq* are consistent with these belonging to a lexical class of adverbs.<sup>141,142</sup>

<sup>140</sup> Potts's logic attributes speaker-orientation to all CI typed material. See Chapter 2 for details about his framework. Note also that the position of *luckily* in (377) does not affect the interpretation since it takes the entire proposition as its semantic argument.

<sup>141</sup> Elements such as *qquuq* 'probably', *pallai/vallai* 'maybe', and *qai* 'perhaps' are likely also speaker-oriented adverbs, although some of these are difficult to differentiate from modals.

<sup>142</sup> Again, *jjuaq* is dually-categorized, belonging to both adjective and adverb classes, albeit with distinct meanings.

### 3.2.1.8 Summary of evidence

The evidence for positing that adverbial postbases in fact constitute a lexical category of adverbs includes the following:

(380)

- a. Adverbial postbases satisfy the “distributional core” of adverbs: that of modifying verbs.
- b. While there is some overlap between the class of adverbial postbases and strictly-attributive adjectives, many adverbial postbases cannot modify nouns, thereby differentiating them from adjectives.
- c. Adverbial postbases exhibit stacking.
- d. Adverbial postbases exhibit variable ordering.
- e. Adverbial postbases are optional.
- f. Adverbial postbases can be modified by degree words.
- g. We encounter dually-categorized adjectives/adverbs.
- h. Adverbial postbases can modify additional categories such as conjunctions, interjections, and DPs.
- i. Some adverbial postbases exhibit speaker-oriented meanings.

Given this evidence, I conclude that adverbial postbases are in fact adverbs. In the next section I examine adverbials derived primarily from verbs and verb-like adjectives and consider whether they too form a class of adverbs in Inuit.

With respect to lack of Predicate Modification argued for in the Chapter 2, the set of adverbs argued for above conform to the expectation that intersective denotations (insofar as these might be expected among adverbs) are absent. For instance, adverbs with meanings such as ‘only’, ‘almost’, ‘again’, ‘instead’, etc. seem unlikely to share the same semantic type as the constituents they modify; i.e. predicates, entities, propositions, etc. Furthermore, adverbs with speaker-oriented meanings arguably compose via Potts’s CI application.

### 3.2.2 Derived adverbials

In this section I examine the status of derived adverbials. I will begin by presenting evidence that, like the adverbial postbases examined in section 3.2.1, these exhibit a number of properties consistent with adverbs in other languages. However, I conclude this section with evidence that derived adverbials are better analyzed as case-marked adverbial DPs (analogous to adverbial PPs in languages like English).

#### 3.2.2.1 Function

As with the adverbs examined in section 3.2.1, derived case-bearing adverbials fulfill the characteristic function of adverbs, that of modifying verbs. Compton & Pittman (2010a) give the following examples of derived adverbials modifying verbs (p. 2180; glosses modified to conform to those used throughout):

- (381) nipikit-tu-mit            pisu-qqau-junga  
quiet-DEC-OBL.SG        walk-REC.PAST-DEC.1SG  
'I walked quietly.'

- (382) uqalimaa-lauq-tara            sukkait-tu-mi  
read-DIST.PAST-DEC.1SG.3SG    slow-DEC-OBL.SG  
'I read (it) slowly.'

Similarly, the following examples from Spalding (1998) show derived adverbials modifying verbs in the Aivilik dialect:

- (383) a. uqumait-tu-mik<sup>143</sup>            sinik-tuq            (p. 191)  
heavy-DEC-INS.SG            sleep-DEC.3SG  
'he sleeps soundly or deeply'

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<sup>143</sup> Note that while the dialect of my consultant collapses together the ablative case (e.g. *-mit*) and the instrumental case (e.g. *-mik*) (into what I have labeled as 'oblique'), these two cases remain distinct in most other dialects such as Aivilik and West Greenlandic.

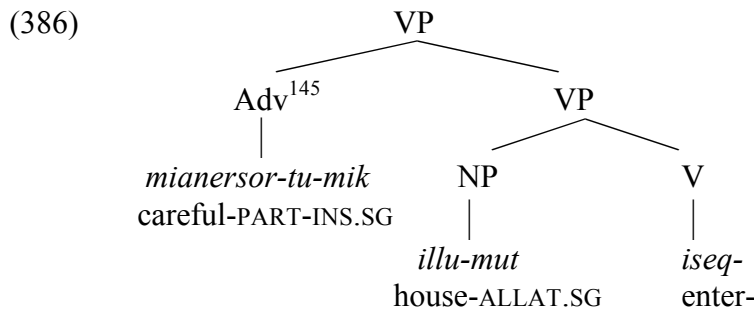
- b. cf. *uqumait-tuq*  
 heavy-DEC.3SG  
 ‘it is heavy in weight’

(384) (p. 40)

- a. *kassunga-ju-mik qai-juq*  
 slow-DEC-INS.SG come-DEC.3SG  
 ‘he comes slowly; at a crawl’  
 b. cf. *kassunga-juq*  
 slow-DEC.3SG  
 ‘it moves slowly; crawls; creeps; dawdles’

Sadock (2003) also treats such adverbials as VP modifiers, as illustrated in the following example from West Greenlandic and corresponding tree (p. 33; glosses modified):

- (385) *mianersor-tu-mik illu-mut iseq-<sup>144</sup>*  
 careful-PART-INS.SG house-ALLAT.SG enter-  
 ‘to enter a house carefully’



Insofar as these adverbials are able to act as VP modifiers, they fulfill the characteristic function of adverbs.

<sup>144</sup> Sadock’s example gives what he analyses as the VP, with the mood/agreement that would normally appear as part of the verbal complex omitted.

<sup>145</sup> Despite using the label ‘Adv’ here, Sadock makes clear elsewhere that he does not distinguish a lexical class of adverbs. For instance, he states that “the morphology of WG distinguishes between nominal and verbal forms”, that “[t]o a large extent, these correspond to the two major classes of words in the syntax”, and finally that there are “a number of full words that are neither nouns nor verbs, often called particles” (pp. 4-5).

### 3.2.2.2 Stacking and variable order

As expected of adverbials generally, derived case-bearing adverbials can be stacked and can exhibit variable order with respect to the verbal complex. In the following example the adverbials *nipikittumi(t)* ‘quietly’ and *sukkaittumi(t)* ‘slowly’ can appear together with the verb without any marker of conjunction. Furthermore, they can appear in any order with the verbal complex:

(387)

- |    |   |                                    |                                    |
|----|---|------------------------------------|------------------------------------|
| a. | nipikik-tu-mit<br>quiet-DEC-OBL.SG                                    | sukkait-tu-mit<br>slow-DEC-OBL.SG  | pisuk-tuq<br>walk-DEC.3SG          |
|    | ‘He/she is slowly walking quietly; he/she is quietly walking slowly.’ |                                    |                                    |
| b. | sukkait-tu-mit<br>slow-DEC-OBL.SG                                     | nipikik-tu-mit<br>quiet-DEC-OBL.SG | pisuk-tuq<br>walk-DEC.3SG          |
| c. | pisuk-tuq<br>walk-DEC.3SG   | nipikik-tu-mit<br>quiet-DEC-OBL.SG | sukkait-tu-mit<br>slow-DEC-OBL.SG  |
| d. | pisuk-tuq<br>walk-DEC.3SG   | sukkait-tu-mit<br>slow-DEC-OBL.SG  | nipikik-tu-mit<br>quiet-DEC-OBL.SG |
| e. | nipikik-tu-mit<br>quiet-DEC-OBL.SG                                    | pisuk-tuq<br>walk-DEC.3SG          | sukkait-tu-mit<br>slow-DEC-OBL.SG  |
| f. | sukkait-tu-mit<br>slow-DEC-OBL.SG                                     | pisuk-tuq<br>walk-DEC.3SG          | nipikik-tu-mit<br>quiet-DEC-OBL.SG |

The ability of derived case-bearing adverbials to be stacked and be freely ordered is consistent with them being adverbs.

### 3.2.2.3 Optionality

Another property expected of adverbs (as discussed in section 3.2.1.3 above) is optionality. Fortescue (1984) notes that in the small set of situations in which adverbials are required in West Greenlandic, particles, nominals in the SIMILARIS case (i.e. Fortescue’s EQUATIVE), and the question word *qanuq* ‘how’ are sufficient to meet the requirement (p. 102; italics added):

Apart from the copular constructions with adverbial particles like *tassa* and *aana* [...], cases where an adverbial is obligatory are few – notably in connection with derivational affix *tigi* of degree ‘so’ or quasi-independent stem *it-* ‘be’ (and its derivatives like *iliur-* ‘act’), where a preceding NP in the equative case, q[uestion]-word ‘how’ or an adverbial of extent/comparison like *taama* is required.

For instance, Fortescue notes the copular uses of particles,<sup>146</sup> as in (388), and the use of nominals in the SIMILARIS case, as in (389)-(392) (glosses modified):

- (388) Hansi *tassa* *pisurtaq* (p. 72)  
Hansi that.is leader  
‘Hansi is the leader.’
- (389) *miitiri-sut* *arvinilit-tut* *taki-tigi-suq* (p. 224)  
meter-SIMIL.PL six-SIMIL.SG be.long-so-PART.3SG  
‘six meters long’
- (390) *Maalia* *Ammaalia-tut* *ajur-tiga-aq* (p. 224)  
Maalia Ammaalia-SIMIL.SG be.bad-so-INDIC.3SG  
‘M. is as bad as A.’
- (391) *ataata-tut* *ataqqi-vaa* (p. 218)  
father-SIMIL.SG respect-INDIC.3SG.3SG  
‘He respected him as a father.’

Such constructions are (potentially) compatible with derived case-bearing adverbials, as illustrated in (392):

- (392) *sianilluanngit-su-tut* *iliur-puq* (p. 218)  
be.stupid-PART-SIMIL.SG act-INDIC.3SG  
‘He acted stupidly.’

Crucially, however, no construction specifically requires a derived case-bearing adverbial to the exclusion of particles or nominals in the SIMILARIS case. Thus, like adverbs in languages like English, derived case-marked adverbials are optional.

<sup>146</sup> This use of deictic forms seems analogous to the use of third person pronouns as copulas in the present tense in Hebrew.

### 3.2.2.4 Degree words

Like adverbs, case-bearing adverbials appear to admit degree modification. In the following examples the degree adverb *vijjuaq* ‘very’ (introduced in section 3.2.1.4) modifies the adverbial:

(393)

- a. *sukka-vijjuaq-tu-mit*      *pisuk-tuq*  
fast-very-DEC-OBL.SG      walk-DEC.3SG  
‘He/she is walking very quickly.’
- b. *sukkai-vijjuaq-tu-mit*      *pisuk-tuq*  
slow-very-DEC-OBL.SG      walk-DEC.3SG  
‘He/she is walking very slowly.’

However, given the position of *vijjuaq* adjacent to the verb-like adjectives *sukka-* ‘fast’ and *sukkai-* ‘slow’ in these examples, it may instead be that a sub-constituent of these adverbials is being modified. Fortescue (1984) provides the following example from West Greenlandic in which the degree word *assut* ‘very’ clearly modifies the entire derived adverbial *quinartumik* ‘amusingly’ (p. 136; glosses modified):

- (394) *assut*<sup>147</sup> *quinar-tu-mik*      *piviu-su-mil=li*  
very    amusing-PART-INSTR.SG      realistic-PART-INSTR.SG=but  
‘very amusingly but realistically’

Such examples conform to the expectation that (at least some) adverbs will be able to be modified by degree adverbs.

### 3.2.2.5 Relationship with verb-like adjectives

Another potential argument in favour of classifying derived adverbials as real adverbs is that many of them contain verb-like adjectives (i.e. elements traditionally

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<sup>147</sup> The status of *assut* ‘very’ will be discussed in section 3.2.3.2 below.

categorized in the literature as verbs that were argued in Chapter 2 to be adjectives). In a number of languages adjectives and adverbs are derivationally related, as illustrated in the following examples from Japanese and Mandarin:

(395) Japanese (Martin, 2004, p. 467)

a.	hayai	yoi	karui	atarashii
	‘quick’	‘good’	‘light’	‘new’
b.	haya-ku	yo-ku	karu-ku	atarashi-ku
	‘quickly’	‘well’	‘lightly; easily’	‘newly; recently; freshly; anew’

(396) Mandarin (Li & Thompson, 1981, p. 323)

a.	kuài	xīngfèn	jiǎndān
	‘quick’	‘excited’	‘simple’
b.	kuài-kuài-de	xīngfèn-de	jiǎndān-de
	‘quickly’	‘excitedly’	‘simply’

In Japanese the morpheme *-ku* creates adverbs from *i*-adjectives (i.e. one of the two adjective classes in Japanese, along with *na*-adjectives), while in Chinese *-de* forms adverbs from adjectives, sometimes in conjunction with reduplication. Given that previous analyses of Inuktitut treat *-tuq/-juq* as a nominalizer that is homophonous with the declarative (or participial) mood marker (e.g. Bok-Bennema (1991, p. 62)), it could be argued that adverbials constructed from verb-like adjectives have simply undergone another layer of derivation, with the case-markers functioning as adverbializers, analogous to English *-ly*. However, in the next subsection I argue against such an analysis.

