Distribution and Function of Comparative Aspect in Athabaskan/Dene

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1 Introduction

This paper explores the distribution and contribution of morphemes referred to as ‘comparative aspect’ in Athabaskan and Na-Dene languages, considering data from Slave, Witsuwit’en, Navajo, and Tlingit. Comparative aspect morphology marks verb stems denoting gradable adjectival properties (e.g., tall, fast, small, strong). In (1), the same Navajo verb stem -neež ‘tall’ is shown marked with comparative and absolute aspect morphology. The translations associated with comparative and absolute marking are representative of the semantics attributed cross-linguistically to these morphemes. A corresponding pair is shown for Tlingit in (2).

(1) a. ‘ánínlnéez

'á-ni-ø-l-néež

COMPAR-COMPAR-3S-CLASS-long

‘S/he/it is long or tall (in a relative or comparative sense)’

(YM 1987: 117)

b. nineez

ni-ø-ø-neez

ABS-3S-CLASS-long

‘S/he/it is long or tall (in an absolute sense)’

(YM 1987: 647)

(2) a. yé’ ku’wát’

yé’ ka-ø-ø-ýát’

COMPAR-COMPAR-COMPAR-3S-CLASS-long

‘It is (so) long’

(Leer 1991: 258)

b. ýýýát’

ýa-ø-ø-ýýát’

ABS-3S-CLASS-long

‘It is long’

(Leer 1991: 257)

1 Thanks to Ellavina Perkins and Irene Silentman for generous help with the Navajo language data. Unless otherwise indicated, all Navajo data was collected at the 2008 Navajo Language Academy. Research was made possible by a Joel Dean Grant from Swarthmore College. Many thanks to Theodore Fernald, Keren Rice, Christopher Kennedy, Leonard Faltz, Seth Cable, and audience members at the 2009 Dene Languages Conference at the University of California, Berkeley for helpful discussion.

2 Young and Morgan (1987) abbreviated at YM (1987). All YM page numbers refer to the dictionary portion. The following abbreviations are used in the glosses: COMPAR = comparative aspect; morpheme ABS = absolute aspect morpheme; CLASS = classifier/voice-valence marker; 1,2,3,3’ = person; sg, dpl, pl = number; S = subject; O = object; 1sg-, 2sg-, 3- etc. = possessive prefixes; DET = determiner; SUB = subordinator -go; FOC = focus marker; NEG = negative particle.
The central claim of this paper is that comparative aspect morphology in Athabaskan languages and Tlingit does not make only a superficial semantic contribution but has deeper implications for argument structure. When a verb is marked for comparative aspect, a new argument position is introduced. This argument must be saturated by a (typically) verb-external degree-denoting phrase (e.g., a more...than, less...than, or as...as phrase).

The paper will proceed as follows. In Section 2, I introduce the facts of the distribution and morphemic shape of comparative aspect in Slave, Witsuwit’en, Navajo, and Tlingit, highlighting cross-linguistic uniformities and differences. In Section 3, I draw on previous theories of the semantics and syntax of gradable adjectives to make a formal proposal about the contribution of comparative aspect morphology to verbal argument structure. Section 4 presents evidence in favor of this proposal. I demonstrate that comparative aspect-marked verbs are in a tighter syntactic relation with their modifiers than absolute aspect-marked and action-denoting verbs are with their modifiers. I pay particular attention to data from Navajo and Tlingit. Section 5 considers the ramifications of these findings for theories of Na-Dene syntax and semantics and relates comparative aspect to light verb constructions in Athabaskan languages.

2 Shape and distribution of comparative aspect in Na-Dene languages

In this section, I introduce the morphological shape and distribution of comparative aspect in a subset of Na-Dene languages. While the location of comparative aspect in the verb is largely invariant cross-linguistically, there is variation in which verb stems can be marked for comparative aspect.

2.1 Distribution of comparative aspect

I follow Kari (1979, 1990), Rice (1989), Young and Morgan (1987), and Axelrod (1993) by dividing Na-Dene verbs into verb theme categories. A verb theme category is “a broad group of verb themes [stem plus prefixes] that has an identifiable semantic relationship and a common structure in the most basic derived verb forms” (Kari 1990: 44-45).

Verb themes fall into two broad classes, Active and Neuter. The Neuter class includes verbs of position, existence, and adjectival description. Verb themes of adjectival description can be divided into the Dimensional and Descriptive verb theme categories. Crucially, the division between the two categories is not semantic but instead is based on the availability of comparative aspect. Dimensional verb themes can be marked for either absolute or comparative aspect. Descriptive verb themes can only be marked for absolute aspect.

