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Ashkii Bizaad: Verbal Morphology Loss in One Young Speaker's Navajo

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1. A Brief Introduction to the Navajo Verb

1.1 Prefix Positions

The Navajo language, a member of the Na-Dene family, is well-known among linguists for its incredibly complex verbs, into which grammatical subject, object, number, multiple facets of aspect, and information about the physical nature of either subject or object can all be incorporated. To express all of this information, every Navajo verb is composed of a stem and a series of prefixes, each of which occupies a specific position and undergoes phonological changes based on that position and the surrounding prefixes. The stem can also undergo some of these changes to a lesser degree. In any given verb form, the stem, a classifier, and a subject prefix are mandatory, although a zero classifier is common, and the third-person subject prefix can be zero as well.

Models for the structure of the Navajo verb—that is, a summary of the prefixes' possible positions and relative order—are not all identical, but do not vary much in their basic interpretation of the verb. Leonard M. Faltz gives the following model:

(1)

outer prefix – distributive plural – object prefix – inner prefixes – subject prefix – classifier – stem

Garth A. Wilson provides the following system in *Conversational Navajo Workbook*:

An Introductory Course for Non-Native Speakers:

(2)

¹ I would like to acknowledge my consultant, Zachary Charley, for his time and patience; my advisors John Haiman and Christina Esposito, and two additional committee members, Cynthia Kauffeld and Leonard Faltz, for their invaluable suggestions and assistance; and Stephanie Farmer, for her inspiration and advice as well.

ADVERBIAL MORPHEMES – REPETITIVE MARKER – PLURAL MARKER –
DIRECT OBJECT – DEICTIC PRONOUNS – ADVERBIAL MORPHEMES – MODE
AND ASPECT MARKER – SUBJECT MARKER – CLASSIFIER – STEM

A comparison of these models shows that Faltz has condensed Wilson's prefix positions in three ways:

1. "Repetitive marker" and the first "adverbial morphemes" are combined into "outer prefix" (Wilson's second "adverbial morphemes" position is renamed "inner prefixes" by Faltz).
2. "Direct object" and "deictic pronouns" are combined into "object prefix".
3. "Mode and aspect marker" and "subject marker" are combined into "subject prefix".

In *The Navajo Verb System: An Overview*, Robert W. Young² numbers and describes 11 positions, some of which are split into subpositions like 1c) reflexive, 1e) semelfactive, and 6c) adverbial-thematic. Linguists studying Navajo use the term "conjunct prefix" to describe any prefix that follows the plural marker and precedes the subject marker, and the term "disjunct prefix" for the plural marker and any prefixes preceding it.

These and all other models differ in their grouping of certain prefix types, the most radical difference probably being Faltz's treatment of the subject prefix and "mode and aspect marker" as a single unit; this establishes a greater number of individual subject prefixes, but each prefix retains a more predictable, stable form. The diversity of subject prefixes is the topic of §3.2 in this thesis. Throughout this thesis I will use Faltz's model, but all are more or less equivalent, with some authors choosing to explicitly distinguish

² Much of today's linguistic work on Navajo would be impossible without the data recorded and organized by Young (1912-2007)

prefixes with different grammatical roles but the same basic rules regarding placement and phonological change.

1.2 Mode

A very important element of the Navajo verb is **mode**. There are seven modes in Navajo, but not all verbs can be expressed in all seven modes. Mode can be correlated with tense in English, but more accurately, it reflects the “temporal flow” of the verb—whether the action is completed, ongoing, repeated, habitual, and so on. Although verb stems seldom undergo any real change when examining forms that vary only by person and number—the usual notion of “conjugation”—they almost always have noticeably different forms depending on the mode they are expressing. For example, the stem *né*, which signifies verbs having to do with playing, is specific to the imperfective mode. In the perfective mode, the same meaning is expressed with the stem *ne'*, and the future and iterative modes have their own forms as well (*neel* and *neeh*, respectively). All the forms of a stem that occur in different modes are together called a “stem set”. Furthermore, we can collect stem sets into “verb themes”, groups of verbs with the same classifier, transitivity, some prefixes, and basically the same meaning, but different aspects. The stem set given above is an example of the continuative aspect; other aspects reflected in stem sets include momentaneous, durative, and repetitive, to name a few.

1.3 Subject prefixes and conjugation classes

The combination of “mode and aspect marker” and “subject marker” into a single “subject prefix” means that multiple sets of subject prefixes exist, and that all of these sets of subject prefixes (each of which contains a first-person singular subject prefix, a second-person singular subject prefix, and so on) are defined by a mode and a

conjugation class. To conjugate a verb for a particular mode, we must know its conjugation class in that mode to determine which subject prefix set to use. For example, some verbs will use a subject prefix set called the \emptyset -imperfective when conjugated in the imperfective mode, while others will use the long-vowel-imperfective. Both of these verbs might use the s-perfective subject prefix set when conjugated in the perfective. It is very important that we cannot predict a verb's conjugation class (and hence the appropriate subject prefix set) in a given mode even if we know the verb's correct conjugation class in a different mode.³

1.4 Pegs

Certain verb forms in Navajo, as well as other Na-Dene languages, contain what are known as “peg syllables” and “peg consonants”. These morphemes are completely meaningless, and serve only to satisfy morphophonological rules. One such rule states that no Navajo word may begin with a vowel. When a verb's structure is such that it would begin with a vowel, a peg consonant is inserted at the very beginning of the form in order not to violate the rule. When the initial vowel is <i> or <ii>, the peg consonant is *y-*; when the initial vowel is <o> or <oo>, the peg consonant is *w-*.⁴

Another rule states that all verb forms must contain at least one syllable before the stem. When a verb form would be complete without a syllable before the verb stem, the peg syllable *yi-* is inserted at the beginning of the form. This rule can come into effect

³ Patterns relating conjugation classes do exist, but they are complicated and are not necessary here.

⁴ No other vowels are in the position to require a peg consonant. Many Navajo words appear to begin with vowels when written, but these words actually begin with a glottal stop. For morphological consistency, I have written the initial glottal stop at the beginnings of these words in this thesis.

even when a morpheme already exists outside a verb stem; if this morpheme is a subject prefix and is not syllabic, it needs a peg syllable.⁵

2. Preparation for this thesis

2.1 Thesis and motivation

The complexity of its verbs makes Navajo a favorite subject of research by linguists. Today, the Navajo language is endangered in the long-term; about 178,000 Americans speak it, but fewer and fewer children learn the language, either as their mother tongue or through lessons at school.⁶ Away from the Navajo homeland of Arizona and New Mexico, most Navajo speakers have little occasion to speak their native tongue, whether they are fluent or not.

At the same time, Navajo is going through a period of dramatic change. As more technology continues to flow into the Navajo homeland, and more Navajo speakers interact with diverse groups of non-speakers on a daily basis, speakers are being forced to adapt their language at a rate much faster than natural language change.

Because of these two factors—infrequent use and rapid change—and because the morphology is so complex, I predicted that the verb forms I elicited from my Navajo consultant, a young, ethnic Navajo, would be simplified, i.e., they would not exhibit the full verbal morphology present in traditional grammars of the Navajo language. My goal in this thesis is to describe and attempt to explain the differences, whether they can be considered simplifications or not, between the data I collected from the consultant and the data I obtained through published grammars.

⁵ There is a single exception to the rule that makes peg syllables necessary: the verb *ní*, meaning “he or she says”, does not receive a peg syllable.

⁶ Figure from *Dine Bizaad at a Crossroads: Extinction or Renewal?*, AnCita Benally and Denis Viri in *Bilingual Research Journal*, 29: 1, Spring 2005.

2.2 Consultant

I elicited data from only one Navajo speaker, a 20 year-old male undergraduate student. He learned Navajo from his grandparents, mainly his maternal grandparents. Until the age of five, he spent about half of his time with these older relatives, and spoke Navajo nearly as well as he spoke English. At the age of five, his family moved away from his grandparents; for the next eight years, he used English almost all of the time and relocated frequently. During this period, he lived in Albuquerque and Gallup, New Mexico; Durango, Colorado; and Phoenix, Arizona. At the age of fifteen, he moved to Crown Point, New Mexico, where he could spend more time with his grandparents again and subsequently use Navajo. His family now lives outside Window Rock, Arizona.

The consultant occasionally speaks Navajo to two other Navajo students at his school, but while he is at home with his family, he speaks at least a little bit of Navajo everyday. This Navajo is often limited to “little phrases”, as he described his speech—phrases involving chores and daily activities. When he visits his grandparents or other extended family, he speaks and hears more complex Navajo; these visits vary in their frequency from every weekend to once a month.

My consultant is very familiar with the Navajo orthography; he does not write much in Navajo, but reads material printed in Navajo frequently.

He also listens to a Navajo radio station, which broadcasts country music in English but fills the interstices with DJs announcing community events and news in Navajo.

2.3 Procedure

Before collecting any data from the consultant, I first identified thirteen specific features of Navajo grammar that I felt were likely to be lost or at least modified. These features are:

1. The use of distinct (but closely related) stems corresponding to mode
2. Numerous, distinct sets of subject prefixes (e.g., s-imperfective)
3. Systematic mixing of subject prefix sets within some perfective mode paradigms
4. Systematic mixing of different classifiers with a stem set
5. The alternation between the prefixes *yi-* and *bi-*
6. The use of a morpheme which conveys an unspecified object for a transitive verb
7. The devoicing of fricative-initial verb stems
8. The contraction of certain subject prefixes with inner prefixes
9. The use of distinct, unrelated stems in basic verbs of motion, corresponding to number
10. The use of distinct, unrelated stems corresponding to the physical nature of a verb's subject or object (e.g., flat and flexible)
11. The use of a morpheme conveying a series of identical actions
12. Sibilant consonant harmony
13. Various irregularities

For each of these categories, I found several verbs expected to exhibit the feature, wrote natural English sentences designed to elicit these verbs when translated into Navajo, and compiled the sentences into a questionnaire.

I met with the consultant about once every two weeks, giving him a different section of the questionnaire at each meeting. I transcribed his Navajo translations using Navajo orthography; when unsure of some phonetic feature, most often tone or vowel length, I

asked the consultant directly, or showed him my transcription and asked if I accurately represented his speech.

At first, I intended to focus my attention only on the retention or modification of the thirteen features listed above. I found, however, that analysis of some of these features, though informative, was straightforward, while some of the richest information originated from structures in the verb I had not intended to investigate specifically. Also, some verbs exhibit more than one of the thirteen features listed above. For these reasons, I analyze each verb individually; at the same time, the verbs are grouped together into sections based around the thirteen features I set out to investigate. At the beginning of each section is an explanation of the feature, followed by a discussion of how the feature has been modified in my consultant's speech (if at all).

Finally, I have compared the general phenomena that distinguish the consultant's verb forms from the "expected forms", i.e. those found in traditional Navajo grammars, to phenomena occurring in Romansch and Dyrbal, two languages whose numbers of speakers have dwindled in recent times. This analysis constitutes the last section of the thesis.

2.4 A note about data presentation and terminology

In this paper, I have presented the data in a concise, consistent format. For almost all Navajo verbs, the third-person singular and third-person dual are identical, as well as the fourth-person singular and fourth-person dual. Unless otherwise noted, this format represents a complete paradigm for a single mode. The symbols [] together signify that I the form that would be placed in that position was not elicited. For each data set, I give the English translation I actually used in elicitation sessions. They are not necessarily the

translation that would be given out of context. For example, I elicited the verb presented in (45) with the English sentence “I am at Window Rock”, but the form *naashá* by itself is best translated “I am going around in Window Rock”.

I have chosen to use the term “fourth-person” instead of “alternate third-person”.

For simplicity’s sake, my use of the word “plural” throughout this work never includes grammatically dual forms; it is used only in reference to groups of three or more. When I refer to the general English sense of plural, i.e., two or more persons, I use the term “nonsingular”.

Most of the other terms I use to refer to parts of the Navajo grammar are the same as Faltz’s terms; I do, however, provide the full name of modes when referring to subject prefix sets, as in “n-imperfective” (“n-I” in Faltz) and “y-perfective” (“y-P” in Faltz), and use “Ø-imperfective” instead of Faltz’s “regular I”.

This thesis makes use of the following abbreviations:

(3)

1s	first-person singular subject marker
2s	second-person singular subject marker
3s	third-person singular/dual/plural subject marker
4s	fourth-person singular/dual/plural subject marker ⁷
1d	first-person dual/plural subject marker
2d	second-person dual/plural subject marker
3O	third-person object marker
4O	fourth-person object marker ⁸
uO	unspecified object marker
cl	classifier
pl	distributive plural marker
inP	inner prefix
outP	outer prefix

⁷ The description of this marker (underlying form *j-*) is a simplification. To create a verb form with a fourth-person subject, this fourth-person subject marker must be placed in the verb’s direct object position, and a third-person subject marker must be placed in the verb’s subject prefix position.

⁸ While the fourth-person object marker (underlying form *hw-*) can serve the purpose its name describes, it is more common as a reference to an area or as a lexical prefix.

peg a peg syllable or consonant

2.5 My treatment of tone

Navajo has only two tones; I recognize the difficulty in accurately recording tones and distinguishing them from stress patterns, and so I made special care to verify the accuracy of my transcriptions with regard to tone during elicitation sessions by directly asking my consultant, who is definitely familiar with the importance of tone in the language.⁹ However, I did not measure pitch with any instruments, so there is no completely objective information regarding my consultant's tones. I have no reason to believe that my transcriptions of tone are incorrect, but the reader should be aware that I cannot assert my accuracy with complete confidence.

2.6 The possibilities of dialectal variation

Many of my consultant's verb forms are inconsistent with the expected forms of the verbs, for reasons that are not usually clear. In most cases, I have suggested at least one possible motivation for the specific discrepancies in the consultant's forms. These conjectures range from quite likely (as (38) and (39), "speak") to speculation based on the data (as (31)). More important, variations in traditional spoken Navajo are poorly understood. Faltz writes that "dialectal and idiolectal variations in Navajo have not been sufficiently studied...[Some] forms might...represent a dialectal or idiolectal variation of some sort. Until someone does a detailed study of variation in Navajo, it's too hard to say [what forms are innovations and what forms are dialectal]" (personal communication).

⁹ Some analyses suggest that Navajo has four tones: low, high, rising, and falling. In the two-tone analysis, the rising and falling tones are the product of a long vowel composed of two short vowels, one with a low tone and the other with a high tone.

In *Navaho Grammar*, Reichard mentions numerous “phases of diversity” found in Navajo. These notes are generally phonological in nature, and as such their applicability here is limited; one particularly relevant note, however, briefly discusses alternations in stem vowels: “alternants like *dishné*, *dishní*, and *dishní* ‘I say’ are common” (370).¹⁰ Such alternations could explain the difference in some of my consultant’s stems, as in (24) “learn (it)” (future mode); (34) “drink” (imperfective mode); and (35) “dance” (imperfective mode).

The lack of information on regional, dialectal variation thus prevents me from reaching definite conclusions about some of the differences between expected forms and my consultant’s speech. Yet the differences that can be reasonably ascribed to dialectal variation play a small part in the overall consideration of verb morphology loss as presented in this thesis. I have included the conjectural analyses of differences that I consider plausible, not only because they may reflect the truth, but also because they illustrate the difficulty in analyzing such forms, a difficulty that defies a notion of simplification.

2.7 Orthography

Throughout this thesis I have presented data solely in the Navajo orthography. This orthography is very similar to the IPA, however, and I mention below only those symbols used in Navajo orthography that do not signify the same sound as the identical IPA symbol.