### 3.2.2.6 Evidence against adverb status

Despite exhibiting a number of the syntactic properties we would expect of a class of derived adverbs (i.e. analogous to English *-ly* adverbs) such as stacking, variable



ordering, optionality, and compatibility with degree words, additional evidence precludes case-bearing adverbials from constituting a second class of adverbs in Inuit.

An important criterion for concluding that verbal-complex-internal adverbials examined in section 3.2.1 were indeed adverbs and not merely members of another lexical category functioning as adverbials was that they could be differentiated from other potential categories of adverbials (e.g. nominals, as illustrated in section 3.2.1.1). But this is not the case with derived adverbials. Unlike the verbal-complex internal adverbs which never bear case, derived adverbials are typically case-marked.<sup>148</sup> The presence of case-marking suggests that these are in fact nominal constituents (i.e. DPs) being used adverbially. In particular, the full range of oblique cases available to nouns also appears to be available to derived adverbials, as illustrated in the following examples from Spalding's (1998) dictionary:

(397) Locative case:

- |    |  |          |
|----|--|----------|
| a. | quttik-tu-mi<br>high-DEC-LOC.SG<br>'high up; in the sky'                       | (p. 122) |
| b. | kingullir-mi<br>descendant/successor-LOC.SG<br>'later; afterwards; in the end' | (p. 45)  |

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<sup>148</sup> In addition to case-marking, Fortescue also gives the following examples from West Greenlandic which appear to include number agreement on the derived adverbials (1984, pp. 249-250; glosses modified):

- |      |  |                                     |
|------|--|-------------------------------------|
| (i)  | apiri-su-qar-puq<br>ask-PART-have-INDIC.3SG<br>'There is an angry questioner/somebody asked angrily.'        | kamat-tu-mik<br>angry-PART-INSTR.SG |
| (ii) | apiri-su-qar-puq<br>ask-PART-have-INDIC.3SG<br>'There are some angry questioners/some people asked angrily.' | kamat-tu-nik<br>angry-PART-INSTR.PL |

The singular agreement on *qaq* 'have' in (ii) appears to be due to these being existential constructions.

(398) Vialis case:

- a. *ilaanni-kkut* (p. 22)  
sometimes-VIAL.SG  
'from time to time'
- b. *qakku*<sup>149</sup>-*tikkut* (p. 106)  
when-VIAL.SG  
'from time to time; sometimes'

(399) Similaris case:

- a. *tamai-titut* (p. 151)  
all/everyone-SIMIL.PL  
'like all of them'
- b. *inuk-titut*      *qimuksi-qattar-tuq* (p. 27)  
Inuk-SIMIL.PL      travel.by.dog.team-regularly-DEC.3SG  
'he travels by sled and dogs in the Inuit or Eskimo manner'

(400) Allative case:

- a. *sani-mut* (p. 127)  
side-ALLAT.SG  
'sideways; to the side'
- b. *sivu-mut* (p. 139)  
front-ALLAT.SG  
'forward'

(401) Ablative case:

- a. *ungasik-tu-mit*      *niuviriartur-tuq* (p. 110)  
far-DEC-ABL.SG      shop/trade-DEC.3SG  
'he comes to trade from a distance'
- b. *isu-qa-nngit-tu-mit*      *isu-qa-nngit-tu-mut* (p. 32)  
end-have-NEG-DEC-ABL.SG      end-have-NEG-DEC-ALLAT.SG  
'forever and ever (Christ[ian] prayer book)'

The above examples (in addition to examples in previous subsections with the instrumental case) illustrate that all the oblique cases can appear on derived adverbials. A potential counterexample to the argument that case-marking is diagnostic of non-adverb

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<sup>149</sup> Both Spalding (1998, pp. 106, 109) and Fortescue et al (2010, pp. 304, 310) note that *qakkugu* (Proto-Eskimo \**qaku*) has a future orientation (except in some eastern dialects), while *qanga* (\**qana*) has a past orientation.

status is the use of accusative case in Arabic adverbials. However, Ryding (2005) states that “most words that *function* as Arabic adverbs are adjectives or nouns in the accusative case” (p. 276; italics added) and that “the accusative case [...] may mark an adverbial function” (p. 54). Ryding’s discussion consistently distinguishes between “adverb” and “adverbial”, suggesting that the elements bearing accusative case are DP adverbials (i.e. nominals functioning adverbially). If only a single oblique case in Inuit had this function, as in Arabic, we might argue that it was actually an adverbializer that was merely homophonous with one of the case-markers. However, we would not predict the full range of oblique case-marking to be homophonous with adverbializers. Instead, this situation suggests that these derived adverbials are DPs. Such an analysis coincides with Blake’s (2004) typological observation that “it is common for nouns in oblique cases to be reinterpreted as adverbs, particularly adverbs of place, time and manner” (p. 179).

While it is convenient here to refer to these adverbials with nominal properties as DPs, I assume that their adverbial usage is licensed by oblique cases instantiating a functional head in the syntax (i.e. the KP of Bayer, Bader, & Meng, 2001), and that they are analogous to adverbial PPs in languages like English. However, the claim that these adverbials are not adverbs, but merely nominals employed adverbially, is also compatible with analyses which postulate that oblique cases are prepositions cross-linguistically (see, e.g., Fillmore, 1968; Ashbury, 2008).<sup>150,151</sup>

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<sup>150</sup> A question arises as to why derived adverbs do not occur word-internally. One possibility is that Inuktitut lacks an adverbializer analogous to English *-ly*. Alternatively, given that these elements bear case, and following Compton & Pittman’s (2010a) analysis of Inuit word-formation, case-bearing DPs will spell out as separate phonological words.

<sup>151</sup> If Inuit lacks a rule of Predicate Modification, case-bearing adverbials either compose with the projections they modify via Functional Application (with oblique cases serving as type-shifters lifting the semantic types of these modifiers to take verbal or clausal projections as arguments) or possibly via CI application.

### 3.2.2.7 Summary

Despite exhibiting a number of the syntactic properties expected of adverbs such as stacking, variable ordering, optionality, and degree modification, it is not possible to differentiate derived case-marked adverbials from DPs employed adverbially. Accordingly, I conclude that they do not constitute a class of adverbs. Instead, they are DPs (or more precisely either KPs or PPs, depending on the status of the oblique cases involved) used adverbially.

### 3.2.3 Particles

In addition to the verbal-complex internal adverbs and DP adverbials examined above, we also observe a set of elements which are labeled as particles in the literature. For instance, Sadock (2003, p. 5) lists *kiisa* ‘finally’, *aamma* ‘also’, *qaa* ‘let’s go’, and *naak* ‘where?’ as examples of particles in West Greenlandic. The diversity of these examples illustrates that the label “particle” appears to be a cover term for all uninflected words (i.e. bearing neither case nor person/number agreement). Such a position is illustrated by Nowak (2008, p. 13) who states that “[p]articles are without grammatical category; they are not marked grammatically and in that respect resemble German adverbs”.<sup>152</sup>

In the following subsections I will first argue that these particles actually belong to several different lexical and functional categories. Next, after isolating a small subset of potential adverbs from this class, I will present evidence that they exhibit properties consistent with adverbs cross-linguistically.

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<sup>152</sup> Translated from the original German: “Partikel sind ohne grammatische Kategorie, sie werden nicht grammatisch markiert und ähneln darin deutschen Adverbien.”

### 3.2.3.1 Categorical heterogeneity

Despite being grouped together as a class by Sadock (2003), Fortescue (1984), and Nowak (2008), “particles” appear to be a grouping of several syntactic categories. First, a number of so-called particles appear to exhibit the properties of nominals. For instance, Nowak lists *qanga* ‘when?’ and *qaukpat* ‘tomorrow’ as particles in Inuktitut, based on their lack of inflection. However, such elements exhibit properties typically associated with nominals, such as noun incorporation, the possibility of case-marking, and compatibility with modifiers such as *kiaq* ‘I don’t know/I wonder’ which normally modifies nominals.<sup>153</sup>

(402) *qaukpa-u-laar-mat* (Legislative Assembly of Nunavut, 2001c, p. 1020)  
tomorrow-COPULA-DIST.FUT-BECAUS.3SG  
‘[because it] is tomorrow’

(403) *qauppa-mut* (Legislative Assembly of Nunavut, 2002e, p. 1289)  
tomorrow-ALLAT.SG  
‘until tomorrow’

(404) *qanga-kkut pi-gia-rajaq-pat?*  
when-VIAL.SG do-start-would-INTERROG.3PL  
‘When would it begin?’ (Legislative Assembly of Nunavut, 2002c, p. 413)

(405) *qanga-kiaq* (Spalding, 1998, p. 109)  
when-I.wonder/don’t.know  
‘I don’t know when.’

The noun incorporation exemplified in (402), compatibility with case-marking illustrated in (403)-(404), and compatibility with modifiers such as *kiaq*, as in (405), suggest that these “particles” are actually nominals.

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<sup>153</sup> For instance, Harper (1979, p. 31) treats *kiaq* as a nominal modifier.

Similarly, uninflected deictic elements are often classified as particles. For instance, Denny (1982) categorizes a number of forms as “predicative particles”.<sup>154</sup> According to Denny these forms are created by doubling the final consonant of deictic roots and adding /a/ (p. 365):

- (406) pik-ka  
up.there-PREDICATIVE.FORM  
‘up there’
- (407) kan-na  
down.there-PREDICATIVE.FORM  
‘down there’
- (408) Piita uv-va  
P. here-PREDICATIVE.FORM  
‘here is Peter’

Denny suggests that this doubling and the addition of the vowel is necessary to “form a phonological word”, presumably since the language appears to lack (non-interjection) CVC words (which I presume to be due to a requirement that words contain at least two vowel morae, thereby allowing CVV and VVC words such as *kia* ‘whose?’ and *auk* ‘blood’). However, this does not account for the consonant doubling in Denny’s predicative particles, since /CVC-a/ is an attested phonotactically well-formed sequence (e.g. *nuna* ‘land’; *siku* ‘ice’, *kina* ‘who?’, etc.).

However, given that such roots undergo case-marking to create demonstrative pronouns and adverbials,<sup>155</sup> as illustrated in the following examples, it seems fair to

<sup>154</sup> Fortescue et al (1994, p. 451) also calls these forms “predicative” or “interjectional”.

<sup>155</sup> Lanz (2010) treats demonstratives bearing oblique cases employed adverbially as belonging to a class of adverbs (e.g. p. 99). However, her argument (p. 113) that they can be distinguished from nouns because they only bear oblique cases (i.e. that they are incompatible with ergative, instrumental, similariis, and vocative) seems (at least in part) reducible to their adverbial meaning. I contend that these are simply adverbial uses of nominal roots with demonstrative meanings. Similarly, Nagai (2006) proposes a class of

conclude that they too are nominal, since nothing else receives case (glosses added/modified).<sup>156</sup>

- (409) ping-na                      Lukii?                      (Denny, 1982, p. 365)  
           up.there-ABS.SG            Luke.INTERROG<sup>157</sup>  
           ‘Is the one up there Luke?’
- (410) u-na                      kiisi-lauq-tuq                      u-uminga    (Compton, 2004, p. 18)  
           here-ABS.SG    bite-DIST.PAST-DEC.3SG    here-OBL.SG  
           ‘This one bit this one.’
- (411) ik-ani                      iksiva-juq                      (Denny, 1982, p. 363)  
           over.there-LOC.SG    sit-DEC.3SG  
           ‘He is sitting right over there.’
- (412) un-uuna                      pisuk-puq                      (p. 364)  
           down.there-VIAL.SG    walk-INDIC.3SG  
           ‘He is walking via around down there.’

For instance, in (409) the demonstrative pronoun *pingna* serves the role of subject and bears absolutive case in what appears to be an equative construction, while in (410) demonstrative pronouns *una* and *uuminga* (bearing absolutive and oblique case respectively) serve as subject and object. In examples (411)-(412) demonstratives bearing locative and vialis cases serve as adverbial modifiers. This usage as case-marked arguments and case-marked adverbials is consistent with these deictic “particles” actually being nominals.<sup>158</sup>

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“demonstrative and interrogative adverbs” (p. 36) in North Alaskan Iñupiaq. However, his note that “Adverbs are marked for case” suggests to me that these too should be analyzed as adverbial DPs.

