

1: Introduction

Outline

- I. Describe the differences in syntactic behavior associated with alternation in two derivational prefixes (*ni*⁻⁶ and *'á-ní*⁻²) that mark adjectival verbs.
- II. Argue that *'á-ní*⁻²-marked verbs possess a second argument position, the degree argument, that is projected (and saturated) verb-externally.

Verb template:

0	I	II	III	IV	V	VI	VII	VIII	IX	X	.
	<i>'á-</i>				object	{aspect / mode}		subject	classifier	stem	
						<i>ní⁻⁶, ní⁻²</i>					

- **Pronominal Argument Hypothesis** (Willie & Jelinek 2000)
- **Verbs fully saturated verb-internally** (Faltz 2000)
- All verb-external material has adjunct, not argument, status:
 - Inflected verbs can occur without verb-external subject or object
 - Modifiers (locative phrases, particles, etc.) are optional
 - Order of adverbs and other modifiers (locative phrases, particles, etc.) flexible

- (1) a. *Baa' bi-yáázh Kintání-di naalnish*
 Bah 3sg-son Flagstaff-LOC 3sgS-work
 'Bah's son works in Flagstaff.'
- b. *Baa' Kintání-di bi-yáázh naalnish*
 Bah Flagstaff-LOC 3sg-son 3sgS-work
 'Bah's son works in Flagstaff.'
- (Faltz 2000: 38-39)

2: Comparative vs. Absolute Aspect

- YM (1987) posit a distinction between COMPARATIVE and ABSOLUTE aspect (1987: g192).¹
- | | |
|--|--|
| absolute: <i>ní-</i> ⁶ | comparative: <i>'á-ní-</i> ² |
|--|--|
- (2) a. *nineež* ‘S/he is long or tall (in an absolute sense)’ *Absolute*
 b. *'áníńnééž* ‘S/he is long or tall (in a relative or comparative sense)’ *Comparative*
(YM 1987: d117)

* The Navajo data in this presentation are from the 1987 edition of the Young and Morgan Navajo dictionary (henceforth YM) and from fieldwork at the 2008 Navajo Language Academy (Diné Bizaad Naalkaah) in Albuquerque, NM. Special thanks go to Navajo linguists Ellavina Perkins and Irene Silentman: all unattributed grammaticality judgments and examples are due to them. Thanks are also due to Ted Fernald and Keren Rice. Any remaining errors are of course my own. This work is developed from Elizabeth Bogal-Allbritten (2008). Abbreviations used in glosses are as follows: 1,2,3,3' = person marking; sg, dl, pl = number marking; TOPIC = topic marker; BEYOND = postposition *-lááh* 'beyond'; WITH = postposition *-ee*; AT = locative enclitic *-gi* 'at'; LOC = locative enclitic *-di*; SUB = adverbializer/subordinator *-go*; NEG = negative marker; NOM = nominalizer; Pages from the grammar section of Young and Morgan (1987) are indicated as g###, while pages from the dictionary section are indicated as d###.

¹ Not all adjectival verbs can take both comparative and absolute aspect. See Appendix III for lists of verbs from both categories. For discussion of absolute vs. comparative aspect in other Athabaskan languages, see Kari (1979, 1990), Rice (1989), Axelrod (1993), and Hargus (2007).

⇒ **Proposal: Comparative- and absolute- aspect affects syntactic configuration**

3: The morphosyntax of comparative- vs. absolute-marked verbs

A: Obligatory presence of a degree expression

- **Comparative-marked verbs cannot be used in the absence of a DEGREE EXPRESSION (DE).**

TABLE A: Degree expressions²

Navajo	Translation	Interpretation	Type
<i>P-lááh</i>	‘beyond P’	X is more A than P	PP
<i>P-’oh</i>	‘short of P’	X is less A than P	PP
<i>P-ee</i>	‘with P’	X is as A as P	PP
<i>NP-gi</i>	‘at NP’	X is as A as NP	Enc
<i>’ayóo</i>	‘very’	X is very A	Adv
<i>Haa</i>	‘how, why’	How A is X?	Wh
measure phrase	e.g., <i>6ft</i>	X is MP A	DP

- (3) a. *Shí* **(shínaaí bilááh)* *’áníshdííł* *Comparative*
 1sg. 1sg-older.brother 3sgO-BEYOND ‘á-ní⁻²-1sgS-big
 ‘I’m larger than my older brother.’ (YM 1987: d85)

- b. *Shí* *k’ad shínaaí beenísnééz* *Comparative*
 1sg. now 1sg-older.brother 3sgO-WITH-(’á)-ní⁻²-1sgS-tall
 ‘I am as tall as my older brother now.’ (YM 1987: d165)

- c. *Shí* **(shínaaí-gi)* *’ánísnééz* *Comparative*
 1sg. 1sg-older.brother-AT ‘á-ní⁻²-1sgS-tall
 ‘I am as tall as my older brother.’

