Introduction to Navajo Language Studies

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Abstract

This chapter[1] briefly describes traditional approaches to the grammatical structure of Navajo, and is intended to provide definitions and examples of important and basic terms and concepts used (and perhaps argued against) in the rest of the papers in this volume. Readers who are unfamiliar with the Navajo language, or with the linguistic literature about Navajo, are encouraged to read this chapter before delving into the subsequent articles in this volume.

1   Introduction

Many of the papers in this volume are the result of a seminar conducted during the spring of 2006 at the University of Arizona in Navajo morphology. The goals and priorities of the seminar were to, as much as possible, gain a basic understanding of the grammatical structures of Navajo, and then to apply that understanding to an analysis of properties of the Navajo verb—with special focus on the so-called 'conjunct' and 'disjunct' domains of the verb word. The papers that resulted vary in terms of their theoretical orientation and focus, but all benefited from a concerted effort to focus on the data, and to draw from resources both within and outside the confines of the literature on theoretical linguistics.

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[1]Thanks to the editors, Mans Hulden, Shannon Bischoff, and Meghan O'Donnell, and to the participants in Mary Willie's Navajo Morphology Seminar during the Spring of 2006—Stacey Oberly, Emily Kidder, and Sumayya Racy. The seminar benefited from the insights of our guest speakers, Natasha Warner and Carole Uentille. Most importantly, thanks to Mary Willie for her invaluable insight and support. Finally, thanks to Mike Hammond for his support for the production of this volume. All errors are my own.

Many of these papers share a set of assumptions and descriptive conventions about Navajo, and it is the goal of this essay to lay out some of those so that each individual author need not recapitulate them in the papers that follow. Readers unfamiliar with Navajo grammar are strongly encouraged to review this chapter as a primer for understanding the papers in this volume.

Importantly, the sketch provided here should not be viewed as an argument in support of this or any particular theoretical approach to Navajo grammar. Navajo is one of the most thoroughly described languages indigenous to the Americas, and a number of scholars and practitioners have provided monumental and indispensable reference works on this topic (cf. Haile (1926); Hoijer (1943, 1945a,b, 1946a); Kari (1975, 1976, 1978); Neundorf (1993, 1983, 2006); Sapir (1967); Young (2000); Young and Morgan (1987, 2000); Young (2000); Young et al. (1992)). Our work in the seminar benefited also from a variety first-rate scholarship has been devoted to analysis of various aspects of Navajo grammar (most notably Faltz (1998, 2000); Fernald et al. (2000a,b); Fernald and Platero (2000b,a); Fernald and Willie (2001); Hale (2000, 2001); Hale and Platero (2000); Hale et al. (2000); Jelinek and Willie (1996); McDonough (2000c,b, 2003); Smith (1996, 2000a,b); Smith et al. (2003); Speas and Yazzie (1996); Tsosie-Perkins (2000); Speas (2000); Willie (1991, 2000b,a); Willie and Jelinek (2000); Yellowman-Yazzie et al. (2000)), and from the personal insights of professors Mary Ann Willie, Natasha Warner and Carole Uentille. We are indebted to these scholars, and others—but we often remained agnostic about the theoretical orientations brought to bear by linguists on the Navajo language. This sketch attempts to define some key terms and concepts, especially those proposed by the extraordinarily influential work of Young and Morgan, that characterize the descriptions of Navajo grammar in the literature on Navajo generally, and in some of the papers that follow.

1.1 Organization

This paper is organized as follows. Section 2 provides a brief description of the Navajo language situation. Section 3 focuses on phonological properties of Navajo, and introduces the practical orthography which is used in many of the papers in this volume. Sections 4 and 5 outline important terms concepts in the study of Navajo morphology (i.e. the so called 'disjunct' and 'conjunct' domains, and the position classes of Young and Morgan's verb 'template') and syntax-semantics (including the categories known as 'mode' and 'aspect'

in the Athabaskanist literature, and a brief introduction to the famous Navajo 'inverse voice,' also known as 'the yi-/bi- alternation'). Section 6 concludes the essay.

2   The Navajo Language Situation

The Navajo language, also known as T'áá Diné Bizaad, is spoken by approximately 175,000 people in the United States and elsewhere (Gordon, 2005). Navajo is indigenous to the American Southwest, but today Navajo speakers can be found in every state (Benally and Viri, 2005), and Navajo accounts for approximately .3% of Americans who speak a language other than English at home - similar percentages report speaking Hebrew, Yiddish, Khmer, Hmong, and Laotian (Shind and Bruno, 2003). Within the state of Arizona, Navajo is the third most commonly spoken language, after English and Spanish.

2.1   Is Navajo an 'endangered language'?

In spite of the large community of speakers, and of the value of Navajo language to its linguistic community, there is evidence that the situation of Navajo is precarious. Many scholars (Benally and McCarty (1990); Dyc (2002); Willie (1994); Saville-Troike and Courtney (2002), among others) note a dramatic decline in the last generations in the number of children acquiring Navajo as a first language in the home. Fillerup (2000) reports that Navajo language proficiency tests in some reservation schools in 1996 found that fully 82% of middle school students had no proficiency in Navajo, and only 7% qualified as fluent speakers of their heritage language. The BIA boarding school experiences suffered by a large number of Navajo speakers now of parental and grandparental age are surely responsible for a great deal of the decline in the use of Navajo as a first language (cf. Zepeda and Hill (1990)). Additionally, issues of racial and ethnic discrimination both on and off the reservation are sadly endemic, and create an environment in which native speakers may be less likely to pass their linguistic and cultural heritage on to their children.

In spite of this, the Navajo Nation was the first to establish community schools under the direct control of an indigenous community; the demonstration school at Rough Rock was the first in the US to have an all-Indian board

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of directors McCarty (1998). This and other community-based schools on the reservation often provide bilingual and bicultural education to their students (but see Fernald and Platero (2000c)) for issues with respect teaching Navajo language in the schools). Diné College also provides educational opportunities in the study of Navajo language and culture, and Navajo continues to be the "language of power" in the governing institutions of the Navajo Nation (Dyc, 2002).