<sup>156</sup> Note that demonstrative case-markers exhibit distinct forms from other nominals. However, the glossing in these examples is supported as follows: Fortescue et al (2010, pp. 516, 526) lists *pingna* as absolutive singular in Western Canadian dialects and *una* as absolutive singular across all dialects, Dorais (2010, p. 84) lists *uminga* as a “modalis” (i.e. my ‘oblique’) case form in the Nunavik dialect, and Lowe (1985, pp. 273-281) lists a number of demonstratives bearing *-uuna* as vialis singular in the Siglit dialect.

<sup>157</sup> A yes/no question can sometimes be formed by lengthening a final vowel (see Fortescue 1984, p. 18).

<sup>158</sup> A further property differentiating demonstratives from other so-called “particles” (although perhaps also differentiating them from nouns) is that they alone are compatible with the prefix *ta-*, which Denny (1982)

Further evidence for classifying deictic particles as nominals includes the possibility of noun incorporation. For instance, in the following examples *maanna* ‘now’ and *una* ‘this’ have both undergone noun incorporation by the copula.

- (413) *maanna-u-juq* (Legislative Assembly of Nunavut, 2004b, p. 266)  
*now-COP-DEC.3SG*  
 ‘at this point (in time)/at the present time’
- (414) *aippa-nga uattiaq*  
*second-3SG.POSS.ABS a.while.ago*  
*apiqquti-gi-qqau-jan-nut*  
*question-have.as-REC.PAST-PASS-1.SG.POSS.ALLAT.SG*  
*una-u-qqau-juq*  
*this-COP-REC.PAST-DEC.3SG*  
 ‘My second part of my earlier question was: [...]’ (*lit.* ‘it was this’)  
 (Legislative Assembly of Nunavut, 2005e, p. 1606)

Since noun-incorporation in Inuit is (otherwise) confined to nominals, this appears to be strong evidence that demonstratives are nominals.

Another set of elements typically labeled as particles are conjunctions. For instance, Fortescue (1984, pp. 122-123) labels a number of words in West Greenlandic such as *aamma(lu)* ‘and’, *kisianni(li)* ‘but’, and *taava(lu)* ‘then’ as “conjunctive particles”. Despite the “particle” label, they fulfill the same function as conjunctions in more familiar languages, that of conjoining constituents, as illustrated in the following examples from Baffin Island Inuktitut (Compton & Pittman, 2010b, p. 5):

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describes as shifting the perspective of demonstratives from that of the speaker to that of either the addressee or a third person. For instance, he gives the following contrastive pair (glosses added):

- (i) *pik-unga*  
*up.there-ALLAT.SG*  
 ‘to right up there, for the speaker’
- (ii) *tak-pik-unga*  
*OTHER.FIELD-up.there-ALLAT.SG*  
 ‘to right up there, for something else’

(Note that he leaves the *ta-/tak-* allomorphy unexplained. It may be that /tak/ is the underlying form.)



- (415) tiivi-taa-qqau-junga                      amma Miali   pi-gunna-qqau-mmi-juq  
 TV-get-REC.PAST-DEC.1SG    *and*    Mary   do.so-can-REC.PAST-also-DEC.3SG  
 ‘I got a TV and Mary was able to [get one] too.’
- (416) tiivi-taa-gasuaq-tunga                      kisiani                      pi-gunna-nngit-tunga  
 TV-get-try-DEC.1SG                      *but*                      do.so-can-NEG-DEC.1SG  
 ‘I’m trying to buy a TV but can’t [get it/one].’

The apparent motivation for grouping together particles as a class is their lack of inflection, and yet a lack of inflection is characteristic of conjunctions in most languages. Given that the only grounds suggested in the literature for treating Inuit conjunctions as particles would hold true of conjunction in most languages<sup>159</sup> in which they are standardly assigned their own functional category, there appears to be no basis for conflating conjunctions into a larger class of particles.

A further subset of “particles” in Inuktitut include examples like *aarnga!* ‘Phew! What a stink!’, *iiq!* ‘yuck!’, *ujuu!* ‘Whew! I’m exhausted!’, etc. (Spalding, 1998). Examining an analogous set of particles in West Greenlandic, Fortescue (1984, p. 29) states “[t]here are a large number of uninflected ‘particles’ of an exclamatory nature that may form complete utterances”. For instance, each of the following examples can stand alone as utterances according to Fortescue (p. 29).

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<sup>159</sup> For instance, Nishiyama (2011) observes that “agreement WITHIN coordination seems to be quite rare” (p. 382; original emphasis). Nishiyama examines one such language, Lamaholot (Austronesian), in which conjunctions agree with their first conjunct, as illustrated below:

- (i) go    k-o’on    mo    pana  
       I        1SG-and    you    walk  
       ‘I and you walk.’
- (ii) mo    m-o’on    Bala    pana  
       you    2SG-and    Bala    walk  
       ‘You and Bala walk.’
- (iii) Bala    n-o’on    mo    pana  
       Bala    3SG-and    you    walk  
       ‘Bala and you walk.’

- (417) asu  
‘stop that now’
- (418) ikkii  
‘brrr! (it’s cold)’
- (419) na’aa  
‘ow!’
- (420) ak  
‘here you are’

Similarly, Sadock (2003, p. 24) states that “[a] number of particles can be used all by themselves with the force of an independent clause”, giving the following as examples, also from West Greenlandic:

- (421) qaa  
‘Let’s go, let’s do it!’
- (422) Ta!  
‘Listen!’

Despite the use of the label “particle” by these authors, their descriptions of these elements, in particular their ability to stand on their own as complete utterances, seems to coincide with Wilkins (1992, p. 124)’s definition of interjections:

- (423) Interjection: A conventional lexical form which (commonly and) conventionally constitutes an utterance on its own, (typically) does not enter into construction with other word classes, is (usually) monomorphemic, and (generally) does not host inflectional or derivational morphemes.

The examples above and the statements by Fortescue and Sadock show that this subset of “particles” conform to the first part of this definition, in that they can occur alone as utterances. Further consistent with Wilkins’ definition, the examples provided in the

literature tend to be monomorphemic.<sup>160</sup> Regarding inflection, Nowak notes that “particles can appear in the sentence unchanged” and that “this means first of all, that they are not inflected” (p. 14).<sup>161</sup> This too conforms to Wilkins’ definition of interjections.

Finally, regarding the observation that interjections generally do not enter into larger constructions, Fortescue notes one potential exception, stating that these forms “can be used with nominals in apposition” (p. 29). For instance, he notes that *taamak* ‘it’s (all) gone’ can be combined with a nominal as in (424) below:

- (424) savi-ga                      taamak  
         knife-1POSS.SG.ABS    it’s.(all).gone  
         ‘my knife is gone!’

However, similar juxtapositions of prototypical interjections and nominals appear possible in other languages, such as English:

- (425) Wow/hurray/hey, a pie!

Given the possibility of this analogous construction with what appear to unambiguously be interjections in English, the possibility of apposition with nominals does not appear to be counter-evidence to classifying this subset of Inuit “particles” as interjections, despite Wilkin’s generalization.

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<sup>160</sup> An illustrative example of the exceptions to this generalization is *takanna* ‘help yourself/do start’ (for which Fortescue suggests the context of ‘pointing at food’). This form appears to be an interjectional (and idiomatic) use of a morphosyntactically complex demonstrative (glossing added using Denny 1982 and Sadock 2003):

- (i) ta-kan-na  
     OTHER.FIELD-down-ABS.SG  
     ‘that one down there (from you)’

However, Wilkins also notes that morphosyntactically complex interjections exist in English. For instance, he gives “Bloody hell!” as an example. Similarly, I would suggest that “here you go!” is a complex interjection (as evidenced by its formulaic use and non-compositional meaning) that is roughly equivalent to *takanna*. Despite morphological complexity, these elements exhibit other characteristics of interjections.

<sup>161</sup> Translated from the original German: “Partikel können unverändert im Satz erscheinen. Dies heißt zunächst, dass sie nicht flektiert werden.”

In sum, a large number of elements previously characterized as either exclamative particles or particles which are able to stand on their own as utterances are better characterized as interjections.<sup>162</sup>

### 3.2.3.2 Residual adverbs in the class of “particles”

After teasing apart the sets of nominal “particles” (including those used deictically), conjunctions, and finally interjections, we are left with a rather small set of candidates for the category of adverb. Two such potential adverbs are *suli* ‘still, yet’ and *aksut/atsut/assut* ‘very’<sup>163</sup> (along with related forms such as *aksualuk* ‘very much so’).

Beginning with *suli*, it appears to exhibit some of the properties typically associated with adverbs cross-linguistically. First, it exhibits variable order with respect to the elements that it modifies, as illustrated in the following example:

- (426)
- |    |                           |                 |
|----|---------------------------|-----------------|
| a. | <i>suli</i>               | <i>niri-juq</i> |
|    | still                     | eat-DEC.3SG     |
|    | ‘He/she is still eating.’ |                 |
| b. | <i>niri-juq</i>           | <i>suli</i>     |
|    | eat-DEC.3SG               | still           |
|    | (same)                    |                 |

Furthermore, it appears to be optional in the contexts in which it can appear. For instance, it can be omitted in examples such as those in (426) and does not appear to be required by any constructions. Moreover, *suli* appears to perform the characteristic function of

<sup>162</sup> Note that Lanz’s (2010) grammar of Iñupiaq also admits a category of conjunctions and a category of interjections, although both categorizations appear to be based primarily on their English translations (pp. 131-2).

<sup>163</sup> *Aksut* and *atsut* are the Inuktitut cognates of WG *assut* ‘very’ which appeared in example (394) in section 3.2.2.4 above. The difference between the forms is due to different phonotactic constraints on consonant clusters across dialects.



Perhaps most crucially, *suli* does not exhibit any of the morpho-syntactic properties of other lexical categories; it does not bear case, number, tense, mood, or agreement.<sup>165</sup> It seems fair to conclude that an adverbial modifier which does not exhibit the properties normally associated with adverbials belonging to other categories (e.g. DP adverbials) is an adverb.

Similarly, *aksut/atsut/assut* ‘very, a lot’ (whose form varies in accordance with dialect-specific constraints on consonant clusters) and variants such as *aksualuk* ‘very much so’ exhibit a number of the properties expected of adverbials, yet none of the properties typically associated with nominal, verbal, or clausal constituents. For instance, *assut* acts as a degree modifier in the following example from West Greenlandic where it modifies the verb *pirpalup* ‘make noise’ (Fortescue, 1984, p. 100):

- (432) ullaa-kkut                      ini-mi                      assut    pirpalup-puq  
morning-VIAL.SG            room-LOC.SG    very    make.noise-INDIC.3SG  
‘In the morning there was quite a din in the room.’

Similarly in the following example from Inuktitut *aksut* acts as a degree modifier:

- (433) aksut    quviat-tunga                      (Legislative Assembly of Nunavut, 1999c, p. 574)  
very    happy-DEC.3SG  
‘I am extremely pleased [...]’

Both of these examples illustrate that *aksut* performs the characteristic function of adverbs, that of modifying verbs and adjectives.

Further consistent with adverb status, the related form *aksualuk* ‘very much so’ exhibits variable ordering with respect to what it modifies:

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<sup>165</sup> Note, however, that there is a homophonous (yet synchronically unrelated) verb *suli* which bears the normal mood/agreement morphology, i.e. *sulijuq* ‘he/she speaks truthfully’ (Spalding, 1998, p. 143).

(434)

- a. qujannamiik      aksualuk  
    thank.you      very.much.so  
    ‘Thank you very much.’ (Legislative Assembly of Nunavut, 2002f, p. 1533)
- b. aksualuk      qujannamiik  
    very.much.so      thank.you  
    ‘Thank you very much.’ (Legislative Assembly of Nunavut, 2002a, p. 2905)

Also, *aksut* and its related forms always appear to be optional in the constructions in which it appears, which is once again consistent with its adverbial status.

Yet another reason to conclude that *aksut* is an adverb is the fact that its variants all involve adverbs acting as modifiers (possibly in lexicalized combinations). For instance, each of the following forms contains an adverb modifier:

- (435) aksu-aluk                              cf.      angi-ju-aluk  
        very-very/*a.lot*                              big-DEC(3SG)-*very*  
        ‘very’    ‘(he/she/it) is very big’
- (436) atsu-mmari      pi-junna-ni-qa-ravi                              nunali-nniuvit  
        very-*really*      do/get-can-NOM-have-BECAUS.2SG      community-2SG.POSS.LOC.SG  
        ‘You’ve got a tremendous potential in your community.’  
        (Legislative Assembly of Nunavut, 2002b, p. 250)

As we might expect if *aksut* is an adverb, and in particular if it is a degree adverb, its modifiers will also be adverbs.

