

# Grammaticization of Tense in Navajo: The Evolution of *nt'éeé*

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## 1. Introduction

Grammaticization, according to Hopper and Traugott (1993:1) “focuses on how grammatical forms and constructions arise, how they are used, and how they shape the language.” In this paper, we examine a case of grammaticization in Navajo involving the emergence of tense marking. Athabaskan languages are well known for their elaborate system of morphologically marked aspect and aktionsart (Axelrod 1993, Midgette 1995). Data from Navajo suggests that this Southern Athabaskan language is developing a tense system in addition to its system of aspect. We explore here, in particular, the functions of Navajo *nt'éeé* to illustrate its development from a temporal adverb to a tense marker.

We begin our discussion with an explanation of grammaticization. Next we provide an overview of the temporal system of Navajo and references to *nt'éeé* in the scholarly literature on Navajo. This historical perspective details both how the construction was used by speakers of Navajo in the past and also what the leading researchers have thought regarding its meaning and usage. We then proceed to examine examples of *nt'éeé*, as it is found in current usage patterns and discourse style. Much of the data considered here was collected in a 2003 linguistic field methods course at the University of New Mexico, in which author Chee was the native speaker consultant. The rest of the examples come from spontaneous conversation between three to four native speakers, recorded and transcribed by Chee.

## 2. Grammaticization

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Our discussion of *nt'ée* in this paper is guided by the theoretical framework of grammaticization. “Reduced to its essentials, grammaticization theory begins with the observation that grammatical morphemes develop gradually out of lexical morphemes or combinations of grammatical morphemes” (Bybee et al. 1994). As concluded in Bybee 1985 and Bybee et al. 1994, one of the most important elements impacting grammaticization is frequency of use. As lexical items increase in frequency, they become semantically generalized and phonetically reduced. With the loss of meaning and substance, these forms can be used by speakers in more contexts. Cross-linguistic evidence of grammaticization cases display common tendencies and regularities, in which frequently used verbs like *go*, *have*, *do*, and *be* become obligatory in certain contexts because of their generality.

Lexical items and constructions all follow a grammaticization path, which tends to consist of four main principles: phonological reduction, morphosyntactic reduction, semantic generalization, and pragmatic extension (Bybee et al. 1994). Phonological reduction is the shortening or loss of phonetic characteristics, as in *have to* becoming [haftə]. Morphosyntactic reduction is the loss of salient morphological or syntactic features; that is, the grammaticizing construction tends to lose its syntactic independence and become more like a clitic or an affix. Semantic generalization is the loss of features of meaning. For example, the verb *will* in English used to mean “to want, to desire.” Because it was frequently used, it lost this meaning of desire and came to mean just ‘willingness,’ and from there, ‘intention.’ The future or prediction meaning was then inferred from this intention meaning, and so *will* generalized from the meaning of ‘desire’ to the English Future tense marker (Bybee et al. 1994: 254-256). The last component of grammaticization is pragmatic extension, in which the lexeme extends to new

contexts. Thus, when a future or predicative meaning was inferred from *will*, the form was extended pragmatically and was used in a wider range of contexts.

It is not only important to look at the process of grammaticization, but the effects as well. One of these effects is layering, in which a construction develops polysemous meanings that reflect the past stages of the grammaticization path. Once again, we return to the example of *will*. Although *will* has Future tense meaning in English, it also retains the meanings of ‘willingness’ and ‘intention’ (Hopper and Traugott 1993:97). These layered meanings are further evidence of the grammaticization path.

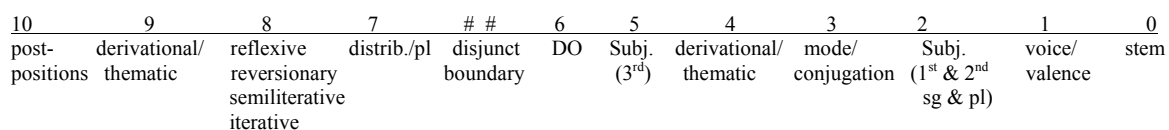
### 3. Verbal and temporal system of Navajo

This section examines the structure of the Navajo verb, and how it expresses temporality. According to Young (2000:vii), “The verb occupies a central position in Navajo, and in the Athabaskan languages generally. Most of the noun lexicon, along with adverbs and adjectivals, are verbal in origin or verb related in one way or another.”

