

A PLURALITY PUZZLE UNRAVELED

(Or, The Importance of Being So?taa?e)

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[The Cheyenne language is a little-studied member of the great Algonquian Language Family, displaying some interesting complexities. Even such a normally simple task as describing the pluralizing system of Cheyenne, descended as it is from a single animate and a single inanimate plural in Proto-Algonquian (PA), cannot be accomplished without historical information--all purely synchronic plurals classes are obviously ad-hoc and quite unsatisfying.]

Cheyenne plurals--indeed the whole Cheyenne language--cannot be understood without a knowledge of a submerged dialect called So?taa?e (referring to "the ones left behind"), a previously undescribed and seldom mentioned dialect which now assumes tremendous importance.]

1.0. The Synchronic Problem

A very few attempts have been made previously to account for the plurals of Cheyenne, none of which have been very enlightening, including my own. Rudolph Petter (1952:5) mentioned three animate and two inanimate plurals (+o?o, +ho, e > o; and +ne+stse, +no+stse), whereas my own recent synchronic analysis revealed eight animate and six inanimate pluralizers in a sample of 434 different noun forms:

FIG-1

ANIMATE

(sample = 211 = 48%)

- a. +o?o...67 = 32%
- b. +ho....45 = 21
- c. e/o....26 = 12
- d. +no....22 = 10
- e. stress.17 = 8
- f. ?/n....16 = 8
- g. +ne....12 = 6
- h. +hne... 6 = 3

INANIMATE

(sample = 223 = 51%)

- a. ?/n, +tse.....52 = 23%
- b. +no, +tse.....47 = 21
- c. +tse.....45 = 20
- d. e/o, +tse.....52 = 23
- e. +ne, +stse....14 = 6
- f. +V?estse.....13 = 6

These fourteen pluralizers, however, were merely the cover-symbols which masked a multitude of subcategories--35 in all!--as concomitant internal changes took place within the words to which these plurals were affixed. The more analysis was applied to this plurality puzzle, the messier the answers became.

Having previously studied some noun-classifying African languages, I looked for semantic sense within these plurals classes of Cheyenne-- to no avail. The classes were devoid of any apparent semantic grouping; indeed, they seemed either phonologically based or idiosyncratic.

Where was the psychological reality? I kept asking myself. Furthermore, to add to the confusion, there was a list of words (about 1/20th of my total corpus, 25 or so) which could take two or even three different plurals--and for one word, there were eight separate plurals possible! But it was my discovery of all the multiple plurals which finally got me asking more illuminating questions, such as: "What about plurals in other Algonquian languages? Are they accounted for by noun classes, as I have posited for Cheyenne, or in some other way?"

2.0. Syllable-Final Problems in Algonquian Languages

First, a note concerning final vowels and syllables in Algonquian languages. There is an historical tendency within the Algonquian family to weaken (by devoicing or dropping altogether any traces of) final vowels of words--a process which, under certain conditions, can extend frontward into the original penultimate and even antepenultimate syllables; as noted by Haas (1966:497), this regressive unvoicing affects vowels and consonants alike. In fact, the Cheyenne language is a model of this type of regressive unvoicing, both synchronically and diachronically. On the other hand, Wick Miller (1959:21) has mentioned that "Fox, Kickapoo and Shawnee are among the few languages that preserve the final vowels of PCA."

Now there is an unfortunate tendency in most of the PA literature to find words spelled as if they ended in consonants or voiced vowels (as not writing a final voiceless -ho syllable)--a tendency, I feel, which obscures knowledge important for historical purposes. While this does not normally hide important synchronic phonemic information, it does tend to obscure the effects of historical phonemic patterning.

Therefore in my comments here on the plural-systems of other Algonquian languages, I have inserted

values for final vowels which are intended merely to show whether any significant deviations have occurred from the PA pattern; the actual phonetic vowel specifications may well be disputed by experts of those languages, but I am interested in pattern.

3.0. Shawnee and PA Pluralizers

The plural system of Shawnee (Parks (1975:139)) compares nicely with Bloomfield's (1946:95) description of Proto-Algonquian. We will be introducing the terms proximate (normal third person) and obviative ("other-third" or so-called "fourth" person: disambiguates by suffix the equivalent of the English "Tom and Fred saw his dog coming up the trail.").