The Navajo language has a special status in US history, due to the crucial and well-known role of the Navajo Code Talkers during World War II. Also, perhaps in part as a result of this episode, Navajo is commonly thought to be unlearnable for non-Navajos. It is structurally very different from Indo-European languages such as English, Spanish and German, and it evinces a number of typologically rare grammatical properties. This reputation for grammatical complexity may be one of the reasons for the large amount of scholarship focused on Navajo grammar, but it also may obscure some of the ways in which Navajo grammar is consistent with the grammars of other naturally occurring human languages.

2.2   The Athabaskan Language Family

The Athabaskan[2] language family includes approximately 44 different language groups native to the Western U.S. and Canada (Gordon, 2005). Navajo, along with its sister languages Western Apache, Mescalero Apache, Chiricahua Apache, Jicarilla Apache, Lipan Apache and Plains Apache, comprise the Southern Athabaskan group (also known as Apachean). The Southern Athabaskans form a kind of linguistic island in the area that is now Arizona, Utah, New Mexico and Texas. A map of the Athabaskan language families is provided in figure 1.

Evidence suggests that the Southern Athabaskan languages arrived with communities migrating to the Southwest about 1,500 years BP (Krauss and Golla, 1983). Many of these languages are mutually intelligible, at least to some degree, although there is a fair amount of cultural diversity among communities collectively known as Apachean.

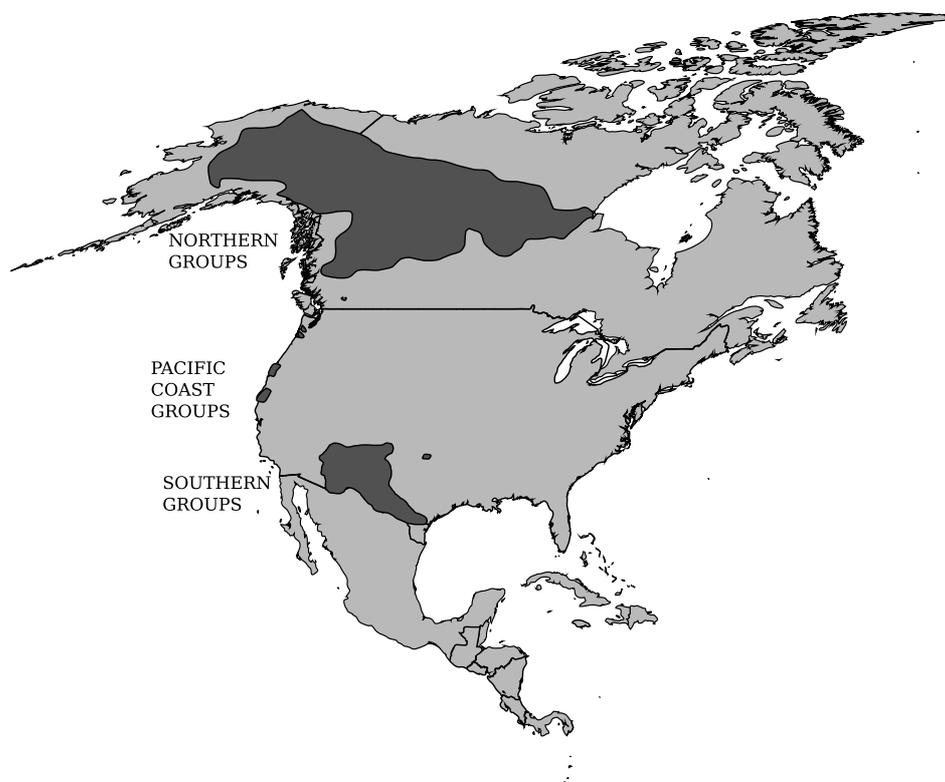[2]Variously spelled as "Athapaskan," "Athabascan," or "Athapascan."

Figure 1: *Map of Athabaskan Language Family, after* Thompson and McGary (1984)

2.3   Navajo as a Written Language

Navajo has a relatively long tradition as a written language compared with other North American languages, but the practical orthography for Navajo is by no means generally used by speakers of the language. For most speakers, Navajo remains a primarily or invariably spoken form.

The writing system currently in use for Navajo came about during the 1930s through a collaboration between linguist J.P. Harrington (who had been commissioned to develop a standard orthography for Navajo by Willard Beatty, then director of Education at the Bureau of Indian Affairs) with several Navajo speakers, including Robert Young, as well as Young's non-Navajo colleague at the Fort Wingate sheep breeding station, William Morgan. Drawing upon the knowledge of these and others on the reservation, as

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well as the work of anthropologist and linguist Gladys Reichard and at least two distinct writing systems developed by Christian missionaries (Protestant and Franciscan), Harrington oversaw the birth of the Young and Morgan alphabet (Lockard, 1995).

The adoption of the Young and Morgan system as a standard orthography was accomplished in two language conferences held in 1969 and 1976, each with minimal input from community members (Ohannessian (1996a,b); Willie, p.c.). Since that time, the Young and Morgan system has been the consensus writing system for both academic and other applications. It has been used in a wide variety of published material, including pedagogical material, poetry, children's fiction, and newspapers. It has been accepted and is used in schools in Navajo communities, and at Diné College, the Tribal College located on the Navajo reservation in Arizona. It is characteristic that linguistic articles about Navajo use this orthography as well. The next section presents this standard orthography, as it relates to the phonemic inventory of Navajo.

3 Phonology and Orthography

In the sections that follow, the sound system of Navajo is introduced, and the mapping between International Phonetic Alphabet (IPA) values and practical orthographic conventions is provided.

3.1 Consonants

The consonantal phonemes of Navajo are given in IPA in table 1.