Finally, and once again crucially, *aksut* exhibits none of the properties of other categories in Inuktitut. It lacks case, number, mood, agreement, or anything else that would normally be found with nominal and verbal elements. Furthermore, there is no

evidence that it can act as an argument or as a main predicate. Taken together, these facts suggest that *aksut* and its related forms are degree adverbs.<sup>166</sup>

### 3.2.3.3 Summary

Despite numerous references to a class of “particles” in the literature, a closer examination of the forms involved reveals that most of them are in fact nominals (e.g. demonstrative pronouns) employed adverbially, conjunctions, or interjections. Relying solely on the criterion of lacking inflection ignores the syntactic distribution of such elements; e.g. that demonstrative elements can undergo incorporation like nouns, that interjections can stand alone as complete utterances, etc. Finally, the few remaining particles that do not fit into one of the classes listed above exhibit the syntactic properties of adverbs.

In conclusion, “particles” do not form a lexical or functional class in Inuktitut any more than prepositions, conjunctions, interjections, and adverbs form a single class in a language like English simply because they are similarly uninflected. Furthermore, within the pseudo-class of particles we find a very small set of adverbs, further contradicting the claim that Inuit languages lack adverbs.

## 3.3 Comparing two approaches to adverb positioning

A central debate in the syntax of adverbs concerns their positioning inside the clause. In this section I compare Cinque’s (1999) cartographic approach to adverb

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<sup>166</sup> Two additional candidates for this class of phonologically free adverbs are *uattiaq* ‘a little while ago’ and *uattiaruk* ‘in a little while’. However, the possibility of allative case marking suggests that they may simply be nominals (i.e. DPs) employed adverbially (Legislative Assembly of Nunavut, 2000, p. 241):

(i) *uattiaru-mut*  
in.a.little.while-ALLAT.SG  
‘in the long term; down the road; until then’



ordering with Ernst's (2002) semantically-based approach, arguing that a system with fixed universal adverb positions such as Cinque's functional hierarchy fails to account for the Inuit data.

### 3.3.1 Adverbs as functional heads

On one side of the debate on adverb ordering, Cinque (1999) and (2004) propose a system of dedicated functional heads, each of which licenses a different type of adverb phrase in its specifier. The relative order of these functional heads is mandated by UG, thereby accounting for cross-linguistic similarities in adverb ordering as well as similarities in the inventory of semantic classes found in the world's languages (since the inventory of licensing heads is uniform). His ordering of functional heads, including illustrative AdvP specifiers from English and Italian, is as follows (1999, p. 106):

- (437) [ *frankly* Mood<sub>speech act</sub> [ *fortunately* Mood<sub>evaluative</sub> [ *allegedly* Mood<sub>evidential</sub> [ *probably* Mod<sub>epistemic</sub> [ *once* T(Past) [ *then* T(Future) [ *perhaps* Mood<sub>irrealis</sub> [ *necessarily* Mod<sub>necessity</sub> [ *possibly* Mod<sub>possibility</sub> [ *usually* Asp<sub>habitual</sub> [ *again* Asp<sub>repetitive(I)</sub> [ *often* Asp<sub>frequentative(I)</sub> [ *intentionally* Mod<sub>volitional</sub> [ *quickly* Asp<sub>celerative(I)</sub> [ *already* T(Anterior) [ *no longer* Asp<sub>terminative</sub> [ *still* Asp<sub>continuative</sub> [ *always* Asp<sub>perfect(?)</sub> [ *just* Asp<sub>retrospective</sub> [ *soon* Asp<sub>proximative</sub> [ *briefly* Asp<sub>durative</sub> [ *characteristically(?)* Asp<sub>generic/progressive</sub> [ *almost* Asp<sub>prospective</sub> [ *completely* Asp<sub>SgCompletive(I)</sub> [ *tutto* Asp<sub>PlCompletive</sub> [ *well* Voice [ *fast/early* Asp<sub>celerative(II)</sub> [ *again* Asp<sub>repetitive(II)</sub> [ *often* Asp<sub>frequentative(II)</sub> [ *completely* Asp<sub>SgCompletive(II)</sub>

As part of his evidence for such a system, Cinque points to the order of “free functional morphemes (‘particles’ and auxiliaries) and of bound functional morphemes (affixes)” (1999, p. v). In particular, he points to instances of verbal-complex internal adverbs as well as their relative order in Eskimo languages as evidence for his analysis. For instance, he gives the following example from West Greenlandic (originally from Fortescue

(1984)) containing *riir* ‘already’ as evidence for a T(anterior) head (p. 94; gloss modified):

- (438) Niri-riir-pugut  
eat-already-INDIC.1PL  
‘We have/had already eaten.’

Similarly, Cinque presents the following data from Yup’ik (extracted from Mithun & Ali (1996)) to support his proposed ordering of the functional heads in (440) (p. 158):

- (439) ayag-uma-lar-tu-q  
go-LONG TIME-HAB-INTR.INDIC-3sg  
‘He customarily goes for long periods of time.’

- (440) Mood<sub>irrealis</sub> Asp<sub>habitual</sub> Asp<sub>durative</sub> V

Implicit in this approach is the claim that affixal elements are functional heads. Furthermore, Cinque offers these affixes as overt examples of the functional heads that are (for the most part) covert in languages like English and Italian.<sup>167</sup> However, as noted above in section 3.1.1.3, evidence from variable ordering of adverbs in Inuktitut suggests that these adverbs are not in fact heads, since they do not appear to conform to the Head Movement Constraint (HMC) (see Travis (1984), Baker (1988)), as defined by Matushansky (2006, p. 74):<sup>168</sup>

- (441) *Head Movement Constraint*  
Head movement may not skip intermediate heads.

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<sup>167</sup> The claim that such affixes instantiate the functional heads in Cinque’s hierarchy avoids a challenge to his system on the grounds that while the exponents of a given functional head may be covert in some languages, cross-linguistic variation predicts that it will not be phonologically null in all languages.

<sup>168</sup> Matushansky’s definition avoids Travis’s (1984) original reference to the government relationship (i.e. immediate c-command).

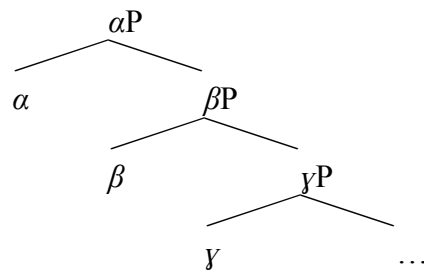
This incompatibility with the HMC is illustrated in the following example, in which three adverbs can appear in all six logically possible orders (repeated from (333) above):

(442)

- a. niri-mmari-qattaq-quuq-tuq  
eat-even-regularly-probably-DEC.3SG  
'He/she is probably even eating.'
- b. niri-mmari-quu-qattaq-tuq  
eat-even-probably-regularly-DEC.3SG
- c. niri-qatta-mmari-quuq-tuq  
eat-regularly-even-probably-DEC.3SG
- d. niri-qattaq-quu-mmari-tuq  
eat-regularly-probably-even-DEC.3SG
- e. niri-qquu-qatta-mmari-tuq  
eat-probably-regularly-even-DEC.3SG
- f. niri-qquu-mmari-qattaq-tuq  
eat-probably-even-regularly-DEC.3SG

If these orders are derived via head movement, we would expect at least two of the orders to violate the HMC, as illustrated below for any three heads (repeated from (315)-(316)):

(443)



(444)

- |    |                         |   |
|----|-------------------------|---|
| a. | $\alpha \beta \gamma$   | (underlying order)                                  |
| b. | $\alpha \gamma \beta$   | (head-movement of $\gamma$ to $\beta$ )             |
| c. | $\gamma \beta \alpha$   | (head-movement of $\gamma$ to $\beta$ to $\alpha$ ) |
| d. | $\beta \alpha \gamma$   | (head-movement of $\beta$ to $\alpha$ )             |
| e. | * $\gamma \alpha \beta$ | (not possible)                                      |
| f. | * $\beta \gamma \alpha$ | (not possible)                                      |

Furthermore, when marginality does arise, as illustrated in the following example where *mmarrik* ‘even’ has been replaced by *giiq* ‘already’, the marginal orders do not appear to correspond to those predicted to violate the HMC (according to Cinque’s hierarchy):

(445)

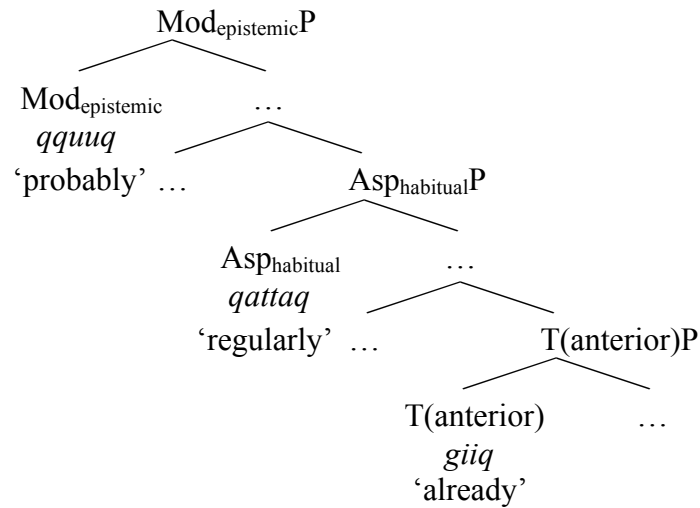
- a. niri-giiq-qattaq-quuq-tuq  
eat-*already-regularly-probably*-DEC.3SG  
‘He/she probably eats early/beforehand.’
- b. niri-giiq-quu-qattaq-tuq  
eat-*already-probably-regularly*-DEC.3SG
- c. niri-qatta-giiq-quuq-tuq  
eat-*regularly-already-probably*-DEC.3SG
- d. niri-qattaq-quu-giiq-tuq  
eat-*regularly-probably-already*-DEC.3SG
- e. ?niri-qquu-qatta-giiq-tuq  
eat-*probably-regularly-already*-DEC.3SG
- f. ?niri-qquu-gii-qattaq-tuq  
eat-*probably-already-regularly*-DEC.3SG

Based on their translations, the three adverbs in this example appear to correspond most closely to the heads Mod<sub>epistemic</sub> (*qquuq* ‘probably’), Asp<sub>habitual</sub> (*qattaq* ‘regularly’), and T(anterior) (*giiq* ‘already’) in Cinque’s system.<sup>169</sup> If Cinque’s universal hierarchy of functional projections is correct, and the underlying relative order of these heads is as in (446), this predicts that the fully grammatical orders *giiq-qquuq-qattaq* and *qattaq-giiq-qquuq* in (b) and (c) above should violate the HMC, as schematized in (447).<sup>170</sup>

<sup>169</sup> An alternative matching of functional heads with adverbs will yield the same results for the argument made below since the ordering of any three heads derived via head movement will be subject to the HMC.

<sup>170</sup> In particular, assuming the base order illustrated in the tree in (446), the movement of T(anterior) to Mod<sub>epistemic</sub> to derive the order T(anterior)-Mod<sub>epistemic</sub>-Asp<sub>habitual</sub> in (442) will violate the HMC. Similarly, the order Asp-T(anterior)-Mod<sub>epistemic</sub> in (442) cannot be derived via head-movement.