2.7.1 Consonants

<ch> corresponds to IPA [tʃ]. <c> is never found outside of the digraph <ch>.

¹⁰ I have spelled the Navajo words in this quote differently than the source, to match the orthography I use throughout this thesis.

<gh> corresponds to IPA [ɣ].

<j> corresponds to IPA [dʒ].

<ł> corresponds to IPA [ɬ].

<sh> corresponds to IPA [ʃ].

<y> corresponds to IPA [j].

<zh> corresponds to IPA [ʒ].

<'> corresponds to IPA [ʔ].

Navajo <x> corresponds to IPA [h], and is pronounced identically to Navajo <h>.

<x> is used when the sound [h] follows any Navajo digraph written using an <h>, i.e.,

<ch>, <sh>, <gh>, and <zh>, or when [h] follows [s], [g], or [z]. For example, a word

for “stinkbug” is usually spelled *wónitlchxoní*, but can also be spelled *wónitlchhoní*. The

latter spelling is not incorrect, but is usually avoided.

2.7.2 Vowels

Navajo has four tones: low, high, rising, and falling. They are represented in the following way, using the letter <a>:

low tone a

high tone á

rising tone aá

falling tone áa

Vowel length is contrastive in Navajo; short vowels are written with a single vowel, while long vowels are written with two vowels next to each other. So, the word *nidaané* “they are all playing” contains two short vowels, <i> and <é>, and one long vowel, <aa>.

<a> and <o> in Navajo orthography are pronounced just as the IPA symbols are pronounced, but the same cannot be said of <e> and <i>. <e> corresponds to IPA [ɛ].

<i> is the most different; it is the only vowel in Navajo for which a difference in length also means a difference in quality. <i> corresponds to IPA [ɪ], while <ii> corresponds to IPA [i].

My only departure in this thesis from Navajo orthography is that I indicate vowel nasality using a superscript <n> following a vowel, like so: aⁿ. This is opposed to standard Navajo orthography, which indicates nasality by placing a hook under a vowel. In this thesis, when a long vowel is followed by a superscript <n>, the entire vowel is nasal, but in the standard orthography, both letters in a long, nasal vowel must have a hook.

2.8 Example—an underlying structure and its corresponding surface form

To see how the prefix positions are synthesized into words, let us look at a specific verb form with all seven of Faltz’s positions occupied. The following verb means “they (three or more people) carded wool”:

(4)

ha – da – y – n – s – ł – chaad
 outP – pl – 3O – inP – 3s – cl – stem

After we alter these morphemes to conform to Navajo morphophonology, the actual form is *hadeineeshchaad*. How do we get from ha-da-y-n-s-ł-chaad to *hadeineeshchaad*?

The classifier *l* disappears because it comes between the subject prefix *s* and a consonant-initial stem:

(5)

ha – da – y – n – s – chaad

When the inner prefix *n* is followed by the third-person singular, perfective mode subject prefix *s*, the long vowel *ee* is inserted between them:

(6)

ha – da – y – nee – s – chaad

The subject prefix *s* undergoes consonant harmony because of the presence of the morpheme <ch> in the stem *chaad*, and thus becomes *sh*:

(7)

ha – da – y – nee – sh – chaad

The third-person singular object prefix *y* becomes *i* after plural *da* and before a consonant:

(8)

ha – da – i – nee – sh – chaad

Finally, the plural marker *da* becomes *de* due to the following *i*. This step must occur after the step shown in (8).

(9)

ha – de – i – nee – sh – chaad

3. Results

In the coming sections, I present the data resulting from the elicitation sessions with my consultant, as well as a description of the differences between the consultant's forms and the expected forms, and an analysis of these differences, where possible.

3.1 Mode Usage

The most commonly used (and most morphologically complicated) modes of Navajo are the imperfective and perfective; all neuter verbs, i.e., common verbs that can be expressed in only one mode, take either the imperfective or the perfective mode (Faltz 16). The future mode is somewhat less common, but the iterative, usitative, and optative modes are less common still. I wanted to examine the retention of these last three—which express repetition, habit, and desire respectively—and included in my questionnaire English sentences meant to elicit forms in these modes. However, I was unsuccessful in eliciting any data using any of these three modes, as my speaker has completely lost all three of them.

When prompted with the English sentence, “I hope it rains”, the consultant produced the following form:

(10) *Nahałtin nisin* (dooleel).

This can be translated literally as “It rains I want (it will be)”. My consultant confirmed that he would use the same construction for the rest of the paradigm (“you hope it rains”, “she hopes it rains”, etc.). In fact, he used a construction using *nisin* for all optative forms I tried to elicit. The corresponding sentence would be expressed in traditional Navajo, using the optative mode, as:

(11) *Nahółtááⁿ* (laanaa)¹¹

¹¹ *Laanaa* is required by most speakers here, but is distinct from the verb. It is an optative particle meaning “wish that”.

Thus, the consultant's speech retains no grammaticalized optative forms; he instead uses two distinct verbs in (10). In fact, of these two verbs, the one expressing desire (*nisin*) is neuter and must always be conjugated in the imperfective. It is important to recognize that my consultant's use of *nisin* in (10) is perfectly acceptable in traditional Navajo grammar; it is not incorrect by any means. Rather, it is the ubiquity of this construction at the expense of the grammatically optative verb that is notable.

In this section, I only tried to elicit the iterative, usitative, and optative modes, making the assumption that these modes would be lost more than the imperfective, perfective, and future modes because of their lower lexical frequency. This assumption was only marginally correct; as we will see, the data elicited in other sections revealed that the consultant has a strong grasp only of the imperfective. However, he is aware of the "special forms" used in the perfective and future modes, and appended /l/ to imperfective forms twice to form the future (see §3.2). He also provided two verbs in the perfective (see §3.5 and §3.10), but did not recognize the existence of any grammatically iterative, usitative, or optative forms. The consultant recognizes this limitation of his speech, admitting "When I talk, it's always in the now, or present." He uses the separate words *ńt'ée'* "it was, it used to be" and *dooleel* (it will be) with the imperfective mode to convey past and future. Like my consultant's construction using *nisin* in (10), his use of *ńt'ée'* and *dooleel* is not an innovation, and would never be considered "incorrect"; however, it may not be the most common way of expressing time for a conservative speaker.

3.2 Subject prefixes

The goal of this section was to elicit verbs that I expected to contain many different sets of subject prefixes, and to analyze whether my consultant's subject prefixes were

changed according to any patterns, collapsed into fewer forms, or showed any other noticeable difference. Unfortunately, this was hampered by the paucity of data for all modes but the imperfective.

Subject prefixes of the Navajo verb are notoriously unpredictable morphemes. The conventional linguistic approach to Navajo subject prefixes is to treat them as regular underlying forms, not particular to any mode, that can be dramatically altered by mode markers, which precede the subject and provide a combination of both modal and aspectual information. Faltz's innovation is to merge the mode marker and the subject marker category into a single prefix which shows both subject and mode at the same time. The resulting sets of subject prefixes each contain one of each of the following subject prefixes:

1. First-person singular
2. Second-person singular
3. Third-person singular/dual/plural
4. First-person dual/plural
5. Second-person dual/plural

I chose to analyze my data using Faltz's analysis because it was most familiar to me and because I hypothesized that the widely divergent surface forms of subject prefixes obscure underlying mode and aspect markers enough that these markers would fail to emerge except in drastically simplified Navajo verb forms .

To illustrate the dissimilarity between different subject prefix sets, I give below the third-person singular form of "crawl around" in the imperfective:

(12) naa'na'

The corresponding form in the perfective mode is:

(13) naas'na'

In the imperfective example above, the subject marker is null, but in the perfective example it is *s-*. While the two forms in (12) and (13) are clearly quite similar, and in fact the *s*-perfective subject prefixes often resemble subject prefixes in the imperfective with an /s/ placed at the beginning, regularly affixing this *s-* does not provide the correct forms of the perfective prefixes, as shown in the chart below.

(14)	∅-imperfective subject prefix	s-perfective subject prefix
first-person singular	sh-	sé- or sis-
second-person singular	ni-	síní-
third-person singular/dual	∅-	s- or z-
first-person dual	iid-	siid-
second-person dual	oh-	soo- or sooh-

No simple formula seems to derive the forms in the third column of (14) from the forms of the second column. More importantly, I chose these two subject prefix sets to illustrate the unpredictability of subject prefixes even when sets are relatively similar; additional examples presented later in this section demonstrate how subject prefixes can be warped beyond recognition in sets like the *y*-perfective.

With a few exceptions,¹² a verb's conjugation class (for example, *s*-perfective or *y*-perfective) is constant within a single paradigm, but is unpredictable; the correct class can be deduced at times, but in general must be memorized for each verb.¹³ Even a specific subject prefix set, like the *s*-perfective given above, can yield different forms when classifiers vary or when conjunct and disjunct prefixes are present. In (14), the first-

¹² Two phenomena called “perfective da-shift” and “progressive da-shift” cause a verb to conjugate in a different conjugation class when the distributive plural prefix *da-* is present. Perfective da-shift is the subject of §3.3.

¹³ Certain outer prefixes require certain subject prefix sets. The outer prefix *ha-*, for example, signals the *y*-perfective set. Motion verbs with a terminative meaning take the *n*-perfective set.

person singular subject prefix *sis-* and the second-person dual *sooh-* are used with an l- or a d-classifier; the third-person *z-* is used with a zero-classifier. The s-perfective subject prefixes can also combine with certain inner prefixes to produce unique surface forms; this is the topic of §3.9. In the next few paragraphs, I will discuss how what subject prefixes my consultant used in the data I collected.

In (16) below, it is safe to say we see an example of the Ø-imperfective subject prefixes. In (18), we see the same, since the forms in (18) are based on the forms in (16), but the expected forms use the Ø-future subject prefix set. This is one of only two verbs in the future mode successfully elicited; the other is presented in (24). Neither (18) nor (24) contain the Ø-future (or any other “future” subject prefix set).

I also elicited two perfective tense forms, both of which use the s-perfective. The data are located in §3.5 and §3.10. In §3.5, the only form we have is the third-person singular. Still, it is enough to suggest that, even though my consultant might not continue to use the s-perfective third-person subject prefix *s-* (were he to attempt to formulate more s-perfective verbs), he has not completely generalized the Ø-imperfective’s third-person subject prefix, namely Ø-. The example in §3.10 is much more difficult to judge, due to the interaction between that verb’s subject prefixes and its *d-* inner prefix (a phenomenon covered in detail in section §3.9), and an irregularity that converts the regular third-person subject *z-* to Ø-! Although the s-perfective prefixes are radically changed even in the expected forms, we can say that all the forms in (44) at least show interaction between their subject prefix and inner prefix *d-*, which only occurs for the s-perfective subject prefix set. Thus, in the few forms where the s-perfective has a chance to show up

in the data I elicited, it seems to have been retained fairly well, and has at least not been replaced by Ø-imperfective subject prefixes.

All of the remaining data is conjugated in the imperfective mode, for which there are four different conjugations: the Ø-imperfective, the n-imperfective, the long-vowel-imperfective, and the s-imperfective. I failed to elicit an s-imperfective verb, but the other three conjugations are represented in the data. The majority of the data, however, is in the Ø-imperfective: 13 out of the 19 imperfective verbs I elicited for the entire study were probably conjugated by my consultant in the Ø-imperfective; 3 of these verbs used the long-vowel-imperative, 1 was a neuter verb using the n-imperfective, and 2 were indeterminable.¹⁴

I was surprised by the fact that my consultant never substituted a certain subject prefix set when an entirely different one was expected; I had conjectured that alternative conjugations would be “wiped out” in favor of the Ø-imperfective. This may be connected to the low number of n-imperfective, long-vowel-imperfective, and s-imperfective verbs I successfully elicited; that is, my consultant was willing to volunteer more Ø-imperfective verbs.

On the other hand, my consultant showed considerable variation in the actual surface form of the subject prefix, variation not present in expected forms. In most cases, I still identified a verb’s conjugation class as one of the established sets, since they were usually similar enough to the expected subject prefix to be recognizable.

In my presentation of data below, the symbols [/] take the place of any form not elicited. For most verbs, at least one form was not elicited from my consultant; for some,

¹⁴ I have counted all the verbs presented in §3.11, so-called “handling” verbs, as representing only one verb for this tally, because of their extremely similar morphological forms.

few forms were elicited. The following table shows how often my consultant offered each form:

(15)

Form (grammatical person and number)	Frequency of successful elicitation
First-person singular	1.00
Second-person singular	.89
Third-person singular	.90
Fourth-person singular	.32
First-person dual	.42
Second-person dual	.58
First-person plural	.37
Second-person plural	.42
Third-person plural	.32
Fourth-person plural	.05

(15) shows that my consultant produced all three kinds of singular form quite often; fourth-person plural forms very seldom; and all other forms with intermediate frequency. These figures are particularly interesting for their implications regarding my consultant's treatment of subject prefixes. Recall that in traditional Navajo grammar there are only five individual subject prefixes in any set of subject prefixes, even though we normally consider ten forms in a full paradigm. This is because some subject prefixes are used for more than one form: the third-person singular subject prefix is used for the third-person singular, fourth-person singular, third-person plural, and fourth-person plural forms; the first-person dual subject prefix is used for the first-person dual and the first-person plural forms; and the second-person dual prefix is used for the second-person dual and the second-person plural forms.

Plural forms are distinguished from non-plural forms with the *da-* prefix, and fourth-person forms are distinguished from third-person forms with the *j-* prefix. The wide disparity of frequencies between the four forms using the third-person singular subject

prefix, as well as lesser disparities for the forms using the first-person dual and second-person dual subject prefixes, suggests that the consultant does not associate these verb forms with each other; or, perhaps, that he considers their surface forms significantly more complicated than their underlying forms.

Before presenting the data itself, I will discuss a few specific features I encountered more than once in the subject prefixes of my consultant's elicited forms that are not present in the corresponding expected forms.

Persistence of *ni-*

One rule of Navajo grammar prescribes the transformation of the second-person singular subject marker from the underlying form *ni-* to a surface form *i-* after a conjunct prefix. Out of four elicited verbs whose expected forms contained the transformed second-person singular subject prefix *i-*, my consultant used *i-* as the subject prefix once (36), and kept *ni-* or something very similar as the subject prefix the other three times (33), (34), (56).

Insertion of l-classifier

Although classifiers are usually quite distinct from the subject prefixes that immediately precede them, I found that my consultant's verb forms sometimes included an l-classifier that was absent not only in the corresponding expected forms, but also in the consultant's other forms within the paradigm. This calls into question whether these appearances of *l-* are actually classifiers or are something else—perhaps a component of the subject prefix itself.

I do not assert that these unexpected l-classifiers actually belong in the subject prefixes, however, because they do not appear regularly enough to be established as a

component of subject prefixes in certain environments. I found these unexpected *l*-prefixes that I assume to be classifiers after the second-person singular subject prefixes in (37), (44), and (45); after the first-person dual subject prefixes in (37), (38), and (42); and near the second-person dual subject prefixes in (42) and (45).

Insertion of *n*- prefix

On several occasions, the consultant’s forms exhibited an unexpected *n*- or *ne*- before the first-person dual subject prefix and the second-person dual subject prefix. This *n*-prefix sometimes co-occurred with the unexpected *l*-classifier discussed above, but did not always do so. It presents an issue similar to the *l*-classifier, though: is this *n*- prefix a separate inner prefix of the form *n*- or *ne*-, or could it actually be part of the subject prefix? As with the *l*-classifier, the fact that other forms in the paradigm do not contain this prefix suggests that it may be a component of the subject prefix; but if that were true, when is this subject prefix used? These questions are unanswerable with the current data, and this *n*- prefix seems entirely unpredictable, like the unexpected *l*-classifier. I found this *n*- prefix preceding the first-person dual subject prefix in (37), (38), and (42), and preceding the second-person dual subject prefix in (16), (18), (20), (38), and (45).

