Cheyenne Obviation Pitch Alternations

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Introduction

Cheyenne obviative forms undergo interesting pitch alternations. The data collection in Leman (1979) presented a rather unitary account of Cheyenne pitch in obviative forms, particularly in verbs. Subsequent fieldwork, however, indicates that systematic pitch alternations do occur, and several dialects exist which complicate a description of Cheyenne obviation. In this paper I describe the pertinent pitch alternations.

Obviation in Cheyenne, as in other Algonquian languages, refers to suffixation on nouns and similar suffixal cross-referencing on verbs which disambiguates multiple third persons within a discourse span. Obviation is a complex morphological, syntactic, and pragmatic phenomenon which continues to deserve the study it receives both within and without Algonquianist circles.

A pragmatically simple (morphologically unmarked) third person is called the proximate. In some sense, it is the third person which is in focus within a discourse segment. The third person hetane ‘man’ of (1) is proximate:

1) ná-vóó-m-o hetane
1-see-ASA-DIR man

‘I saw the man’

1 Throughout this paper, Arabic numerals 1, 2, 3, 4 refer to first, second, third, and obviative pronominal persons, respectively. ASA = Animate Stem Agreement. DIR = Direct. Direct refers to action by a person higher on the Algonquian person hierarchy (2,1 > 3 > 4) toward one lower on the hierarchy. Inverse (INV) refers to an inverse person combination, as in (2), where third person (lower on the hierarchy) is semantic subject and first person is semantic object.
2) \( \text{ná-vóo-m-a} \) \( \text{hetane} \) \\
\( 1-\text{see-ASA-INV man} \) \\

'The man saw me' 

When two or more third persons appear within the same discourse segment only one may occur as proximate. All others, apart from certain exceptions which are irrelevant here, are out of focus and marked as obviatives:

3) \( \text{é-vóo-m-ô-ho} \) \( \text{hetane he'-ôho} \) \\
\( 3-\text{see-ASA-DIR-OBV man woman-OBV} \) \\

'the man (prox.) saw the woman (obv.)' 

4) \( \text{é-vóo-m-äå'e} \) \( \text{hetane he'-ôho} \) \\
\( 3-\text{see-ASA-INV man woman-OBV} \) \\

'the woman (obv.) saw the man (prox.)' 

Basic constituent word order does not determine syntactic or semantic roles; rather it is indicative of various pragmatic roles such as contrast, emphasis, and old vs. new information. Comparison of (3) and (4) shows that change from direct to inverse verbal marking reverses semantic roles when nominal marking is held constant. Up to now, apart from a few sound correspondences, everything appears very Algonquian.

Cheyenne however, has developed into a tone language (Leman 1981). Phonemic high pitch is, in general, the reflex of Proto-Algonquian long vowels (Frantz 1972; Leman 1981). Various phonological rules, as described in Leman (1979, 1981), operate upon phonemic forms (found within / / virgules) to produce the systematic phonetic (surface) forms, which are left unmarked. For example, the verb of (4) is derived as in (5):

5) \( /\text{évōomaâ/} \rightarrow \text{évōomäâ'e} \) \\

'he /they (obv.) saw him' 

by rules of low-to-mid raising, word-medial high raising, vowel-stretching (Goddard's Law), and vowel assimilation.

In this paper I will make only brief reference to the relevant pitch rules. The rules, or processes, are assimilatory in nature. For instance, a low tone is raised to a mid tone preceding a word-final high tone. A high tone is lowered preceding word-final low tone.

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2 Cheyenne forms have so far been cited in a systematic phonetic orthography. Pitch values are: ' = high; = raised high; = mid; ' = lowered high (sometimes left unmarked). Low pitch is left unmarked. The apostrophe is used to indicate glottal stop. Phrase final vowels are voiceless. Other voiceless vowels are indicated by a superimposed circle '.
In this paper I also will only discuss Cheyenne obviation in nouns and direct relation verbs. That is, I will omit discussion of pitch phenomena in inverse verbal morphology since there appears to be a unitary account, adequately described in Leman (1979), which is agreed upon by all speakers. The result of the limitation in discussion is that I will only concern myself here with obviative marking which consists of, or is associated with, the Cheyenne segment /-o/, with or without a high pitch.