The contents of the Dimensional and Descriptive verb theme categories vary cross-linguistically. In Navajo, largely verb stems that denote ‘positive’ dimensions (e.g., -nee ‘tall’, -daaz ‘heavy’, -teel ‘wide’) can bear comparative aspect. In Slave, dimensions (both positive and negative), some color terms, shapes, and textures can bear comparative aspect (Rice 1989: 910-911). The facts are similar for Witsuwit’en (Hargus 2007). Comparative aspect appears on Tlingit verbs that denote “a quantifiable physical attribute” (Leer 1991: 61).

Table A shows the (full) Dimensional and (partial) Descriptive verb theme categories in Navajo. Several notes on morphology bear special mention. For Descriptive themes, both first- and third-person forms are given: the derivational morpheme that marks absolute aspect (ni-) fails to surface on verbs marked for third person subject in the presence of certain additional derivational prefixes. However, ni- always surfaces on first person forms, as shown below. For
a few comparative aspect-marked verbs, the derivational morpheme that marks comparative aspect (nî-) fails to surface (e.g., ‘ábóodziil). I posit that the morpheme is still reflected as a high tone (compare bidziil vs. ‘ábóodziil).

TABLE A: Dimensional and descriptive verb themes in Navajo

<table>
<thead>
<tr>
<th>Descriptive Adjectival Verbs (Subset)</th>
<th>Dimensional Adjectival Verbs (Exhaustive?)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Translation</td>
<td>1-person</td>
</tr>
<tr>
<td>stinky</td>
<td>nishchxon</td>
</tr>
<tr>
<td>white</td>
<td>finishgai</td>
</tr>
<tr>
<td>round, plump</td>
<td>dinishjool</td>
</tr>
<tr>
<td>hairy</td>
<td>dinish’il</td>
</tr>
<tr>
<td>wet</td>
<td>dinishŧleé’</td>
</tr>
<tr>
<td>fast</td>
<td>dinishwo’</td>
</tr>
<tr>
<td>lightweight</td>
<td>‘áníñsts’óózí</td>
</tr>
<tr>
<td>small</td>
<td>‘áníñtísí</td>
</tr>
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<td></td>
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</tbody>
</table>

2.2 Shape of comparative aspect

Comparative aspect morphology is related in three ways in the languages under consideration. First, comparative aspect morphology is maximally bipartite. One morpheme appears in a derivational position near mode/aspect markers. The linear proximity to true aspect morphology led to the names ‘comparative aspect’ and ‘absolute aspect,’ although it is not the case that these morphemes currently mark true verbal aspect. This morpheme is nî in Navajo, de in Slave, d in Witsuwit’en, and ka-ú in Tlingit. In Athabaskan languages, a second morpheme translated as ‘so, thus’ appears on the left periphery of the verb in preverb position. This morpheme is ‘á in Navajo, ‘a in Slave, and ‘ə in Witsuwit’en. I refer to them collectively as the ‘á-morphemes. While the derivational morpheme is always present, the presence of the preverb morpheme is determined by the presence of other prefixes and modifiers. Tlingit comparative aspect-marked verbs can be preceded by the morpheme ye’ ‘so, thus.’ While ye’ is semantically and positionally similar to the Athabaskan ‘á-morphemes, I discuss below the possibility that ye’ is not a part of comparative aspect but instead is a verb-external modifier.

The second and third unifying characteristics apply only to the Athabaskan languages. Classifier shift (from [ø] to reflexes of Proto-Athabaskan [*]) accompanies comparative aspect

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3 This portion of the table contains all verbs for which comparative aspect was attested, either in YM (1987) or by speakers. Not attested in YM (1987): absolute aspect-marked forms of ‘áníldííl, níshchxoq’, níshëtí ‘áníñshyáźhí; forms with ‘á for ‘ugly’ or ‘little₁’.
morphology. In addition, Athabaskan verb stems marked for comparative aspect often change shape. This change typically involves systematic raising of vowel tones (e.g., Navajo nineez ABS+tall vs. ‘áníthéez COMPAR+tall) or suppletion.

Table B summarizes the morphology associated with comparative aspect marking. Where the original sources distinguish homophonous prefixes with superscripts, I have reproduced these superscripts here for reference. The Navajo superscripts correspond to the superscript numbering scheme in the grammar portion of YM (1987) while the Tlingit superscripts correspond to Leer (1991).