Note that stops and affricates are distinguished by place of articulation and glottal state (plain vs aspirated vs glottalized), but voicing is not distinctive in these series. Most scholars (including Young and Morgan (1987); Kari (1976); McDonough (2003)) argue that voicing in fricatives is predictable based on morphological and phonological environment, but they differ as to whether the fricative phonemes are underlyingly voiced, voiceless or unspecified for voice. Additionally, note that Young and Morgan (1987) list the phoneme given here as /t$^\text{h}$/ as an affricate, /tx/. This is due to the very prominent aspiration of this element as it is pronounced by Navajo speakers.

The sounds [ɣ], [x], and [h] are, at least in some environments, predictable allophones of a single underlying phoneme ([h] appears in syllable-final po-

		Labial	Coronal			Dorsal	Glottal
			Apical	Laminal	Lateral		
Stops	Unaspirated	p	t			k, k^w	ʔ
	Aspirated		t^h			k^h	
	Glottalized		t'			k'	
Affricates	Unaspirated		ts	tʃ	tl		
	Aspirated		ts^h	tʃ^h	tɬ		
	Glottalized		ts'	tʃ'	tɬ'		
Fricative	Voiced		z	ʒ	l	ɣ	h, h^w
	Voiceless		s	ʃ	ɬ	x	
Nasals	Plain	m	n				
Glides		w		j			

Table 1: *Consonantal Phonemes of Navajo in IPA*

sition, [ɣ], in syllable-initial position, and in some consonant sequences is pronounced as [x]), but as is shown below, the practical orthography treats them as distinct. The labialized consonants can surface allophonically in the environment of round vowels, they are rare—but do occur—outside of this environment (Fountain, 1998).

The practical orthographic conventions for writing the consonants of Navajo are given in table 2.

The convention for writing a sequence of s and h is to use "x"—this eliminates confusion between the sequence of two voiceless fricatives and the single voiceless palatal fricative, spelled "sh," in words such as *yiyiisxí*, 'he/she killed it' (Young and Morgan, 1987, p.688).

3.2   Vowels and Diphthongs

Distinctive vowel qualities in Navajo are given in table 3. The Young and Morgan orthography is consistent with the IPA in the transcription of vowel qualities, except as noted below.

The back vowel /o/ varies in phonetic quality between IPA [o] and [u] depending upon its environment. Vowel length (long and short), tone (high and low)[3] and nasalization are phonemic in Navajo. In the practical orthog-

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[3]Although high tone is contrastive in stems and the so-called 'disjunct prefixes' or clitics

		Labial	Alveolar	Palatal	Lateral	Velar	Glottal
Stops	Unaspirated	b	d			g	'
	Aspirated		t			k	
	Glottalized		t'			k'	
Affricates	Unaspirated		dz	j	tl		
	Aspirated		ts	ch	tł		
	Glottalized		ts'	ch'	tł'		
Fricative	Voiced		z	zh	l	gh	h
	Voiceless		s	sh	ł	x	
Nasals	Plain	m	n				
Glides		w		y			

Table 2: *Consonantal Phonemes of Navajo in Practical Orthography*

	Front	Back
High	i	
Mid	e	o
Low		a

Table 3: *Phonemic Vowel Qualities in Navajo*

Dipthong	Form	Gloss
ai	hai	'winter'
oi	hastoi	'elders' (particularly men)
ei	deijį'éé'	'blouse'
ao	siláo	'soldier'
aii	dloziłgaii	'light colored squirrel'
aai	ch'il łigaaí	'lettuce'
oii	bibóii	'(her) boyfriend'
ooi	'ak'a litsooí	'Vaseline'
eii	bíínéíí	'it is frisky'

Table 4: *Navajo Diphthongs* (Fountain, 1998, p.27)

raphy, vowel length is indicated by adjacent identical vowel symbols (i.e. ii, ąą, oo, ęę, etc.), high tone is marked with an acute accent, and low tone is orthographically unmarked. Nasalization is marked with a nasal hook (i.e. ą, ę, į, ǫ). Phonetically, the high vowel is pronounced [iː] when it is long, but [ɪ] when it is short. Other than this, there are no significant vowel quality differences associated with differences in vowel duration (McDonough et al., 1992).

Possible diphthongs are listed in table 4. All diphthongs can be analyzed historically as occurring across morpheme boundaries—and most, but not all, can be analyzed synchronically in this way. Forms given below are written using the Young and Morgan orthography.

4 Morphology

The Nadene languages,[4] probably the most specialized of all ... while presenting a superficially 'polysynthetic' aspect, are built up, fundamentally, of monosyllabic elements of prevailingly nominal significance which have a fixed order with reference to

of Navajo, it also has morphological functions—it acts as a second person subject marker in certain verb paradigms (as illustrated in table 5 on page 22, and in some domains of the verb is subject to spreading (cf. table 8 on page 26).

[4]Sapir includes in the Nadene family the Athabaskan languages as well as Haida and Tlingit.

each other and combine into morphologically loose 'words'; emphasize voice and 'aspect' rather than tense; make a fundamental distinction between active and static verb forms; make abundant use of postpositions after both noun and verb forms; and compound nominal stems freely. (Sapir, 1949, p.174–175)

4.1 Navajo Verbs and the Young and Morgan Template

Navajo verbs constitute complete propositions, corresponding roughly to the notion of 'sentence' in languages like English. Freestanding nominals are optional. Words of any category in Navajo consist of an element traditionally referred to as the 'stem'—a monosyllabic constituent, usually word-final, which constrains the basic semantics of the word in which it is contained.

Some stems may surface in isolation, and when they do they are nouns. Examples of independent stem nouns are *bąąs* 'hoop', *tin* 'frost', *ch'ał* 'frog' (Young and Morgan, 1987). Many, but not all such nouns can also occur as verb stems, i.e. *anisbąąs* 'one arrives driving a wheeled vehicle'; *yishtin* 'I freeze it' (Young and Morgan, 2003); *ha'dishch'ał* 'I am chattering' (Young et al., 1992, p.98).