Nominal Obviation

There is widespread agreement among Cheyenne speakers as to obviative marking on nouns. There is an important pitch alternation which we will also later see used, to varying degrees in different dialects, in verbal obviative marking.

Cheyenne marks pluralization on nouns by suffixing either /-o/ or /-é/. The latter ultimately derives from the same PA source, *-aki ‘animate plural’ as does the former (Leman 1981:304, fn. 19). The majority of noun obviatives receive word-final /-o/ and this marking strategy will be our concern here. Cheyenne forms marked for obviation are indifferent as to number, e.g., (3) could be glossed as ‘The man saw the woman’ or ‘The man saw the women’. Many noun obviatives have the same shape as plural non-obviative forms:

6)  a. pōése ‘cat’, pōesōno ‘cats, cat (obv.)’
    b. hoōhtéstse ‘tree’, hoōhtseto ‘trees, tree (obv.)’
    c. xāö'o ‘skunk’, xaöne ‘skunks, skunk (obv.)’
    d. vé'ho’e ‘culture hero’, vé'hő’e ‘culture hero, culture heroes (obv.)’

Consonantal apocope applies to derive singular forms (6a–6c). The noun stems of (6a–d) are phonemically (7a–d):

7)  a. /pōeson/
    b. /hoōhtet/
    c. /saön/
    d. /vé'ho'e/

The basic pattern shown in (6a, 6b) is to suffix low-pitched /-o/ to a consonant-final stem to create a noun obviative.

Vowel-final stems replace the final vowel which is apparently always /e/, with the obviative suffix /-o/, and undergo a pitch alternation which is sensitive to the pitch of the preceding vowel. An additional /-hö/ appears following obviative /-o/ when the vowel preceding stem-final /e/ is low-pitched. The pertinent triggering vowel is low-pitched in (8–9) and high-pitched in (10–13). Those forms which undergo replacement of the stem-final vowel to create the obviative do not replace the final vowel when suffixing the /-o/ pluralizer. This differentiates these replacing forms from forms such as (6a–c) for which the plural and obviative are identical in
surface form although different in underlying morphological form. In the following, plurals appear as (b) numbers corresponding to singulars and obviatives, which appear in (a) numbers:

8) a. /hetane/ 'man'; /hetan-óhó/ (obv.)
   b. /hetane-o/ (pl.)

9) a. /náhkohe/ 'bear'; /náhkohe-óhó/ (obv.)
   b. /náhkohe-o/ (pl.)

10) a. /pê'e/ 'nighthawk'; /pê'o/ (obv.)
    b. /pê'e-o/ (pl.)

11) a. /šé'sé/ 'duck'; /šé'so/ (obv.)
    b. /šé'sé-o/ (pl.)

12) a. /nôte/ 'alien'; /nôt-o/ (obv.)
    b. /nôte-o/ (pl.)

13) a. /ho'honâé/ 'rock'; /ho'honâé-o/ (obv.)
    b. /ho'honâé-o/ (pl.)

The obviative of (13) is interesting in that it shows that obviative creation, presumably a morphological process, derivationally follows vowel-stretching, which is a surface phonetic process, thus providing a counterexample to the claim that morphological or word-formation processes precede phonetic processes in derivational models of language.

Using the framework of autosegmental phonology (AP), as developed by Goldsmith (1979) and others, we can account for the pitch and segmental differences between (9–10) and (10–13). Within AP various kinds of phenomena are analyzed as belonging to different levels or tiers of phonological composition. Features such as pitch, stress, gemination, vowel harmony, and length are often found to operate rather independently from more segmental kinds of phonological information, and hence separation into tiers often brings additional explanatory value to a phonological description.

In AP terms, most Cheyenne vowels are lexically preassociated, i.e., each vowel receives either a phonemic low or high pitch in the lexicon. Such association is indicated in AP diagrams with solid association lines. Pitch adjustments or assimilations are indicated by dotted reassociation lines.

In our AP diagrams, H indicates high pitch and L indicates low pitch. For purposes of analysis here, I regard the following as sufficient to illustrate the pitch contour (melody) of (8):
Obviative Tone Copying (OTC)

I have omitted here the derivational step of obviative vowel replacement (OVR) of the stem-final /e/ of *hetane* ‘man’ with obviative /-ö/. The raised high surface pitch of obviative *hetanôho* can, according to our understanding of Cheyenne pitch rules (Leman 1981), only be derived from the concatenation of a penultimate high pitch and an ultimate high pitch.