**Table B: Comparative aspect cross-linguistically**

<table>
<thead>
<tr>
<th>Language</th>
<th>Morphemes</th>
<th>Classifier shift</th>
<th>Comparative</th>
<th>Absolute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navajo</td>
<td>(‘á’)-nf²</td>
<td>Yes (⟹ l)</td>
<td>‘áníldáás’</td>
<td>nidaaz</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>‘it is (so) heavy’</td>
<td>‘it is (so) heavy’</td>
</tr>
<tr>
<td>Slave</td>
<td>Hare</td>
<td>(‘a’)-de</td>
<td>Yes (⟹ h)</td>
<td>‘adéhshá’</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>‘it (so) big, tall’</td>
<td>‘it is big, tall’</td>
</tr>
<tr>
<td>Bearlake</td>
<td>‘a’-de</td>
<td>Yes (⟹ h)</td>
<td>‘adéhcho’</td>
<td>nechá</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>‘it is (so) big’</td>
<td>‘it is big’</td>
</tr>
<tr>
<td>Slavey⁴</td>
<td>‘a’-de</td>
<td>Yes (⟹ h)</td>
<td>‘aecho’</td>
<td>nechá</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>‘it is (so) big’</td>
<td>‘it is big’</td>
</tr>
<tr>
<td>Witsuwit’en</td>
<td>(‘ə’)-(d)</td>
<td>Yes (⟹ l)</td>
<td>‘əydiilt’o’</td>
<td>nyiz</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>‘it is (so) thick’</td>
<td>‘s/he is tall’</td>
</tr>
<tr>
<td>Tlingit</td>
<td>(yē’)-ka-ū¹</td>
<td>No</td>
<td>ku’wált’</td>
<td>ʔayáʔt’</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>‘it is so long’</td>
<td>‘it is long’</td>
</tr>
</tbody>
</table>

### 2.3 Degree expressions

The final characteristic of comparative aspect is that in all languages, only a closed set of modifying expressions can be used with a comparative-marked verb. I refer to this set as degree expressions, where ‘degree expressions’ are phrases or morphemes that make reference to some degree to which an adjectival property holds. Table C gives an exhaustive list of degree expressions found with comparative-marked verbs in Navajo. The other Na-Dene languages have very similar sets of degree expressions, shown in Table D.

⁴ A second way to form comparative aspect in Slavey is through the use of “y- conjugation morphology and no additional aspect prefixes” (Rice 1989: 1093).
The most important fact about degree expressions in relation to comparative aspect is that they are obligatory. I return to this observation in Section 4. A second notable characteristic of degree expressions is that in the Athabaskan languages, the same degree expressions appear to license or prohibit the presence of the ‘á’-morphemes. This is illustrated in Table D. I return to Tlingit below. In Navajo, Slave, and Witsuwit’en, ‘á’-morphemes are omitted in wh-word, with-P (as...as) postposition, and deictic (e.g., ‘that long’) constructions. The ‘á’-morphemes are obligatory in greater than and less than postpositional constructions. The tendency is that if the degree expression is bound, ‘á’-morphemes cannot appear.

As an aside, most degree expressions can also felicitously modify absolute aspect-marked verbs with certain syntactic differences. For instance, in Navajo, the copula ‘át’é ‘it is’ must introduce the degree expression. The entire copula+degree expression unit is then subordinated by -go, as will be seen in Section 4.3.1. For discussion of these facts for Navajo, see Bogal-Allbritten (2008).

<table>
<thead>
<tr>
<th>Navajo</th>
<th>Translation</th>
<th>Interpretation</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘ayóó</td>
<td>‘very’</td>
<td>X is very Adj</td>
<td>Adverb</td>
</tr>
<tr>
<td>Haa/Daa</td>
<td>‘how, why’</td>
<td>How Adj is X?</td>
<td>Wh-word</td>
</tr>
<tr>
<td>P-ee</td>
<td>‘with P’</td>
<td>X is as Adj as P</td>
<td>Postposition</td>
</tr>
<tr>
<td>P-lááh</td>
<td>‘beyond P’</td>
<td>X is more Adj than P</td>
<td>Postposition</td>
</tr>
<tr>
<td>P-‘oh</td>
<td>‘short of P’</td>
<td>X is less Adj than P</td>
<td>Postposition</td>
</tr>
<tr>
<td>NP-gi</td>
<td>‘at NP’</td>
<td>X is as Adj as NP</td>
<td>Postposition</td>
</tr>
<tr>
<td>Measure phrase (MP)</td>
<td>e.g., 6ft</td>
<td>X is MP Adj</td>
<td>Locative enclitic</td>
</tr>
<tr>
<td>doo shó-Adj da</td>
<td>‘awfully, extremely’</td>
<td>X is awfully Adj</td>
<td>NP</td>
</tr>
<tr>
<td>ko-Adj</td>
<td>‘that’</td>
<td>X is that (deictic) Adj</td>
<td>Prefix</td>
</tr>
</tbody>
</table>
### Table D: Degree expressions cross-linguistically