- d. *Shideezhí* **(tseebíí dahidíldlo’)* *’áníłdáás* *Comparative*
 1sg-younger.sister eight pound ‘á-ní⁻²-3sgS-heavy
 ‘My younger sister weighs eight pounds.’

- **Absolute-marked verbs can appear without a DE.**

- (4) a. *Díí bilasáana* (*’ayóo*) *nítł’iz* *Absolute*
 DET apple very ní⁻⁶-3sgS-hard
 ‘This apple is very hard.’

- b. *Shí shichidí* (*nihígíí bi’oh* *’át’éego*) *nizhóní* *Absolute*
 1sg. 1sg-car 2sg-COMP 3sgO-SHORT.OF 3sgS-be-SUB ní⁻⁶-3sgS-pretty
 ‘My car is not as pretty as yours.’ (Lit: My car is less pretty than yours.)

² P = pronominal inflection; A = adjectival verb; NP = noun phrase; X = any subject; MP = measure phrase

- Could it be the case that comparative-marked verbs impose stronger restrictions on discourse context necessary for interpretation?

- **No. Even in a rich discourse context, comparative-marked verbs are still ungrammatical in the absence of an overt degree expression.**

- (5) *Shideezhí* *('ayóo) 'áníldííl, shí 'éí 'ánísts'óózí
 1sg-younger.sister very 'á-ní⁻²-3sgS-big 1sg TOPIC ní⁻⁶-1sgS-slender
 'My younger sister is chunky, but I'm slender.'
 NOT: 'My younger sister is chunky compared to me, but I'm slender.' (YM 1987: d117)

B: Interposition of negative marker

- **Negative marker *doo* cannot intercede between DE and comparative-marked verb**

- (6) a. *Shidezhé'é* 'ayóo 'ánífnééz, shádí 'éí doo 'ayóo *Comparative*
 1sg-father very 'á-ní⁻²-3sgS-tall 1sg-older.sister TOPIC NEG very
 'ánífnééz da
 'á-ní⁻²-3sgS-tall NEG
 'My father is very tall, but my older sister is not very tall.'
- b. **Shidezhé'é* 'ayóo 'ánífnééz, shádí 'éí 'ayóo doo *Comparative*
 1sg-father very 'á-ní⁻²-3sgS-tall 1sg-older.sister TOPIC very NEG
 'ánífnééz da
 'á-ní⁻²-3sgS-tall NEG
 'My father is very tall, but my older sister is not very tall.'

- **Negative marker *doo* can intercede between DE and absolute-marked verb**

- (7) a. *Shádí* 'éí doo 'ayóo nidaaz da *Absolute*
 1sg-older.sister TOPIC NEG very ní⁻⁶-3sgS-heavy NEG
 'My older sister is not very heavy (medium weight).'
- b. *Shádí* 'éí 'ayóo doo nidaaz da *Absolute*
 1sg-older.sister TOPIC very NEG ní⁻⁶-3sgS-heavy NEG
 'My older sister is not very not heavy (rather thin).'

C: Topicalization of DE

- **DE cannot be topicalized when used with comparative-marked verb**

- (8) a. ?**Shizhé'é* bilááh shí 'ánísnééz *Comparative*
 1sg-father 3sgO-BEYOND 1sg. 'á-ní⁻²-1sgS-tall
 ('I am taller than my father.')

- b. ?**Bimá-gi* *shideezhí* ‘*ánóoshóní* *Comparative*
 3sg-mother-AT 1sg-younger.sister ‘*á-ní*’²-3sgS-pretty
 (‘My little sister is as pretty as her mother.’)