The Athabaskan verb is a polysynthetic structure composed of a stem and its prefixes (Axelrod 2004). The stem is usually monosyllabic and is the last syllable of the verb form. Together, the stem and its obligatory prefixes form the *verb base* (Faltz 1998). The verb base can undergo aspectual modifications as well; for example, some verbs have an Imperfective and a Perfective stem, which differ phonologically.

The verbal prefixes are used to mark person, number, aspect, tense, and adverbials.

These prefixes generally occur in the same order, as shown in Figure 1.



## Figure 1 Navajo Prefix Chart

Some prefixes are obligatory, such as person, tense, aspect, mode, voice/valence (or “classifier”) prefixes (Axelrod 2004). Non-obligatory prefixes tend to be derivational in nature, and thus their “slots” need not be filled in every verb.

Temporal expression in the Navajo verb is marked by the Mode and Aspect prefixes. Mode is used to define the temporal character of an activity, that is if it is incomplete, complete, ongoing, future, potential, customary, or recurrent. Mode is marked by modifications to the verb stem, or in the third position prefix. There are seven Modes in Navajo and these Modes are illustrated below.

(A) The Imperfective describes an action or event that is incomplete. It is usually translated as the English Present Tense: **yáshti**, ‘I talk.’

(B) The Perfective describes an action or event that is completed. It is usually translated as the English Past Tense: **yáálti**, ‘I talked.’

(C) The Future describes an action or event that is impending or in the future. It is derived from the inceptive prefix *di-* and the progressive: **deesháál**, ‘I’ll go/come.’

(D) The Usitative Mode describes an action or event that occurs usually or customarily. For example, compare **yishdlá** ‘I’m drinking it’ with the usitative **yishdlíh** ‘I usually drink it’.

(E) The Iterative Mode is closely related to the Usitative, with the addition of the repetitive prefix **ná-**. It describes an action or event that occurs customarily or repeatedly, with an emphasis on repetition: **ndídááh**, ‘he walks back and forth (as a sentinel). Faltz (1998:15) states that of the two Modes, the Iterative is used more than the Usitative if there is a choice between the two.

(F) The Progressive Mode describes an action that is ongoing. It is usually translated with the English Present Progressive: **yisháál**, ‘I’m walking along’. Faltz (1998:16) mentions that many verbs do not actually have a Progressive Mode.

(G) The Optative Mode, which is marked by -ó- or -o- in position VII, describes an action as potential or desired: **nahóltáá’ laanaa**, ‘I wish it would rain’. The second person optative is used to express a negative command: **ndoó’nééh**, ‘don’t get up!’

The Aspects express the manner in which an activity or event is carried out over time – whether it happens once, or repeatedly, or at length. There are twelve Aspects that make such distinctions in meaning as: ‘I am red’ vs. ‘I turned red’; ‘I am eating’ vs. ‘I swallowed’; ‘I am walking about’ vs. ‘I walked in’. (Young and Morgan with Midgette, 1992). Aspect is marked by stem shape and/or prefixes.

The twelve Aspects in Navajo are:



- (A) Momentaneous, which is an action that takes place at one point in time.
- (B) Continuative, an action or event that extends over an indefinite period of time, or an action without a goal.
- (C) Durative, an action that extends over some time.
- (D) Conclusive, an action or event that is extended but has a definitive endpoint.
- (E) Repetitive, a repeated action or event;.
- (F) Semelfactive, a single, extremely telic action, such as coughing.
- (G) Distributive, a marker that describes the distribution of items or actions.
- (H) Reversative, an action involving a turning or reversing of direction.
- (I) Diversative, which describes a “here and there” action.
- (J) Conative, which describes the attempt to perform an action.

(K) Transistional, which describes the changing from one place or state to another.

(L) Cursive, which describes the subject of an intransitive verb or the object of a transitive verb moving along in a straight line. (Young and Morgan 1992)

In this paper, we concentrate primarily on the Imperfective and Perfective Modes and their relationship to tense marking.

#### 4. Previous research on *nt'ée*

One of the earliest researchers to work on the Navajo language was Edward Sapir, who collected and transcribed a wide range of folktales and historical narrative from Navajo speakers during the 1920's and 1930's. The folktales usually center around the infamous Coyote and his adventures. Sapir (1942) records several occurrences *nt'ée*, used as a temporal adverb meaning 'then.' In the narrative context, *nt'ée* signals a new event and tends to occur almost exclusively in sentence-initial position, as in the following example "The First Louse," from Sapir (1942:16).