If we regard the ultimate high pitch (i.e., /-hô/) as being lexically associated then we must lexically account for three facts: in some (verbal) forms a -ho associated with the obviative is low-pitched, in some (both nouns and verbs) it is high-pitched, and in yet others, the -ho is nonexistent. Accounting for such facts as lexical (morphological) alternants is cumbersome, and can obscure recognition of the phonological regularities which we describe in this paper. The fact of the matter is that a regular Cheyenne rule, observed by all Cheyenne speakers does exist, which is accounted for by the OTC rule of (14). The nominal obviative suffix /-ô/ is lexically preassociated with a high pitch. The -ho which might initially seem to come and go arbitrarily (perhaps through lexical marking) is found to obey a regular constraint in Cheyenne. It appears in the lexicon without any tonal preassociation, i.e., no pitch is associated with its lexical entry; or, perhaps by marking convention, lack of high pitch associates a vowel with low pitch by default. When a pitch contour allows, i.e., when the penultimate obviative suffix retains its high pitch in phonological derivation, the high pitch is copied to an immediately following word-final -ho, shown by a dotted reassociation line in the diagrams below.

When a surface antepenultimate vowel is high-pitched, this high pitch copies, or attracts, the high pitch which is lexically associated with obviative suffixation. This copying (or floating) of the second high to the first high is indicated by the dotted reassociation line in (15). When a pitch reassociates, the original pitch association (solid line to obviative /-ô/) is lost.

There is now no high pitch to be copied onto word-final obviative /-ho/. This final syllable is therefore tonally weak and undergoes apocope by Word-final Obviative Deletion (WFOD), as illustrated by the double arrow in (15).
Obviative Tone Stealing (OTS)

An important constraint on WFOD apocope is that it only occurs when the penultimate vowel is /-o/ (except in certain dialectal cases with intransitive verbs, to be discussed below). Hence, WFOD applies to (15) but not (19b.), below, where the penultimate vowel is -e.

Verbal Obviation

With the two pitch rules of OTC and OTS plus WFOD apocope and OVR replacement we can now account for all of the pitch and segmental alternations of the several dialectal variants which occur in Cheyenne verbs marked for obviation. Pitch alternations which previously seemed arbitrary now can be seen to follow regularly from Cheyenne pitch rules unique to Cheyenne obviation.

At the time of publication of Leman (1979) my understanding of verbal obviation was based on a dialect in which simple verbs (Independent Order Indicative Affirmative Mode) consistently take phonemically high-pitched word-final /-hó/ in the obviative, in Animate Intransitive (AI) verbs:

16) a. é-mane 'he (prox.) drank'
   b. é-man-óho 'he (obv.) drank'

17) a. é-manétáno 'he (prox.) wants to drink'
   b. é-manétan-óho 'he (obv.) wants to drink'

18) a. é-háóéna 'he (prox.) prayed'
   b. é-háóéná-óho 'he (obv.) prayed'

and in Transitive Animate (TA) verbs:

19) é-vóom-óho 'he saw him (obv.)'

20) é-het-óho 'he told him (obv.)'

21) é-méot-óho 'he fought him (obv.)'

22) é-mév-óho 'he ate him (obv.)'

For AI verbs a stem-final -e (and also stem-final -o?) is replaced by /-ó/ before suffixing /-hó/, reminiscent of OVR stem-vowel replacement seen earlier in noun obviation. Surface high and raised high pitches on penultimate syllables require a phonemic high pitch on the obviative word-final /-hó/ of (16–22).
There were at least two troubling points of inconsistency in this dialect, however. First, I was aware of a single TA verb for which the final vowel of the obviative was phonemically low-pitched:

23) \( a. \) [\( e \)-vovóhnēhešēh-ōi 'he took care of him (obv.)'

Dialectal consistency called for:

23) \( b. \) [\( e \)-vovóhnēhešēh-ōëho

but this was considered incorrect by native speakers.