In the following sections, I present the data itself, as well as an analysis of the differences between the consultant’s form and the expected form. I will start with the verb “cry”, in the imperfective mode.

“Cry”, imperfective mode

The expected forms of this verb have a zero classifier and use the \emptyset -imperfective.

(16)	Consultant’s form	Expected form
First-person singular	yíshcha	/yi-sh-cha/ yi-sh-cha peg-1s-stem

Second-person singular	nícha	/ni-cha/ ni-cha 2s-stem
Third-person singular	yícha	/yi-Ø-cha/ yi-cha peg-3s-stem
Fourth-person singular	jícha	/j-Ø-cha/ ji-cha 4s-3s-stem
First-person dual	[]	/y-iid-cha/ y-ii-cha peg-1d-stem
Second-person dual	nohcha	/w-oh-cha/ w-oh-cha peg-2d-stem
First-person plural	[]	/da-iid-cha/ de-ii-cha pl-1d-stem
Second-person plural	danohcha	/da-oh-cha/ da-oh-cha pl-2d-stem
Third-person plural	[]	/da-Ø-cha/ daa-cha pl-3s-stem
Fourth-person plural	[]	/da-j-Ø-cha/ da-ji-cha pl-4s-3s-stem

One of the simplest verbs in the Navajo lexicon is featured in (16). It has no lexical prefixes and takes the Ø-imperfective; the full Ø-imperfective set can be seen in (19).

The consultant has produced subject prefixes very close to the expected ones, but has added a high tone to the pre-stem syllable in all his singular forms; the consultant insisted upon these high-tones, in fact. It is possible that this high-tone has been inserted because of its presence in the perfective-mode version of “cry”, which has the following forms:

“Cry”, perfective mode

The expected forms of this verb have a zero classifier and use the y-perfective.

(17)	Expected form
------	---------------

First-person singular	/yí-cha/ yí-cha 1s-stem
Second-person singular	/yíní-cha/ yíní-cha 2s-stem
Third-person singular	/yí-cha/ yí-cha 3s-stem
Fourth-person singular	/j-íí-cha/ j-íí-cha 4s-3s-stem
First-person dual	/yiiid-cha/ yii-cha 1d-stem
Second-person dual	/woo-cha/ woo-cha 2d-stem
First-person plural	/da-yiid-cha/ de-ii-cha pl-1d-stem
Second-person plural	/da-oo-cha/ da-oo-cha pl-2d-stem
Third-person plural	/da-[long, high-tone]-cha/ dáá-cha pl-3s-stem
Fourth-person plural	/da-j-íí-cha/ da-j-íí-cha pl-4s-3s-stem

The forms in (17) and the consultant's forms in (16) are not identical, however. Rather, the consultant's forms seem intermediate between the expected imperfective and perfective forms (as given in (16) and (17) respectively). When asked, my consultant could not produce any perfective forms of this verb.

Another departure from the expected forms is that an unexpected prefix *n-* occurs before the second-person dual subject prefix (in both the dual and plural). Prefixes of the general form *n-* are incredibly common in Navajo, but its presence here seems arbitrary;

it does not show up in the other forms in (16). As we examine more data, we will see unexpected *n-* and *ni-* prefixes emerging from the framework of my consultant’s speech frequently, but for now, we can say that the *n-* in the second-person dual in (16) may be acting as a kind of peg, replacing the expected peg *w-*, and that this *n-* remains in the plural even after the peg is no longer needed, because the plural was derived simply by adding the prefix *da-* to the second-person dual form. It is also very conceivable that this *n-* prefix is a dialectal or idiolectal variation. Although I have not seen any similar forms in printed Navajo materials, the reoccurrence of this *n-* in certain forms (i.e., first- and second-person dual) of other verbs suggests it may not be an impromptu addition.

“Cry”, future mode

The expected forms of this verb have a zero classifier and an inner prefix *d-*, marking the future, and they use the \emptyset -future.

(18)	Consultant’s form	Expected form
First-person singular	yishchał	/d-eesh-chah/ d-eesh-chah inP-1s-stem
Second-person singular	nichał	/d-íi-chah/ d-íi-chah inP-2s-stem
Third-person singular	yichał	/d-oo-chah/ d-oo-chah inP-3s-stem
Fourth-person singular	jichał	/j-d-oo-chah/ ji-d-oo-chah 4s-inP-3s-stem
First-person dual	[]	/d-iid-chah/ d-ii-chah inP-1d-stem
Second-person dual	nohchał	/d-ooch-chah/ d-ooch-chah inP-2d-stem
First-person plural	[]	/da-d-iid-chah/ da-d-ii-chah pl-inP-1d-stem

Second-person plural	danohchat	/da-d-ooch-chah/ da-d-ooch-chah pl-inP-2d-stem
Third-person plural	[]	/da-d-oo-chah/ da-d-oo-chah pl-inP-3s-stem
Fourth-person plural	[]	/da-j-d-oo-chah/ da-zh-d-oo-chah pl-4s-inP-3s-stem

§3.1 noted the consultant's near-universal loss of every mode besides the imperfective, and his transference of the other modes' grammatical function to a few particular lexemes. Here, we see a rare exception; instead of the shift towards an isolating system evident in most of my other attempts at the elicitation of different modes, (18) shows a more agglutinative system. The consultant has taken a morpheme *l*, which occurs at the end of many future mode stems and probably used to be a productive future marker, and suffixed it to the corresponding imperfective forms found in (16). He has also eliminated the high tones on initial syllables of the singular forms.

Contrasting this with the expected forms in (18), we find that the consultant has disposed of the inner prefix *d-*, which marks the future, and has used the \emptyset -imperfective subject prefix set instead of the \emptyset -future imperfective set. These subject prefixes are quite different:

(19)	\emptyset -imperfective subject prefix	\emptyset -future subject prefix
first-person singular	sh-	eesh-
second-person singular	ni-	íí-
third-person singular/dual	\emptyset -	oo-
first-person dual	iid-	iid-
second-person dual	oh-	ooh-

It is arguable that the consultant's paradigm in (18) represents the loss of the future mode itself, just like all the other examples the consultant gave, which use *dooleel* with

imperfective mode forms. However, because the consultant explicitly stated that the forms in (18) signified the future even without *dooleel* following, I believe this shows a grammaticalized future still present in some forms.

Besides these issues, an analysis of (18) is not complicated. Like (16), it features the unexpected *n-* in the second-person dual and plural, for presumably the same reasons as in (16).

“Play”, imperfective mode

The expected forms of this verb have a zero classifier and an outer prefix *na-*.

(20)	Consultant’s form	Expected form
First-person singular	naashné	/na-sh-né/ naa-sh-né outP-1s-stem
Second-person singular	naniné	/na-ni-né/ na-ni-né outP-2s-stem
Third-person singular	naané	/na-Ø-né/ naa-né outP-3s-stem
Fourth-person singular	[]	/na-j-Ø-né/ ni-ji-né outP-4s-3s-stem
First-person dual	neiiné	/na-iiid-né/ ne-ii’-né outP-1d-stem
Second-person dual	neinojnë	/na-oh-né/ na-oh-né outP-2d-stem
First-person plural	[]	/na-da-iiid-né/ ni-de-ii’-né outP-pl-1d-stem
Second-person plural	[]	/na-da-oh-né/ ni-da-oh-né outP-pl-2d-stem
Third-person plural	[]	/na-da-Ø-né/ ni-daa-né outP-pl-3s-stem
Fourth-person plural	[]	/na-da-j-Ø-né/ nidajiné outP-pl-4s-3s-stem

This verb shows few differences between the consultant’s forms and the expected forms. The consultant’s first-person, second-person, and third-person singular forms all match up with their respective expected forms exactly. The consultant’s first-person dual form omits a glottal stop. This glottal stop originates in the expected form from a /d/ at the end of the first-person dual subject prefix that is reduced to a glottal stop because of the following /n/. It could be that my consultant has dropped the /d/ from his first-person dual subject prefix in general, or he may reduce it to zero in this environment.

In the second-person dual forms, we see that the consultant has inserted an unexpected *n-* before the subject prefix. As discussed at the beginning of this section, this *n-* seems to have no particular meaning or conditioning environment. The outer prefix *na-* has changed to *nei-* for the consultant here, unexpectedly. This is probably due to the influence of the form elicited immediately prior to this one—the first-person dual, which contains an environment that changes *na-* to *ne-*.

“Work”, imperfective mode

The expected forms of this verb have an l-classifier, and an outer prefix *na-*.

(21)	Consultant’s form	Expected form
First-person singular	naashnish	/na-sh-l-nish/ naa-sh-nish outP-1s-cl-stem
Second-person singular	nanilnish	/na-ni-l-nish/ nanilnish outP-2s-cl-stem
Third-person singular	naalnish	/na-Ø-l-nish/ naa-l-nish outP-3s-cl-stem
Fourth-person singular	[]	/na-j-Ø-l-nish/ ni-ji-l-nish outP-4s-3s-cl-stem
First-person dual	[]	/na-iid-l-nish/ ne-ii-l-nish outP-1d-cl-stem

Second-person dual	[]	/na-oh-l-nish/ na-o-l-nish outP-2d-cl-stem
First-person plural	[]	/na-da-iiid-l-nish/ ni-de-ii-l-nish outP-pl-1d-cl-stem
Second-person plural	[]	/na-da-oh-l-nish/ ni-da-o-l-nish outP-pl-2d-cl-stem
Third-person plural	[]	/na-da-Ø-l-nish/ ni-daa-l-nish outP-pl-3s-cl-stem
Fourth-person plural	[]	/na-da-j-Ø-l-nish/ ni-da-ji-l-nish outP-pl-4s-3s-cl-stem

In (21), we see that the consultant has produced all three elicited forms exactly as expected. There are thus no differences to analyze here, although it is worth noting that the three forms the consultant produced are the first-person, second-person, and third-person singular.

“Learn (it)”, imperfective mode

The expected forms of this verb have an *l*-classifier, an inner prefix *hw-*, and a third-person object as an outer prefix.

(22)	Consultant’s form	Expected form
First-person singular	bihoosh’aah	/bí-hw-iish-l-’aah/ bí-h-oosh-’aah outP-4O-1s-cl-stem
Second-person singular	bihooł’aah	/bí-hw-ii-l-’aah/ bí-h-oo-l-’aah outP-4O-2s-cl-stem
Third-person singular	yihoosh’aah	/yí-hw-ii-l-’aah/ yí-h-oo-l-’aah outP-4O-3s-cl-stem
Fourth-person singular	bihoosh’aah	/bí-hw-j-ii-l-’aah/ bí-ho-j-ii-l-’aah outP-4O-4s-3s-cl-stem
First-person dual	[]	/bí-hw-iiid-l-’aah/ bí-hw-ii-l-’aah outP-4O-1d-cl-stem

Second-person dual	bihooł'aah	/bí-hw-ooh-ł-'aah/ bí-h-oo-ł-'aah outP-4O-2d-cl-stem
First-person plural	[]	/bí-da-hw-iid-ł-'aah/ bí-da-hw-ii-ł-'aah outP-pl-4O-1d-cl-stem
Second-person plural	[]	/bí-da-hw-ooh-ł-'aah/ bí-da-h-oo-ł-'aah outP-pl-4O-2d-cl-stem
Third-person plural	[]	/yí-da-hw-ii-ł-'aah/ yí-da-h-oo-ł-'aah outP-pl-4O-3s-cl-stem
Fourth-person plural	[]	/bí-da-hw-j-ii-ł-'aah/ bí-da-ho-j-ii-ł-'aah outP-pl-4O-4s-3s-cl-stem

The forms in (22) use the long-vowel-imperfective subject prefix set, which is the following:¹⁵

(23)	long-vowel-imperfective subject prefix
first-person singular	iish-
second-person singular	ii-
third-person singular/dual	ii-
first-person dual	iid-
second-person dual	ooh-

This verb is one of the few data to show a conjugation class other than the Ø-imperfective. It is important to note, then, that the consultant's subject prefixes match the expected ones quite closely. A lack of tone makes the only difference between the consultant's forms and the expected forms of the first-person singular, second-person singular, and second-person dual. In the third-person singular, it looks like the consultant used a subject prefix *sh-* instead of the expected *ii-* (which becomes *oo-* after the *hw-* object prefix). The fourth-person singular is conspicuous for its lack of any phoneme resembling *j-*, and for its consistency with the third-person singular in the subject prefix position, which is a consistency we see regularly in traditional Navajo.

¹⁵ These prefixes have slightly different forms when they are preceded by a disjunct prefix.

“Learn (it)”, future mode

The expected forms of this verb have an *l*-classifier, an inner prefix *hw-*, an inner prefix *d-*, and a third-person object as an outer prefix.

(24)	Consultant’s form	Expected form
First-person singular	bihoosh’aał	/bí-hw-y-d-eesh-ł-’áál/ bí-hw-ii-d-eesh-’áál outP-4O-inP-inP-1s-cl-stem
Second-person singular	bihooł’aał	/bí-hw-y-d-í-ł-’áál/ bí-hw-ii-d-í-ł-’áál outP-4O-inP-inP-2s-cl-stem
Third-person singular	yihoosh’aał	/yí-hw-y-d-oo-ł-’áál/ yí-hw-ii-d-oo-ł-’áál outP-4O-inP-inP-3s-cl-stem
Fourth-person singular	bihoosh’aał	/bí-hw-j-y-d-oo-ł-’áál/ bí-hw-ii-zh-d-oo-ł-’áál outP-4O-4s-inP-inP-3s-cl-stem
First-person dual	[]	/bí-hw-y-d-iid-ł-’áál/ bí-hw-ii-d-ii-l-’áál outP-4O-inP-inP-1d-cl-stem
Second-person dual	bihooł’aał	/bí-hw-y-d-ooł-ł-’áál/ bí-hw-ii-d-oo-ł-’áál outP-4O-inP-inP-2d-cl-stem
First-person plural	[]	/bí-da-hw-y-d-iid-ł-’áál/ bí-da-hw-ii-d-ii-l-’áál outP-pl-4O-inP-inP-1d-cl-stem
Second-person plural	[]	/bí-da-hw-y-d-ooł-ł-’áál/ bí-da-hw-ii-d-oo-ł-’áál outP-pl-4O-inP-inP-2d-cl-stem
Third-person plural	[]	/yí-da-hw-y-d-oo-ł-’áál/ yí-da-hw-ii-d-oo-ł-’áál outP-pl-4O-inP-inP-3s-cl-stem
Fourth-person plural	[]	/bí-da-hw-j-y-d-oo-ł-’áál/ bí-da-hw-ii-zh-d-oo-ł-’áál outP-pl-4O-4s-inP-inP-3s-cl-stem

We see here in (24) a process similar to that occurring in (16) and (18); namely, the addition of a *-ł* to the end of the verb to signify the future. Interestingly, the *-ł* replaces an */h/* at the end of the stem in (23). Other than this, the forms are the same as in (23), although the expected forms for the future mode here have a high-tone stem, which is not reflected in the consultant’s forms.

3.3 S-perfective da- shift

An interesting phenomenon occurs sometimes in the plural forms of verbs that use either of two common sets of subject prefixes, namely the y-perfective and the n-perfective. Either all the plural forms of the verb or only the third- and fourth-person plurals make use of the corresponding subject prefixes of the s-perfective set (because these plural forms always contain the distributive plural prefix *da-*, this is often called *da-shift*).