Navajo is primarily a prefixing language, though a small but productive set of enclitics are also used. Following Young and Morgan, the ordering of prefixes is traditionally described according to a slot-and-item template. This is sometimes referred to as 'position-class morphology,' and the standard analysis of Navajo position classes is given in Young and Morgan (1987), and repeated below:

(1) The Young and Morgan (1987) Template[5]

0	I					II	III	IV	V	VI			VII	VIII	IX	X
	Ia	Ib	Ic	Id	Ie					VIa	VIb	VIc				
Obj PP	Null PP	Adv-thm	Rfl	Rev	Sml	It	DstP	obj	Deict Subj (3)	Adv-thm	Adv thm	Trans/Sml	Mode/Asp	Subj (1,2)	Class.	Stem

According to this approach, any given verb will surface with one or more prefixes, but not all slots will be filled. Some slots may be filled by morphemes

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[5] Abbreviations used here: Obj = 'object'; PP = 'postposition'; Adv-them = 'adverbial thematic'; Rfl = 'reflexive'; Rev = 'reversionary'; Sml = 'semelfactive'; It = 'iterative'; DstP = 'distributive plural'; Subj = 'subject'; Trans = 'transitional'; Asp = 'aspect' and Class. = 'classifier.'

which are phonologically null, and there are many examples of phonological fusion between morphemes in different slots, and even a few instances in which metathesis must be posited. Nevertheless, the template slots reflect as fully as has been yet achieved the ordering restrictions among the Navajo prefixes.

Beginning at the right of the template, the basic morphological elements described by Young and Morgan are as in (2) below.

(2) The morphemes of the Young and Morgan (1987) template:

- Position X—the stem: a monosyllabic element which provides the basic universe of semantics that will be expressed by the fully inflected verb. Stems are inflected for certain tense/mode/aspectual distinctions, and may subcategorize for a certain classifier, and/or for some set of so-called 'lexical prefixes' which are obligatory for the generation of a well-formed verb.

- Position IX—the classifier: a prefix of shape [l, ł, dl, or Ø]. Classifiers are associated with alternations in verbal valance (transitivity, causativization, passivization), but at least some classifiers occur unpredictably. The stem and classifier are often grouped together into a single constituent (McDonough (2003); Hale (2001), and others), although Young and Morgan (1987) includes the classifier in the 'conjunct domain' of the template, which includes positions VIII through IV.

- Position VIII—the local subject marker: first and second person, singular and duoplural subject markers. These markers often 'fuse' with the position VII mode/aspect markers of position VII, as discussed below.

- Position VII—mode/aspect: these markers indicate the conjugation class of the verb (Si-, Ni-, Yi-, or Ø; perfective or imperfective). McDonough (2003) argues that positions VIII and VII are actually fused, and that Navajo instead uses portmanteau morphemes which designate subject and aspect and conjugation class simultaneously. Section 5.1.1 deals with these markers specifically.

- Position VI—adverbial/thematic: a verb stem may subcategorize for zero, one or two position VI prefixes, and these prefixes contribute to the lexical meaning of the verb 'theme.' Faltz (1998) among others

characterizes these prefixes as forming a discontinuous constituent with the verb stem (Position X).

- Position V—deictic subjects: definite 3rd person subject markers in Navajo are phonologically null. However there are three non-null 3rd person subject markers that may be found in a Navajo verb. These are:

  – ji ∼ zh—'fourth person'—an obligatorily human subject marker (see Akmajian and Anderson (1970) for an early discussion of the Navajo 4th person, and Willie (1991) for a more extensive one outlining the various uses of the Navajo fourth person. O'Donnell (this volume) is a historical view of this marker.)

  – 'a ∼ '—'indefinite third person'—often glossed as 'someone' or 'one'

  – ha ∼ ho—'spatial third person'—used as an areal or locative subject marker.

- Position IV—direct objects: direct object markers occur to the left of deictic subjects.

- Position III—distributive plural marker, 'da-': this element may pluralize subjects, objects or events. See Witherspoon (1977) for a detailed and nuanced discussion of number marking in Navajo verbs, and Yellowman-Yazzie et al. (2000) for a *delightful* exploration of the semantics of 'da-' in Navajo. This is the rightmost of the set of elements which are sometimes analyzed as prefixes, but have also been argued to be proclitics to the verb.

  – Ie—the semeliterative náá-, "denoting a single repetition of a verbal action, event or state of being" (Witherspoon, 1977, p.60).

  – Id—the reversionary ná-, indicates a return to a previous condition, state or condition.

  – Ic—the reflexive 'ádi- contains two components, 'a and di, and the surface position of these varies depending upon the other elements in the word (the reversionary or iterative can intervene between them).

– Ib—'derivational/thematic'—any of a wide variety of postpositional, directional and adverbial elements, some of which are subcategorized for by a verb stem (and therefore arguably part of the lexical entry for that stem).

– Ia—the 'null postpositions'—a set of elements homophonous with the personal pronouns which:

* Represent an indirect object in certain constructions involving pointing or extending an object (i.e. a knife) at someone

* Represent a "direct object in transitive inchoative verb constructions" (such as 'I started to dry it up')

* Represent a "subject in intransitive inchoative constructions" (such as 'it started to dry up')

* Represent "joining, contact, similarity, convergence" in constructions like it "resembles or matches it."

- Position 0—Postpositional pronoun object or noun possessor: pronominal elements that represent the object of a postposition or possessor of a noun when the latter appear as prefixes or proclitics to the verb.