Second, when obviative verbs were placed in the negative, a word-final low pitch was also inexplicably required by all speakers. Corresponding to (16-23) were:

16) \( c. \) é-sāā-manē-he 'he (prox.) did not drink'
    \( d. \) é-sāā-manē-he-ho 'he (obv.) did not drink'

17) \( c. \) é-sāā-manē-tanō-he 'he (prox.) did not want to drink'
    \( d. \) é-sāā-manē-tanō-he-ho 'he (obv.) did not want to drink'

18) \( c. \) é-sāā-hāōēnā-he 'he (prox.) did not pray'
    \( d. \) é-sāā-hāōēnā-he-ho 'he (obv.) did not pray'

19) \( b. \) é-sāā-vōo-m-ō-he-ho 'he did not see him (obv.)'

20) \( b. \) é-sāā-he-t-ō-he-ho 'he did not tell him (obv.)'

21) \( b. \) é-sāā-mēo-t-ō-he-ho 'he did not fight him (obv.)'

22) \( b. \) é-sāā-mēv-ō-he-ho 'he did not eat him (obv.)'

23) \( b. \) é-sāā-vovóhnēhešē-he-ho 'he did not take care of him (obv.)'

The Cheyenne negative here consists of the preverb /sāa-/ and a suffix /-hē/. Pitch rules require a phonemic high pitch on the negative suffix. The rule of High Push-Over (HPO) lowers this phonemic high in the negative obviative forms of (16d–18d), (19b–23b). The only explanation I could muster was that the lack of a word-final high pitch in the /-ho/ suffix of the negatives was morphologically determined, i.e., /-ho/ was high pitched in the affirmative, but low pitched in the negative. Examples (23a) and (23b) with word-final low pitch in both the affirmative and negative formed an exception, which I assumed was simply marked as an exception in the lexicon.

**Obviative Dialects**

Further fieldwork with a number of speakers now confirms that the dialect I was working with in Leman (1979) is a minority dialect. It reflects a recent tendency to regularize paradigms, i.e., to have consistency throughout as much of the obviative verbal paradigms as possible. Consistent exposure to majority dialects using the pitch alternation requiring
low pitched word-final morphology in negatives and (21) required speakers of this dialect, which I label the New dialect, to have some elements of obviative pitch alternations. In terms of rules, speakers of the New dialect specifically did not use the OTS pitch copying rule in affirmative forms, other than in the (21) marked exception. Since OTS was not used, there was no need either for use of WFOD apocope of /-ho/ in affirmative forms.

Present-day Cheyenne has two dialects with regards to pitch alternations in TA simple affirmative forms, the New dialect just described and a so-called Old dialect. The Old dialect has an obviative pitch alternation sensitive to the last vowel of the TA stem, the same alternation described earlier for noun obviatives. In the following TA verbs of the Old dialect note that when the last vowel of the stem is phonemically high-pitched (21c–23c), obviative suffixes are low-pitched. And when the last vowel is phonemically low-pitched (19c–20c) the obviative suffixes have high pitches. As we did with noun obviatives we can see OTS Copying at work as well as WFOD syllable apocope of /-ho/. The following examples are numbered to parallel corresponding forms of the New dialect, above:

**Old Dialect**

19) c. /é-vóo-m-ó-hó/ évōomóho
   3-see-ASA-DIR-OBV
   'he saw him (obv.)'

20) c. /é-he-t-ó-hó/ éhetóho
   3-tell-ASA-DIR-OBV
   'he told him (obv.)'

21) c. /é-mé-t-o/ émêoto
   3-fight-ASA-OBV
   'he fought him (obv.)'

22) c. /é-mév-o/ émevo
   3-eat:ASA-OBV
   'he ate him (obv.)'

23) c. /é-vovóhešé-h-o/ évovóhhešého
   3-take.care.of-ASA-OBV
   'he took care of him (obv.)'

The Old and New dialects diverge in examples (21–22). This obviative divergence in Affirmative Independent Indicative forms is the only difference between Old and New TA dialect forms of which I am aware. In all non-affirmative and non-indicative modes speakers agree on obviative pitch alternations in TA forms. For example, all speakers agree on the following pitch contours:
24) /é-vóo-m-ó-oon-o/ évóomóhoono
3-see-ASA-DIR-PRET-OBV
‘he DID see him (obv.)’