For example, the verb mean “hit (it) (i.e., with a tool)” has the root *-ghaal* in the imperfective, and takes y-perfective subject prefixes in most of its forms. One such form is the third-person singular, which is:

(25)

né - i - d - íí - ł - haal

/ná - y - d - íí - ł - ghaal/

outP - 3O - inP - 1s - cl - stem

The subject prefix in (25) is *íí-*, which is specific to the y-perfective conjugation. However, the third-person plural form, “they hit (it)”, has the following structure:

(26)

ní - de - i - dee - s - xaal

/ná - da - y - d - s - ł - ghaal/

outP - pl - 3O - inP - 3s - cl - stem

In (26), the prefix position reserved for the plural *da-* prefix is occupied, but the subject prefix position is also different from that of (25), having *s-* instead of *íí-*. This *s-* is a subject prefix of the s-perfective conjugation, which means that s-perfective *da-shift*

has occurred here. Had da-shift not taken place, the expected third-person plural form would be:

(27)

ní - de - i - d - íí - ł - haal

/ná - da - y - d - íí - ł - ghaal/

outP - pl - 3O - inP - 3s - cl - stem

S-perfective da-shift is becoming less prevalent in the speech of young Navajos; the acceptability of a non-shifted form varies from speaker to speaker and from verb to verb (Kari 1976, Faltz 1998). Although patterns exist, this da-shift can be mandatory, optional, or never used (Faltz 90). In 1976, Kari wrote that Robert Young believed there was “far greater tolerance of non-shifted plurals...than there was thirty years ago”, and that data from 1912 show “no hint of variation” in da-shift (Kari 268).

Certain outer prefixes tend to trigger perfective da-shift, including *ha-*, *ni-*, *ch'i-*, and *'a-*, although non-shifted forms are not uncommon with these prefixes (Kari 266). Verbs with d- or l-classifiers shift less than those with zero- or ł-classifiers.

My consultant did not produce any verb forms exhibiting da-shift. However, he did not provide any forms at all for the verbs I had identified as probable occurrences of da-shift. Because it is difficult to predict when da-shift may occur, I can not conclusively say that the consultant has lost all environments in which da-shift is possible. Therefore, it remains to be seen whether the consultant retains da-shift in his speech, but his complete loss of the most reliable sources of da-shift suggest that he does not.

3.4 Classifier shift

Classifier shift is a grammatical phenomenon in which certain prefixes trigger the verb's classifier to shift to a different form. Just like s-perfective da-shift, classifier shift is hard to predict, and classifier shifting behavior varies from speaker to speaker (Faltz 313). When classifier shift does occur, it always occurs in the same ways: a zero-classifier becomes a d-classifier, and an l-classifier becomes an l-classifier; d- and l-classifiers do not shift.

No classifier shift occurred in any of the data I collected from my consultant. Two prefixes which often cause classifier shift are the reversionary and the semeliterative; a third prefix automatically accompanies the iterative mode, which is another frequent cause of classifier shift. My speaker produced no iterative mode forms, nor could I elicit any verbs using the semeliterative or reversionary prefixes. The semeliterative prefix, which conveys that a verb's action has already happened and is now happening again, is very similar in form to the independent word *náána*, which means “again”; my consultant used this independent word for all cases in which I expected the semeliterative prefix to be used, reminiscent of his transition to more isolating forms using *nt'éé'* and *dooleel* as discussed in §3.1. Classifier shift occurs with reflexive verbs as well, but the consultant did not produce any reflexive forms.

Although I have no reason to suspect that classifier shift is occurring in any of my elicited data, if it were to occur, it would be impossible to tell for various reasons. One reason is a recurring pattern in my consultant's speech—specifically, the variability of classifiers within a single paradigm. These changing classifiers could not be explained with any single underlying form for the classifier. In (33), for example, the consultant's second-person singular form of “eat” is *'anilyáⁿ*, which suggests an underlying l-

classifier, but his third-person singular form is 'ayáⁿ', which probably indicates an underlying zero classifier. A similar pattern is found in (45), where his third-person singular form of “be at” is *naaghá*, while his second-person singular form of the same verb is *nanilghá*; again, there seems to be a zero classifier in the third-person but an l-classifier in the second-person singular.¹⁶

Furthermore, my consultant often produced a partial paradigm of only a few verb forms. Because certain forms, especially the first-person singular, often alter classifiers phonologically or obscure them completely, it can be impossible to determine classifiers in these minimal paradigms.

For these reasons, I believe it is highly probable that classifier shift as described by Faltz does not occur in my consultant’s speech, but I cannot prove this conclusively.

3.5 Inverse Form

Essentially, Navajo has two distinct third-person object prefixes: <y> and .¹⁷ It has been clearly shown that these two markers are inherited from proto-Athabaskan, yet the true difference in usage (both in proto-Athabaskan and modern Navajo) still eludes linguists (Thompson 81). The most common analysis is to treat *y-* as the default third-person object, and to treat *b-* as a marker of the inverse form, a form in which the verb’s object is also the topic of the whole phrase. In other words, the *b-* object prefix occurs in the verb when the object of the verb precedes the subject.¹⁸

¹⁶ The consultant probably also has an underlying l-classifier for the second-person dual in (33), and derives the surface form of the classifier, *l-*, through a regular voicing assimilation rule. This is interesting as it juxtaposes the retention of phonological rules regarding classifiers with possibly morphological innovations involving classifiers.

¹⁷ The third-person object is also frequently expressed by a null morpheme, but this does not play a role in this discussion.

¹⁸ Implicit in this analysis also is the fact that the *b-* prefix can be found in sentences in which the object is topic, and only the subject is expressed explicitly, “outside the verb” (Faltz 111).

Thompson argues that Subject-Object-Inversion (SOI) and the *yi-/bi-* alternation are two unrelated processes that happen to cooccur very frequently. He presents examples from other Athabaskan languages, showing a looser connection between SOI and the *yi-/bi-* alternation, as well as some examples from Navajo in which the two processes are distinct. However, for my purposes, I did not need to understand the cause of the *yi-/bi-* alternation; I only needed to determine if my consultant retained the alternation in his speech. To do this, I constructed a sentence for elicitation assuming the more widely-accepted analysis. That analysis, however, represents only a means to an end for my purposes.

The sentences used for elicitation are “the dog is biting the boy” and “the dog bit the boy”. Because I was not seeking a full paradigm, but rather a specific combination of subject and object, I have included my consultant’s translation of the entire phrase here, in contrast to the presentation of my other data, which gives only the verb.

“The dog is biting the boy”

Expected form:

(28) Ashkii lééchaaⁿ’í b - ii - ł - hash
 /b - ii - ł - ghash/
 3O - 3s - cl - stem

Consultant’s form:

(29) Ashkii lééchaaⁿ’í bilhash
 3O-cl-stem

“The dog bit the boy”

Expected form:

(30) Ashkii lééchaaⁿ’í bi-sh-xash
 /b-s-ł-ghash/
 3O-3s-cl-stem

Consultant’s form:

(31) Ashkii lééchaaⁿ’í bishnahash

Since they are based on two occurrences of the same phenomenon, I discuss these two examples together. The purpose of this section was to determine whether my speaker's speech exhibits the *yi-/bi-* alternation or not, and it quite clearly does. A bit more can be said about these data, though.

In (29), the consultant's verb is almost identical to the expected form, which is constructed using the long-vowel-imperfective prefix *ii-*. It is difficult to tell whether the consultant is just substituting the \emptyset -imperfective prefix, which is null, or if the vowel difference is due to a discrepancy between the verb's precise meaning in (28) and the English translation I used for elicitation of (29).

In the second sentence, the consultant has added a prefix *na-* between the subject prefix and the stem (or more accurately, between the unseen classifier and the stem). I originally theorized that this *na-* was a form of a prefix indicating repetition (listed in Young and Morgan as *ná*⁵), and that the consultant had omitted the expected high tone and put the prefix in an unorthodox position.¹⁹ The expected form, including the repetitive prefix, would be:

(32) *Ashkii lééchaaⁿ'í nábishxash*²⁰

However, when I directly asked my consultant what *nábishxash* would mean, he explained that *nábishxash* would signify "repeated biting" or "a series of bites", and stood by his definition of *bishnahash* as "one instance of biting". The presence of *na-* in my consultant's form in (31) is thus quite unusual, and I have absolutely no explanation for it. The form in (32) is an example of the repetitive aspect, and the form I elicited is presumably an instance of the semelfactive aspect, which is considered a primary aspect,

¹⁹ There are quite a large number of prefixes in Navajo of the general shape *na-* and *ná-*...

²⁰ Or possibly *Ashkii lééchaaⁿ'í nábishxazh*

but is nevertheless not the most common (Young and Morgan 164). One possible way to investigate this *na-* further would be to elicit forms of this verb with other aspects.

At any rate, the consultant's version is not identical to the expected form in (30). As I noted above, the *ná-* has been inserted between the classifier and the stem. No analysis of Navajo verb structure allows a prefix in this position. Yet the consultant must have either created a nonstandard prefix position, or incorporated the *ná-* into the stem itself. In my opinion, keeping *na-* as a prefix in a new position is more likely, given the consultant's nonstandard order of other prefixes (cf. the discussion of (37) in §3.8) and just how radical such a change in the stem would be; the only stem change, both intramodal and intermodal, that seems to involve the addition of a separate morpheme is the unpredictable addition of *-l* in the future mode.

3.6 Unspecified Object

Transitive verbs in Navajo are usually presented in grammars and dictionaries with third-person objects, even if first- or second-person objects are just as natural. There are two reasons for this: first, for most verbs, the third-person object marker is null unless the subject is third-person as well; second, transitive verbs can be expressed without an explicit object, in a way that focuses attention on the action itself, but these forms require the addition of a prefix, referred to as the unspecified object prefix by Faltz, in the “object prefix” position. The form of this prefix is simply a glottal stop, but its presence can introduce a variety of vowels and influence consonants as well. In the data below, I found that my consultant uses the unspecified object prefix in expected contexts and retains the most basic morphological rules involving this prefix, but not all such rules.

“Eat”, imperfective mode

The expected forms of this verb have a zero classifier and the object prefix '.

(33)	Consultant's form	Expected form
First-person singular	'ashyá ⁿ	/ ' -sh-yá ⁿ / 'a-sh-á ⁿ uO-1s-stem
Second-person singular	'anilyá ⁿ	/ ' -ni-yá ⁿ / 'íyá ⁿ uO-2s-stem
Third-person singular	'ayá ⁿ	/ ' -Ø-yá ⁿ / 'ayá ⁿ uO-3s-stem
Fourth-person singular	[]	/ ' -j-Ø-yá ⁿ / 'ajiyá ⁿ uO-4s-3s-stem
First-person dual	[]	/ ' -iid-yá ⁿ / 'iidá ⁿ uO-1d-stem
Second-person dual	[]	/ ' -oh-yá ⁿ / 'ohsá ⁿ uO-2d-stem
First-person plural	[]	/da- ' -iid-yá ⁿ / da'iidá ⁿ pl-uO-1d-stem
Second-person plural	[]	/da- ' -oh-yá ⁿ / da'ohsá ⁿ pl-uO-2d-stem
Third-person plural	[]	/da- ' -Ø-yá ⁿ / da'ayá ⁿ pl-uO-3s-stem
Fourth-person plural	[]	/da- ' -j-Ø-yá ⁿ / da'jiyá ⁿ pl-uO-4s-3s-stem

In verbs with this prefix, many interesting effects can appear, especially in the perfective mode, which are unexaminable here due to a lack of data. Still, the forms in (33) show something worth examining.

Although they are usually written without one, all of the singular and dual forms in (33) begin with a glottal stop, the unspecified object prefix. For the first-, third-, and fourth-person singular, an epenthetic /a/ is inserted after the glottal stop; the second-person singular is different because of the regular transformation of the second-person

singular subject prefix *ni-* into *i-* after a conjunct prefix. (33) shows that the consultant has not carried out this transformation, but instead has generalized the insertion of an epenthetic /a/ to the second-person singular.

There are two more differences between the consultant's forms and the expected forms in (33). First, the consultant's first-person singular form shows a /y/ not present in the expected form. This /y/ is the initial consonant of the verb stem, and is not present in the expected form of the first-person singular only because the verb is irregular; that is, the consultant has lost an irregularity of the grammar here, but is not violating any standard morphological rules.²¹ The other difference is that the consultant has inserted an /l/ between the second-person singular subject prefix *ni-* and the verb stem. This /l/ could be an l-classifier at odds with the zero-classifier in the expected forms and the consultant's two other forms in (33), or could actually be a component of the subject prefix; by the latter analysis, the consultant has changed the second-person singular subject prefix in (33) from *ni-* to *nil-*. The possibility of a switch to an l-classifier seems much more likely to me.

“Drink”, imperfective mode

The expected forms of this verb have a d-classifier and the object prefix '.

(34)	Consultant's form	Expected form
First-person singular	'ashdloh	/ ' -sh-d-dlá ⁿ / 'a-sh-dlá ⁿ uO-1s-cl-stem
Second-person singular	'anildloh	/ ' -ni-d-dlá ⁿ / '-i-dlá ⁿ uO-2s-cl-stem
Third-person singular	'adloh	/ ' -Ø-d-dlá ⁿ / 'a-dlá ⁿ uO-3s-cl-stem

²¹ This irregularity is discussed more in §3.8.

Fourth-person singular	[]	/ 'j-Ø-d-dlá ⁿ / 'a-ji-dlá ⁿ uO-4s-3s-cl-stem
First-person dual	[]	/ 'iid-d-dlá ⁿ / 'iid-lá ⁿ uO-1d-cl-stem
Second-person dual	[]	/ 'oh-d-dlá ⁿ / 'oh-dlá ⁿ uO-2d-cl-stem
First-person plural	[]	/da-'iid-d-dlá ⁿ / da-'ii-dlá ⁿ pl-uO-1d-cl-stem
Second-person plural	[]	/da-'oh-d-dlá ⁿ / da-'oh-dlá ⁿ pl-uO-2d-cl-stem
Third-person plural	[]	/da-'Ø-d-dlá ⁿ / da-'a-dlá ⁿ pl-uO-3s-cl-stem
Fourth-person plural	[]	/da-'j-Ø-d-dlá ⁿ / da-'ji-dlá ⁿ pl-uO-4s-3s-cl-stem

The forms in (34) show all the same features as (33), with the exception of the irregularity involving the initial consonant of the stem of “to eat”, since (34) involves a different stem. That is, we see again that the consultant has generalized the surface form of the unspecified object prefix as *'a-*, and that an unexpected /l/ has been inserted in the second-person singular. The expected forms in (34) have a d-classifier instead of the zero classifier of (33), but this does not make a difference for our purposes.

Besides these changes, the consultant’s stem in (34) differs from the expected stem. This stem very much looks like it could be a simple modification of any of the stems having to do with drinking;²² on the other hand, it is identical to the progressive stem of the verb meaning “to laugh” or “to smile”. I believe the consultant confused these two

²² The full stem-set for the continuative aspect, which is the aspect I was trying to elicit here, is *-dláⁿ* (imperfective), *-dlááⁿ* (perfective), *-dliⁿl* (future), *-dliⁿh* (iterative), *-dlááⁿ* (optative).

very similar stems in (34), but the difference could very well have local or regional roots, perhaps stemming from the nasal quality of the vowel.

“Dance”, imperfective mode

The expected forms of this verb have an l-classifier and the object prefix ʔ.