There are a number of ways in which this approach is unsatisfactory. The patterns of mutual dependency (or exclusivity) between or among stems, prefixes, clitics are not captured in the template. It is not clear from the template where phonologically null morphemes are motivated, versus where 'empty' slots may be tolerated or required. The actual linear ordering of elements on the surface is not necessarily captured by the ordering of the slots. The categories of elements posited to reside in the slots vary tremendously in their cross-linguistic utility and their level of generality. Many of the affixes posited to appear in the slots are haplologs (there are an alarming number of different prefixes /ni-/, similarly /di-/, similarly /yi-/, and others, and it is not clear the extent to which the desegregation of such elements are actually motivated by their behavior). But perhaps most importantly, it is by no means certain that the Navajo verbal system is anywhere near as productive for speakers of Navajo (now, or in the past) as the template approach would predict (but see McDonough and Willie (2000); Saville-Troike and Courtney (2002) for approaches to understanding the lexical representation and acquisition of verbs in Navajo).

In spite of these shortcomings, position class approaches to Navajo morphology (and Athabaskan morphology) persist; and often form the substrate of assumptions over which analyses of Navajo are built. This is evidence that the position class approach has tremendous heuristic value, and the longevity of the Young and Morgan system is also testament to its intellectual and practical durability.

4.2 Domains of the Verb: Young and Morgan's Stem, Conjunct, and Disjunct

As early as 1945 in the work of Hoijer, a distinction between two sets of prefixes has been recognized in the literature on Navajo. The definitions given here are consistent with Young and Morgan (1987), unless otherwise noted.

The first set, typically termed the 'conjunct,' includes the prefix elements in Young and Morgan's positions IX through IV. The second set, typically termed the 'disjunct,' encompasses the elements in Young and Morgan's positions III-0. The differences between the conjunct and the disjunct elements in the Navajo verb are typically couched in terms such as these:

> Primarily on the basis of their phonological behavior, the verb prefixes are grouped in two broad categories identified as Disjunct and Conjunct .... The Disjunct prefixes ... [are] generally less tightly bound as components of the verb prefix complex than the Conjunct elements, the Disjunct class includes postpositions and other accretions from the 'outside' that have entered and become more or less loosely integrated into the verb prefix complex. (Young and Morgan, 1987, p.39)

Kari (1976) lists three morphophonemic alternations which show sensitivity to the disjunct/conjunct boundary in the Navajo verb. The first of these involves an alternation in the marking of the second person subject in Navajo verbs. If the second person marker is word-initial, or follows a disjunct morpheme, it surfaces as [ni-] table 5(a-h)[6]. If the second person marker follows a conjunct morpheme, it surfaces as a high tone table 5 (i-u).

The second alternation involves the position VI prefix, the 'seriative.' The seriative surfaces as [h-] when it is word-initial, as in table 6 (a), or when it

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[6]This alternation is typically referred to as 'ni-Absorption' in the literature on Navajo.

	Preceding Prefix Slot	Preceding Prefix Form[a]	Preceding Prefix Meaning	Form	Gloss
a	N/A	N/A	N/A	**ni**cha[b]	'you are crying'
b	I	'a	'away'	yah 'a**ni**'aa	'you carry it out of sight'
c	I	na	'about'	na**ni**lnish	'you are working'
d	I	ha	'up'	ha**ni**gééd	'you are digging it up'
e	I	da	'die'	da**ni**tsaah	'you are gravely ill'
f	I	yá	'speak'	yá**ní**łti'	'you are speaking'[c]
g	II	ná	'iterative'	ná**ní**dlish	'you repeatedly paint it'
h	III	da	'plural'	'ada**ni**lééh	'you are making them'
i	IV	shi	'1st obj.'	'adah sh**í**łteeh	'you're carrying me/bringing me down'
j	IV	nihi	'2pl. obj'	'adah nih**í**łnííl	'you're carrying us/bringing us down'
k	V	ho	'area'	h**ó**taał	'you are singing'
l	V	'i	'3i'	'**í**diz	'you are spinning (it)'
m	VI	ni	'termin.'	n**í**daah	'you sit down'
n	VI	dzi	'streak'	'ab**í**dzíłhaał	'you bat it off'
o	VI	hi	'seriative	h**í**tííh	'you break them off one after the other'
p	VI	di	'fire'	d**í**lid	'you're burning it'
q	VI	di	'fire'	d**í**bááh	'you are starting to war'
r	VI	si	'destruct'	s**í**łxé	'you are killing it'
s	VII	si	'imp.'	dah s**í**'aah	'you are putting it up'
t	VII	ni	'imp.'	n**í**lgheed	'you are in the act of arriving running'
u	VII	yi	'progressive'	y**í**lghoł	'you are running along'

[a]Kari lists the preceding prefix according to its underlying shape. In this and the tables that follow, I list prefixes as they surface in the word in question

[b]All data are presented in the practical orthography, as cited by Kari—except as corrected by Mary Ann Willie.

[c]This form and the next demonstrate a regular process of rightward tone spread which may affect vowels in the conjunct domain of the verb. See table 8.

Table 5: *Second Person Singular Marking and the Disjunct/Conjunct Boundary* (Kari, 1976, p.37)

	Preceding Prefix Slot	Preceding Prefix Form	Preceding Prefix Meaning	Form	Gloss
a	N/A	N/A	N/A	**h**ishtííh	'I am breaking them off'
b	I	na	'about'	na**h**ashniih	'I am buying it'
c	II	ná	'iterative'	niná**h**áshniih	'I a buying it back'
d	III	da	'plural'	nda**h**iilniih	'we are buying it'
e	IV	i	'3rd obj.'	nayi**i**łniih	'he (3rd) is buying it'
f	V	ji	'4th subj.'	jii**t**ííh	'he (4th) is breaking them off'
g	V	ji	'4th subj.'	nji**i**łniih	'he (4th) is buying it'

Table 6: *The Seriative Prefix and the Disjunct/Conjunct Boundary* (Kari, 1976, p.39)

is preceded by a disjunct prefix, as shown in the forms in table 6 (b–d). Else, it surfaces as [i-], as shown in forms table 6 (e–g).