<table>
<thead>
<tr>
<th>Morphology</th>
<th><strong>Navajo</strong> (YM 1987)</th>
<th><strong>Slave</strong> (Rice 1989)</th>
<th><strong>Witsuwit’en</strong> (Hargus 2007)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Degree expression</strong></td>
<td><strong>Gloss</strong></td>
<td><strong>Example</strong></td>
<td><strong>Translation</strong></td>
</tr>
<tr>
<td>da-</td>
<td>‘how’</td>
<td>daa níłhéez</td>
<td>‘how long is it?’</td>
</tr>
<tr>
<td>P-ee-</td>
<td>‘with P’</td>
<td>P-ee níłhéez</td>
<td>‘it is as long as P’</td>
</tr>
<tr>
<td>ka-</td>
<td>‘that’ (deictic)</td>
<td>kónilhéez</td>
<td>‘it is that long’</td>
</tr>
<tr>
<td>doo shó- da NEG sufficient NEG doo shónóoshóní da</td>
<td>‘it is awfully pretty’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘á-ní’</td>
<td>‘á-de’</td>
<td>‘á-d’</td>
<td></td>
</tr>
<tr>
<td>P-lááh</td>
<td>‘beyond P’</td>
<td>P-lááh ‘ánílnéez’ ‘it is longer than P’</td>
<td>P-’ó</td>
</tr>
<tr>
<td>P-oh</td>
<td>‘short of P’</td>
<td>P-oh ‘ánílnéez’ ‘it is less long than P’</td>
<td>P-’íh</td>
</tr>
<tr>
<td>NP-gi</td>
<td>‘at NP’</td>
<td>NP-gi ‘ánílnéez’ ‘it is as tall as NP’</td>
<td></td>
</tr>
</tbody>
</table>

---

5 In free variation with koánínééz. Speakers reported no difference in meaning.
The measure phrase construction is not shown in Table D. In Navajo, this construction also requires both pieces of comparative aspect morphology to be present, as shown in (3).

(3) Shideezhí tseebíí dahídídlo’ ‘ánífldáás

1sg-younger.sister eight pound COMPAR-COMPAR-3S-CLASS-heavy

‘My younger sister weighs eight pounds.’

A non-exhaustive list of Tlingit degree expressions is given in (4).

(4) a. yé’

‘thus’

yé’ ku’wá’t’

‘it is so long’ (or: ‘it is long’)

b. wá’#sá

‘how’

wá’#sá ku’wá’t’

‘how long is it?’

c. P-ýáx

‘like P, in accordance with P, as much as P’

‘a-ýáx ku’wá’t’

‘it is as long as it’

d. P-ýá’náx

‘more than P’

‘a-ýá’náx ku’wá’t’

‘it is longer than it’

e. P-qín

‘less than P’

‘a-qín ku’wá’t’

‘it is shorter than it’

(Leer 1991: 61, 258)

The range of degree expressions in Tlingit is comparable to the range found in Athabaskan languages. The primary difference is that in Tlingit, the presence of any degree expression precludes the realization of the ‘preverb’ morpheme yé’ ‘so, thus.’

One interpretation of this observation is that yé’ is a preverb morpheme and is realized along with ka-ú as part of comparative aspect. But given its morphosyntactic position, it is always in competition with other degree expressions, which are perhaps always bound even where there appears to be an intervening word boundary. Recall that in Athabaskan languages, ‘á-morphemes typically only appear with degree expressions that are not bound to the verb.

A second interpretation is that while ‘á-morphemes are proper components of comparative aspect in Athabaskan languages, Tlingit yé’ is a degree expression. Under this analysis, only the derivational morphemes ka-ú qualify as comparative aspect morphology. Treating yé’ as a degree expression accounts for an issue to which we return in Section 4.4.

2.4 Productivity of comparative aspect morphology

In Navajo, the dimensional and descriptive verb theme categories appear to be static: comparative aspect morphology cannot be freely applied to other verb stems. The only fluidity came from forms like ‘ádóolwo’ ‘it is (so) wet’, which was cited in YM (1987) but was not accepted by all speakers consulted.

However, evidence that comparative aspect morphology is at least somewhat productive
comes from Tłı̨chǫ Yatı̨ (Dogrib). Leslie Saxon (p.c., 7/12/09) reports the following novel nominalization construction used in a weather report on a radio broadcast. The verb root edza ‘cold’ is not usually known to take comparative aspect but does here, as indicated by the shifted classifier, h (*f) and bound degree expression (da ‘how’).

(5) edàéëhdzàai
    how-cold-CL-NOM
    ‘(the to which it is) how cold’ or, ‘the temperature’

3 Comparative aspect morphology introduces an argument position

In Section 2, we considered the morphemic form of comparative aspect and its distribution in Navajo, Witsuwit’en, Slave, and Tlingit. In Section 3, we consider the syntactic and semantic contribution made by comparative aspect morphology. Recall from Section 1 that verbs marked for comparative aspect are typically translated as ‘to [have some adjectival property] in a relative or comparative sense,’ as opposed to expressing this property in an absolute sense. I argue that the translations ascribed to comparative aspect-marked verbs hint at the deeper syntactic and semantic contribution made by comparative aspect.