(35)	Consultant’s form		Expected form
First-person singular ²³	yishzhiizh	ʔashzhiizh	/ ʔ-sh-l-zhish/ ʔa-sh-zhish uO-1s-cl-stem
Second-person singular	[]		/ ʔ-ni-l-zhish/ ʔ-i-l-zhish uO-2s-cl-stem
Third-person singular	ʔaʔzhiizh		/ ʔ-Ø-l-zhish/ ʔa-l-zhish uO-3s-cl-stem
Fourth-person singular	[]		/ ʔ-j-Ø-l-zhish/ ʔa-ji-l-zhish uO-4s-3s-cl-stem
First-person dual	[]		/ ʔ-iid-l-zhish/ ʔ-ii-l-zhish uO-1d-cl-stem
Second-person dual	[]		/ ʔ-oh-l-zhish/ ʔ-o-ʔ-zhish uO-2d-cl-stem
First-person plural	[]		/da-ʔ-iid-l-zhish/ da-ʔ-ii-l-zhish pl-uO-1d-cl-stem
Second-person plural	[]		/da-ʔ-oh-l-zhish/ da-ʔ-o-ʔ-zhish pl-uO-2d-cl-stem
Third-person plural	[]		/da-ʔ-Ø-l-zhish/ da-ʔ-a-l-zhish pl-uO-3s-cl-stem
Fourth-person plural	[]		/da-ʔ-j-Ø-l-zhish/ da-ʔ-ji-l-zhish pl-uO-4s-3s-cl-stem

Like “eat” and “drink” above, this verb contains the unspecified object prefix, but unlike them, it has no variant form that does not include an unspecified object. This may

²³ My consultant was unable to choose between two different forms for the first-person singular of this verb, so I have presented both here. The split-cell method used here is used elsewhere in the presentation of my data to signify a similar situation.

explain why the consultant had difficulty deciding between the two first-person singular forms in (35); one of his forms contains the unspecified object prefix and is very close to the expected form, but the other form is what we would expect if “dance” did not contain an unspecified object, or if it had a transitive variant.

Otherwise, this verb does not present much that we did not examine in (33) and (34). The stem given by the consultant is actually the expected perfective stem, which is interesting in light of the fact that he could not produce a perfective paradigm. This suggests that the consultant regards the stems of verbs in general as quite distinct from their conglomerations of pre-stem prefixes.

The consultant has also used an *l*-classifier instead of the expected *l*-classifier. This shows the loss of a morphophonological rule that would cause the initial <zh> of the stem to devoice to <sh> and the *l*-classifier to be omitted in this context. The rule is not relevant in the expected forms because we expect an *l*-classifier; if it had applied, the verb might have been presented in the following section regarding “voiced fricative stems”.

3.7 Voiced Fricative Stems

No Navajo verb stems begin with an voiceless consonant in their underlying form. However, their surface form often starts with an voiceless consonant because of rules that devoice stem-initial voiced fricatives in some environments.

Specifically, stem-initial voiced fricatives devoice in most forms when preceded by an *l*-classifier, and when preceded by a zero-classifier which is preceded by <sh>, <s>, or <h>.

My speaker only produced one of the verbs I identified as featuring stem-initial devoicing. This verb shows a single example of devoicing: stem-initial /l/ becomes /h/ in the consultant's first-person singular form in (36). Thus, it remains to be seen how productive this feature is in my consultant's speech.

“Be, have the role of”, imperfective mode

The expected forms of this verb have a zero-classifier and no lexical prefixes.

(36)	Consultant's form	Expected form
First-person singular	nishlí ⁿ	/nish-lí ⁿ / nish-hí ⁿ 1s-stem
Second-person singular	nílí ⁿ	/ní-lí ⁿ / ní-lí ⁿ 2s-stem
Third-person singular	nilí ⁿ	/ni-lí ⁿ / ni-lí ⁿ 3s-stem
Fourth-person singular	[]	/j-ni-lí ⁿ / j-í-lí ⁿ 4s-3s-stem
First-person dual	niidlí ⁿ	/niid-lí ⁿ / niid-lí ⁿ 1d-stem
Second-person dual	neiilí ⁿ	/noh-lí ⁿ / noh-hí ⁿ 2d-stem
First-person plural	daniidlí ⁿ	/da-niid-lí ⁿ / da-niid-lí ⁿ pl-1d-stem
Second-person plural	daneiilí ⁿ	/da-noh-lí ⁿ / da-noh-hí ⁿ pl-2d-stem
Third-person plural	daniilí ⁿ	/da-ni-lí ⁿ / da-ni-lí ⁿ pl-3s-stem
Fourth-person plural	[]	/da-j-ni-lí ⁿ / da-j-í-lí ⁿ pl-4s-3s-stem

This verb is exceptionally well-maintained by the consultant, probably because of high lexical frequency. The only two forms that differ at all from their expected forms

are the second-person dual and the second-person plural. These two forms show an unusual, but consistent (within this paradigm) change in the second-person dual subject prefix; here, it resembles the first-person dual subject prefix. This modification may be due to relative unfamiliarity with the n-imperfective conjugation class, and possibly low lexical frequency of the second-person dual and plural forms of this verb; unfortunately, no other elicited data use the n-imperfective, so it is impossible to further examine the consultant's familiarity with the n-imperfective.

3.8 General Irregulars

My goal in this section is to determine if the consultant would retain expected forms that defy the extensive rules of Navajo morphophonology—that is, forms that are considered “irregular” in conservative Navajo. The differences between the actual forms of these irregular verbs and the forms we would expect when following all the morphophonological rules are all relatively small details. Because these irregularities are miscellaneous, I discuss them here one-by-one.

In (37), the stem-initial <y> is irregularly expected to assimilate to the previous consonant in all first-person forms. The consultant produced this irregularity in the first-person singular, but not the dual or plural, where the consonant remained <y>. Another irregularity, in which the stem-initial <y> is expected to become /s/ in the second-person dual and plural, could not be tested because the consultant failed to produce either of these forms.

The verb (38) does not actually contain any irregularities in traditional Navajo. It is included here because I tried to elicit an actually irregular verb, “to say”. My consultant

did not produce any forms for “say” but offered his forms for “speak” instead. The resulting data do not technically fit into this section, but are still noteworthy.

In (40), the consultant also produced forms of a different verb, one meaning “watch”. This situation is slightly different from that of “say” in that the consultant knew he was substituting a different verb for “say”, while the forms in (40) represent his actual forms for “see it”. Again, the substitution made examination of the expected irregularity impossible.

The final data in this section covers the verb “want it”. There are two irregularities in traditional grammar for the verb “to want it”. The first is that an epenthetic vowel has a high tone in the second-person singular, third-person, and fourth-person forms, but not in the first-person singular. The second is that a rule which contracts an inner prefix with the second-person singular subject prefix *ni-* does not take effect. I found that neither of these irregularities could be examined for my consultant’s forms, for multiple reasons.

First, my consultant’s use of tone is unpredictable, and he tends to omit high-tones completely, as in (41); thus, it is difficult to say whether any loss or retention of tone is related to an irregularity. For the record, one vowel in (42) does have a high-tone, in the second-person singular. Second, the other irregularity consists of the failure of a normal rule of morphology to apply—but my consultant does not execute this rule even when it is expected, so I cannot say that the failure of this rule to apply in the consultant’s form is due to his retention of an irregularity.

“Eat (it)”, imperfective mode

The expected forms of this verb have a zero classifier and no lexical prefixes. Expected forms:

(37)	Consultant’s form	Expected form
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First-person singular	yishshá ⁿ	/yi-sh-yá ⁿ / yi-sh-shá ⁿ peg-1s-stem	
Second-person singular	yinilyá ⁿ	/ni-yá ⁿ / ni-yá ⁿ 2s-stem	
Third-person singular	yiiyá ⁿ	/y-Ø-yá ⁿ / yi-yá ⁿ 3O-3s-stem	
Fourth-person singular	jiiyá ⁿ	/j-Ø-yá ⁿ / ji-yá ⁿ 4s-3s-stem	
First-person dual	yiniilyá ⁿ	/y-iid-yá ⁿ / y-iid-dá ⁿ peg-1d-stem	
Second-person dual	[]	/w-oh-yá ⁿ / w-oh-sá ⁿ peg-2d-stem	
First-person plural	yidaneiiyá ⁿ	/da-iid-yá ⁿ / de-iid-dá ⁿ pl-1d-stem	
Second-person plural	[]	/da-oh-yá ⁿ / da-oh-sá ⁿ pl-2d-stem	
Third-person plural	dayiyá ⁿ	yiiyá ⁿ	/da-y-Ø-yá ⁿ / de-i-yá ⁿ pl-3O-3s-stem
Fourth-person plural	jidayiiyá ⁿ	/da-j-Ø-yá ⁿ / da-ji-yá ⁿ pl-4s-3s-stem	

The verb “to eat” has irregularities on top of the standard Navajo transformations.

The structure of the verb is simple—its stem is -yáⁿ, with no classifier or lexical prefixes.

When appearing next to a voiceless consonant, the initial <y> should devoice to /h/, but here it instead either assimilates to a consonant at the end of the subject prefix (all first-person forms), or becomes /s/ (second person nonsingular).²⁴

²⁴ Strictly speaking, the place of articulation of Navajo <y> is variable; it can stand for IPA /j/ or, before a front vowel, IPA /y/. In this example, it represents IPA /y/, so it can devoice to /h/, or perhaps /x/. The phonemic status of velar and glottal fricatives are somewhat debatable (Reichard 370).

In the consultant's forms we see the irregularity in the first-person singular, but not the other first-person forms. Rather, the /d/ in the subject prefix *iid-* has disappeared, although this is very regular right before the classifiers /l/ and /ʎ/.

Returning to the first-person nonsingulars, it appears as though the consultant has replaced the zero-classifier of this stem with an l-classifier; this is supported by the pre-stem /l/ in the second-person singular *yinilyáʎ*ⁿ. However, this l-classifier does not appear in any of the third-person forms (its presence would be obscured in the first-person singular).

Classifier shift is not rare in Navajo (§3.4 is devoted entirely to it), but I doubt it plays any role here; for one, the classifier would probably shift in all persons. Also, classifier shift occurs in varied but predictable contexts, such as in the iterative mode and with the semeliterative and reversionary, and this is not such a circumstance.

All of the consultant's forms show a *yi-* prefix in some position; however, this verb has no such prefix. The *yi-* that appears sometimes in (37) arises for multiple reasons; as a peg syllable (first-person singular), as the third-person object (third-person singular), and as a “peg consonant” (first-person dual). I speculate that the consultant has reinterpreted the peg syllable *yi-* as a lexical prefix *yi-* (a real lexical prefix in Navajo), or as the third-person object (which normally is zero for all subjects except third person). In fact, I would suggest that the consultant is most familiar with the first-person singular form, not only because its form was identical to my expected form, but also because the first-person singular very often obscures a verb's classifier—it is “sandwiched” between the subject prefix and the initial consonant of the verb stem.

One problem with this interpretation is that the expected third-person singular form would then be *yiyiyáʷ* instead of *yiyáʷ*, but the consultant’s actual form is still plausible, since the underlying form would be *yi-y-yáʷ*, and /y/ often becomes /i/ in other environments. Moreover, this is not a problem at all if the consultant’s prefix *yi-* is the third-person object in the first place.

A bigger problem with this analysis is that the consultant’s placement of *yi-* amidst other disjunct and conjunct prefixes does not let it qualify as either disjunct or conjunct itself. The status of disjunct and conjunct prefixes in the consultant’s paradigm, as we will see below, is otherwise unclear, though, so I believe my analysis is still plausible.

Normally, the distributive plural prefix *da-* occurs as the very first element of the plural forms of this verb. In the third-person plural, we see the fourth-person prefix *j-* has usurped this position—it precedes not only *da-*, but also my posited prefix *yi-*. The relative order of *yi-* and *da-* is unclear; the evidence from the first-person distributive plural contradicts that from the fourth-person distributive plural.

Finally, the recurring *n-* prefix is present in the consultant’s forms here. For a discussion of this unexpected morpheme, see §3.2.

“Speak, talk”, imperfective mode

The expected forms of this verb have an *l*-classifier and one outer prefix, *yá-*.

(38)	Consultant’s form	Expected form
First-person singular	yinishtaʷ	yáshtiʷ
Second-person singular	yiniltaʷ	yáníltiʷ
Third-person singular	yiltaʷ	yáltiʷ
Fourth-person singular	jniltaʷ	yájíltiʷ
First-person dual	yineiiltaʷ	yéiiltiʷ

Second-person dual	yinołta'	yáolti'
First-person plural	dayinilta'	yádeiilti'
Second-person plural	danołta'	yádaolti'
Third-person plural	dayilta'	yádaalti'
Fourth-person plural	[]	yádajilti'

The /n/ we have observed in unexpected places in the consultant's speech is more prominent here, but now there is a very specific reason. The consultant has, in fact, used the *yn-* inner prefix here, because he is probably giving the forms for a different but very similar verb, one which means "to read it" or "to count it". These verbs are superficially quite similar (compare especially the second-person singular forms *yánilti* 'you are talking' and *yínilta* 'you are reading/counting it'), and arguably lie in roughly the same semantic field. Here are the expected forms of the other verb:

"Read, count (it)", imperfective mode

The expected forms of this verb have an l-classifier, an inner prefix *yn*, and an inner high-tone prefix.

(39)	Consultant's form		Expected form
First-person singular	yi(ni)shta'		yínishta'
Second-person singular	[]		yínilta'
Third-person singular	yołta'	yilta'	yólta'
Fourth-person singular	[]		jólta'
First-person dual	[]		yínilta'
Second-person dual	[]		yínólta'
First-person plural	[]		deínilta'
Second-person plural	[]		deínólta'
Third-person plural	[]		dayólta'
Fourth-person plural	[]		dajólta'

If the consultant did indeed confuse the verbs "to speak" and "to read it" semantically, we should analyze his produced forms with the expected forms of "to read it". From this perspective, the consultant's forms are very close to the expected ones. In the first-

person singular and the second-person dual, the only differences are the high-tones in the “textbook” forms. Now, although in this verb the *yn-* prefix and high-tone prefix are fused, they can occur separately in different verbs—so it looks like the consultant has just left out the high-tone prefix.

The second-person singular shows that the consultant has omitted the high-tone prefix, but also that he has given this verb an l-classifier, a fact that was obscured by the regular transformation of the l-classifier into /l/ after the second-person nonsingular subject prefix *oh-*. the consultant’s first-person dual lacks a high-tone prefix, and has an additional, unexpected vowel immediately following the /n/, much like in the consultant’s first-person plural form of “to eat it”.

The third- and fourth-person singular forms are not so easy to analyze, but they probably result from simplification of the surface forms of the *yn-* prefix, which are very irregular when they combine with the third-person subject prefix in the imperfective mode. Here, the subject prefix and *yn-* prefix have combined to give *o-*, a very unintuitive form; the consultant’s modification of it is not surprising.