(446) Universal underlying order proposed by Cinque:

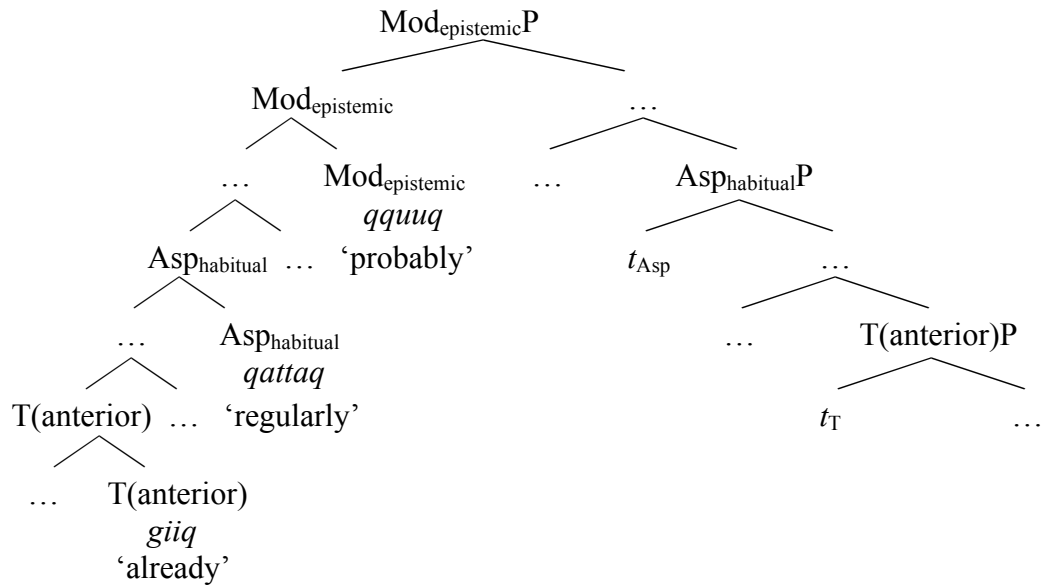


(447)

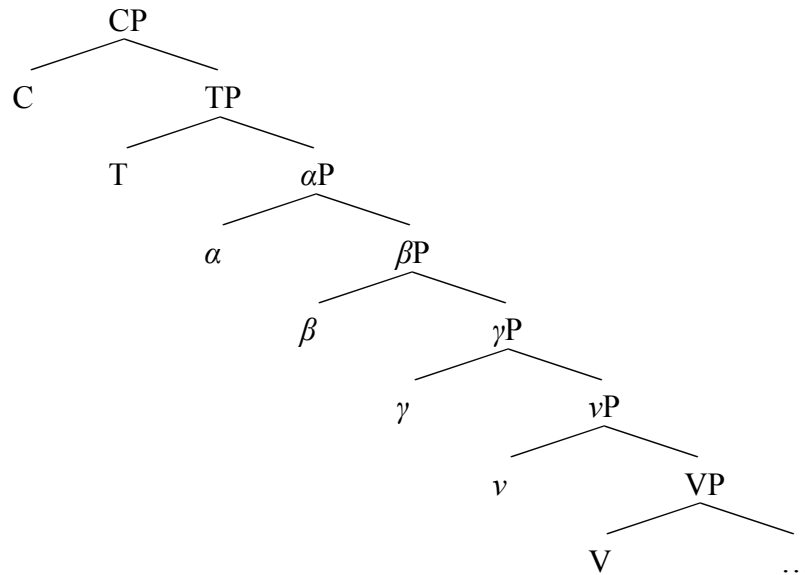
- a. *qquuq* > *qattaq* > *giiq* (underlying order)
- b. *qquuq* > *giiq* > *qattaq* (head-movement of *giiq* to *qattaq*)
- c. *giiq* > *qattaq* > *qquuq* (head-movement of *giiq* to *qattaq* to *qquuq*)
- d. *qattaq* > *qquuq* > *giiq* (head-movement of *qattaq* to *qquuq*)
- e. \* *giiq* > *qquuq* > *qattaq* (not possible)
- f. \* *qattaq* > *giiq* > *qquuq* (not possible)

A further complication of Cinque's analysis of adverb ordering and word-formation is that if adverbs are heads and if morphologically complex words are derived from an underlying "universal Spec-head-complement order, coupled with leftward movements of heads" (p. 66), the initial position of verb roots in Inuktitut before voice, tense, and mood marking necessitates head-movement of all intervening functional heads, and should yield a single possible ordering of adverbs, as illustrated below first with these three adverbs and then schematized for any three heads (ignoring specifier positions):

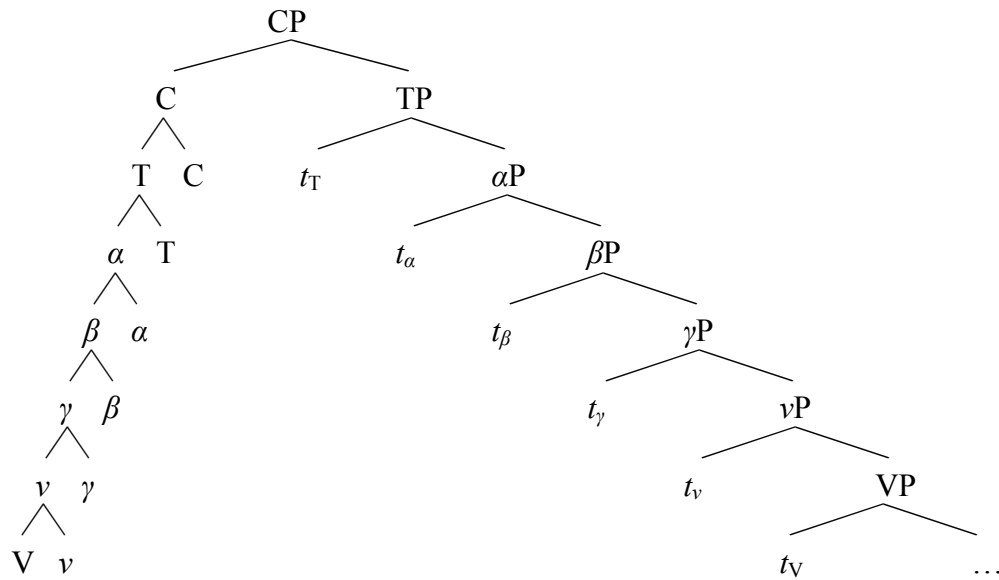
(448) Relative order after head-movement:



(449) Base order of any three functional adverb heads before head movement:



(450) Order of functional heads after head-movement:  $V-v-\gamma-\beta-\alpha-T-C$



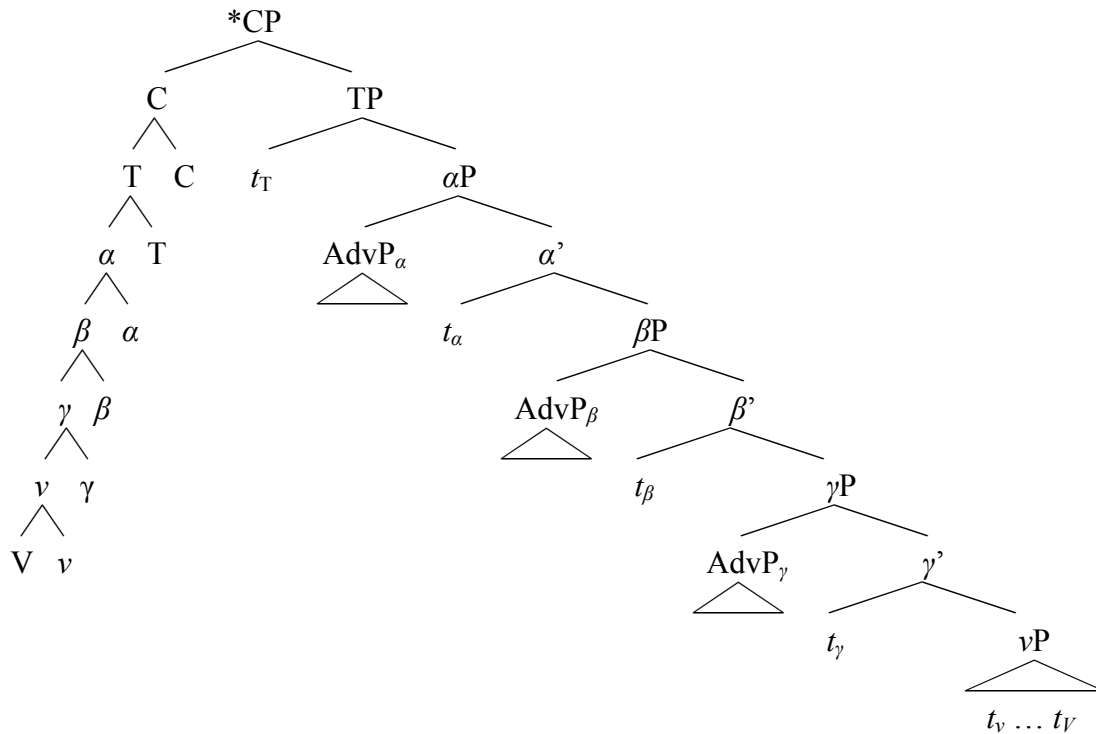
Alternative orders (e.g.  $\alpha-\beta-\gamma$ ) inside polysynthetic verbs should not be possible, since lack of head-movement among these intermediate elements should block the movement of the verb (and lower functional elements such as the anti-passive marker) from inverting with respect to higher functional heads such as tense, negation, aspect, and mood. And yet, variable orders are attested without any affect on the position of the verb root.

In summary, Cinque's proposal that bound adverbial morphemes in languages like Inuktitut are functional heads and his assumption that morphologically complex words are created via leftward head-movement are incompatible with the Inuktitut data presented above. Either these adverbs are not heads, or polysynthetic words are not derived via head-movement, (or both).

Furthermore, even if we retreat from Cinque's claim that bound adverbial elements are heads (at least in Inuit languages), and instead treat these elements as AdjPs in the specifier position of phonologically null licensing heads, we still cannot account

for their position inside verbal complexes if these polysynthetic words are derived via head-movement since the roll-up of heads should strand the adverbs at the right edge of the word, as illustrated below:

- (451) Unattested ordering predicted by phrasal adverbs and word-formation via leftward head-movement.<sup>171</sup>



Consequently, the position and ordering of adverbial elements appear to be incompatible with a head-movement analysis of word-formation. If these elements are heads we cannot account for their variable order (due to the HMC) and if they are phrases we would expect them to be stranded by head-movement and always appear at the right edges of words, contrary to the data presented throughout this chapter. In sum, a head-movement

<sup>171</sup> While evaluative adverbs (in at least one of their meanings) such as *jjuaq* ‘unfortunately’ can appear at the right edge of verbal complexes, such adverbs are located near the top of Cinque’s functional hierarchy (e.g. Mood<sub>evaluative</sub>) and thus their position cannot help us differentiate between adverbs being either heads or adjoined phrases, since either analysis will place them at the right edge of the verbal complex after leftward head movement.



analysis of Inuit word-formation makes the wrong predictions, regardless of the actual status of the adverbs.<sup>172</sup>

Finally, to show that these different orders are not the result of focus movement (e.g. movement at PF) I employ a frame containing two conjoined clauses in which two adverbs are mentioned in the first conjunct and then repeated in the second conjunct along with *kkanniq* ‘again’. Given that *kkanniq* ‘again’ is the likely target for contrastive focus in this context, we might expect it to exhibit a preferred position with respect to the other adverbs if their relative positions are due to focus movement (or focus generally). However, as long as the relative order of the adverbs in the first conjunct was maintained in the second conjunct, no such preference for the position of *kkanniq* emerged:

(452)

- a. Sanattaili-mit qimmiq ani-kasa-ngaa-lauq-tuq  
 Sunday-OBL.SG dog(ABS.SG) go.out-almost-instead-DIST.PAST-DEC.3SG  
 amma-lu Naggajja-mit ani-kasa-*kkanni*-ngaa-lauq-tuq.  
 and-CONJ Monday-OBL.SG go.out-almost-*again*-instead-DIST.PAST-DEC.3SG  
 ‘On Sunday the dog almost went out instead and then on Monday (it) almost went out instead *again*.’
- b. Sanattaili-mit qimmiq ani-kasa-ngaa-lauq-tuq  
 Sunday-OBL.SG dog(ABS.SG) go.out-almost-instead-DIST.PAST-DEC.3SG  
 amma-lu Naggajja-mit ani-kasa-ngaa-*kkanni*-lauq-tuq.  
 and-CONJ Monday-OBL.SG go.out-almost-instead-*again*-DIST.PAST-DEC.3SG
- c. Sanattaili-mit qimmiq ani-kasa-ngaa-lauq-tuq  
 Sunday-OBL.SG dog(ABS.SG) go.out-almost-instead-DIST.PAST-DEC.3SG  
 amma-lu Naggajja-mit ani-*kkanni*-kasa-ngaa-lauq-tuq.  
 and-CONJ Monday-OBL.SG go.out-*again*-almost-instead-DIST.PAST-DEC.3SG

<sup>172</sup> The claim that head-movement (alone) cannot account for the data presented in this chapter would appear to extend to accounts in which adverbial elements are adjoined phrases (e.g. Ernst 2002; 2007) since these too would predicted stranded AdvPs at the right periphery of verbal complexes (i.e. similar to the situation illustrated in the tree in (451), but with the AdvPs adjoined to functional projections such as vP). In the following subsection I argue that right-headedness can capture all of the relevant facts. Another potential alternative that is left unexplored herein is remnant movement (e.g. Koopman & Szabolcsi 2000). Such an analysis could in principle capture the facts herein while maintaining an antisymmetric left-headed structure. However, the challenge to such an analysis would be to allow variable ordering *only* among adverbs (as well as between adverbs and modals) while never *allowing* variation in the relative order of V, v, T, Asp, Neg, and C.