1. *nt'ée-' ma'i haélyod zini.*

"Then Coyote came running to them they say."

*Nt'ée* is also referred to as an adverb of past time in Young and Morgan (1987) and Midgette (1995). Young and Morgan (1987) describe *nt'ée* as well as a "conjunctive", meaning "but, so, and, with the result that, and when." Importantly, they say that the use of *nt'ée* as a conjunctive always occurs "in a past tense framework" (24). The following two sentences demonstrate this use of *nt'ée*. We have included the glosses given by Young and Morgan (1987).

2. *Chidí bikee' béesh léi' bee nánishshish nt'ée' biniká nishiizh.*

'I was poking at the tire with a knife when I poked a hole in it.'

3. *Kintahd□□' shil ná'oolta nt'ée' chidí bikee'la'sits'□□'diitaa'.*

‘I was speeding back from town when one of my tires went to pieces on me.’

Young and Morgan (1992) define *nt'éeé* as a temporal-modal enclitic. These enclitics serve “a wide variety of purposes. Some connote emphasis or other shades of meaning commonly conveyed by intonation in English” (1992: 940). It is worth noting that unlike most of the other twenty temporal-modal enclitics, which are written attached to the verb as a suffix, *nt'éeé* is written as an independent word. The semantics of *nt'éeé* are said to be equivalent to *was* or *used to be*, and the adverbial use of *nt'éeé* described in Young and Morgan (1987) is not noted in the later work. It is also interesting that in both of their example sentences, *nt'éeé* occurs in sentence-final position, rather than initial position as in the Sapir (1942) texts.

4. *'ashkii nishlín □ □ d □ □ 'shimá sání bána 'nishkaad nt'éeé.*

‘When I was a boy I used to herd for my grandmother.’

5. *ánii naashá h □ ad □ □ 't'áá 'ákwíí ghaai b □ □ h haashzheeh nt'éeé.*

‘I used to hunt deer every winter when I was young.’

Faltz (1998) is perhaps the first to mention *nt'éeé* as a past tense marker and concludes that it occurs only with verbs of the imperfective mode if they are dependent verbs.

To summarize, *nt'éeé* has been described as a temporal conjunction (Sapir 1942 and Young and Morgan 1987), as a temporal/past tense adverb (Young and Morgan 1992, Midgette 1995), and as plain past tense marker (Faltz 1998). These changes in description may mirror changes in the function of the word and are compatible with theories of grammaticization from syntactic to inflectional grams. In Section 3, we will report on the uses of *nt'éeé* in current informal speech and argue that they represent a case of grammaticization.

## 5. Evidence for the Grammaticization of *nt'éeé*

As stated earlier, because grammatical morphemes develop from lexical constructions through an increase in frequency, observations of the changes in the form and meaning of the developing morpheme provide evidence for grammaticization. In addition to a reduction in substance, the grammaticizing morpheme is also likely to generalize semantically. Because of the loss of specific meanings, the morpheme will be also be used in a wider range of contexts. This process can be observed in Navajo, as *nt'ée* undergoes much phonological reduction when produced in continuous speech and is also general enough semantically to be used by speakers in a varying number of contexts. We will now discuss each of these changes in greater detail.

### 5.1 Phonological reduction and the loss of morphosyntactic properties

Although, originally a separate lexeme, *nt'ée*<sup>2</sup> now appears to have cliticized and often undergoes phonological reduction. According to Bybee (1985), in the process of grammaticization, lexical items (constructions) become free grammatical units (clitics, auxiliaries, etc.) and eventually develop into bound inflectional affixes. This process is accompanied by a reduction in the phonetic substance of the form. According to Hopper and Traugott (1993), as items become more grammatical, they tend to “deategorialize,” or lose their word class characteristics. Examples (6a) and (6b) illustrate this; note that in (6b) *nt'ée* is fused to the verb and this change is reflected in a resyllabification and a change from [tʰ] to [d].

6a. *anists'íisí yéédí' nasshnée leh nt'íí'*

6b. *anists'jada nashnelaendée'*

‘When I was young I used to play.’