The plural forms are not surprising, either. The first-person dual subject prefix in (38) is *iniid-*, so the consultant has shortened the second vowel and inserted an initial /y/,

“See (it)”, imperfective mode

(40)	Consultant’s form	Expected form
First-person singular	di-ni-sh- <i>i</i> ⁿ inP-inP-1s-stem	/yish-’ <i>i</i> ⁿ / yish-’ <i>i</i> ⁿ 1s-stem
Second-person singular	di-n-i-l-yi ⁿ inP-inP-2s-cl-stem	/yíni-’ <i>i</i> ⁿ / yíni-’ <i>i</i> ⁿ 2s-stem
Third-person singular	[]	/y-oo-’ <i>i</i> ⁿ / y-oo-’ <i>i</i> ⁿ 3O-3s-stem

Fourth-person singular	[]	/j-oo-’i ⁿ / j-oo-’i ⁿ 4s-3s-stem
First-person dual	[]	/yiid-’i ⁿ / yiit-’i ⁿ 1d-stem
Second-person dual	[]	/woh-’i ⁿ / woh’i ⁿ 2d-stem
First-person plural	[]	/da-iid-’i ⁿ / de-iit-’i ⁿ pl-1d-stem
Second-person plural	[]	/da-oh-’i ⁿ / da-oh-’i ⁿ pl-2d-stem
Third-person plural	[]	/da-y-oo-’i ⁿ / da-y-oo-’i ⁿ pl-3O-3s-stem
Fourth-person plural	[]	/da-j-oo-’i ⁿ / da-j-oo-’i ⁿ pl-4s-3s-stem

The Navajo verb “to see it” is only used in the imperfective mode (of course, sight can be expressed in other modes, but a different stem must be used). This is not rare in Navajo; many verbs are “neuter”, meaning they can be conjugated in only one mode (not always the imperfective). What sets this verb apart is that despite its fixture in the imperfective, its forms use the subject prefixes normally found in the perfective mode forms of certain verbs—specifically, *yish-* for the first-person singular and *yíni-* for the second-person singular.²⁵

Comparing the consultant’s forms with the expected forms in (40), we see that while the stems are fairly similar, the consultant’s forms contain some inner prefixes absent in the expected form. These expected forms resemble a different but related verb, one meaning “watch” or “gaze”; its forms are presented below:

²⁵ Strictly speaking, the subject prefixes used for this verb don’t exactly much up with any other sets of subject prefixes, but they come very close to it.

“Watch it”, imperfective mode

This verb is neuter, with irregular subject prefixes. It has an l-classifier.

(41)	Consultant’s form from (40)	Expected form
First-person singular	dinishí ⁿ	/dínish-l-’í ⁿ / dínish-’í ⁿ 1s-cl-stem
Second-person singular	dinilyí ⁿ	/díní-l-’í ⁿ / díní-l-’í ⁿ 2s-cl-stem
Third-person singular	[]	/déés-l-’í ⁿ / déés-’í ⁿ 3s-cl-stem
Fourth-person singular	[]	/j-déés-l-’í ⁿ / ji-déés-’í ⁿ 4s-3s-cl-stem
First-person dual	[]	/díníid-l-’í ⁿ / díníi-l-’í ⁿ 1d-cl-stem
Second-person dual	[]	/dínóh-l-’í ⁿ / dínó-ł-’í ⁿ 2d-cl-stem
First-person plural	[]	/da-díníid-l-’í ⁿ / da-díníi-l-’í ⁿ pl-1d-cl-stem
Second-person plural	[]	/da-dínóh-l-’í ⁿ / da-dínó-ł-’í ⁿ pl-2d-cl-stem
Third-person plural	[]	/da-déés-l-’í ⁿ / da-déés-’í ⁿ pl-3s-cl-stem
Fourth-person plural	[]	/da-j-déés-l-’í ⁿ / da-zh-déés-’í ⁿ pl-4s-3s-cl-stem

A conspicuous feature of the consultant’s forms is the total lack of high-tone—we have seen this leveling of tone in earlier data. The modifications in the stem are also interesting; the consultant’s forms in (41) bear some resemblance to his form in (37), in that an l-classifier is inserted in the second-person singular, and the onset of the stem syllable is variable. In fact, the stems in (41) and (37) are variable in the same ways; a hypothetical consonant is deleted (or assimilates to <sh>) in the first-person singular,

while the second-person singular shows a stem-initial <y>. This could be evidence that the verb “eat” has imposed some influence on this verb.

“Want (it)”, imperfective mode

The expected forms of this verb have a zero classifier and an inner prefix *n-*.

(42)	Consultant’s form	Expected form
First-person singular	nissin	/n-sh-zin/ ni-s-sin inP-1s-stem
Second-person singular	ninízin	/n-ni-zin/ ní-ní-zin inP-2s-stem
Third-person singular	[]	/y-n-Ø-zin/ yi-ní-zin 3O-inP-3s-stem
Fourth-person singular	[]	/j-n-Ø-zin/ ji-ní-zin 4s-inP-3s-stem
First-person dual	niniilzin	/n-iid-zin/ n-iid-zin inP-1d-stem
Second-person dual	nilhozin	/n-oh-zin/ n-oh-sin inP-2d-stem
First-person plural	ndaniilzin	/da-n-iid-zin/ da-n-iid-zin pl-inP-1d-stem
Second-person plural	ndanolzin	/da-n-oh-zin/ da-n-oh-sin pl-inP-2d-stem
Third-person plural	[]	/da-y-n-Ø-zin/ de-i-ní-zin pl-3O-inP-3s-stem
Fourth-person plural	[]	/da-j-n-Ø-zin/ da-zh-ní-zin pl-4s-inP-3s-stem

There are two irregularities in traditional grammar for the verb “to want it”. The first is that the epenthetic vowel arising from the *n-* inner prefix has a high tone in the second-person singular, third-person, and fourth-person forms, but not in the first-person singular (this causes the second-person singular subject prefix *ni-* to become *ní-* via a kind of tone

harmony). The second is that a rule which contracts an inner prefix with the second-person singular subject prefix *ni-* does not take effect; if this rule had taken effect, the expected form would be just *nízin*.

My consultant does not have the high tone in the *ni-* lexical prefix in the second-person singular; this is not very surprising, as the environments conditioning tone in lexical prefixes are often very complex. There may be more to this than meets the eye, though, as the consultant has retained the high tone in the subject prefix. It is possible that the consultant truly has retained this second high tone but lost the conditioning environment—the high tone of the first prefix. A possible alternative is that the consultant kept the high tone in the first prefix, did *not* raise the tone in the subject prefix, and then metathesized this, to produce the observed form. Truthfully, it is very difficult to say why the consultant might have kept a high-tone on the second vowel, but not the first.

For this verb, which normally has a zero classifier, the consultant has again inserted an l-classifier, but only in the dual and plural forms.

It looks like the consultant has also inserted a *second* /n/ prefix before the first-person dual subject marker, as in “to eat it”. This, along with the posited l-classifier, fully accounts for the first-person dual form. It almost accounts for the first-person plural as well; however, for the plural we must also note that the /n/ prefix precedes the plural marker *da*, which means that the consultant is treating this /n/ prefix as an outer prefix instead of the textbook’s inner prefix.

The second-person dual is puzzling, but not complicated. I propose that the consultant metathesized the classifier and the subject prefix, as well as the phonemes of the subject

prefix itself; thus, he made *oh-l* into *l-ho*. Interestingly, the consultant does not reproduce this process for the second-person plural; in this form, the classifier comes after the subject prefix, and the *h* in the subject prefix is “swallowed up” by the l-classifier, as it normally would be. The l-classifier should become ɫ on the surface, though, through the influence of this *h*, and it does not. Lastly, we see two n- prefixes in the second-person plural here. This is probably from analogy with the first-person plural form, but is striking considering he did not add a second *n-* prefix to the second-person dual form.

3.9 s-Perfective subject prefix contractions

The subject prefixes of the s-perfective conjugation, and in particular the /s/ within them, are not always visible when a verb form contains an inner prefix. Some inner prefixes are said to “contract” with the s-perfective subject prefixes; basically, this means that the inner prefix has unusual phonological effects on the subject prefix. When dealing with other subject prefixes, we expect a preceding inner prefix to gain an epenthetic *i-* if the subject prefix begins with a consonant, like so:

(43)

d – sh – ɫ – yíⁿh
 di – sh – híⁿh
 inP – ɫs – cl – stem

The verb in (43) means “I am melting it (i.e., metal)”. Before the stem, we have *d-sh* underlyingly, but *dish-* on the surface. This is very different for s-perfective subject prefixes; if the subject prefix in (43) were the s-perfective first-person singular *sé-*, the resulting form would be *déyíⁿh* (as it so happens, this verb is conjugated with the y-perfective, so *déyíⁿh* does not exist).

Because I was only able to elicit two verbs conjugated in the perfective mode, I did not have much of an opportunity to examine s-perfective subject prefix contractions in my consultant's speech. Of the two perfective verbs, only (44) contained an inner prefix. In (44), we see that the consultant produced the correct "contraction" for six of the nine forms; the other three forms differ from the expected contractions, but do not follow the basic rule of epenthetic *i*-insertion either. It is impossible to say whether these three forms represent changes to the expected contracted forms, or they represent the substitution of few subject prefixes from an alternative subject prefix set, perhaps the \emptyset -imperfective.

With such little data, no conclusions can be drawn, except that in at least the example of (44), admittedly a verb with high lexical frequency, there is little or no analogy with the non-contracting forms found in every other subject prefix set in the language (Faltz 207).

3.10 Different roots for "to go"

A strange facet of the generic verb meaning "to go" in Navajo is the tripartite variation in the stem; the three different forms are so completely different that they cannot share a common underlying or historical form. This situation is much like English "go" and "went", although the three different stems in Navajo are found within the same mode.

There is one stem for singular subjects, a second for dual subjects, and a third for plural subjects. Furthermore, the underlying form of the singular-subject stem is somewhat hard to pin down, with irregularities arising from different subject prefixes. That being said, the three stems in the imperfective mode are something like *-Xá*, *-'aash*,

and *-kai*. The *X* here is a variable which can be replaced by a few different consonants or by nothing at all.

The consultant showed in (44) that he maintains this tripartite variation completely; however, in (45), he did *not* use the three different stems, instead generalizing the *-Xá* stem to the dual and plural forms. I had not expected such conflicting results, and this discrepancy would make an excellent subject of further research.

“Be on one’s way to”, perfective mode

The expected forms of this verb have a zero classifier in the singular and dual, and a *d*-classifier in the plural. All forms have an inner prefix *d-*.²⁶

(44)	Consultant’s form	Expected form
First-person singular	dé-yá inP-1s-stem	/d-sé-yá/ dé-yá inP-1s-stem
Second-person singular	díní-1-yá inP-2s-cl-stem	/d-síní-yá/ díní-yá inP-2s-stem
Third-person singular	dee-yá	/d-z-yá/ dee-yá inP-3s-stem
Fourth-person singular	[]	/j-d-z-yá/ ji-dee-yá 4s-inP-3s-stem
First-person dual	deet’áásh	/d-siid-’áázh/ deet-’áázh inP-1d-stem
Second-person dual	deeh’áázh	/d-soo-’áázh/ dishoo-’áázh inP-2d-stem
Third-person dual	dee’áázh	/d-z-’áázh/ deezh-’áázh inP-3s-stem
Fourth-person dual	[]	/j-d-z-’áázh/ ji-deezh-’áázh 4s-inP-3s-stem

²⁶ I have marked the consultant’s plural forms with asterisks because, while he produced these forms as I have written, he was unsure which form corresponded to which person. I have placed these forms in the order seen in (32) so that two of the consultant’s forms match the corresponding expected forms exactly; that is, without any reason to order these forms in a particular way, I have assumed the order should match the expected forms as closely as possible.

First-person plural	deekai*	/d-siid-d-kai/ dee-kai inP-1d-cl-stem
Second-person plural	deikai*	/d-sooh-d-kai/ disooh-kai inP-2d-cl-stem
Third-person plural	deeskai*	/d-s-d-kai/ dees-kai inP-3s-cl-stem
Fourth-person plural	[]	/j-d-s-d-kai/ ji-dees-kai 4s-inP-3s-cl-stem

Despite the English sentence used for elicitation, these verbs are conjugated in the perfective mode. My initial goal in eliciting this verb was to see if the consultant would use three different stems. He clearly does so, but there is a little more to analyze in the forms he produced. The consultant has reproduced the singular forms with little variation; the only discrepancies are in the second-person singular, where he omitted the high tone on the first vowel in the second-person singular form and added an l-classifier in the same form.

The consultant's first-person dual form is very close to the expected form; the only difference is that he devoiced the final consonant of the stem. This is conspicuous, considering he left the same consonant voiced in the other dual forms; it may have to do with the fact that the imperfective mode counterpart of -'áázh is -'aash. The consultant's third-person dual form is also close to the expected form; the consultant has omitted the third-person subject marker. This is not strange at all, considering that the third-person subject marker is often a null morpheme in the imperfective mode, and that, more importantly, the third-person singular form of this verb omits its subject marker for no regular reason.

On the other hand, the form the consultant produced for the second-person dual is a little farther from the expected form. It is probably a result of the consultant generalizing the *ee* vowel from the other two dual subject prefixes, along with the tendency for the second-person dual subject prefix to end in /h/.

“Be at”, imperfective mode

The expected forms of this verb have a zero classifier in the singular and dual, and a d-classifier in the plural. All forms have an outer prefix *na-*.

(45)	Consultant's form	Expected form
First-person singular	naashá	/na-sh-Xá/ naa-sh-á outP-1s-stem
Second-person singular	nanilghá	/na-ni-Xá/ na-ni-ná outP-2s-stem
Third-person singular	naaghá	/na-Ø-Xá/ naa-ghá outP-3s-stem
Fourth-person singular	[]	/na-j-Ø-Xá/ ni-ji-ghá outP-4s-3s-stem
First-person dual	nayighá	/na-iid-'aash/ ne-iit-'aash outP-1d-stem
Second-person dual	nanolná	/na-oh-'aash/ na-oh-'aash outP-2d-stem
Third-person dual	naaghá	/na-Ø-'aash/ naa-'aash outP-3s-stem
Fourth-person dual	[]	/na-j-Ø-'aash/ ni-ji-'aash outP-4s-3s-stem
First-person plural	daniyighá	/na-da-iid-d-kai/ ni-de-ii-kai outP-pl-1d-cl-stem
Second-person plural	dananolná	/na-da-oh-d-kai/ ni-da-oh-kai outP-pl-2d-cl-stem
Third-person plural	danaaghá	/na-da-Ø-d-kai/ ni-daa-kai outP-pl-3s-cl-stem

Fourth-person plural	[]	/na-da-j-Ø-d-kai/ ni-da-ji-kai outP-pl-4s-3s-cl-stem
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Having found that the consultant retained the three different number-dependent stems for the verb “to be on one’s way to”, it was interesting to see that he applied the singular stem to the dual and plural here. This is the most variable of the three stems, as well.

It looks as though the consultant has mostly gotten rid of the irregularity in the stem-initial consonant of the *-Xá* stem—the majority of the forms in (45) have a stem of the form *-ghá*. In the second-person singular, we would normally expect to see a stem *-ná*, but it is remarkable that this form of the stem might be absent because the consultant inserted an *l*-classifier, thus separating the subject prefix and the stem. An *l*-classifier has also been inserted in the second-person dual and plural, but it has become *l-* through a regular phonological process.

We also see strong evidence here that the consultant has reanalyzed the *na-* prefix as an inner prefix, as it follows the plural marker *da-* in all three elicited plural forms.

3.11 Classification by type of matter

For many verbs involving motion and handling, Navajo grammatically distinguishes the physical nature of the verb’s subjects and objects with entirely different verb roots. The language has twelve to fourteen categories of this type, depending on the speaker or source referenced. These categories have been given standardized names and abbreviations by linguists, which reflect a necessarily vague description of the nouns fitting in each category. The great generality of the descriptions cannot be avoided because of the wide variety of the nouns included in each category, which also contain nouns that do not fit the category description by any means, but follow some sort of

pattern. For example, the category called “slender flexible objects” and abbreviated SFO is comprised of things like ropes and snakes, but also naturally-paired objects such as socks, and sundry other groupings like bands of people (Young 7).