- d. Sanattaili-mit qimmiq ani-ngaa-kasa-lauq-tuq  
 Sunday-OBL.SG dog(ABS.SG) go.out-instead-almost-DIST.PAST-DEC.3SG  
 amma-lu Naggajja-mit ani-*kkanni*-ngaa-kasa-lauq-tuq.  
 and-CONJ Monday-OBL.SG go.out-*again*-instead-almost-DIST.PAST-DEC.3SG
- e. Sanattaili-mit qimmiq ani-ngaa-kasa-lauq-tuq  
 Sunday-OBL.SG dog(ABS.SG) go.out-instead-almost-DIST.PAST-DEC.3SG  
 amma-lu Naggajja-mit ani-ngaa-*kkanni*-kasa-lauq-tuq.  
 and-CONJ Monday-OBL.SG go.out-instead-*again*-almost-DIST.PAST-DEC.3SG

In sum, in a context in which a particular adverb might naturally receive contrastive focus, it can still exhibit variable order with respect to other adverbs, suggesting that alternative orders are not due to focus or focus movement.

### 3.3.2 Adverbs as adjoined phrases

The main alternative to Cinque's analysis of adverb ordering is that of Ernst (2002) and (2007). Ernst proposes that the position of adverbs is primarily determined by semantics, along with morphological weight and scope. Contrary to Cinque, he argues that adverbs lack unique base positions and instead proposes that they are adjoined. In addition to empirical arguments advanced against fixed base positions for adjuncts, he makes the following observation regarding the motivation for base positions more generally (2002, p. 3):

[T]here has sometimes seemed to be an uncritical assumption that adjuncts must have unique base positions. Since many adjuncts seem to have multiple surface positions, the null assumptions in current theory ought to be that they also have correspondingly multiple base positions; this is what is predicted by the free choice of items from the lexicon in the course of building up a tree. Note in particular that none of the reasons for positing unique base positions for arguments apply in general to adjuncts, such as the need to preserve the locality of selection and locality of Case assignment, or to preserve the simplest set of P[hrase] S[tructure] rules.

In place of a hierarchy of functional heads to license the placement of adverbs, Ernst proposes that “the hierarchical arrangement of adverbials is primarily determined by the

interaction of compositional rules and lexicosemantic requirements of individual adjuncts” (p. 3).<sup>173</sup> Essentially, adverbs may adjoin wherever semantics, scope, and weight theory allow.

Ernst proposes what he calls the Fact-Event Object (FEO) calculus; “a set of rules [...] for the composition of events, propositions, times, and predicates” (p. 17). This system includes the three basic rules in (453), applies to the hierarchy of semantic types in (454), and employs the classification of adverbs in (455) (pp. 50, 53):

(453) The FEO Calculus:

- a. Any FEO type may be freely converted to any higher FEO type but not to a lower one, except:
- b. Any FEO (sub)type may be converted to another FEO (sub)type as required by lexical items or coercion operators.
- c. Events may be interpreted as Specified Events (SpecEvents) within PredP.

(454) Speech-Act > Fact > Proposition > Event > Specified Event<sup>174</sup>

(455)

- a. predicational
  - speaker-oriented: *frankly, maybe, luckily, obviously*
  - subject-oriented: *deliberately, stupidly*
  - exocomparative: *similarly*
  - event-internal: *tightly, partially*
- b. domain: *mathematically, chemically*
- c. participant: *on the wall, with a bowl, for his aunt*
- d. functional
  - time-related: *now, for a minute, still*
  - quantificational: *frequently, again, precisely*
  - focusing: *even, just, only*
  - negative: *not*
  - clausal relations: purpose, causal, concessive, conditional, etc.

In the composition of a clause, higher semantic objects in the FEO hierarchy are composed from lower objects, with individual classes of adverbs selecting for particular

<sup>173</sup> See Ernst (2002, 2007) for empirically-based arguments against Cinque’s account of adverb ordering.

<sup>174</sup> Ernst defines Specified Events (SpecEvents) as the type of event involved in manner readings, stating that their “comparison class is more specific” (p. 56).

semantic types.<sup>175</sup> For instance, a modal adverb like *probably* must compose with a Proposition, (yielding another proposition), while a speech-act adverb such as *frankly* needs to compose with a Speech Act, thus accounting for asymmetries such as the following:

(456)

- a. Frankly, [SPEECH-ACT [PROP  $he_i$  probably [PROP  $t_i$  [EVENT left ] ] ] ].
- b. \*Probably(,) he frankly left.

Ernst demonstrates that such a semantically-based system can account for both the restrictions on adverb ordering as well as variation in ordering. For example, his system captures the variation in the position of predication adverbs, as illustrated in the example below (p. 45):

(457)

- a. Probably, they could have gone a long way before stopping.
- b. They probably could have gone a long way before stopping.
- c. They could probably have gone a long way before stopping.
- d. They could have probably gone a long way before stopping.

According to Ernst, such variation is possible because of the following generalization on the distribution of predication adverbs, including speaker-oriented modal adverbs such as *probably* (p. 114):

- (458) A predication adverb may occur in a range of positions starting from the lowest (rightmost) position where it is a sister of its required FEO and upward (leftward) from there in a contiguous range, unless something forces the FEO to change.

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<sup>175</sup> It seems feasible that such a system could in large part be reduced to type-driven composition. For instance, modal adverbs such as *probably* which compose with a proposition and yield another proposition could presumably be of type  $\langle\langle s, t \rangle, \langle s, t \rangle\rangle$  (where  $\langle s, t \rangle$  is the semantic type of propositions).

Essentially, this means that a modal adverb such as *probably* may adjoin at any point in the derivation where its sister is a proposition. Ernst (2002) provides similar semantically-based accounts of other types of adverbials.

In addition to proposing a semantic account of adverb ordering, Ernst (2002) argues against Kayne's (1994) Linear Correspondence Axiom (LCA). He argues that the attempt to simplify the grammar by deriving precedence from asymmetric c-command requires the adoption of an otherwise unnecessary segment/category distinction, which in turn necessitates more complicated definitions of both c-command and dominance. Furthermore, he challenges the LCA's ban on right-adjunction using data from constituent structure, scope, and secondary predication. For instance, he demonstrates that while preverbal adjuncts take scope over subsequent preverbal adjuncts, as in illustrated in (459), this pattern is reversed with postverbal adjuncts, as in (460) (p. 155; scope relationships in parentheses added):

(459)

- a. Carol willingly has frequently made extra trips. ( *willingly* > *frequently* )
- b. Carol frequently has willingly made extra trips. ( *frequently* > *willingly* )

(460)

- a. Carol has made extra trips frequently willingly. ( *willingly* > *frequently* )
- b. Carol has made extra trips willingly frequently. ( *frequently* > *willingly* )

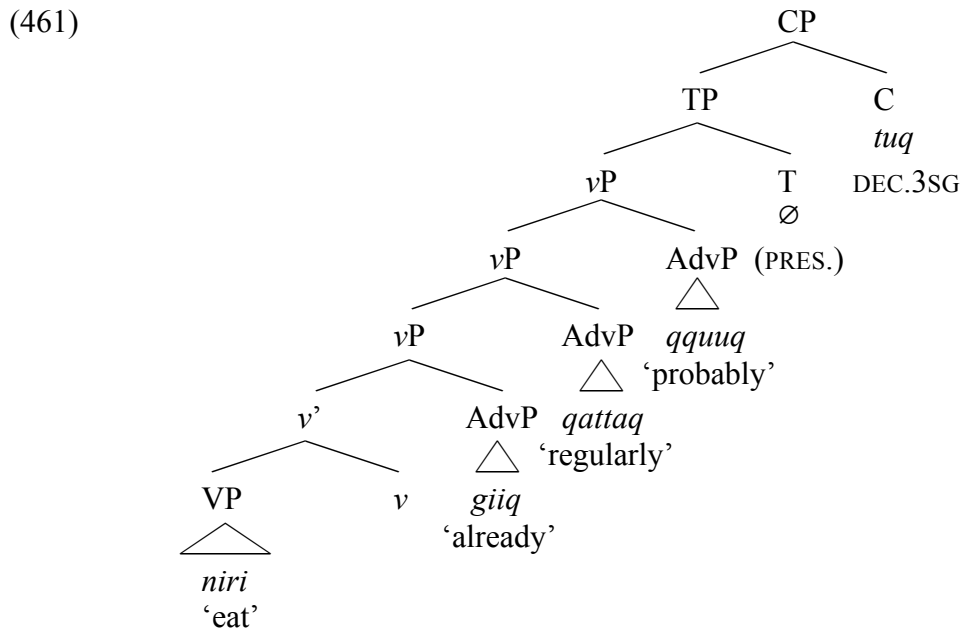
Such scope data falls out naturally if post-verbal adjuncts are right-adjoined at successively higher positions.<sup>176</sup> In sum, he advances both empirical and theoretical arguments against the existence of the LCA. In place of the LCA, Ernst argues for a

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<sup>176</sup> Potts also provides arguments for right-adjunction based on the syntax of nominal appositives (see Potts, 2005, pp. 106-107).

Parameterized Direction Hypothesis (PDH), which is analogous to the traditional headedness parameter allowing for both head-initial and head-final languages.

Taking together Ernst's proposals for semantically-driven ordering of adverbial adjuncts and the possibility of right-headedness, we can provide a straightforward account of adverb ordering phenomena in Inuit. First, a right-headed structure with right-adjunction will permit the correct positioning of those adverbs which appear inside polysynthetic words (even if we assume initial positions roughly analogous to Cinque's account; i.e. between *v* and T), as illustrated below using example (442) above.<sup>177</sup>



niri-giiq-qattaa-quuq-tuq  
eat-already-regularly-probably-DEC.3SG  
‘He/she probably eats early/beforehand.’

<sup>177</sup> I ignore the position and possible movements of DP arguments as it is difficult to ascertain their case positions. Such arguments may be null in Inuit (i.e. pro-dropped) but if they are overt their (ultimate) position is highly variable and appears to be (at least in part) determined by information structure. See also Compton & Pittman (2010a).

Second, Ernst's semantically-based account of adverb ordering can accommodate variation in the relative position of adverbs. As noted above for English, modal adverbs such as *qquuq* 'probably' can, in principle, adjoin at any position in which their sister is a proposition. Both *giiq* 'already' and *qattaq* 'regularly' in this example appear to correspond to Ernst's category of FUNCTIONAL adjuncts, with *giiq* 'already' ostensibly belonging to the ASPECTUAL subtype and *qattaq* 'regularly' belonging to the FREQUENCY subtype (e.g., see p. 120).<sup>178</sup> He states that functional adverbs such as these largely involve "focus-presupposition structure and/or quantification" (p. 120) and that they can be "licensed, in principle, in any projection" (p. 121). Ernst illustrates the variability in the positioning of frequency adverbs using the following example from English (p. 121; italics added):

(462)

- a. *Occasionally* they could have been passed over for promotions.
- b. They *occasionally* could have been passed over for promotions.
- c. They could *occasionally* have been passed over for promotions.
- d. They could have *occasionally* been passed over for promotions.
- e. They could have been *occasionally* passed over for promotions.
- f. They could have been passed over for promotions *occasionally*.

Furthermore, he illustrates the variable order of functional adverbs with respect to other functional adverbs using the following example from French where the difference in meaning is purely scopal (i.e. unlike in Cinque's system where distinct positions are associated with differences in the meanings of the adverbs themselves) (p. 361; italics added):

---

<sup>178</sup> Ernst notes the possibility of cross-classification, noting for instance that an adverb like *never* shares the properties of both the NEGATIVE and ASPECTUAL subtypes of FUNCTIONAL adverbs (p. 9).

(463)

- a. Les soldats sont déjà fréquemment rentrés à la base.  
the soldiers are *already frequently* returned to the base  
'The soldiers have already frequently returned to base.'
- b. Les enfants sont fréquemment déjà couchés quand j'arrive.  
the children are *frequently already* in-bed when I arrive  
'The children are frequently already in bed when I get there.'

While Ernst's system predicts that functional adverbs such as *already* combine with events, and thus should not compose after modal adverbs such as *probably* which yield propositions, he proposes the possibility of coercion (via lexical items or operators) to account for examples such as the following in which we find variation between the positions of modal *probably* and functional *already* (p. 124):

(464)

- a. Dan already has probably given up.
- b. Dan probably has already given up.