The third alternation involves the second person duoplural subject prefix (w)oh-. In form table 7 (a), the verb contains only a stem and the second person dual prefix. In forms table 7 (b–g), a disjunct element precedes the prefix, and it surfaces as CV. In forms table 7 (h–q), a conjunct element precedes the prefix, and it surfaces as C.

These facts could follow from either of two analyses. One, offered by Kari, is that all of the prefixes in table 7 are underlyingly CV, and the V is deleted from conjunct, but not disjunct prefixes, when they occur before the second person dual subject marker. Another, argued by Fountain (1998) and others, is that the conjunct prefixes in table 7 (h–q) are underlyingly C. Disjunct elements are much more likely to contain underlying vowels than are conjunct elements, and are analyzable as clitics rather than true prefixes. Either way, there is an asymmetry between conjunct and disjunct elements— and this is one source of evidence that bolsters the notion that two different domains exist in the Navajo verb.

In addition to the alternations in tables 5–7, at least two additional phonological processes, and two phonotactic generalizations are sensitive to the conjunct disjunct boundary. These are briefly described next.

The relevant phonological processes are coronal harmony (see Oberly, this volume) and tone spread. Coronal harmony holds of the stem + conjunct

	Preceding Prefix Slot	Preceding Prefix Form	Preceding Prefix Meaning	Form	Gloss
a	N/A	N/A	N/A	**w**ohcha	'you (dpl) are crying'
b	I	yá	'speak'	**yá**olti'	'you (dpl) speak'
c	I	na	'about'	**na**ohniih	'you (dpl) are distributing them'
d	I	ha	'up'	**ha**ohgééd	'you (dpl) dig it up'
e	I	'i	'out of'	yah **'o**oh'aah	'you (dpl) hide it'
f	II	ní	'iterative'	**ná**ohdlish	'you (dpl) repeatedly paint it'
g	III	da	'plural'	**da**ohcha	'you (dpl) cry'
h	IV	shi	'1st obj.'	'adah **sh**ołteeh	'you (dpl) carry me'
i	V	ho	'area'	**h**ohtaał	'you (dpl) sing'
j	V	'i	'3i'	**'**ohdiz	'you (dpl) are spinning (it)'
k	VI	dzi	'streak'	'abí**dz**ółhaał	'you (dpl) bat it off'
l	VI	hi	'seriative'	**h**otííh	'you (dpl) break them off one after the other'
m	VI	di	'fire'	**d**ohłid	'you (dpl) burn it'
n	VI	di	'inceptive'	**d**ohbááh	'you (dpl) start to war'
o	VI	si	'destruct'	**s**ołxé	'you (dpl) kill it'
p	VII	si	'imp.'	dah **s**oh'aah	'you (dpl) are putting it up'
q	VII	ni	'imp.'	**n**oht'ááh	'you (dpl) arriving flying'

Table 7: *Second person duoplural marking and the disjunct/conjunct boundary* (Kari, 1976, p.38)

	Disjunct	Conjunct	Form	Gloss
a	N/A	ni '2nd subject'	**ni**cha	'you are crying'
b	ná 'iter'	ni '2nd subject'	ná**ní**dlish	'you repeatedly paint it'
c	k'é friendly relations', ahi 'reciprocal'	di, 'thematic' iid, '1st duoplural subject'	k'é**a**hidii'ní	'address each other as relatives'

Table 8: *Tone Spread in the Conjunct* (cf. Fountain (1998, p.93–94))

domain in Navajo—but generally does not include disjunct prefixes. Navajo tone is phonemic, and therefore typically unpredictable. However, there is a generalization to be made about the patterns of tones that surface in the conjunct domain. Generally, a conjunct prefix to the immediate right of a high toned syllable surfaces with high tone also. There is dialectal variation on this point, however. For some speakers, any conjunct syllable with a long vowel or coda consonant on the surface will resist tone spread, only syllables of shape CV will inherit a high tone from a left-adjacent syllable. The tone spreading generalization for speakers allowing spread to all conjunct syllables is illustrated in table 8.

The forms in table 8 (a and b) show that a conjunct vowel which is not inherently high in tone surfaces as high when it immediately follows a high tone from the disjunct domain. The form (c) in table 8 shows a disjunct vowel which is not inherently high in tone does not surface as high when it immediately follows a high tone.

Phonotactically, there are two key distinctions between conjunct and disjunct in Navajo. First, the range and variety of phonological contrasts available in the conjunct domain is dramatically smaller than that of the disjunct domain. Disjunct elements and stems, for example, may contain any of the consonant or vowel phonemes of Navajo—but conjunct prefixes never contrast for laryngeal state and overwhelmingly frequently surface with the short, high vowel /i/ as opposed to any of the other possible vowel qualities (cf. McDonough (2003); Alderete (2003)). This pattern also seems to suggest that there may be a system of prominence in Navajo in which stems are stressed—however see Kidder (this volume) for an alternative proposal.

Second, closed syllables are found only in the following three locations in

a Navajo verb word.

(3) Closed syllables in the Navajo verb word:
   a. *The stem*
      nání<u>dlish</u>
      'you repeatedly paint it'

   b. *The rightmost syllable of the conjunct*
      abí<u>dzó</u>łhaał
      'you (dpl) bat it off'

   c. *The position V deictic subjects when preceded*
      by a direct object marker of position IV
      <u>shizh</u>dooch'ił
      'she (4th) will be scratching it'
      (cf. Fountain (1998, p.254)).

The third of these environments is worthy of note—McDonough (2003) and Hale (2001) use this and other evidence to argue that the boundary between conjunct and disjunct may be more complex than has been described before. McDonough posits the position IV object markers as prefixes to a constituent she refers to as the Inflectional stem (I-stem). The I-stem contains the material in the conjunct domain, as we've discussed it here, but without the classifier prefixes of position IX (which McDonough groups with the verb stem). Hale follows this approach, and it appears to be a fruitful reconsideration of the conjunct/disjunct system used by previous scholars.