- Locative phrases that modify action-denoting verbs are not subject to locality restrictions

• **DE can be topicalized when used with absolute-marked verb**

- (9) a. *K’ad* *chidí naat’aí* *hosiyoalts’ít* *yilááh* ‘*át’éego* *dilwo’* *Absolute*
 now airplane speed.of.sound 3’sgO-BEYOND 3sgS-be-SUB *ni*’⁶-3sgS-fast
 ‘Now airplanes are faster than the speed of sound.’ (adapt. YM 1987: d458)

- b. *Hosiyoalts’ít* *yilááh* *(‘*át’éego*) *k’ad* *chidí naat’aí* *dilwo’* *Absolute*
 speed.of.sound 3’sgO-BEYOND 3sgS-be-SUB now airplane *ni*’⁶-3sgS-fast
 ‘Now airplanes are faster than the speed of sound.’

4: Introduction of DE with copula ‘*át’é* and subordinator –*go*

- *Go*-marked clauses modify action-denoting verbs (Schauber 1979). *Go*-marked material is adverbial and can be deleted felicitously.

⇒ When modified by degree expressions, action-denoting verbs require ‘*át’é* to introduce the DE, with –*go* again subordinating the [degree expression + ‘*át’é*] constituent.

- (10) a. *Sitsilí* (*shí-gi* ‘*át’éego*) *nahałá*
 1sg-younger.brother 1sg-AT 3sgS-be-SUB 3sgS-perform.ceremony
 ‘My younger brother can perform ceremonies just like me.’ (YM 1987: g193)

- b. *T’áa* *shí* (*yáshti’í-gi*) ‘*át’éego* *yáłti’*
 just 1sg. 1sgS-talk-COMP-AT 3sgS-be-SUB 3sgS-talk
 ‘He talks just like I do.’ (YM 1987: d369)

- **When a DE modifies an absolute-marked verb, the DE must be located in clause headed by the copula ‘*át’é* and subordinated by –*go*.**³

- (11) a. *Shideezhí* *bimá-gi* *(‘*át’éego*) *nizhóní* *Absolute*
 1sg-younger.sister 3g-mother-AT 3sgS-be-SUB *ni*’⁶-3sgS-pretty
 ‘My little sister is as pretty as her mother’ (YM 1987: g193)

- b. *Ni-gi* *(‘*át’éego*) *nisneez* *Absolute*
 2sg-AT 3sgS-be-SUB *ni*’⁶-1sgS-tall
 ‘I am tall like you.’ (YM 1987: g193)

³ There are two exceptions. First, ‘*ayóo* does not have to be located in a subordinate clause. Second, measure phrases cannot be used with absolute-marked verbs at all, not even when subordinated with ‘*át’é*+*go*. I propose that both exceptions are due to the semantics of the absolute morpheme, *ni*’⁶ (c.f. Bogal-Allbritten 2008).

c. *Bínaaí* ‘át’*éhé-gi* ‘át’*éego* *dilwo* Absolute
 3sg-older.brother-AT 3sgS-be-SUB *ni*-⁶-3sgS-fast
 ‘He’s a fast runner just like his older brother.’ (YM 1987: d369)

• **Comparative-marked verbs: DE cannot be in separate, subordinate clause.**

(12) *Shideezhí* *bimá-gi* (*‘át’*éego*) ‘ánóoshóní’ Comparative
 1sg-younger.sister 3sg-mother-AT 3sgS-be-SUB ‘á-ní’-²-3sgS-pretty
 ‘My little sister is as pretty as her mother.’

⇒ **Observations:**

- Absolute-marked verbs behave like fully-saturated verbs
 - DE are located in subordinated clauses when they modify fully-saturated verbs
- DE must be taken directly by comparative-marked verbs.⁴

5: Analysis: Positing a degree argument

TABLE B: Contrasts in verb/DE relationship based on comparative vs. absolute aspect

	Comparative	Absolute
DE is optional	no	yes
DE can be discontinuous from verb - separated by neg. <i>doo</i> - topicalized	no	yes
DE is obligatorily found in subordinate, adverbial clause	no	yes

• **Proposal:**

⇒ Absolute-marked verbs, like action-denoting verbs, are fully saturated verb-internally. DE used with absolute-marked verbs subject to same (lack of) restrictions imposed on locative phrases and other adverbial modifiers used with action-denoting verbs.

⇒ Comparative-marked verbs are *not fully saturated verb-internally*. Comparative-marked verbs project two argument positions, a subject and a second argument – the *degree argument* – which is external to the verb and which can be saturated by a degree expression.

The degree argument, cross-linguistically

- *All* adjectival verbs are associated with two arguments: (1) an INDIVIDUAL ARGUMENT and (2) a DEGREE ARGUMENT saturated by a DE (Cresswell 1976, von Stechow 1984, Kennedy 1997, Heim 2000, among many others).