The benefit of such coercion operators according to Ernst is that they can be language-specific, and can thus account for cross-linguistic variation. For instance, he provides the following example to illustrate that while English allows predication speaker-oriented adverbs under functional adverbs, the same relative ordering of adverbs is not possible in Chinese (p. 373; italics added).

(465)

- a. She *still probably* won't be here on time.
- b. ?Sally *always* has *luckily* been willing to work.

(466)

- a. \*Ta hai dagai bu (hui) zhunshi dao.  
s/he *still probably* not will on-time arrive  
'S/he still probably won't get here on time.'



- b. \*Xiao Li yizhi xingkui yuanyi gongzuo.  
 Xiao Li *always luckily* willing work  
 ‘Xiao Li always has luckily been willing to work.’<sup>179</sup>

Returning to the example of variable adverb ordering in Inuktitut, repeated from (442) above, the system proposed by Ernst to account for adverb ordering in more familiar languages can account for all six orders. Orders (a) and (c) are composed via the natural progression of events to propositions according to Ernst’s FEO calculus, while the remaining orders require the use of coercion by functional adverbs composing after *qquuq* ‘probably’, creating events from these propositions. In (468), which summarizes the FEO type at each stage of the composition, I indicate instances of this lexically-driven semantic coercion of events into propositions using an asterisk.

(467)

- a. niri-giiq-qattaq-quuq-tuq  
 eat-*already-regularly-probably*-DEC.3SG  
 ‘He/she probably eats early/beforehand.’  
 b. niri-giiq-quu-qattaq-tuq  
 eat-*already-probably-regularly*-DEC.3SG  
 c. niri-qatta-giiq-quuq-tuq  
 eat-*regularly-already-probably*-DEC.3SG  
 d. niri-qattaq-quu-giiq-tuq  
 eat-*regularly-probably-already*-DEC.3SG  
 e. ?niri-qquu-qatta-giiq-tuq  
 eat-*probably-regularly-already*-DEC.3SG  
 f. ?niri-qquu-gii-qattaq-tuq  
 eat-*probably-already-regularly*-DEC.3SG

<sup>179</sup> Julia Yu-Ying Su (p.c.) confirms that reversing the order of *dagai* ‘probably’ and *hai* ‘still’ resolves the ungrammaticality of the first sentence. While reversing the order of *xingkui* ‘luckily’ and *yizhi* ‘always’ in the second sentence resulted in improved acceptability, as shown in (ii), moving *xingkui* to the beginning of the sentence yielded grammaticality, as in (iii).

- (i) Ta dagai hai bu (hui) zhunshi dao.  
 s/he *probably still* not will on-time arrive  
 (ii) ?Xiao Li Xingkui yizhi yuanyi gongzuo.  
 Xiao Li *luckily always* willing work  
 (iii) Xingkui Xiao Li yizhi yuanyi gongzuo.  
*luckily* Xiao Li *always* willing work

(468)

- a. [ [ [ [ *niri* ... ]<sub>EVENT</sub> *giiq* ]<sub>EVENT</sub> *qattaq* ]<sub>EVENT</sub> ]<sub>PROP</sub> *qquuq* ]<sub>PROP</sub> ...
- b. [ [ [ [ *niri* ... ]<sub>EVENT</sub> *giiq* ]<sub>EVENT</sub> ]<sub>PROP</sub> *qquuq* ]<sub>PROP\*EVENT</sub> *qattaq* ]<sub>EVENT</sub> ...
- c. [ [ [ [ *niri* ... ]<sub>EVENT</sub> *qattaq* ]<sub>EVENT</sub> *giiq* ]<sub>EVENT</sub> ]<sub>PROP</sub> *qquuq* ]<sub>PROP</sub> ...
- d. [ [ [ [ *niri* ... ]<sub>EVENT</sub> *qattaq* ]<sub>EVENT</sub> ]<sub>PROP</sub> *qquuq* ]<sub>PROP\*EVENT</sub> *giiq* ]<sub>EVENT</sub> ...
- e. [ [ [ [ *niri* ... ]<sub>EVENT</sub> ]<sub>PROP</sub> *qquuq* ]<sub>PROP\*EVENT</sub> *qattaq* ]<sub>EVENT</sub> *giiq* ]<sub>EVENT</sub> ...
- f. [ [ [ [ *niri* ... ]<sub>EVENT</sub> ]<sub>PROP</sub> *qquuq* ]<sub>PROP\*EVENT</sub> *giiq* ]<sub>EVENT</sub> *qattaq* ]<sub>EVENT</sub> ...

In sum, Ernst’s framework of semantically-driven adverb ordering in conjunction with the possibility of coercion by lexical items (which appears to be needed to account for variable ordering in English as well as cross-linguistic variation) can account for the variation in adverb ordering observed in Inuktitut.

Ernst’s system can also account for the right-edge position of evaluative adverbs such as *jjuaq* ‘unfortunately’. In his framework such adverbs must compose with a fact, which he describes as being “a true proposition” (p. 42).<sup>180</sup> If overt declarative mood marking in Inuktitut takes a proposition and yields a fact (or if a higher covert functional projection yields a fact), the position of such adverbs as adjoined at the (right) periphery is predicted by the FEO calculus. For instance, in the example below, repeated from (363), *jjuaq* ‘unfortunately’ attaches to the right of the mood marking, as shown in (471), with the FEO types at each stage of the derivation indicated in (470):

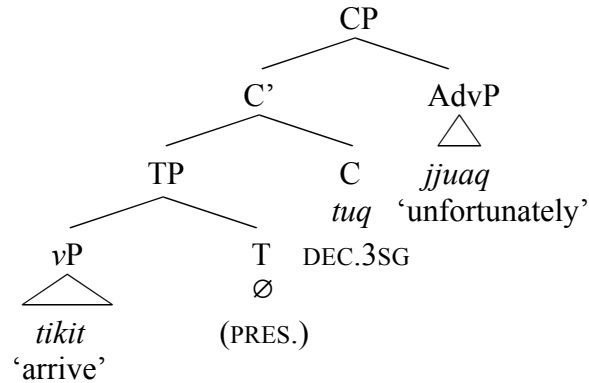
- (469) *tikit-tu<sup>q</sup>-jjuaq*  
 arrive-DEC.3SG-*unfortunately/big*  
 ‘Unfortunately, he arrived.’

- (470) [ [ [ *tikit* ]<sub>EVENT</sub> ]<sub>PROP</sub> *tuq* ]<sub>FACT</sub> *jjuaq*

<sup>180</sup> Ernst supports his position that such adverbs combine with facts by citing the following entailment patterns (p. 42):

- |                                    |                         |                      |
|------------------------------------|-------------------------|----------------------|
| (i) Boris obviously likes Natasha. | <i>entails:</i>         | Boris likes Natasha. |
| (ii) Boris possibly likes Natasha. | <i>does not entail:</i> | Boris likes Natasha. |

(471)



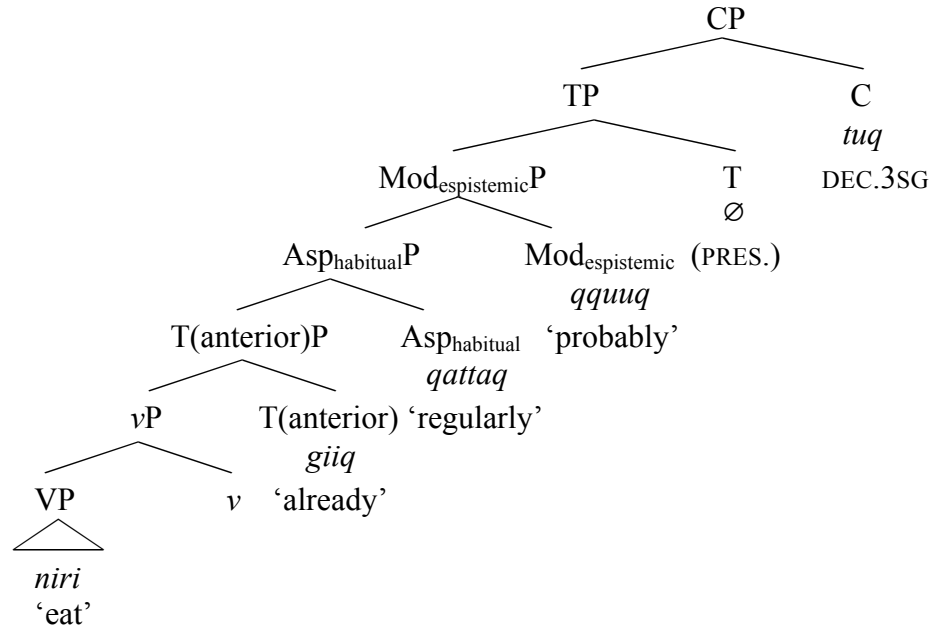
Thus, Ernst's semantically-driven framework also appears to account for the position of evaluative adverbs, in conjunction with a right-headed structure and right-adjunction.

Finally, we may wish to consider the possibility that only Ernst's directionality claims are correct, and that a right-headed version of Cinque's framework can account for the Inuktitut data. While such an approach would permit the placement of multiple verbal-complex-internal adverbs according to Cinque's base hierarchical ordering, as shown in (472) below, and while head-movement could derive some of the attested relative orders, other attested orders would still not be derivable.<sup>181</sup>

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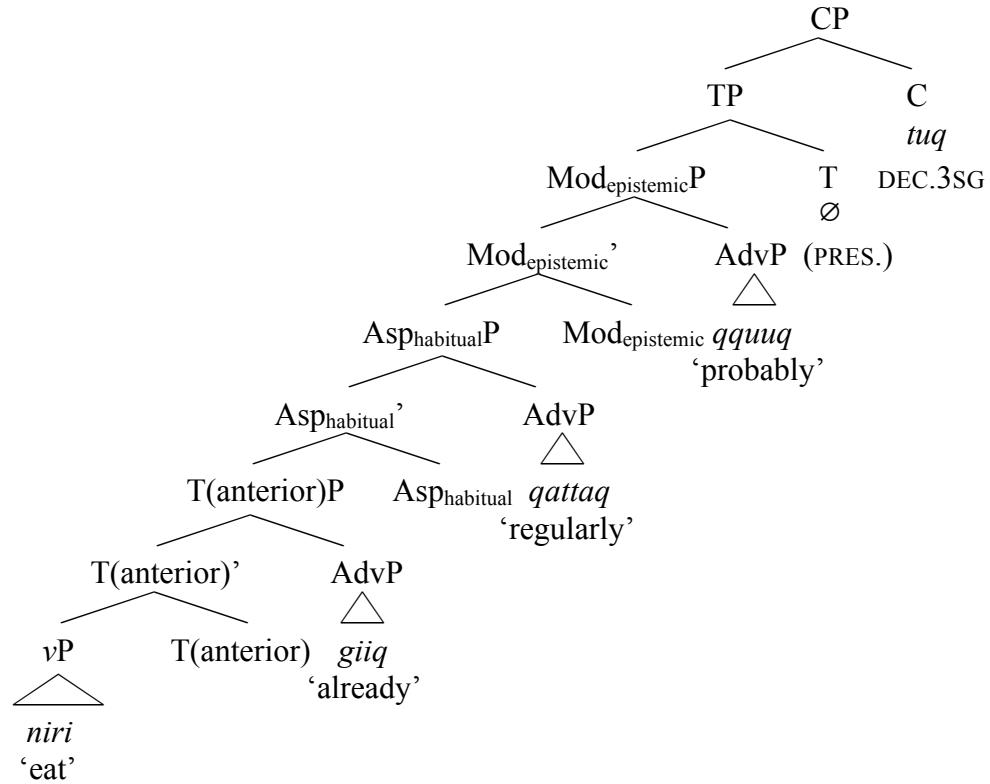
<sup>181</sup> This is essentially the same situation as that illustrated in sections 3.1.1.3 and 3.3.1. Once again, for any three heads, head-movement can only derive four of the six logically possible surface orders of those heads.

(472)



Similarly, if we also set aside Cinque’s claim that bound adverbial elements correspond to his functional adverbial heads, and instead posit that these adverbs are phrasal specifiers (licensed by phonologically null functional heads), we still predict a single base ordering of the adverbs in question, as illustrated in (473).