25) /é-mév-ó-seht-o/ émévosesto
3-eat:ASA-DIR-ATTRIB-OBV
‘he is said to have eaten him (obv.)’
(DIR /-ó/ lowered by HPO, then devoiced)

26) /é-méó-t-ó-oon-o/ éméotóhoono
3-fight-ASA-DIR-PRET-OBV
‘he DID fight him (obv.)’

27) /é-saa-he-t-ó-hé-seht-o/ ésaahehtóhesesto
3-NEG-tell-ASA-DIR-NEG-ATTRIB-OBV
‘he is said to have not told him (obv.)’

Before concluding this section on the TA alternations, I should point out that a number of speakers are aware of the dialect split. Several speakers of the Old dialect are quite certain that their pronunciation is the correct one. One relatively young speaker of the Old dialect mentioned that he has heard both épéoto (Old) and épéótóho (New) meaning ‘he dislikes him (obv.)’ (the TA stem with ASA is /-peó/). He volunteered that there might be a meaning difference between the two pronunciations. Such folk interpretation is, of course, quite common when speakers are exposed to multiple pronunciations. For example apparently some speakers near the [grisi] vs. [grizi] greasy isogloss impute to the latter pronunciation a meaning with greater intensity. Someone who gets [grizi] is “greasier” than someone who gets [grisi]. In my own background I was exposed to both [krik] and [krík] pronunciations for creek. If hard pressed I might say that a [krik] is smaller than a [krík].

AI Obviative Dialects

Dialect splits become more complicated in AI obviative forms. As mentioned earlier, the New dialect consistently treats the obviative suffixes in the affirmative as /-(ó)hó/, with phonemic high pitch on the obviative suffixation, regardless of the phonemic pitch of any preceding vowel:

New Dialect

28) a. /é-man-e/ émane ‘he (prox.) drank’
b. /é-man-óhó/ émanóho ‘he (obv.) drank’

29) a. /é-to’ó-e/ étó’e ‘he (prox.) got up (from sleep)’
b. /é-to’óhó/ étó’óho ‘he (obv.) got up (from sleep)’

30) a. /é-mó’ó-e/ émó’e ‘he (prox.) invited to a feast’
b. /é-mó’óhó/ émó’óho ‘he (obv.) invited to a feast’
Other speakers maintain a variety of Old dialects, with minor variations among speakers. All of these speakers use in common the pitch alternation we have seen elsewhere in this paper, i.e., when the last vowel of the stem is high pitched, obviative suffixation will be low-pitched, and, conversely, when the last vowel is low-pitched, obviative suffixation will be high-pitched. But Old speakers vary in terms of what else they do with the obviative morphology besides having this pitch alternation. I will label the three Old subdialect variants Old1, Old2, and Old3. I believe a majority of speakers probably hold to some form of an Old dialect, but I am unsure at this point which, if any, of the Old dialects is presently dominant. It should be noted that while speakers are, in general, quite confident about their pronunciation of the TA forms, they are conscious of a little less certainty concerning the AI forms. I returned to some speakers for additional questioning on later occasions and most were consistent with previous responses, but initial responses sometimes showed some uncertainty. An individual speaker would sometimes vary, uncertain as to which pronunciation he or she will prefer. (I allowed speakers to volunteer pronunciations, and did not initially suggest alternatives.)

Old speakers of all subdialects agree with New speakers that the last stem vowel is low-pitched (17, 28, 29). Old speakers all agree that an AI stem which ends in /-e/ in a third person proximate form and for which the preceding vowel is high-pitched, e.g., (30a), should have low-pitched obviative morphology. So, all Old speakers maintain obviative (30c):

30)  
   c. /é-mó'-o/ émo'o
       3-invite to feast-OBV
       'he (obv.) invited to a feast'

However, the following subdialectal splits were found when the last stem vowel is high-pitched and the proximate ends in a vowel other than /-e/ (my corpus only contains other AI proximate subject verbs ending in /-á/):

31)  
   a. /é-háoéná/ éháoéna ‘he (prox.) prayed’ (all speakers)
   c. /é-háoéna-ho/ éháoénaho ‘he (obv.) prayed’ (Old1)
   d. /é-háoéna/ éháoena ‘he (obv.) prayed’ (Old2)
   e. /é-háoéno/ éháoeno ‘he (obv.) prayed’ (Old3)

Examples (31c–e), of course, contrast with (31b) of the New dialect. Each of the Old dialects treats the obviative morphology as being low-pitched, whereas the New dialect treats it as high-pitched. The same splits seen in forms of (31) occur with the verb which occurs in the proximate as /é-ó'esóva/ éó'esóva ‘he (prox.) sliced drymeat’.