The following is a list of the categories, with their usual descriptions and abbreviations, and the noun I used to elicit the particular verb. I created the abbreviations marked with an asterisk myself; the others can be found in many sources, including Young and Morgan 1987.

1. Solid roundish object (SRO): “ball”
2. Load, pack, or burden (LPB): “four big books, being carried”
3. Non-compact matter (NCM): “grass”
4. Slender flexible object (SFO): “rope”
5. Slender stiff object (SSO): “stick”
6. Flat flexible object (FFO): “blanket”
7. Mushy matter (MM): “mud”
8. Open container (OC): “glass of water”
9. Animate object (ANO): “cat”
10. Anything carried on the back (BACK)*: “backpack”
11. Anything on a handle or string (HS)*: suitcase
12. Anything that moves in streams (STR)*: gasoline
13. Plural objects, usually small in number and each being relatively large in size (PLOa): “four big books”
14. Plural objects, usually greater in number and each being smaller in size (PLOB): “many coins”

My consultant produced ten of the fourteen stems listed above, giving forms that were very similar to the expected stem in all but one case. The missing classes were “mushy matter”, “many plural objects” (PLOb), “handle/string”, and “streaming matter”. These four were regarded differently by my consultant, however; the first two were clearly familiar categories to him, while the latter two were completely foreign. Ultimately, the consultant used the NCM stem for “mushy matter”, and the PLOa stem for “many plural objects” (PLOb). Aware that the verb stems were not the traditionally correct ones, he stated that he sometimes uses one class instead of another when he cannot recall the original class’s verb stem fast enough.

The consultant’s forms throughout this section are remarkably close to the expected forms. This can be attributed to two factors. First, the structure of the verbs are all very similar, with classifier, subject prefix, and the occasional presence of the fourth-person subject or marked third-person object being the only differences between underlying forms. Second, when asked specifically about his retention of these forms, the consultant explained that these verb stems are among the most frequently used for him personally, because his family uses them at the dinner table to request food or drink. He reports that he uses the SRO, LPB, OC, ANO, and BACK stems the most often.

“Pick up a SRO”, imperfective mode²⁷

(46)	Consultant’s form	Expected form
First-person singular	ńdiish’ aah	/ná-d-iish-’ aah/ ní-d-iish-’ aah outP-inP-1s-stem
Second-person singular	ńdii’ aah	/ná-d-ii-’ aah/ ní-d-ii-’ aah outP-inP-2s-stem

²⁷ Throughout this section, my consultant consistently produced the prefix *ní- as ń-*. This is a widespread form and is by no means indicative of language attrition.

Third-person singular	ńeidi'aah	/ná-y-d-ii-'aah/ né-i-d-ii-'aah outP-3O-inP-3s-stem
Fourth-person singular	[]	/ná-j-d-ii-'aah/ ní-zh-d-ii-'aah outP-4s-inP-3s-stem
First-person dual	ńdii'aah	/ná-d-iid-'aah/ ní-d-iit-'aah outP-inP-1d-stem
Second-person dual	ńdoh'aah	/ná-d-oooh-'aah/ ní-d-oooh-'aah outP-inP-2d-stem
First-person plural	ńdadi'aah	/ná-da-d-iid-'aah/ ní-da-d-iit-'aah outP-pl-inP-1d-stem
Second-person plural	ńdadoh'aah	/ná-da-d-oooh-'aah/ ní-da-d-oooh-'aah outP-pl-inP-2d-stem
Third-person plural	ńdeidii'aah	/ná-da-y-d-ii-'aah/ ní-de-i-d-ii-'aah outP-pl-3O-inP-3s-stem
Fourth-person plural	[]	/ná-da-j-d-ii-'aah/ ní-da-zh-d-ii-'aah outP-pl-4s-inP-3s-stem

“Pick up a LPB”, imperfective mode

(47)	Consultant's form	Expected form
First-person singular	ńdiishyeeh	ńídiishxeeh
Second-person singular	ńdiiyeeh	ńídiiyeeh
Third-person singular	ńeidiyeeh	ńéidiiyeeh
Fourth-person singular	[]	ńízhdiiyeeh
First-person dual	ńdiiyeeh	ńídiigeeh
Second-person dual	ńdohyeeh	ńídoohxeeh
First-person plural	ńdadiyeeh	ńídadiigeeh
Second-person plural	ńdadohyeeh	ńídadoohxeeh
Third-person plural	ńdeidiiyeeh	ńídeidiiyeeh
Fourth-person plural	[]	ńídazhdiiyeeh

“Pick up NCM”, imperfective mode

(48)	Consultant's form	Expected form
First-person singular	ńdiishjooł	ńídiishjooł
Second-person singular	ńdiiljooł	ńídiiljooł
Third-person singular	ńeidiljooł	ńéidiiljooł
Fourth-person singular	[]	ńízhdiiljooł
First-person dual	ńdiiljooł	ńídiiljooł

Second-person dual	ńdohjooł	ńidoooljooł
First-person plural	ńdadiłjooł	ńidadiiljooł
Second-person plural	ńdadohljooł	ńidadooljooł
Third-person plural	ńdeidiiljooł	ńideidiiljooł
Fourth-person plural	[]	ńidazhdiiljooł

“Pick up a SFO”, imperfective mode

(49)	Consultant’s form	Expected form
First-person singular	ńdiishlé	ńidiishlé
Second-person singular	ńdiilé	ńidiilé
Third-person singular	ńeidilé	ńeidiilé
Fourth-person singular	[]	ńízhdiilé
First-person dual	ńdiilé	ńidiilyé
Second-person dual	ńdohlé	ńidoohlé
First-person plural	ńdadilé	ńidadiilyé
Second-person plural	ńdadohlé	ńidadoohlé
Third-person plural	ńdeidiilé	ńideidiilé
Fourth-person plural	[]	ńidazhdiilé

“Pick up a SSO”, imperfective mode

(50)	Consultant’s form	Expected form
First-person singular	ńdiishtłe	ńidiishtii ^h
Second-person singular	ńdiitłe	ńidiitii ^h
Third-person singular	ńeiditłe	ńeidiitii ^h
Fourth-person singular	[]	ńízhdiitii ^h
First-person dual	ńdiitłe	ńidiitii ^h
Second-person dual	ńdohtłe	ńidoohtii ^h
First-person plural	ńdaditłe	ńidadiitii ^h
Second-person plural	ńdadohtłe	ńidadoohtii ^h
Third-person plural	ńdeidiitłe	ńideidiitii ^h
Fourth-person plural	[]	ńidazhdiitii ^h

“Pick up a FFO”, imperfective mode

(51)	Consultant’s form	Expected form
First-person singular	ńdiishtsoos	ńidiistsóos
Second-person singular	ńdiiltsoos	ńidiiltsóos
Third-person singular	ńeidiltsoos	ńeidiiltsóos
Fourth-person singular	[]	ńízhdiiltsóos
First-person dual	ńdiiltsoos	ńidiiltsóos
Second-person dual	ńdohtsoos	ńidooltsóos
First-person plural	ńdadiiltsoos	ńidadiiltsóos
Second-person plural	ńdadohltssoos	ńidadooltsóos
Third-person plural	ńdeidiiltsoos	ńideidiiltsóos
Fourth-person plural	[]	ńidazhdiiltsóos

“Pick up an OC”, imperfective mode

(52)	Consultant’s form	Expected form
First-person singular	ńdiishkaah	ńídiishkaah
Second-person singular	ńdiikaah	ńídiikaah
Third-person singular	ńeidikaah	ńéidiikaah
Fourth-person singular	[]	ńízhdiikaah
First-person dual	ńdiikaah	ńídiikaah
Second-person dual	ńdohkaah	ńídoohkaah
First-person plural	ńdadikaah	ńídadiikaah
Second-person plural	ńdadohkaah	ńídadoohkaah
Third-person plural	ńdeidiikaah	ńídeidiikaah
Fourth-person plural	[]	ńídazhdiikaah

“Pick up an ANO”, imperfective mode

(53)	Consultant’s form	Expected form
First-person singular	ńdiishteeh	ńídiishteeh
Second-person singular	ńdiilteeh	ńídiilteeh
Third-person singular	ńeidilteeh	ńéidiilteeh
Fourth-person singular	[]	ńízhdiilteeh
First-person dual	ńdiilteeh	ńídiilteeh
Second-person dual	ńdohteeh	ńídoolteeh
First-person plural	ńdadiilteeh	ńídadiilteeh
Second-person plural	ńdadohlteeh	ńídadoolteeh
Third-person plural	ńdeidiilteeh	ńídeidiilteeh
Fourth-person plural	[]	ńídazhdiilteeh

“Pick up a BACK”, imperfective mode

(54)	Consultant’s form	Expected form
First-person singular	ńdiishjiid	ńídiishjiid
Second-person singular	ńdiiljiid	ńídiiljiid
Third-person singular	ńeidiljiid	ńéidiiljiid
Fourth-person singular	[]	ńízhdiiljiid
First-person dual	ńdiiljiid	ńídiiljiid
Second-person dual	ńdohjiid	ńídooljiid
First-person plural	ńdadiiljiid	ńídadiiljiid
Second-person plural	ńdadohljiid	ńídadooljiid
Third-person plural	ńdeidiiljiid	ńídeidiiljiid
Fourth-person plural	[]	ńídazhdiiljiid

“Pick up PLOa”, imperfective mode

(55)	Consultant’s form	Expected form
First-person singular	ńdiishniit	ńídiishniit
Second-person singular	ńdiiniiit	ńídiiniiit
Third-person singular	ńeidiniiit	ńéidiiniiit
Fourth-person singular	[]	ńízhdiiniiit

First-person dual	ńdiinił	ńdii'ńił
Second-person dual	ńdohnił	ńdoohnił
First-person plural	ńdadinił	ńdadii'ńił
Second-person plural	ńdadohnił	ńdadoohnił
Third-person plural	ńdeidiinił	ńdeidiinił
Fourth-person plural	[]	ńdazhdiinił

3.12 Seriative

The seriative prefix is an important inner prefix that generally means that some action is repeated in a series of events. For example, verb forms meaning “hop along (like a rabbit)”, “make a series of payments”, and “load things into a car, one at a time” all use the seriative (Faltz 340). Some verbs contain the seriative prefix even if they do not seem to semantically involve any repetitive, serial action; one such verb is “buy”. The seriative is particularly interesting because of the many surface forms it takes on: it can begin with *h-* or *y-* (and in the latter form can become *ii-*), undergo vowel harmony, contract with *s-* perfective subject prefixes, and move around to different positions within the verb.

These qualities made the seriative prefix an excellent grammatical feature to examine in this thesis. Although I was only able to elicit one partial paradigm, “buy (it)”, some morphological simplification was clear from just three verb forms.

In (56), the expected third-person singular form includes the seriative in its *y-* allomorph because it follows an object prefix; this *y-* becomes *ii-* between the two consonants in this verb form. My consultant omitted the third-person object and kept the seriative in its *h-* form in his third-person singular form; while this produces a form unlike the expected version, it suggests that he follows the rule prescribing when seriative *h-* becomes *y-*.

My consultant’s forms in (56) exhibit vowel harmony, but not all the rules of vowel harmony are obeyed. One rule, which is broken in my consultant’s second-person

singular form, is that for vowel harmony to take place, a syllable starting with the seriative *h-* must be the syllable immediately preceding the verb stem. In my consultant's second-person singular, the syllable *nił* comes in-between the stem and the seriative syllable *hi*, but *hi* changes to *ha* to harmonize with *na*, the previous syllable, regardless.

The syllable containing the seriative became *ha* in all three forms produced by my consultant. Unfortunately, it is impossible to determine whether this is a coincidence, or if my consultant has frozen the seriative prefix in the form *ha-* instead. The answer would have implications for the analysis of further features of this verb discussed below.

“Buy it”, imperfective mode

The expected forms of this verb have an *ł*-classifier and the seriative inner prefix, *h-*. They use the \emptyset -imperfective subject prefixes.

(56)	Consultant's form	Expected form
First-person singular	nahashnii ⁿ h	/na-h-sh-ł-niih/ na-ha-sh-niih outP-inP-1s-cl-stem
Second-person singular	nahaniłnii ⁿ h	/na-h-ni-ł-niih/ na-h-ı-ł-niih outP-inP-2s-cl-stem
Third-person singular	nahanii ⁿ h	/na-y-h- \emptyset -ł-niih/ na-y-ii-ł-niih outP-3O-inP-3s-cl-stem
Fourth-person singular	[]	/na-j-h- \emptyset -ł-niih/ ni-j-ii-ł-niih outP-4s-inP-3s-cl-stem
First-person dual	[]	/na-h-ii-ł-niih/ na-h-ii-l-niih outP-inP-1d-cl-stem
Second-person dual	[]	/na-h-oh-ł-niih/ na-h-o-ł-niih outP-inP-2d-cl-stem
First-person plural	[]	/na-da-h-ii-ł-niih/ ni-da-h-ii-l-niih outP-pl-inP-1d-cl-stem
Second-person plural	[]	/na-da-h-oh-ł-niih/ ni-da-h-o-ł-niih outP-pl-inP-2d-cl-stem

Third-person plural	[]	/na-da-y-h-Ø-l-niih/ ni-da-y-ii-l-niih outP-pl-3O-inP-3s-cl-stem
Fourth-person plural	[]	/na-da-j-h-Ø-l-niih/ ni-da-j-ii-l-niih outP-pl-4s-inP-3s-cl-stem

The expected form of the verb in (56) has a stem *-niih*, which my consultant consistently produced as *-niiⁿh*. This has no bearing on any other elements of the verb, though.

In the second-person singular, my consultant has not observed a rule that turns the second-person singular subject prefix *ni-* into *i-* after a consonant at the end of a conjunct prefix, a process which occurs in the second-person singular expected form. The failure to follow this rule leads the seriative syllable to gain an epenthetic vowel, becoming *hi-* and then changing to *ha-* due to vowel harmony. Alternatively, my consultant may have reinterpreted the seriative prefix so that *ha-* is now the underlying form. In this case, the rule changing *ni-* into *i-* would not come into play, as *ni-* does not immediately follow a consonant.

Comparing the third-person singular forms in (56), we see that the consultant has dropped the third-person object, or has made it a null morpheme (as in the forms with first- and second-person subjects). As noted above, this has a conspicuous effect on the surface form of the seriative prefix. The consultant has also given the third-person singular form in (56) a zero-classifier. I find no explanation for this, but it does follow the general trend in the consultant's data of using *l-* or *l-* classifiers with second-person singular forms, and zero-classifiers with third-person forms.

3.13 Sibilant Consonant Harmony

In addition to the limited vowel harmony that accompanies the seriative prefix, Navajo exhibits sibilant consonant harmony. The ten sibilant phonemes in Navajo can be split into two groups: alveolar and postalveolar. Each alveolar sibilant has a corresponding postalveolar sibilant, as in the following table:

(57)

Alveolar	Postalveolar
s	sh
z	zh
ts	ch
dz	j
ts'	ch'

A verb stem cannot contain morphemes from both of these groups. If a verb stem has at least one sibilant, then any subject prefixes on that stem that contain sibilants from the other group must be “harmonized” to the corresponding sibilant in the stem sibilant’s group. For example, the perfective verb stem *-nish* (meaning “work”) contains a postalveolar consonant. It has an l-classifier and takes the s-perfective conjugation, so the first-person singular subject prefix is *sis-*. An interlinear gloss is given below:

(58)

/na – sis – l – nish/

[ni – shish – nish]

outP – 1s – cl – stem

The surface form of the verb, *nishishnish* (“I worked”), contains only postalveolar sibilants.