FIG-2

	ANIMATE (Proximate) [sg,pl]	(Animate) OBVIATIVE [sg,pl]	INANIMATE (Proximate) [sg,pl]
Sh	-a, -aki	-ali, -hi	-i, -ali
PA	*-a, *-aki	*-ali,*-ahi	*-i, *-ali

Shawnee is therefore typical of "standard" PA pluralization. Before leaving Shawnee I should like to note that it has another tendency found in other Algonquian languages: the deletion of final-syllable -n-i in inanimate singulars. I have in Cheyenne an exact counterpart to Parks' Shawnee example (:140) involving the forms for "my shoe, -s":

FIG-3

Sh	/ni+ma?kiθen+i/, /ni+ma?kiθen+ali/ <u>nima?kiθe</u> <u>nima?kiθenali</u>
Ch	/na+mo?kehan+o/, /na+mo?kehan+ote/ <u>namo?keha</u> <u>namo?kēhanotse</u>

We see in Shawnee, therefore, a curious double practice: it voices final vowels, but deletes final -nV's; Cheyenne devoices final vowels and deletes SOME final -nV's; other languages devoice final vowels but leave the final -nV sequences, and so on. In Ojibwa we find an intermediate (and perhaps historically causal?) situation where some final -nV's reduce to final NASALIZATION of vowels: observe that languages undergoing that kind of final nasalization in one historic stage, and then losing all traces of final nasalization (or, indeed, all nasalization--including the

pre-nasalization of consonants) in the next stage, would reasonably be expected to lose track eventually of original final -nV's in these singular forms, only to have them reappear medially in affixed plural forms--indeed, the very case we find in Cheyenne.

4.0. Algonquian Plurals

With these final vowel and final nasal syllable irregularities in mind, therefore, let's turn to other Algonquian languages and look at their pluralizing systems. I am here presenting reformulations of information gathered from the following sources: Bloomfield's Eastern Ojibwa (1956:31), Wolfart's Plains Cree (1973:31), Hockett's Potowatomi (1955:62), Pearson's (ms:44) and Voegelin's (1946:139) Delaware, Siebert's Virginia (1975:418), Silver's Natick (1960:var.), Teeter's Malecite-Passamaquoddy (1971:227), Francis and Hale's Micmac (ms), and Frantz's Blackfoot (1971:22).

FIG-4

	ANIMATE	OBVIATIVE	INANIMATE
PA	*-a, *-aki	*-ali, *-ahi	*-i, *-ali
Sh	-a, -aki	-ali, -hi	-i, -ali
C	-a, -aki	-- -ahi	-i, -ali
Mi	-a, -aki	(?)	-i, -ali
M-P	-a, -aki	-ali, -ahi	-i, -ili
eO	-a, -aki	-a, -ani	-i, -ani
Po	-a, -aki	-ani, --	-i, -ani
De	-a, -aki	-- -ahi	-i, -ahi
Vi	-a, -aki	-- -ahi	-i, -asi
Na	-a, -aki	(?)	-i, -aʒi
Bl	-wa, -iki	yi, -iki	-yi, -isti

Most Algonquian languages, therefore, exhibit great regularity in forming plurals, and the only "noun classes" which are normally needed are the grammatical animacy classes.

Some general remarks before leaving this system. The animate singulars and plurals for all but Blackfoot seem quite regular, and even the Blackfoot is understandable variation. Similarly, the inanimate singulars have not varied extensively from the PA mold, although there seems to be more variation in the inanimate pluralizer and its alveolar consonant which is subject to quite a bit of change, sometimes shared with the obviative form. While it is not the function of

this paper to deal extensively with obviation, the inclusion of the data here may help someone's formulations of obviative.

5.0. Pluralization in Arapaho

One prominent Algonquian language has not been mentioned, and that is Arapaho. It was saved until last in this Algonquian plurals survey because when Salzmann (1965:43+) wrote his description of Arapaho plurals he described PLURALS CLASSES similar to those originally posited and rejected for Cheyenne.

Salzmann's Arapaho plurals article consists of a listing, a cataloguing of the various plurals Classes, Subclasses, Divisions, Sets, and Subsets of Arapaho nouns according to suffixes and internal changes caused by plurals suffixing. Applying now our knowledge of voiceless vowels and loss of final -nV's to his data, the dross melts away to reveal a regular but slightly innovative standard PA plural system.

Indeed, to make sense of the Arapaho data from an historical view, we shall have to proceed somewhat backwards. I propose the following procedures for simplifying about 90% of the Arapaho noun classes, leaving a more comfortable number of irregulars:

FIG-5

- a. Drop final CV of plural form
- b. If new-final syllable begins with {-n, -ʔ, -h}, drop syllable.
- c. Devoice the now-final vowel
- d. Apply various phonological rules, such as: vowel sandhi, vowel harmony, consonant changes before the vowel -i, etc.