(473)



While movement of AdvPs could potentially derive additional orders, there is no apparent motivation for such movements.<sup>182</sup>

### 3.3.3 Summary

In this section I have argued that a universal hierarchy of adverbial functional heads, as advocated by Cinque, cannot account for the variation in adverb ordering exhibited in Inuktitut. Furthermore, any treatment of Inuktitut word-formation as being derived by head-movement from an underlying left-headed structure is problematic, since if adverbs are heads we predict a single fixed order, and if they are phrases we expect them to be stranded at the right-periphery. Instead, I have argued that Ernst's proposals

<sup>182</sup> Note that Cinque handles instances of variable ordering in different ways. Some (apparent, according to him) variable ordering is attributed to homophonous adverbs with different meanings (although Ernst argues that some of these meaning differences are due to scope, not homophony). Other instances of variable ordering are attributed to DP movement and verb movement (see Cinque, 1999, p. 109), yet in the data outlined above the position of verbs and arguments is not relevant.

for adjoined adverbials whose position is primarily determined by semantics can account for both the position of verbal-complex-internal adverbs (via right-headedness and right-adjunction) as well as variable ordering (mediated by their semantic requirements for composition and lexically encoded coercion).

In sum, the variable ordering of adverbs inside polysynthetic Inuktitut words is problematic for the framework elaborated in Cinque (1999). Furthermore, the data presented herein supports Ernst's (2002) proposal that adverbials are adjoined and lack base positions. Moreover, the structure of these words and the placement of adverbs inside them supports Ernst's proposals for parametric directionality and right-adjunction.

### 3.4 Conclusion

In this chapter I have argued that, contrary to claims found in the literature on Inuit languages, there is evidence for a lexical category of adverbs in Inuktitut (and Inuit generally). Of the three potential adverb classes examined, I have argued that the "adverbial postbases" that typically occur inside verbal complexes are in fact adverbs. Evidence of their status as adverbs includes optionality, stacking, variable order, degree modification, partial overlap with adjectives, and the existence of members with speaker-oriented denotations. Furthermore, they fulfil the characteristic function of adverbs (i.e. modifying verbs) yet also modify other categories (e.g. DPs, interjections, etc.).

Conversely, I have made the case that case-bearing adverbials, though adverbial in function, do not constitute adverbs since they cannot be differentiated from DPs. If a single oblique case licensed adverbial usage, it might be possible to argue that this case marker was actually an adverbializer analogous to English *-ly*. However, given that DPs

in all oblique cases can function as adverbials I have argued that these are simply DPs (or KPs/PPs) functioning as adverbial modifiers.

Finally, among the pseudo-class of particles we find a very small set of adverbs, with the remaining “particles” actually belonging to other categories such as conjunctions, interjections, and demonstrative pronouns. The motivation to postulate a category of particles in Inuit languages rests on the assumption that there should be a one-to-one correspondence between category membership and inflection. While this assumption alone is problematic (as I have argued concerning the existence of verb-like adjectives in Chapter 2), concluding that a diverse set of elements with no discernable inflectional marking should constitute a single class based on their lack of inflection ignores the fact that in many languages (e.g. English, Chinese) there exist categories with distinct syntactic distributions which lack unique inflectional paradigms. Applying such criteria to English interjections, conjunctions, and adverbs (e.g. *again*, *still*, *only*) would yield a similar class of particles and overlook their unique syntactic properties.

In addition to arguing for the existence of a lexical category of adverbs in Inuit, I have argued that these adverbs should be analyzed as adjoined phrasal modifiers in a right-headed structure. While Cinque (1999) uses data involving Inuit adverbs as evidence in support of his framework (i.e. as overt manifestations of his adverb-licensing functional heads), the data on variable order presented herein is problematic for his framework. Instead, I have argued, following Ernst (2002), that a right-headed structure in which the position of adverbs is primarily determined by semantics (e.g. semantic types, scope, etc.) offers a compelling alternative to a universal hierarchy of licensing positions, in particular since such a system predicts that adverbs will be able to surface

wherever their licensing conditions are met (i.e. variable order of adverbs is predicted to occur, everything else being equal).



## Chapter 4

### Conclusion

#### 4.1 Overview of major findings

In this thesis I have argued that Inuit possesses two classes of adjectives, one verb-like and another strictly-attributive, as well as a class of adverbs. Furthermore, I have argued against the existence of a class of ‘particles’ on the grounds that lacking inflection is not a sufficient condition for positing a category.

To explain the lack of intersective denotations among the members of the class of strictly-attributive adjectives I proposed that Inuit lacks a rule a Predicate Modification. Consequently, only subsecutive and privative adjectives can compose directly with nominals. Further, I argued that external case-bearing modifiers (i.e. nominals, verbs, and verb-like adjectives) are in fact adjoined DP appositives and that these compose via Potts’s (2005) CI application.

I also examined adverb-ordering phenomena in Inuit, comparing the adequacy of Cinque’s (1999) proposed universal hierarchy of adverb-licensing functional projections with Ernst’s (2002) semantically based account. I argued that although Cinque employs data from Inuit to support his framework, the variable ordering data presented herein are problematic for his system. Conversely, it was demonstrated that such variability is predicted under Ernst’s framework. Finally, I employed adverb-ordering data to demonstrate that Inuit is right-headed, contra Kayne’s (1994) Linear Correspondence Axiom.

## 4.2 Empirical implications: a new inventory of categories for Inuit

Eskimoan languages have often been claimed to lack categorial distinctions present in other languages. Sadock (1999) details early claims in the literature by Thalbitzer (1911) and Bloomfield (1914) that Inuit possesses “just one undifferentiated part of speech” which they deemed to be nominal (p. 383), and the later claim by Lowe (1981) that the language lacks category altogether. While arguing convincingly for the distinction between nouns and verbs in Inuit, Sadock (1999) admits neither adjectives nor adverbs, identifying only nouns, verbs, and particles in his grammar of West Greenlandic (Sadock, 2003). Fortescue’s (1984) grammar of West Greenlandic adopts the same three categories. Recent work by Nagai (2006) and Lanz (2010) has proposed a class of demonstrative adverbs (with Nagai also including interrogative words as adverbs). However, beyond their adverbial function, I see no evidence for either demonstratives or interrogatives forming a class of adverbs distinguishable from nominals.

Instead, I have argued herein for the existence of a class of verb-like adjectives, a class of strictly-attributive adjectives, and a class of adverbs (distinct from demonstratives or interrogative words). Furthermore, I have argued that “particles” at best form a pseudo-class of uninflected elements: conjunctions, interjections, demonstratives, etc. If the criterion of uninflectedness were applied to English or Chinese a similar class of particles would result. In sum, no such class exists. These new results are summarized alongside previous inventories in Table 5 below:

	<b>Lowe (1985)</b>	<b>Fortescue (1984), Sadock (2003)</b>	<b>Nagai (2006)</b>	<b>Lanz (2010)</b>	<b>current proposal</b>
<i>ani-juq</i> go.out-DEC.3SG	no parts of speech	verb	verb	verb	verb
<i>miki-juq</i> small-DEC.3SG					verb-like adjective
<i>ani-saaq-tuq</i> go.out-quickly-DEC.3SG					adverb
<i>amma</i> and		particle	particle	conjunction	conjunction
<i>ii</i> yes				interjection	interjection
<i>maani</i> here		noun	(demonstrative and interrogative) adverbs	(demonstrative) adverb	noun <sup>183</sup>
<i>kina?</i> who					
<i>uvanga</i> 1SG.ABS			nominal	noun	
<i>tuktu</i> caribou(ABS.SG)					
<i>aanniavi-tuqaq</i> hospital-old(ABS.SG)				attributive adjective	

**Table 5: Revised inventory of Inuit categories**

Interestingly, in particular given the earlier exotic claims about categories in Inuit, this inventory of categories resembles that of more familiar languages. One notable difference is the presence of two adjective classes. However, we can observe two adjective classes in languages such as Japanese (in which, similarly, one class exhibits verbal properties and a subset of the verbal inflectional paradigm).

<sup>183</sup> I assume here that pronouns in Inuit form a sub-class of nouns. However, they might instead be the result of a combination of functional heads (e.g. D and/or  $\phi$ ) in the sense of Déchaine & Wiltschko (2002).

## 4.3 Theoretical implications

### 4.3.1 Lexical categories in Universal Grammar and Distributed Morphology

The findings that, contrary to previous claims in the literature, Inuit possesses both adjective and adverb categories support the predictions made by Baker (2004) and Dixon (2004) that evidence for a class of adjectives can be found in all languages. While ultimately the status of a given lexical category as universal cannot be demonstrated by its presence in a single language, a detailed examination of the lexical categories in all languages is a necessary condition for ascertaining what is universal cross-linguistically.

Within the framework of Distributed Morphology lexical roots are argued to be category-neutral, only acquiring a category when combined with categorial heads such as *n*, *v*, *adj*, and possibly *adv*. In this context, the question of the universality of lexical categories can be framed as follows; do all languages employ the same stock of categorial heads? For instance, do all languages employ a ‘little *adj*’ (or ‘little *a*’ if adjectives and adverbs form a single category) that combines with roots to create adjectives? On one hand, UG might make the inventory of categorial heads available to all languages, with individual languages choosing a subset of these. On the other hand, UG could mandate that such elements are part of the functional stock of all languages. The data presented herein from Inuit is compatible with either of these possibilities. While this might seem inconclusive, it is important to stress that the claims in the literature that Inuit lacked adjectives and adverbs (if true) would have ruled out the universality of ‘little *adj*’ and ‘little *adv*’ (or ‘little *a*’), and necessitated a situation of parametric variation. In sum, while evidence for the parametric status of lexical categories may be found elsewhere, it is not present in Inuit.

### 4.3.2 Parametric variation in semantics

Continuing on the topic of parametric variation, my proposal to account for the lack of intersective denotations among strictly-attributive adjectives appeals to the possibility of parameters in semantics; i.e. that Inuit lacks a rule of Predicate Modification. While it is often assumed that such variation should be confined to syntax (e.g. to the inventory of functional heads or formal features in each language) and that semantic principles should be universal, recent work such as Matthewson (2006) (in which she argues that the language St'át'imcets lacks pragmatic presuppositions) suggests the possibility of semantics parameters. Such a parameter for Predicate Modification would have as a default that the speaker's language lacks this rule. While speakers of other languages will be exposed to data that will trigger a change in the parameter setting, no such data will be present in Inuit, resulting in that the default no-PM setting is maintained for Inuit speakers.

### 4.3.3 Adverbs are adjoined phrases

I have proposed, following Ernst (2002), that adverbs in Inuit are adjoined phrases and that their placement is primarily determined by semantics. Such an analysis naturally captures the variable ordering data exhibited by Inuit adverbs since without dedicated base positions we expect variation. Furthermore, I have argued against the claim that these adverbs are functional heads as proposed in Cinque (1999) and Cook & Johns (2009). In particular, the optionality of these adverbs, combined with the fact that they are not selected by higher projections (thereby suggesting that they do not project) indicates that they should be treated as adjuncts, not heads (see Wiltschko (2008) on the adjunct status of number marking in Halkomelem).

### 4.3.4 Right-headedness

In addition to arguing for the superiority of Ernst's (2002) framework in handling adverb ordering data in Inuit, I have also argued that Inuit is right-headed, contra the strong universal claim of antisymmetry (i.e. Kayne's (1994) Linear Correspondence Axiom). Ernst notes that while positing a universal underlying left-headed structure aims to avoid complexity in the grammar by reducing linearization to asymmetric c-command, antisymmetry stipulates additional theoretical machinery (i.e. the segment/category distinction), thereby negating the argument for conceptual simplicity. Furthermore, he offers empirical arguments for right-adjunction. I have argued herein that the Inuit adverb ordering data further support the existence of right-headed structures, as this data is problematic for a left-headed structure employing head-movement to create verbal complexes. Although remnant movement offers the possibility of deriving polysynthetic verbal complexes while maintaining an antisymmetric structure, the challenge to such an analysis will be to accommodate the considerable variation in adverb placement, while simultaneously ensuring that verbs, light verbs, modals, tense, aspect, negation, mood, etc. ultimately emerge from the derivation as essentially *surface*-right-headed. Moreover, to offer a viable alternative to a right-headed structure, such a system will need to avoid adding complexity to the grammar.

### 4.3.5 Word-formation

Finally, the existence of adjectives and adverbs inside polysynthetic words adds further support to Compton & Pittman's (2010a) analysis of word-formation. Their proposal that DP and CP phases spell out as phonological words predicts that attributive AdjPs and AdvPs will form part of DP words and CP words, respectively. Furthermore,

the arguments herein against a head-movement analysis of Inuit word-formation support their claim that the locus of word-formation is the PF interface, i.e. it is the mapping of syntactic structure to phonological domains – not a series of feature-driven syntactic movements whose purpose is to yield the correct surface order of morphemes.

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