Faltz reports that sibilant consonant harmony is universal for some speakers—that is, all sibilants in a word will harmonize with a sibilant in the stem, instead of just sibilants in subject prefixes (119).

My consultant could not remember any forms of the verbs on which I intended to base my study of sibilant harmony. Fortunately, three verbs elicited for other reasons featured sibilant harmony in their expected forms. Two of these forms underwent harmony when elicited from my consultant; one did not.

The first example is found in (31) in §3.5. The stem, *-ghash*, contains <sh>, so any alveolar consonants in subject prefixes must become postalveolar. This verb takes the *s*-perfective, so its third-singular subject prefix is *s-*, which must become *sh-* after sibilant harmony. This is the form of the subject prefix we see in (31): *bishnahash* (“third-person singular bit third-person”). Sibilant harmony has taken place exactly as expected.

In another example, the stem *-zin* in (42) from §3.8 takes the \emptyset -imperfective. The first-person singular subject prefix *sh-* becomes *s-*, which we see in (42): *nissin* (“I want it”). This may not be quite as impressive as *bishnahash*, as it looks just like contact assimilation, but the change in *sh-* is present nonetheless.

Lastly, I present one form for which my consultant did *not* carry out sibilant harmony. In (51) from §3.11, the stem *-tsóós* takes the long-vowel-imperfective, and the first-person singular subject prefix *iish-* should become *iis-*. Instead, my consultant produced the form *ndiishtsoos*. This is clearly a violation of the sibilant harmony rule. The *sh-* may have remained intact due to analogy with the other first-person singular forms in §3.11, which form a natural group of verbs very similar in form and meaning; it is also plausible that, although I elicited these forms individually, my consultant was not actually paying close attention to the forms he was giving, but was instead deriving these forms simply by prefixing *ndiish-* as a unit to each verb stem. These possibilities are interesting in that they still describe the Navajo word-formation process, but do not answer the

question of whether my consultant would actually use *hdiishtsoos* in everyday speech, as opposed to elicitation.

With only these three examples, my consultant's retention of sibilant fricative harmony is debatable, but I believe the first and second example above more than compensate for the possibly "excusable" violation of sibilant harmony in the last example. These three examples also feature sibilant harmony in subject prefixes only; in addition to testing more forms, it would be very interesting to see whether my consultant carries out sibilant harmony on any other prefixes, such as the first-person object marker *sh-* and fourth-person subject marker *j-*

3.14 Summary

My consultant's regular losses include the iterative, usitative, and optative modes completely; most future and perfective mode forms; s-perfective da-shift; and classifier shift. The attrition of rules governing the surface forms of \emptyset -imperfective subject prefixes and probably some of the underlying forms of \emptyset -imperfective subject prefixes at times as well.

4. Analysis: Learn to Earn

While Navajo's grammar is unique, many of the departures from traditional Navajo exhibited by the consultant fit into general observations about language attrition; that is, similar processes occur in completely unrelated languages for speakers who have not learned traditional forms, but have frequent exposure to the language. I looked at two specific examples of language attrition: that of Dyirbal, an Australian Aboriginal language spoken in northeastern Australia; and Bonaduz Romansch, a particular dialect of the Romance language spoken in southeastern Switzerland.

One of the consultant's most salient losses is the near-absence of inflection for mode. Dyirbal expresses time in a manner closer to the English notion of tense, but its younger speakers have still lost Dyirbal's grammatical tense much like the consultant. The future tense is marked in traditional Dyirbal with an affix /ɲ/ on the verb. Younger speakers' expression of the future changes this in two ways: first, the /ɲ/ affix is dropped, and the form unmarked for tense is used; second, expression of tense is transferred to some word with a specific meaning of time, for example, *ɲulga* "tomorrow" (Schmidt 65). As we saw in §3.1 and §3.2, the consultant's only inflection for tense is an occasional affixation of /ʎ/ on the stem to mark the future; otherwise, the consultant conveys past and future time using *nt'ée'* and *dooleet*.

Bonaduz Romansch is permeated by German vocabulary, morphology, and syntax, but not all changes in Bonaduz are examples of the widespread "Germanisierung" of the dialect. The preterite tense has been completely lost in Bonaduz, even in basic verbs of motion and possession (Cavigelli 470). Both German and traditional Romansch have a conditional mood, used to express situations contrary to fact, including suppositions, wishes, and indirect quotation. The grammatically-expressed conditional in Bonaduz has simply been lost in the present tense by some speakers: "Nun trat bereits in der romanischen Primärsprache von Bonaduz...der Indikativ oft an die Stelle des Konjunktivs" (Cavigelli 466).²⁸ In the preterite, the condition has been replaced by a construction using an infinitive and auxiliary verb, as in German (although the auxiliary used in Bonaduz is cognate to *tun* instead of German *werden*). When the infinitive-auxiliary construction is impossible for syntactic reasons, Bonaduz speakers are forced to

²⁸ "Already, the indicative is replacing the conjunctive in the primary Romance language of Bonaduz."

use a grammaticalized conditional, but “die Vielfalt an Formen spricht für sich: ...*miast* / *m̃̃ ast* / *m̃̃st* / *m̃̃ɑfsi* / *m̃̃ ɑfti* / *m̃̃ɑšt̃i*” (Cavigelli 467).²⁹ That is, an idiolectal, probably impromptu form is produced; no regular conditional exists.

Within simple indicative forms in Bonaduz, even non-inflectional morphemes are subject to variation, although they are generally better preserved than inflections. The exact forms of the variations are unpredictable, although certain changes are more common than others; Cavigelli cites three versions of the German infinitive *können*, “to be able to”: *kena*, *köna*, and *khöna*, and four versions of the second-person singular *kannst*: *kanš*, *khantš*, *kaš*, and *khāš* (Cavigelli 471). He even gives nine different inflectional patterns for the plural present indicative forms of *nē*, cognate of German *nehmen*, “to take”.

Cavigelli explains the plethora of forms for these verbs through the variable influence of the nearby Swiss German dialects Chur and Walser on the consultant families, as well as the ethnic background and age of the families’ mothers and fathers. “Für intensive Einwirkung von Chur sprechen schon die Pluralformen an sich, die einen Mischtypus zwischen walserischen und churer-rheintalischen Formen darstellen...” is typical of Cavigelli’s reasoning (464). The dialects influencing Bonaduz—mostly Chur, Walser, standard Romansch, and standard German to a lesser extent, all have their own unique inflectional patterns, making for a patchwork quilt of conjugation in Bonaduz.

All of these various inflections contrast sharply with the reduction of the conditional to an infinitive-auxiliary construction. The latter is clearly a simplification of the grammar; the former is anything but, a swamp of seemingly-unparsible forms. This is strongly reminiscent of much of the data from my Navajo consultant; some grammar was

²⁹ “...the diversity of forms speaks for itself...”

lost completely, as when almost all function of modes was transferred to *nit'ée'*, *dooleet*, and other vocabulary, but the majority of my data represented a usually bewildering array of morphemes recognizable yet modified in ways requiring very complicated parsings. A prime example here is (37).

The reason for the simplified forms, those tending toward isolating grammar, is straightforward: an invariable form with no inflection is easy to remember and parse. Why, then, do speakers and semi-speakers all over the world innovate their speech using non-traditional forms with the variety of inflections Cavigelli describes? These forms certainly do not foster easy communication. Why not analogize *more* forms, and settle on more transparent morphemes? Such verbs exist even in traditional Navajo; neuter state-of-being verbs have a simple structure, as in the following verb, which means “to be strong” (Wilson 38). For these verbs, the subject is expressed grammatically with object pronouns instead of subject pronouns.

(59)

First-person singular	shi-dziil 1sO-stem
Second-person singular	ni-dziil 2sO-stem
Third-person singular	bi-dziil 3sO-stem
First-person dual	nihi-dziil 1dO-stem
Second-person dual	nihi-dziil 2dO-stem
First-person plural	da-nihi-dziil pl-1dO-stem
Second-person plural	da-nihi-dziil pl-2dO-stem
Third-person plural	da-bi-dziil pl-3sO-stem

My consultant never used this pattern in the data I collected for my questionnaire, but in a follow-up session, he confirmed that he knew and used this pattern for a number of verbs I elicited. This neuter verb pattern would be an easy fallback, yet I never saw it any data except for those in which it was expected.

The answers to the last paragraph's questions seem simple at first; although speakers do not know the traditional form exactly, they often have a general idea of a verb's surface form, and they want to produce a form as close to it as possible.

This only begs the question; *why* do the speakers want to produce a similar form, sometimes at the expense of comprehensibility? I believe any speaker's motivation is that they **want to be right**, i.e. they want to minimize the potential criticism their speech will provoke, even if the criticism is only self-imposed. This notion has to do with inclusion in a linguistic group, which can often be an ethnic, cultural, or even familial group as well, but it also underlies the concept of language prescriptivism.

Schmidt gives two reasons why younger speakers of Dyirbal do not form their own cohesive linguistic group. The first is “[t]he important *identity function* that Dyirbal has for the in-group. Due to its binding role within the group, use of Dyirbal to individuals outside the group may be resisted” (38). She refers to the second as “the corrective mechanism”. Young speakers of Dyirbal often supplement their Dyirbal vocabulary with English words, and if they cannot remember some Dyirbal word at all, they use the equivalent English word even in the midst of a Dyirbal sentence. Sometimes they may attach Dyirbal suffixes to it. In a particularly indicative example, Schmidt reproduces a conversation between a 19 year-old Dyirbal speaker and a Dyirbal woman at least 50 years old, in which the 19 year-old, PG, uses the word “cook-iman” instead of the

Dyirbal *nyajun-iman*. The older speaker chastises PG, asserting “*ɲinda mijiji-bin*” (“You’ve become a white woman!”). The older speaker then teaches PG the correct form; Schmidt provides the following translation of this lesson: “You say ‘banyin’, that means ‘cut’. We slice it with an axe, and cook it in the fire to eat. Not ‘cook-iman’!” (39).

The use of the local equivalent of German *tun* instead of *werden* to form the preterite conditional in Bonaduz, as noted above, seems like an arbitrary and uninteresting variation, and its historical origin may very well be described as such. But the verb choice here indicates membership, even identity: “Die Umschreibung mit «tun» wird als einheimisch, «echt bonaduzerisch» betrachtet” (Cavigelli 466).³⁰ It is a marker of authenticity.

Much has been written by Navajo authors on the desire to maintain their ancestral language. The following is an excerpt from an essay, *Diné Bizaad Yissohígíí: The Past, Present, and Future of Navajo Literacy*:

Many people believe that the Navajo language is dying out. To keep Navajo alive, we must use it. Navajo language enables people to be who they are—Navajos. This is the reason behind teaching members of the younger generation Navajo language: they learn to think, speak, and write in their own tongue so they will know their Navajo identity. (Jelinek, Midgette, Rice, and Saxon 351)

Benjamin Barney, director of the Diné Teacher Education Program at Diné College, is quoted in the foreword of *Language Shift Among the Navajos: Identity Politics and Cultural Continuity*, expressing a similar sentiment:

³⁰ “The paraphrasing with ‘tun’ is considered native, ‘genuine Bonaduz’”.

I would say there needs to be a real strong sense of being Navajo. It's a very vague thing, so I wouldn't advise what that Navajo-ness is...I really have to say that because the world is so globbed together now, we're exposed to things from all over the world as well as people of every variety and the kids have to go back to that...It's a kind of image that I started using over the years...That I have a culture, a language, but it does not stifle me. (House ix-x)

In explaining the connections between a loss of social function or the domains of a language and loss of linguistic form, Schmidt quotes Leonard Bloomfield's 1927 work on Menomini: "Bloomfield found 'men who speak little English, yet bad Menomini'. Birdhawk's speech is described thus: 'he spoke with bad syntax and meager, often inept vocabulary...[H]is inflections are barbarous; he constructs sentences on a few threadbare models'" (4). Although no information regarding social status is included in the quotation, the conspicuousness of the men Bloomfield characterizes is key.

My personal experience with my consultant shed some light on the emotions surrounding the struggle for accuracy. When discussing Navajo in general he was lively and shared many anecdotes; during our elicitation sessions, he was subdued, pensive, and apologetic. This is despite his admission that he knows Navajo better than anyone else he knows, of a similar age. It is notable that my consultant's feelings of accuracy were relative; when speaking with another Navajo student, who knew less Navajo than my consultant, my consultant was once again lively.

The quotation in Jelinek et al. above mentions "the younger generation...learn[ing] to think...in [the Navajo] tongue so they will know their Navajo identity". The maintenance of a separate identity naturally involves some positive characteristic—such

as knowledge of the Navajo language—of the group, but could also involve the association of people not in the group with the lack of that characteristic. I am not suggesting that linguistic groups, especially the Navajo, wish to keep their language secret and prevent anyone not ethnically Navajo from acquiring knowledge of it; this is very far from the truth indeed. Rather, knowledge of a language signifies either native membership in the group, or a deliberate, concerted effort to master it as a second language. One need only look as far as the average American teenager; although slang words are a tiny subset of a language, these too mark group membership, and changes in slang over time can be attributed to the expansion of slang word usage outside the in-group; once slang has spread to mainstream speech, it may still be informal, but ceases to be slang. The ancient Biblical idea of the *shibboleth*, pronounced as *sibboleth* by non-Gileadites, echoes this idea.

Even though a complicated morphology and inflectional system can hinder communication—although it does not, for a language’s native speakers—it thus serves a purpose; it binds a group together and distinguishes them, and anyone who has made an effort to become fluent, from the rest of the world. Robert Young was not ethnically Navajo, but his contributions to the study of the language were such that Jelinek et al. named their 1996 collection of essays, some written by ethnic Navajos, *Athabaskan Language Studies: Essays in Honor of Robert W. Young*. Young also received the rare honor of a ceremonial Navajo name.

This, then, is the motivation behind the retention of complex morphology and the lack of extensive leveling in languages the world over: the continued membership of the linguistic group or speech community, especially as it pertains to identity. Navajo’s

verbal morphology may be particularly complicated, but most languages contain some hard-to-learn linguistic features that can be substituted for verbal morphology. Besides, the features do not have to be crucial to the language or very complex; a good but imperfect accent or unusual word choice can mark someone as outside the group. One must learn the language to earn the membership.

References

- Cavigelli, Pieder. 1969. *Die Germanisierung von Bonaduz in geschichtlicher und sprachlicher Schau*. Frauenfeld: Verlag Huber & Co.
- Faltz, Leonard M. 1998. *The Navajo Verb: A Grammar For Students and Scholars*. Albuquerque: University of New Mexico Press.
- House, Deborah. 2002. *Language Shift Among the Navajos*. Tucson: University of Arizona Press.
- Jelinek, Eloise; Midgette, Sally; Rice, Keren and Leslie Saxon (eds). 1996. *Athabaskan Language Studies: Essays in the Honor of Robert W. Young*. Albuquerque: University of New Mexico Press.
- Kari, James M. 1976. *Navajo Verb Prefix Phonology*. New York: Garland Publishing, Inc.
- Reichard, Gladys A. 1951. *Navaho Grammar*. New York: J.J. Augustin Publisher.
- Schmidt, Annette. 1985. *Young People's Dyirbal: An Example of Language Death from Australia*. New York: Cambridge University Press.
- Wilson, Garth A. 1995. *Conversational Navajo*. Blanding, UT: Conversational Navajo Publications.
- Young, Robert W. 2000. *The Navajo Verb System: An Overview*. Albuquerque: University of New Mexico Press.
- Young, Robert W., and William Morgan, Sr. 1987. *The Navajo Language: a Grammar and Colloquial Dictionary*. Albuquerque: University of New Mexico Press.