= singular form of Arapaho noun

Accordingly, we may now list the plural affixes of Arapaho in comparison with our schema for other Algonquian languages, noting these changes: (1) PA animate-*a shows up here in Salzmann's orthography as -o; (2) *k > Ar ʔ; (3) all final vowels of plural/obviation affixes have been called COPIES of the penultimates.

FIG-6

	ANIMATE	OBVIATIVE	INANIMATE
PA	*-a, -aki	*-ali, *-ahi	*-i, *-ali

Ar	a. +o, +o?o	--	+oho	+o, +oho
	b. o/e alt.			
	c. +oho			

Refinements of the above analysis must undoubtedly be made by those more familiar with Arapaho synchronic and diachronic phonology--but in broad outlines, at least, we have found a quite regular system of plural markers, once it is understood that Arapaho (like Cheyenne, Shawnee, and Natick) shares the trait of dropping in singular forms a final -nV# which can be predicted from the plural forms, and would be consistent with going through a nasalization stage such as that of Ojibwa and then a subsequent denasalization stage.

5.1. On the Relationship Between Arapaho and Cheyenne

Fortunately for Algonquianists, both Michelson (1935:131) and Kroeber (1916) have left us in their writings some intriguing glimpses of the little-known dialects of Arapaho. Michelson reports that Mooney says concerning the Southern Arapaho, "'In addition to their everyday dialect, they are said to have an archaic dialect, some words of which approximate closely to Cheyenne,' which important statement is ignored by Kroeber....[who] himself says...'The Nanwacinaha'anan is considerably different from Arapaho. It alone, of all the dialects, has the sound m. In the form of its words, it diverges from Arapaho in the direction of Cheyenne.'"

Since Sapir (1968:456, ftn. 50) as well felt it "highly probable that Cheyenne and Arapaho belong to a single group of Algonkin," I should be remiss were I not to point out the obvious: that an examination of the plurals systems of the two languages tends to support a cohesive grouping, made more obvious below. An examination of certain shared sound changes, the subject of future work, cements the relationship quite nicely.

The next obvious question, then, is: will these principles now help us solve our Cheyenne plurality puzzle as well as it helped with the related Arapaho puzzle? The answer: of course. Let us look now at dialect information concerning the Cheyenne language.

6.0. On the Importance of Being So?taa?e

This section will present but a brief demonstration that the so-called "Cheyenne" language of today is

a bizarre fusion on many different levels of two anciently-related dialects: Cheyenne-proper Dialect (CD) and So?taa?e Dialect (SD), as discussed in Alford (1975). The So?taa?e people (as recounted in tribal folklore) were encountered in warfare and through their shouted commands recognized by the Cheyennes as linguistic relatives, perhaps hundreds of years ago; at which point the larger Cheyenne band adopted into itself the smaller So?taa?e band complete with its different speech and different Sacred Covenants with the Creator--took them in, demonstrably, as a "high-prestige group" in the social hierarchy.

In addition we shall see that archaic male/female speech distinctions (similar in many respects to those of the Gros Ventre (Atsina) dialect of Arapaho described by Regina Flannery (1946)), as well as awareness that gender-shifts have taken place, are needed in addition to information of previous sections in order to finally solve our Cheyenne plurality puzzle.

6.1. Historical References to the So?taa?e

Precious little reference in print has been made to these So?taa?e people (or So?taa?e?o)--otherwise previously spelled Sotaeo or Sotao, or possibly other spellings in anthropological literature.

Petter says in (1915:86): "Sotaeo is the name of a band or tribe of Indians whose language was only dialectally different from the Ch. and readily understood by the latter." He mentions it later (:993) as the

pr. name of a band of Indians whose language differed but little from the Ch. They met the Ch. in the "northern country, on the other side of the Missouri," and a battle would have ensued had not the Ch. heard the Sotaeo address each other in Ch. From that time on the Sotaeo became a part of the tribe. While their dialect was only a dialect of the Ch., it brought many new terms which were gradually added to the Ch. vocabulary.

Michelson (1935:156), of the early researchers, came closest of all to the point of understanding the importance of So?taa?e, but either ignorant or recalcitrant Cheyenne informants steered him off the path (as happened to me in my early work as well):

There is no question but that ma-e'stoo?o "somebody's throat" is derived from a Proto-Algonquian archetype *me-kwentaakan-i...; it is possible that we have a different reflex terminally

in heto'hko "vessel, dish", derived from *we-laakan-i... owing to the loss of -*k- in the case considered first; but it should be pointed out that in Cheyenne -oo?o (pl. -oonotse...) is so common in body parts...that it is plausible that in reality it arose phonetically in one instance or so and then was extended analogically....For it can be easily shown that the Proto-Algonquian archetypes of the words under discussion did not all have the same suffixes (*me-t-aapi@kan-i "somebody's jaw", *me-t-e@emaakan-i "somebody's shoulder", *me-t-weskwan-i, "somebody's elbow")....