A few comments on (31c–e) as representatives of subdialects Old1, Old2, and Old3 are in order. Penultimate devoicing of (31c) does not
follow the normal devoicing rules of Cheyenne. Old1 retains the commonly occurring /-ho/ obviative suffix. Old2, (31d), has no segmental obviative suffix. Instead, there is only the prosodic indication of obviation, i.e., the contrast of pitch contours between the proximate of (31a) and the obviative of (31d). Note that Old2, therefore, does not follow the constraint on WFOD apocope described earlier in discussion of noun obviation, that the penultimate vowel can only be /-o/ for WFOD to occur. Old3 replaces the stem-final /-á/ of the proximate with low-pitched obviative /-o/.

We can now chart the differences between all dialects observed to date, in terms of phonological rules used in verbal obviation. OTC = Obviative Tone Copying, OTS = Obviative Tone Stealing, WFOD = Word-final Obviative Deletion, OVR = Obviative Vowel Replacement. An X indicates that the dialect uses the rule. Chart (32) only refers to dialect differences in the so-called "simple" affirmative verbs. In this chart an X under WFOD or OVR refers only to AI stems ending in proximate /-á/. As mentioned above, WFOD occurs in all Old dialects, except in Old1 for AI stems in /-á/. OVR occurs in the New and all Old dialects for AI stems ending in -e, whether phonemically high or low-pitched, but it only occurs in Old3 for AI stems in /-á/.

<table>
<thead>
<tr>
<th>Dialect</th>
<th>OTC</th>
<th>OTS</th>
<th>WFOD</th>
<th>OVR</th>
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<td>Old3</td>
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Cheyenne speakers have felt the tension between a need for paradigmatic regularization (e.g., keeping obviative suffixes high-pitched) and a need to recover underlying pitches of stems (e.g., keeping proximate forms distinct from obviative forms). Speakers of the different dialects have come up with different solutions to this problem of morphological tension. Speakers of the Old dialects are able to recover underlying pitches in all forms. Speakers of the New dialect are not; instead, speakers of the New dialect must refer to non-indicative and/or some non-affirmative verbal forms to recover underlying pitches.

Autosegmental diagrams can illustrate pertinent examples. The previously unexplained pitch contour of (23) now appears normal when we realize that OTS has occurred:

\[
\text{e-vovohněhese-h-o-ho}
\]

The alternation between high-pitched /-hó/ in affirmative (19) /évéomôho/
'he saw him (obv.)' and low-pitched /-ho/ in negative (19b) is not lexically determined but follows the normal preceding-pitch constraint. Example (19), of course, undergoes OTC:

\[ \begin{array}{c}
H H L H \\
évoo-m-ô-ho
\end{array} \rightarrow évoo-mô-ho 'he saw him (obv.)'
\]

OTC cannot occur in the corresponding negative because for it to do so would violate an important tenet of a well-formedness condition (WFC) of Autosegmental Phonology that "Association lines do not cross" (Goldsmith 1976:27). Hence, (35a) does not meet the WFC, and speakers reject the surface form in favour of (35b):

\[ \begin{array}{c}
H H L H L H H \\
esaavoono-he-ho
\end{array} \rightarrow ésaavoomôhého 'he did not see him (obv.)'
\]

Space limitations do not allow us to display entire derivations in our AP diagrams. Were such possible, it would show that (35b) has undergone the following pitch rules: Word-medial High-Raising (on /saa-/ preverb), High Push-over (HPO) (on the negative suffix /-hé/), and Phrase-final Devoicing (PFD). Each of the dialectal variants in (31) could similarly be displayed in an explanatory fashion through AP diagrams.

**The -'tov ~ -no(t) Alternation**

Recognition of the phonological (pitch) basis of the obviation pitch alternations allows us to understand another previously inexplicable alternation that occurs in one TA final. The particular final is /-’tov/ (from PA *-²taw) which often acts as a transitivizer of inherently intransitive verb roots.