5   Syntax and Semantics

Important additional insights about the constituent structure of the Navajo verb have come from syntactic and semantic approach to the verb. Faltz's (1998; 2000) approach is treated in Hulden and Bischoff (this volume). In this section, several other key terms and definitions are outlined.

5.1   Tense, Mode, Aspect

As Sapir noted, Athabaskan languages tend to have elaborated aspectual and modal systems (cf. Racy, this volume), rather than focusing on tense

per se. There is a future tense, which is created through combination of progressive and inceptive markers in the verb (Young, 2000). Else, there is no tense marking. The terms 'aspect' and 'mode' are used in nonstandard ways in the literature on Navajo, so terminological confusion can be avoided by reviewing the definitions below.

5.1.1 Perfective and Imperfective—Modes?

Navajo verbs are divided into four conjugation classes in the imperfective and in the perfective. In the literature on Navajo, these conjugations are included (on morphological grounds) with usitative, iterative, progressive, future and optative constructions under the rubric "mode", rather than "aspect", as would be more common in the literature crosslinguistically.

In this section, the imperfective and perfective conjugation classes are first described, and then the other so-called 'modes' are listed. Section 5.1.2 lists the categories typically classed as "aspect" in Navajo — none of which are "aspects" in the typical sense of the word.

The imperfective and perfective conjugation classes are named for the prefix that occurs in position VII in the Young and Morgan template. Conjugation classes vary also in terms of the shape of the 1st and 2nd person subject markers for verbs that fall into that class. The conjugation classes in the imperfective are the Ø-, ni-, si-, and yi-/Ø-. The conjugation classes in the perfective are the yi-, ni-, si-, and yi-/Ø-. All quotations below are from (Young, 2000, p.65–71).

(4) The Imperfective and Perfective Conjugation Classes in Navajo

- Imperfectives

    - Ø- uses the imperfective stem, and no overt mode marker in position VII. A Ø-imperfective verb "functions semantically as a simple completive—i.e. the verbal action involved is not marked as terminative or stative in nature or effect."

    - Ni- combines the imperfective stem with a /ni-/ prefix in position VII. This "identifies the verbal action as terminative: the subject finishes, arrives or otherwise reaches a goal." Ni- imperfective occurs only with the 'momentaneous aspect'—which is described below.

– Si- combines with the imperfective stem, and "identifies the verbal action as a type that has a stative-conclusive result upon completion" (ibid). The si- imperfective does not occur with 3rd person or passives—in these the /si-/ prefix is omitted.

– Yi/ Ø- these verbs have a null prefix in position VII, but a /yi/- in position 6 of the template, according to Young. They mark transitional or semelfactive constructions.

- Perfectives

    – Yi- with a perfective stem describes an action as 'simply completed', with no additional connotation.

    – Ni- with a perfective stem implies that the action has completed by virtue of having reached a goal or arrived at a place. Any verb that conjugates as a Ni- perfective also conjugates as a Ni-imperfective.

    – Si- with a perfective stem "describes a verbal action or event as one involving a static-durative sequel: the subject or object remains in the position or condition described by the stem"

    – Yi/ Ø- with a perfective stem "describes the subject or object as shifting from one state, condition or position to another"

In addition to the future tense and perfective/imperfective distinctions described above, Navajo verbs may be marked as 'iterative,' 'usitative,' 'progressive' or 'optative.'

(5) Additional 'modes' in Navajo

- Iterative—derived by use of a disjunct prefix /ná-/ and the 'repetitive' form of the verb stem. This describes an action taking place repeatedly and customarily.

- Usitative—derived by use of a 'repetitive' stem shape with a Ø or si-perfective. This describes an action that is customary or habitual.

- Progressive—marked by a 'progressive' stem shape and a /yi-/ or /ghi-/ prefix in position VII. Describes an action that is ongoing "along a line in time or space."

- Optative—marked by a prefix /o-/ in position VII. Optative verbs refer to a wish or desire for the action of the verb to occur.

5.1.2 Momentaneous, Continuative, Repetitive—Aspects?

The following 12 terms are grouped together under the rubric of 'aspect' in the literature on Navajo. These 'aspects' are marked by a distinct stem shape and/or specific prefixes. They cross-cut and co-occur with the 'modes' described above. For example, (6) shows a Ø-imperfective verb occurring as 'punctual' (6a) or as 'repetitive' (6b) (Young, 2000, p.71).

(6) Punctual vs repetitive marking on a Ø-imperfective verb
   a. ńdiists'in
      'I'm in the act of hitting him one time (with my fist)'

   b. nánísts'in
      'I'm beating him with my fists'

The so-called 'aspects' of Navajo are given in (7). All quotations are from (Young, 2000, p.71–77)

(7) The 'aspects' of Navajo

- Momentaneous—"describes a verbal action or event that takes place at a point in time—punctually." Momentaneous aspect is marked by stem shape; and momentaneous stems can occur with any of the position VII markers described in section 4.1. A number of the aspects that follow are formed using the momentaneous stems, in conjunction with a disjunct element or elements.

- Continuative—denotes a verbal action involving motion, but with no specific start or endpoint, and that moves in a non-determinate or unspecified direction (i.e. walking around a town).

- Durative—denotes a verbal action not involving motion, and without a specific start or endpoint (i.e. eating, drinking). Durative is marked by a special stem shape, and co-occurs primarily with imperfective and optative modes.

- Repetitive—involves a "continuum of repetitive acts . . . or a connected series of act." This includes:

- – Simple repetitive—usitative/iterative stem, Ø-imperfective conjugation.

- – Durative repetitive—durative stem, with the yi-/ Øperfective conjugation

- – Yíní durative repetitive—Ø-imperfective conjugation using the momentaneous stem, and involving the propulsion of an object, or a hand or foot (as in hitting or kicking).

- – Seriative repetitive—is marked with a pair of disjunct prefixes, and defines "an action which is durative in the imperfective mode, but conclusive in the perfective."