As has been mentioned, verbs in Navajo have affixal marking for number, person, aspect, and aktionsart. *Nt'ée* is not a part of that system of inflectional marking. When functioning as a

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<sup>2</sup> *Nít'éeé'* is the base form; other allomorphs include *nídeé'*, *nt'éeé'*, *ndéeé'*, *ne'éé'*, and *ne'*. Our data incorporates nasal hooks as a reflection of the pronunciation of our consultant.



past tense marker, it is not always bound to the verb. Its status as a clitic is confirmed by its placement outside of the negative circumfix, as illustrated in example (7). Notice that in (7), the *do* and *da* of the negative surround the verb, but exclude the *nt'ée*.

7) *dibe nitsaa hahoodzo biyi'di shighanígíí shimá doo bił bée hozin da nít'□□'.*

My mother didn't know I lived in Colorado.

## 5.2 Semantic generalization and pragmatic extension

Hopper and Traugott (1993) and Bybee et al. (1994) demonstrate that grammaticization involves both semantic and grammatical generalization. They point out that semantic generalization includes the development of newer, more abstract meanings as more concrete meanings are lost. From this, we can extrapolate that the item has more functions and a greater range of application. This is accompanied by an increase in token frequency, providing further impetus for the grammaticization process.

Examples (8) and (9) illustrate the use of *nt'ée* as a past tense marker with imperfective verbs. Because these verbs are not marked as 'complete' it is our hypothesis that *nt'ée* was used by speakers in this environment as a past tense marker. The addition of the form creates a periphrastic construction that has a completive meaning.

8. *tl'ée' biighah nahal'in nít'□□'*

'it barked all night'

9. *tl'ée' biighah dilkos nít'□□'*

'she coughed all night'

*Nt'ée* is used with imperfective verbs to create a distinction between present imperfective, in (10a), and past imperfective, as in (10b):

10a. *ádishni'*

‘I am blinking’

10b. *ádishni’ nít’*□□’

‘I was blinking.’

There is also a distinction between past imperfective and perfective as illustrated in examples (11a) and (11b). Recall from Section 3 that perfective and imperfective verbs in Navajo are marked, in part, by a change in stem shape resulting from vowel mutation and or suffixation. In order for the verb ‘eat’ to take *nt’éeé* speakers must use the imperfective stem. This form is illustrated in example (11a), while (11b) demonstrates the same verb with a perfective stem.

11a. *bilisana yiishaandee*

‘I was eating an apple.’

11b. *bilasáana yiy*□

‘I ate an apple.’

The examples in (12) show perfective, imperfective present, and imperfective past verbs. Note again the change in stem between the perfective in (12a) and imperfective in (12b) and (12c).

12a. *bilasáana nihélgizh*

‘I cut the apple’ (perfective)

12b. *bilasáana nihéshgéesh*

‘I am cutting the apple’ (imperfective present)

12c. *bilasáana nihéshgéesh nít’*□□’

‘I was cutting the apple’(imperfective past)

In example (12c), *nít’*□□’ is used to explicitly indicate that the imperfective activity occurred in the past. We see *nt’éeé* here being used to mark a semantic distinction between past and present imperfective.

*Nt'éeé* only infrequently appears with verbs in the perfective, as in example (13).

13. *Oh! Akóó deeshaal niiz'íí ndéé'é*

'I was thinking, oh, I will go over there.'

*Nt'éeé* with the verb 'think' in the perfective appears to also carry the meaning of a sudden change of thought. In the examples in (14), however the use of *nt'éeé* with the perfective verb seems to express a middle or resultative meaning. In all of the examples we collected, *nt'éeé* only occurred following the verb.

14a. *Yibeezh nít'□□'*

'it was boiling' (past imperfective)

14b. *Shibeezh*

'it boiled' (perfective)

14c. *Shibeezh nít'□□'*

'it was boiled' (resultative/middle)

## 6. The layering of *nt'éeé*

Further evidence to support the claim that *nt'éeé* has grammaticized can be gained from observing the range of occurrences of the morpheme. Although new meanings have been gained from the new contexts in which the form occurs, older, more specific meanings of the form have not yet been lost, despite the growing frequency with which the construction is used in more generalized environments. The grammaticization process has resulted in a layering of the older meanings alongside the newer meanings, a cross-linguistic phenomena common to documented cases of grammaticization (Bybee et al. 1994). These older meanings give an indication of the stages of the form's development. The following sections discuss some of the older meanings of

*nt'éeé*, such as its ability to indicate ‘surprise’ and mark causation. We also discuss how the construction is used to form conditionals.