For many verbs /-’tov/ (or a coalesced version, /-’tôe/) occurs in all direct and inverse person combinations of both the Independent and Conjunct Orders of TA paradigms:

\[ \begin{array}{c}
a. na-peheve-’tov-o \\
1-good-TA-DIR
'I was good to him'
\end{array} \]

\[ \begin{array}{c}
b. na-peheve-’tov-o-o’o \\
1-good-TA-DIR-PL
'I was good to them'
\end{array} \]

\[ \begin{array}{c}
c. é-peheve-’tov-ô-ho \\
3-good-TA-DIR-OBV
'he was good to him (obv.)'
\end{array} \]
d. ná-pēhēve-'tov-a
  1-good-TA-INV
  'he was good to me'

e. tse-h-pēhēve-'tov-o
  CJT-PST-good-TA-1:3
  'when I was good to him'

But for other some other verbs, the /-'tov/ final appears only in inverse forms (37d) and in the Conjunct Order (37e). An unexpected /-no(t)/ appears in direct forms of the Independent Order:

37)  a. ná-mone-notse
  1-choose-??
  'I chose him'

b. ná-mone-not-o
  1-choose-??-PL
  'I chose them'

c. é-moné-not-o
  3-choose-??-OBV
  'he chose him (obv.)'

d. ná-moné-'tov-a
  1-choose-TA-INV
  'he chose me'

e. tse-h-mone-'tovo-o
  CJT-PST-choose-TA-1:3
  'when I chose him'

The final (t) of /-no(t)/ disappears in certain person combinations and nonindicative modes:

37)  f. né-moné-no-ne
  2-choose-??-1PL
  'we (incl.) chose him'

g. é-moné-nō-sest-o
  3-choose-??-ATTRIB-OBV
  'he is said to have chosen him'

The basis for the - 'tov ~ -no(t) alternation is the same as that found for the obviation pitch contours, i.e., the determining factor is the phonemic pitch of the preceding vowel. When the last vowel of the verb root is low-pitched the TA final will appear as /-'tov/ throughout the entire paradigm. But when the last vowel is phonemically high-pitched, the /-no(t)/ alternant appears in inverse persons of the Independent Order.

The /-no(t)/ alternant is glossed with '??' in (36, 37) to draw attention to its initially unclear status, but it should be evident by now that /-no(t)/ is simply a morphological alternant of /-'tov/, hence should be glossed as TA. It is best called a morphological alternant in that there is no phonological relationship between /-'tov/ and /-no(t)/.

Some other examples with this alternation are:

38)  a. /é-amahe-not-o/ éamâhênoto 'he received him (obv.)'

b. /ná-amahe- 'tov-a/ nääamâhê'tova 'he received me'
39) a. /é-héhé-not-o/ éhëhenoto 'he has him (obv.) as father'
   b. /ná-héhé-'tov-a/ náhëhetova 'he has me as father'

40) a. /é-hohtó-vá-not-o/ éhohtóvanoto 'he bought/sold him (obv.)'
   b. /ná-hohtó-vá-'tov-a/ náhohtóvata 'he bought/sold me'

It should be noted that Goddard (1983:384) suggests that the /-ot/ of /-no(t)/ is cognate with the Menominee negative-order final suffix -an. Future studies must explore in more detail the historical basis of this and other Cheyenne forms described in this paper.

**Conclusion**

I have attempted to show in this paper that Cheyenne obviation pitch alternations and -'tov ~ -no(t) allomorphy are sensitive to the pitches of preceding vowels. Lexical explanations are found to be unnecessary and, in fact, are counter-explanatory. The concepts and notational devices of Autosegmental Phonology adequately capture the interaction of Cheyenne pitch assimilations and segmental allomorphy.

I have also touched upon the changes that the Cheyenne language is experiencing as speakers attempt to regularize paradigms while trying to maintain recoverability of underlying pitch values. Much more should be said on the broader topics of language change and language death since they are critical in the study of Amerindian languages.

On a practical level, we have seen, once again, that fieldwork, ideally, should take place in a total community setting. Data should be collected from numerous speakers to ensure that it is sufficiently representative of the speech community.

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