(6) Degree Argument Hypothesis

Comparative aspect morphology introduces a degree (d) argument position and a relation that holds between the degree argument and the subject.

According to (6), any comparative aspect-marked verb will take two arguments: an individual (corresponding to the subject) and a degree. The degree argument position can only be saturated by a degree-denoting degree expression. The relation introduced by comparative aspect is such that a given subject expresses the adjectival property denoted by the verb stem in relation to some degree d. Comparative aspect-marked verbs no longer have the informal translations given in (1) or (2), but the translations given in (7a,b).

(7) a. d (‘á)níñnééz
    ‘It is d-long’
    Navajo

   b. d (yé’) ku’wá’t’
    ‘It is d-long’
    Tlingit

To illustrate, we can take the Navajo sentence in (3), repeated below as (8). Here, the first argument is shideezhi ‘my younger sister.’ The second argument corresponds to the degree expressed by the degree expression tseebí dahídídlo’ ‘eight pounds.’ ‘My younger sister’ is heavy in relation to the degree ‘eight pounds.’

(8) Shideezhi tseebí dahídídlo’  áññdáás
    1sg-younger.sister eight pound COMPAR-COMPAR-3S-heavy
    ‘My younger sister weighs eight pounds.’

What is the status of the degree argument? I liken them to locative arguments selected by English verbs such as put or set. As shown in (9), locative arguments cannot be freely omitted.
a. Sandy put her hat *(on her head).

b. Sandy set the glass *(on the table).

Locative expressions with argument status can be contrasted with expressions that have adjunct status and can be omitted.

a. Sandy read a book (in her bedroom).

b. Sandy left the house (at six o’clock).

Similarly, in Navajo, a verb marked with comparative aspect morphology subcategorizes for a subject and a degree argument. A degree expression is needed to ‘complete’ the meaning of the verb. By contrast, a verb marked with absolute aspect morphology can optionally be modified by a degree expression but the verb is semantically complete (or, fully saturated) even without a degree expression. Degree expressions modifying absolute aspect-marked verbs have adjunct status.

Adoption of the degree argument hypothesis also relates comparative aspect-marked Na-Dene verbs to the standard theory of gradable adjectives, held by Cresswell (1976), von Stechow (1984), Heim (2000), Kennedy and McNally (2005), among many others. This theory holds that all adjectives project two argument positions: (1) the subject and (2) a degree. For detailed discussion of the implications of comparative aspect for theories of gradable adjectival meaning, see Bogal-Allbritten (2008).

### 4 Evidence in favor of a degree argument position

In Section 4, we consider evidence in favor of the Degree Argument Hypothesis. Two categories of evidence suggest that degree expressions behave syntactically more like arguments than adjuncts: (1) classifier shift observed in comparative aspect in Athabaskan languages, and (2) a high degree of syntactic configurationality with degree expressions when used with comparative aspect-marked verbs but not when used with either absolute aspect-marked or action-denoting verbs.

#### 4.1 Classifier shift

The first category of evidence that comparative aspect-marked verbs have a degree argument position comes from classifier shift. Recall from Section 2 that all Athabaskan languages exhibit classifier shift as part of the morphological changes that accompany marking a verb stem with comparative aspect morphology. Absolute aspect-marked verbs take the classifier [ø], associated with intransitive argument structure, while comparative aspect-marked verbs take a reflex of proto-Athabaskan [*I], associated with transitive argument structure.

To illustrate, classifier shift in Navajo from [ø] to [l] is frequently seen when a verb undergoes causativization. In (11a), the verb *sits’il ‘it shattered’ is intransitive: *tóbjeel ‘barrel’ is the sole argument. In (11b), an agent (first-person subject) has been added, making the verb transitive.
4.2 Degree expressions are obligatorily present when the verb is comparative aspect-marked

The second category of evidence demonstrates that degree expressions used with comparative aspect-marked verbs exhibit a higher degree of syntactic configurationality than seen with (adjunct) modifiers of absolute aspect-marked and action-denoting verbs.

First, degree expressions are obligatory when the verb is comparative-aspect marked. As shown in (12), ‘ayóó ‘very’ can be felicitously deleted when the verb is marked for absolute aspect. Doing so when the verb is marked for comparative aspect results in ungrammaticality.

(12) a. Shizhé’é *(‘ayóó) ‘ánílnééz
 1sg-father very COMPAR-COMPAR-3S-tall
‘My father is very tall.’

b. Díí bilásáana *(‘ayóó) nit’íz
DET apple very ABS-3S-hard
‘This apple is very hard.’

According to Leer (1991: 142), “because bound adjunct phrases [or, degree expressions] are required by the verb, the verb would not make sense without them.” Of course it makes sense that if the speaker intends to express a meaning such as ‘X is taller than Y’ or ‘X is very tall,’ a degree expression expressing the ‘greater than’ or ‘very’ relations must be present.