⁴ For some speakers, it was marginally acceptable to mark the DE with only *-go* when used with a comparative-marked verb. However, this option was only accepted as ‘possible’ and was not offered by speakers when asked to provide their own translations. The inclusion of ‘át’*é* (c.f. (11)) was judged as sharply ungrammatical. It was also unacceptable for absolute-marked verbs to be modified by DE not introduced by ‘át’*é* and subordinated by *-go*.

⇒ Degree expressions in English: measure phrases, degree morphemes (*more, less, as*), *wh*-words (*how*), etc.

(13) **Tall:** X is d-tall(Susan) → Susan is d-tall(6ft) → Susan is 6ft tall (Susan is tall to degree, 6ft)

Sentences like (12) are...“hierarchically structured and compositionally interpreted just like an ordinary transitive sentence. The adjective’s DEGREE ARGUMENT [*6ft*] appears to be syntactically projected, just like the INDIVIDUAL ARGUMENT [*Susan*], and interpreted in an analogous fashion” (Heim 2000: 214)

- The degree expression is an argument of the verb. ***Degree expressions are not adverbial modifiers.***
 - The degree argument is a non-thematic argument accommodated by a functional projection (Bresnan 1973, Kennedy 1997, among others)

‘*ánísnééz*’ ‘*I am d-tall*’

(14) *Shí* *shimá* *bilááh* ‘*ánísnééz*’ *Comparative*
 1sg. 1sg-mother 3sgO-BEYOND ‘*á-ní*⁻²-1sgS-tall
 ‘I am taller than my mother.’

Individual argument: <i>Shí</i> ‘I’	Degree argument: <i>Shimá bilááh</i> ‘beyond my mother’ (a degree on a scale of heights, NOT ‘my mother.’)
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6: Conclusions: *What does this view mean for Navajo morphosyntax?*

- **Primary conclusion: comparative-marked verbs are not fully saturated verb internally**

⇒ Comparative-marked verbs (‘*á-ní*⁻²-marked) **project a degree argument position** while absolute marked-verbs (*ni*⁻⁶-marked) do not.

- Are DE prefixes to the verb?
 ⇒ A ‘prefix account’ could work for one DE:

(15) *Shí* *k'ad* *shínaaí* *beenísdáás*
 1sg. now 1sg-older.brother 3sgO-WITH-(‘*á*)-*ní*⁻²-1sgS-heavy
 ‘I’m as heavy as my big brother now.’ (YM 1987: d165)

- But the prefix account is implausible for other DE (*gi*-marked *as* phrases and measure phrases).
 - The simpler explanation is that comparative-marked verbs project a verb external degree argument position and **are, as such, exceptions to the rule that Navajo verbs are fully saturated verb internally.**

Future work:

- Is this an exception to the view of Navajo as a discourse configurational language that otherwise does not exhibit configurationality (Willie & Jelinek 2000)?
- How can these findings interface with models of Navajo morphosyntax, especially Hale 2000?
- Are these patterns borne out in northern Athabaskan languages, which also differentiate between comparative and absolute aspect? How do they vary?

7: Appendix

I. Exemplification of *doo...da* negative construction

(16) a. *Shiléechaa'í doo shééhósin da*
 1sg-dog NEG 1sgO-3sgS-know NEG
 'My dog didn't recognize me.' (adapt. YM 1987: d15)

b. *'Adisht'oh t'ah doo bíhoosh'aah da*
 1sgS-be.archer still NEG 3sgO-1sgS-learn NEG
 'I haven't learned archery yet.' (adapt. YM 1987: d27)

II. Oblique argument construction

(17) *Bee naashné*
 3sgO-WITH 1sgS-play
 'I'm playing with it.' (ball, toy, etc.) (Faltz 2000: 43)

III. Categories of Adjectival Verbs (Verb Theme Categories)

Selection of Descriptive Adjectival Verbs⁵

Translation	First person	Third person
stinky	<i>nishchxon</i>	<i>nichxon</i>
white	<i>finishgai</i>	<i>figai</i>
round, plump	<i>dinishjool</i>	<i>dijool</i>
hairy	<i>dinish'il</i>	<i>di'il</i>
wet	<i>dinish'téé'</i>	<i>dit'éé'</i>
fast	<i>dinishwo'</i>	<i>dilwo'</i>
lightweight	<i>'ánísts'óózí</i>	<i>'áłts'óózí</i>
small	<i>'áníst'ísí</i>	<i>'áłts'ísí</i>