- – The Usitative and iterative modes—may be repetitives in nature also

- Conclusive—a durative conjugated in the Si-perfective. The termination of the verbal action is a static state (i.e. "I have the wool spun").

- Semelfactive—isolates a single act from a repetitive series. Never co-occurs with the repetitive. Semelfactives are formed using adverbial-thematic prefixes of the conjunct domain.

- Distributive—requires a Ø-imperfective/Si-perfective conjugation, sometimes with a special stem shape. Distributives refer to "(1) the distributive placement of objects in space; (2) the distribution of objects to recipients; or (3) the distributive performance of verbal actions."

- Diversative—describes movement that takes place in multiple locations, or that involves several subjects or objects. The diversative is formed using the postpositional disjunct element bitaa- 'among them', and is conjugated as a Si-perfective/ Ø-imperfective.

- Reversative—describes action involving a change or reversal in direction. Some reversatives have distinctive stem shapes, others use the momentaneous stem, and all involve a disjunct element ná-.

- Conative—refers to verbal action that is attempted, and are created using the Ø-imperfective and a postpositional disjunct element.

- Transitional—denotes actions that result in a change of state, form, condition or position. Transitional verbs may take a distinctive stem

shape or the momentaneous stem, as well as a conjunct element /i-/ in position VI.

- Cursive—describes action that moves in a line through time or space, this aspect only occurs with the progressive mode.

5.2 Arguments and Adjuncts

Willie and Jelinek (2000) have argued convincingly that the pronominal prefixes in the Navajo verb word are the arguments of the verb; independent noun phrases are syntactic adjuncts which may enter into coreference relations with these pronominal arguments. Others (notably Speas (2000)) have taken the position that NPs in Navajo may in fact be arguments, and several scholars (i.e. Hale (2000, 2001); Aissen (2000); Neundorf (2000)) have been agnostic between the two views.

Whatever one's position on that issue, there is a great deal of evidence for the claim that the discourse functions 'topic' and 'focus' play a large role in surface word order in Navajo. These concepts may be at the root of what is possibly the most well-known aspect of Navajo syntax—the so-called 'yi-/bi-alternation', or the 'Inverse Voice' (Hale, 1973).

The Inverse Voice is found in transitive sentences in Navajo where each of the arguments of the verb are 3rd person. It is manifest in an alternation between two prefixes—yi- and bi-, each of which designates a particular interpretation of the sentence.

The following examples of the Inverse Voice in Navajo are from Willie and Jelinek (2000, p.272). Gender is used in the English translations (but is not relevant to the Navajo forms) strictly in order to track coreference properties of the sentences in (8) below.

(8) Inverse Voice in Navajo
   a. Q: haash   yít'iid
         what-Q   3ACC-3NOM-did
         What did she$_i$ do

      A: yiztał
         3ACC-3NOM-kicked (direct)
         Focus$_j$-Topic$_i$-V
         'She$_i$ kicked him$_j$'

b. Q: haa-sh   yidzaa
what-Q 3ACC-3NOM-happened
'What happened to him$_j$

   A: biztał
3ACC-3NOM-kicked (direct)
'He$_j$ was kicked by her$_i$'

In the question and answer sequence in (8a), the agent of the verb is the topic. In (8b), the bi- prefix marks a topicalized patient, 'him.' The English gloss for the answer in (8b) is a passive—but the Navajo answer in (8b) is not a passive—it is a transitive sentence in which the patient argument is the topic.

In transitive sentences with two overt NPs (a rare occurrence in Navajo discourse), the order of the NPs is determined in part by their 'animacy'—it is conventional that the NP denoting the most animate referent be first in the sentence. The examples in (9) and (10) demonstrate this effect (Willie and Jelinek, 2000, p.273).

(9) Navajo inverse voice and the "animacy hierarchy"; agent ≫ patient
   a. łį́į́   tsé   yitzał
horse rock   3ACC-3NOM-kicked (direct)
'The horse kicked the/a rock'

   b. ?*tsé łį́į́   biztał
rock   horse 3ACC-3NOM-kicked (inverse)
'The rock was kicked by the/a horse'

(10) Navajo inverse voice and the "animacy hierarchy"; patient ≫ agent
   a. ?*łį́į́   'ashkii yiztał
horse   boy   3ACC-3NOM-kicked (direct)
'The horse kicked the/a boy'

   b. 'ashkii łį́į́   biztał
boy   horse 3ACC-3NOM-kicked (inverse)
'The boy was kicked by the/a horse'

In (9) the agent of the verb occupies a higher place on the animacy scale than does the patient. In this case, the inverse voice (9b) will be stigmatized—at least among some speakers[7]—and the direct voice (9a) will be preferred. In (10), the patient ranks higher on the animacy scale than does the agent of the verb. In this case, the opposite pattern is found—the inverse voice (10b) is preferred over the direct voice (10a).

Willie and Jelinek note that less animate NPs are typically not topical—they are more likely to be new information in the sentence, and therefore will be less consistent with the topicalization of the patient as in (9b). "The use of the inverse form [in these cases] can be understood as a way of ensuring that agents low in the animacy scale are focused as new information, while the high-ranking, definite patient is made the topic" (Willie and Jelinek, 2000, p.273). Nominals always appear in topic, focus order in Navajo.

6   Conclusion

The papers in this volume provide a number of new and interesting insights into Navajo language and grammar. They do not necessarily share the assumptions outlined here, but they may refer to those assumptions, terms and definitions. For non-specialists in Athabaskan linguistics, the literature on Navajo can be difficult to understand—it is our hope that this discussion has at least illuminated some of the more commonly used concepts and theoretical underpinnings, and will serve as a handy guide to which readers can refer as they explore the remaining papers in this volume.

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[7]The animacy hierarchy is noted by Willie and Jelinek (2000) to be declining in use among younger speakers of Navajo