### 6.1 Surprise

*Nt'éeé* can be used to indicate an element of surprise in an utterance. When *nt'éeé* is used in this context, it appears as a clause linker, following the verb in the matrix clause. Examples (15) and (16) illustrate this meaning.

15. *ch'iníyáa nít'□□' chahalheel*

‘I walked outside (and all of a sudden) it was dark.’

16. *ha'ii'□q nít'□□' chahalheel*

‘The sun rose (but, unexpectedly) it was dark.’

This use was not common in our data and needs to be further investigated in order to determine its relation to the grammaticization path.

### 6.2 Causation

*Nt'éeé* can also be used to indicate a level of causation. Just as was the case with its use as a marker of ‘surprise’, when used as a causative marker, it occurs as a clause linker, following the verb of the first clause. Furthermore, *nt'éeé* is used in place of the coordinating conjunction *dóó*. Examples (17a) and (17b) demonstrate this use of the morpheme.

17a. *naa'iitlzh nít'□□' haachá*

‘She started crying because she fell down.’

17b. *naa'iitlzh dóó haachá*

‘She fell down and started crying.’

Although both *nt'éeé* and *dóó* can be used as conjunctions, these forms differ in semantic meaning, as is illustrated in examples (18a) and (18b). These examples demonstrate the use of

*nt'éeé* to indicate immediacy and surprise (18a) in contrast to *dóó* in example (18b) which does not express these concepts.

18a. *naa'eelts'id nít'*□□'

'it (bottle) fell down (right here) and was broken (not my fault)

18b. *naa'eelts'id dóó sít's'il*

'it (bottle) fell down '(elsewhere) and was broken (I'm just telling you about it)'

### 6.3 The Conditional

One of the most important additions to the analysis of *nt'éeé* in Young and Morgan (1992) is the documentation of a conditional tense from the use of *nt'éeé* in combination with *doo* and *dooleel*. This use is illustrated in example (19).

19. *As shibee'eld*□□*h hol*□□*go k'ad b*□□*h haashzheeh dooleel nt'éeé*

'I'd be hunting deer now if I had a gun.'

This conditional use can be extended to the English glosses *would*, *could*, and *should* when used in a past tense framework, as in example (20) which comes from our modern Navajo data.

20. *Atsá jiiłts*□*qdoó nít'*□□'.

'I should have seen the eagle.'

This sentence would be the same whether the speaker used *should*, *could*, or *would*. This contrasts with example (21) which uses the perfective mode and thus has no conditional meaning.

21. *atsá yiiłts*□

'I had seen the eagle.'

## 7. Conclusions

An examination of the current function and distribution of the morpheme *nt'éeé* in Navajo has shown that the form has undergone grammaticization and that in doing so, has become phonologically reduced and semantically general. A layering of older meanings is present, which also gives us an indication of the path that the morpheme has traveled along throughout the grammaticization process. Moreover, *nt'éeé* has come to mark past tense within the temporal system of Navajo. The development of a tense marker in Navajo is an important finding, since Athabaskan languages do not typically include tense within their temporal systems.

The appearance of *nt'éeé* in a wide range of contexts and with such high frequency indicates that speakers of Navajo are now using this morpheme productively. The fact that Navajo has had a major change in the temporal system during the last century, despite being threatened by dominant languages, demonstrates the vitality and perseverance of its speakers. Language change happens as a result of language use and the ability of the speakers to express new ideas in their language ensures the transmission of that language to future generations.

These findings also have wider implications for linguistic theory. Our evidence regarding the use of *nt'éeé* supports the cross-linguistic trends that have been found to occur in other cases of grammaticization and language change, whereby semantically general forms extend to new contexts and also lose phonetic substance (Bybee et al. 1994, Hopper and Traugott 1993). The origin of *nt'éeé*, and its original syntactic position have yet to be determined, and would be a good area for future research. A diachronic study of such phenomena might be compared to the development path proposed by Bybee et. al (1994: 105) where resultative grams develop into anteriors before becoming markers of perfective/past. Evidence of such a development path for *nt'éeé*, would further confirm the cross-linguistic tendencies of grammaticization.

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