However, even if no true ‘comparison’ or relational meaning is expressed, the degree expression is still obligatory when the verb is comparative-marked. This is illustrated in (13). This sentence is one of a series of examples given in YM (1987) in which the comparative aspect-marked verb (here, ‘áníshdííl’) is obligatorily preceded by ‘ayóó ‘very’ but the translation makes no mention of ‘very.’ Instead, ‘ayóó seems to be serving in a purely structural role: to saturate the degree argument associated with the comparative aspect-marked verb.

(13) Shideezhí ‘álts’óózí shí ‘éí *(‘ayóó) ‘áníshdííl
 1sg-younger.sister ni-3S-slender 1sg. FOC very COMPAR-COMPAR-1sgS-big
‘My younger sister is slender but I am chunky.’ (adapt. YM 1987: 117)

This point can be rephrased as follows. Given only translations such as those in (1) and (2), a possible analysis is that comparative aspect morphology is somehow making verbs more context-sensitive but not significantly altering the verb’s argument structure. Examples like (13) show us that this cannot be the correct analysis. In (13), a standard of comparison (‘my younger sister’) is present in an adjacent clause but the comparative aspect-marked verb ‘áníshdííl still
must be preceded by ‘ayóó. Again, this seems to show that the contribution of comparative aspect morphology is not ‘superficially’ semantic but instead is related to argument structure.

4.3 Degree expressions must directly precede the comparative aspect-marked verb

Comparative aspect-marked verbs not only must be modified by degree expressions, but the degree expression must directly precede the verb. I highlight two locality restrictions in this section. First, the degree expression cannot be separated from a comparative aspect-marked verb by an intervening negation particle. Second, the degree expression cannot be separated from a comparative aspect-marked verb by topicalization of the degree expression. Once again, degree expressions used with absolute aspect-marked verbs are not subject to either of these locality restrictions.

As a caveat, Faltz (2000) notes that in general, postpositional phrases and certain particles are preferred close to the left periphery of all verbs. Given that the set of degree expressions includes postpositional phrases and a particle, it could be argued that the locality restriction on degree expressions with comparative aspect-marked verbs reflects a broader syntactic preference in Navajo. However, not only does this not explain why locative phrases – which Faltz does not associate with locality restrictions – must be adjacent to comparative aspect-marked verbs, but it also does not explain why degree expressions do not have to be string adjacent to absolute aspect-marked verbs while non-adjacency of degree expressions with comparative aspect-marked verbs results in total ungrammaticality.

4.3.1 Topicalization of DE

As shown in (14) and (15), degree expressions cannot be topicalized when they modify a comparative aspect-marked verb. In both examples, topicalization of the degree expression causes the subject of the verb to intervene.

(14) *Shizh'é biláah shí ‘ánísnééz Comparative
1sg-father 3O-BEYOND 1sg. COMPAR-COMPAR-1sgS-tall
(‘I am taller than my father.’)

(15) *Bimá-gí shideezhí ‘ánóoshóní Comparative
3sg-mother-AT 1sg-younger.sister COMPAR-COMPAR-3S-pretty
(‘My little sister is as pretty as her mother.’)

Example (14) may be degraded for reasons other than the placement of the degree expression. As already noted, postpositions are preferred adjacent to any verb, not just those that are marked for comparative aspect. In addition, the presence of the overt subject shí ‘I’ may give the sentence an inappropriately emphatic reading (see Willie and Jelinek 2000). However, neither of these factors can explain the ungrammaticality of (15). In particular, we can compare the ungrammatical (15) with the fully grammatical (16b), where the subject intercedes between the locative phrase Kínlání-di ‘in Flagstaff’ and the action-denoting verb.
Example (17) shows that absolute aspect-marked verbs behave like action-denoting verbs with respect to modifying phrases. The grammaticality of (17b) is notable since a postpositional phrase has been separated from the verb by a particle k’ad ‘now’ and the subject chidí naat’aí ‘airplane.’

(17) a. K’ad chidí naat’aí hosiyoolts’įł yilááh ‘át’éego dilwo’ Absolute now airplane speed.of.sound 3’O-BEYOND 3S-be-SUB ABS-3S-fast ‘Now airplanes are faster than the speed of sound.’ (adapt. YM 1987: 458)

b. Hosiyoolts’įł yilááh *(‘át’éego) k’ad chidí naat’aí dilwo’ Absolute speed.of.sound 3’O-BEYOND 3S-be-SUB now airplane ABS-3S-fast ‘Now airplanes are faster than the speed of sound.’

It may be noted that degree expressions (except ‘ayóo) used with absolute aspect-marked verbs are obligatorily followed by ‘át’éego, the copula ‘át’é marked by the subordinating particle –go. Thus, not only does a degree expression not have to directly precede an absolute aspect-marked verb, it cannot: ‘át’éego must intercede. I abstract away from this fact, which may provide yet another piece of evidence in favor of the proposal that only comparative aspect-marked have a degree argument that can be saturated by a degree expression. The implications of this are discussed at length in Bogal-Allbritten (2008).