Exhaustive List of Dimensional Adjectival Verbs

Translation	Absolute	Comparative
large, big, tall	<i>nitsaa</i>	<i>'áníłtso</i>
wide, thick	<i>nitsaaz</i>	<i>'áníłtsááz</i>
number	<i>nít'é</i>	<i>'áníłt'e'</i>
tall	<i>nineez</i>	<i>'áníłnééz</i>
wide	<i>niteel</i>	<i>'áníłtéél</i>
heavy	<i>nidaaz</i>	<i>'áníłdáás</i>
big	- - -	<i>'áníłdiil</i>
big around	<i>nimaal</i>	<i>'áníłmáál</i>
pretty	<i>nizhóní</i>	<i>'ánóoshóní</i>
strong	<i>bidziil</i>	<i>'ábóodziil</i>
fast	<i>dilwo'</i>	? <i>'ádóolwo'</i>

⁵ *ni*⁻⁶ disappears in the presence of certain additional derivational prefixes (*hi*, *'á-*, and *di-*) when inflected for third person, but remains in first person forms. When *ni*⁻⁶ comes between *'á-* and first person inflection, *ni*⁻⁶ is realized with high tone. We know that *ni*⁻⁶, not *ní*⁻², is marking *'ánísts'óózí* because (1) *ní*⁻² does not disappear completely in third person form of the verb when realized as *ní*- in the first person form; and (2) *ni*⁻⁶ shows tone raising to *ní*- even in verbs that do not participate in the absolute vs. comparative aspect distinction. For example, the copula *'át'é* 'S/he is' (which YM 1987 identify as unambiguously marked with *ni*⁻⁶) is realized as *'ánisht'é* 'I am'.

8: References

- Axelrod, Melissa. 1993. *The Semantics of Time: Aspectual categorization in Koyukon Athabaskan*. Lincoln, NE: University of Nebraska Press.
- Bresnan, Joan. 1973. Syntax of the comparative clause construction in English. *Linguistic Inquiry* 4. 275-343.
- Bogal-Allbritten, Elizabeth. 2008. *Gradability and Degree Constructions in Navajo*. Swarthmore College, unpublished B.A. thesis.
- Cresswell, Max. 1976. The semantics of degree. In *Montague grammar*, Barbara Partee, ed. New York: Academic Press. 261–292.
- Faltz, Leonard. 2000. A semantic basis for Navajo syntactic typology. *The Athabaskan Languages: Perspectives on a Native American Language Family*. Theodore B. Fernald & Paul R. Platero, eds. Oxford: Oxford UP. 28-50.
- Hale, Kenneth. 2000. Navajo verbal syntax. *Diné Bizaad Naalkaah: Navajo Language Investigations*. Theodore B. Fernald & Kenneth L. Hale, eds. MIT Working Papers on Endangered and Less Familiar Languages, Vol. 3. 55-96.
- Hargus, Sharon. 2007. *Witsuwit'en Grammar: Phonetics, Phonology, Morphology*. Vancouver: University of British Columbia Press.
- Heim, Irene. 2000. Degree operators and scope. *Festschrift for Arnim von Stechow*. Caroline Féry & Wolfgang Sternefeld, eds. 214-239.
- Kari, James. 1979. *Athabaskan Verb Theme Categories: Ahtna*. Alaska Native Language Center Research Papers, no. 2. Fairbanks: University of Alaska.
- . 1990. *Ahtna Athabaskan Dictionary*. Fairbanks: University of Alaska.
- Kennedy, Christopher. 1997. *Projecting the Adjective: The Syntax and Semantics of Gradability and Comparison*. Santa Cruz, CA: UCSC, doctoral dissertation. [Garland Press, 1999].
- Rice, Keren. 1989. *Grammar of Slave*. Berlin: Mouton de Gruyter.
- Schauber, Ellen. 1979. *The Syntax and Semantics of Questions in Navajo*. Cambridge: MIT, unpublished doctoral dissertation.
- von Stechow, Arnim. 1984. Comparing semantic theories of comparison. *Journal of Semantics* 3.1-77.
- Willie, MaryAnn and Eloise Jelinek (2000). Navajo as a discourse configurational language. *The Athabaskan Languages: Perspectives on a Native American Language Family*. Theodore B. Fernald & Paul R. Platero, eds. Oxford: Oxford UP. 252-287.
- Young, Robert and William Morgan. 1987. *The Navajo Language*. Albuquerque: University of New Mexico.