4.3.2 Interposition of negation marker

The negation marker doo may be interposed between degree expressions and absolute aspect-marked verbs, but not between degree expressions and comparative aspect-marked verbs. In (18b), ungrammaticality results when in the second clause, the first half of the negation frame doo…da intercedes between ‘ayóo and the comparative aspect-marked verb ‘ánínéez. In (19), we see that doo can intercede between ‘ayóo and an absolute aspect-marked verb.

(18) a. Shidezhé’é ‘ayóo ‘ánínéez, shádí ‘éí 1sg-father very COMPAR-COMPAR-3S-tall 1sg-older.sister FOC doo ‘ayóo ‘ánínéez da NEG very COMPAR-COMPAR-3S-tall NEG ‘My father is very tall, but my older sister is not very tall.’
b. * Shidezh’é ‘ayóó ‘ánínlééz, shádí ‘éí
1sg-father very COMPAR-COMPAR-3S-tall 1sg-older.sister FOC
‘ayóó doo ‘ánínlééz da
very NEG COMPAR-COMPAR-3S-tall NEG
(‘My father is very tall, but my older sister is not very tall.’)

(19) a. Shádí ‘éí doo ‘ayóó nidaaz da Absolute
1sg-older.sister FOC NEG very ABS-3S-heavy NEG
‘My older sister is not very heavy (medium weight).’

b. Shádí ‘éí ‘ayóó doo nidaaz da Absolute
1sg-older.sister FOC very NEG ABS-3S-heavy NEG
‘My older sister is not very not heavy (rather thin).’

The obligatory adjacency of ‘ayóó when the verb is marked for comparative aspect suggests that ‘ayóó is functioning not as adverbial modifier but as a morpheme necessary for the completion of the verb’s meaning. Adopting the degree argument hypothesis, ‘ayóó is supplying a value (e.g., ‘high’) for the degree associated with ‘ánínlééz in (18).

4.4 Extending the account to Tlingit
In Tlingit as in Navajo, degree expressions are obligatorily present and adjacent (Leer 1991). In Tlingit, the set of degree expressions includes both proclitics and so-called ‘bound phrases,’ which are defined by Leer as “phonologically and syntactically independently phrases which are nevertheless positionally restricted so that they must occur as close to the verb as possible” (1991: 142). The class of bound phrases is not limited to degree-denoting expressions, but also includes phrases denoting instrument, manner, and location.

To this point, I have treated ye’ as a part of Tlingit comparative aspect, on par with Athabaskan ‘á-morphemes. However, as noted in Section 2.2, there is evidence that Tlingit ye’ should not be treated as a preverb morpheme (on par with Navajo ‘á) but instead as a degree expression. First, ye’ never co-occurs with other degree expressions. Second, a verb marked with ka-ú can appear with ye’ alone, as in (20).6

(20) Ye’ g"siká’g
ye’ ka-ú-siká’g
thus/so COMPAR-COMPAR-thick
‘It is that/so/thus thick’ or ‘It is thick’ (Leer 1991: 260)

6 The only instance that I have found of a comparative-marked verb standing ‘alone’ (without ye’) is the use of comparative-marked verbs as postnominal modifiers, e.g., N ku’wá’t’ ‘long N’) (Leer 1991: 256, 258). The implications of postnominal modifiers for the theory developed here must be further explored. However, for our present purposes, the absence of ye’ with postnominal modifiers give another piece of evidence against treating ye’ as a basic part of comparative aspect.
We could claim that ye’ is part of comparative aspect morphology and is responsible for introducing the degree argument but, for reasons of morphosyntactic location, can never co-occur with other degree expressions. However, we would still be left with the question of why Tlingit comparative aspect-marked verbs must appear with degree expressions except when ye’ is overtly realized. Furthermore, if we assume ye’ to be a comparative aspect morpheme we would have to abandon the Degree Argument Hypothesis for Tlingit or at least posit slightly different semantics for comparative aspect. While the question requires further research, I posit here for reasons of parsimony that ye’ is a degree expression and, unlike the Athabaskan ‘á-morphemes, is not a part of comparative aspect.

5 Implications and questions for further work

5.1 Implications for views of Na-Dene syntax and semantics

The account developed here may call into question two theoretical claims about Athabaskan and Tlingit syntax and semantics. First, it has been claimed for Navajo that all argument positions are fully saturated within the verb (Faltz 2000). Verb external material can modify the verb’s meaning but cannot serve as an argument. This claim is typically made with respect to nominal arguments: under the Pronominal Argument Hypothesis, verb-external nominals are adjuncts rather than arguments (Willie and Jelinek 2000). However, this claim has not been considered for non-nominal constituents, such as degree expressions. I have argued that degree expressions saturate degree argument positions introduced by comparative aspect morphology. If we take degree expressions to be external to the verb, then all argument positions are not saturated verb-internally.

Second, it has been claimed that Na-Dene languages are nonconfigurational or, at most, discourse configurational languages (Willie and Jelinek 2000). Relative flexibility of word order has been taken as evidence for this claim. However, as we have seen, degree expressions (e.g., locative phrases) are subject to tight locality restrictions that suggest there is syntactic structure – beyond structure related to discourse topic and focus positions – outside of the verb.

Both of these claims hinge on the question of where to locate the left boundary of the verb. If the verb is a potentially extensive syntactic object then the account here does not necessarily challenge either of the standard claims outlined above. Leer (1991) proposes that Tlingit degree expressions are all part of the verb and are not autonomous syntactic objects. However, if we draw the boundary of the verb immediately to the left of preverb morphemes (e.g., the ‘á-morphemes), then both claims are challenged: verbs are not fully saturated internally and syntactic structure is imposed on verb-external material. I leave further discussion of this topic to future research.

5.2 Currency of comparative aspect-related morphemes elsewhere in Athabaskan

Although I have argued that the Athabaskan ‘á-morphemes are part of comparative aspect, these morphemes are not only used with stative verbs marked with derivational comparative morphology but are also found on light verbs.
Table E: Partial list of light verbs in Navajo

<table>
<thead>
<tr>
<th>Light Verb</th>
<th>Marking</th>
<th>Meaning</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>'ánísht’é</td>
<td>Ø-té</td>
<td>'be'</td>
<td>(YM 1987: 119)</td>
</tr>
<tr>
<td>'áásh’t’eeł</td>
<td>Ø-t’eeł</td>
<td>'be (in appearance)'</td>
<td>(YM 1987: 2)</td>
</tr>
<tr>
<td>'áshnééh ('ásdzaa)</td>
<td>Ø-nééh</td>
<td>'act, do'</td>
<td>(YM 1987: 130)</td>
</tr>
<tr>
<td>'áshlééh ('áshlaa)</td>
<td>Ø-tééh</td>
<td>'make it, create it'</td>
<td>(YM 1987: 128)</td>
</tr>
</tbody>
</table>

Light verbs are used in a wide range of modifier+verb constructions whose meanings are characterized by varying degrees of compositionality. As shown in (21), one construction in which light verbs marked with 'a are used is the periphrastic causative and transitional constructions (Hargus 2009). I continue to gloss this morpheme as COMPAR.

(21) a. Tse tadehkwí ‘asíhwé
   wood 1sgS-chop COMPAR-1sgO-3S-make
   'He makes me chop wood.' (Rice 1989: 1302-6)

   b. Njhts’i nátse ‘adadée
   wind 3S-strong COMPAR-3S-becoming
   'The wind is getting strong.' (Rice 1989: 1301-2)

If the 'á morpheme found on light verbs is the same as the 'á found in comparative aspect, then this may lead us to ask what semantic or syntactic contribution ‘á makes to both light verbs and comparative aspect-marked verbs. Future work will consider light verbs alongside comparative aspect-marked verbs, considering whether there is a deeper syntactic or semantic connection between the two classes of expressions, as mediated by the shared presence of the preverb ‘á. Intuitively, both classes of verbs are semantically deficient and require verb-external material to complete their meaning. However, only comparative aspect-marked verbs require this verb-external material to be degree denoting. Further investigation of this question may necessitate revising our view of which morpheme(s) introduce the degree argument.

6 Conclusions

In this paper, we first considered the morphological form and distribution of comparative aspect and degree expressions in Athabaskan languages and Tlingit. We then saw that comparative aspect morphology not only alters the semantics of verbs on which it occurs, but introduces a degree argument that must be syntactically and semantically saturated by a degree expression. Focusing on Navajo with support from Tlingit, I demonstrated that degree expressions do not behave syntactically like adjoined modifiers when the verb is marked for comparative aspect: degree expressions are obligatorily present and adjacent to the left periphery of the verb. By contrast, absolute aspect-marked and action-denoting verbs can be modified by similar expressions, but these modifiers are neither obligatorily present nor adjacent. I took this as evidence that degree expressions are syntactic and semantic arguments of comparative aspect-marked verbs. Finally, I considered the relation of comparative aspect and Athabaskan light verbs, which are both marked with ‘á-morphemes. While the nature of this relation and other outstanding questions require further study, the analysis of comparative aspect presented here not
only accounts for certain surprising patterns within Na-Dene languages (i.e., obligatory presence and adjacency of verb-external modifiers) but also relates adjectival verbs in these languages to existing theories of the syntax and semantics of gradable adjectives cross-linguistically.

References