I do not know the rationale of such doublets as e-vo'hke-a?one, e-vo'hce-a?one "he, she has a crooked shin", ma?hahkeso, ma?hahceso "old man", etc. Both seem to be considered equally idiomatic among both Southern* [*footnote: A southern Cheyenne informant whom I interrogated recently (May, 1934) uses only the k forms.] and Northern Cheyenne; and both the Southern and Northern Cheyenne denied that one really was Cheyenne and the other Sotaio. One southern Cheyenne said the -c- forms were "old fashioned"; in view of the fact that where the etymologies are known the k forms are the archaic ones, the information is not very enlightening.

Be it noted that Michelson had indeed discovered the So?taa?e dialect, though he couldn't prove it at the time, and did not recognize those anomalous body parts as being of So?taa?e form, wrongly attributing to a 'loss of -*k- what was actually a change of -*k- > ?. The -o?o/-oonotse alternation referred to earlier, also, did not arise "phonetically in one instance or so and then was extended analogically", but was a regular product of an alternate line of development than that of fully "Cheyenne-proper" dialect words--it was a process of syllable collapse which is fully functional in So?taa?e speech.

6.2. How CD and SD Differ re PA Derivation

Let's look now at some specific historic derivational differences between these two dialects comprising modern Cheyenne.

Cheyenne-proper (CD):

- (1) Vowels: (a) The normal PA/Ch vowel shifting (*o/*i, *e, *a > Ch e, a, o) resulted in the loss of the distinctive high-front vowel in both long

and short varieties; additionally (b) *wa became Ch e, (c) LONG PA vowels became SHORT and STRESSED, and (d) some vowels DEVOICE.

(2) Consonants: (a) pre-aspiration of initial vowels--so that the Cheyenne-proper "butterfly" hevavâhkema is found in So?taa?e as pre-aspiration-less evavâhcema or perhaps more properly ?evavâhcema. At some earlier stage of PA, glottal may have been in non-distinctive variation initially with pre-aspiration, as is common in many world languages.

(b) preaspiration of consonants--so that intervocalic *{p,t,k}s become Ch {hp,ht,hk}s. I suspect this is a relic of the postulated Ojibwa-like nasalization stage followed by denasalization. Reconstructed *nC's and *hC's behave identically to straight *C's; and *?C's remain Ch. ?C's.

(c) *#t-, *-y-, *-l-, & *-θ-: all > Ch t.

(d) *?l, *?θ, & *?s: all > Ch ?h

(e) *-s-, *-hs-, & *-ns-: all > Ch h.

So?taa?e Dialect (SD):

(1) Vowels: same changes generally, but (a) very little STRESSing as in CD; (b) PA long vowels remained as So?taa?e long vowels especially before glottals; (c) there is limited vowel DEVOICING per se, but (d) a new process of SYLLABLE COLLAPSE whereby, e.g., -?VnV- becomes just -nV-.

(2) Consonants: Where four out of five Cheyenne-proper changes mentioned above had to do with what **one might** roughly call "h-ing", So?taa?e is more characterized by its "de-k-ing".

(a) PA-initial *p's and *k's either delete completely in So?taa?e or are changed into glottals phonemically before being folk-reanalyzed as non-distinctive; in any case, the glottals are not heard in modern compound words.

(b) There are some examples of medial *-p- and abundant examples of medial *-k- sounds becoming Ch. ?'s, with often concomitant preceding long vowels. The Cheyenne-Dialect Adaptation (CDA) of this So?taa?e form, when one took place, involved adding to the glottal a "k" to get a -?k- sequence (normally with a "diminutive" reading).

(c) On the other hand, when Cheyenne words already had -?k- clusters from PA *-?k-'s, the So?taa?e speakers adapted (SDA) by having -k- palatalize to -c- before the front vowel, or dropping

the k-sound altogether before a non-front vowel. (For instance in various terms for "old man": ma?hahkeso (CD) ma?hahceso (SDA) ma?haeso (SD).) So?taa?e speakers often adapted the Cheyenne -hk-sound by simply dropping the -k- to leave mutable h's: "baby" me?éševótse (SD), me?éškevoṭse (CD); an expected SDA form would then be *me?éšcevoṭse; "hailstone" ao?éseto (SD), ao?éšketo (CD), and the SDA ao?ésceto.

(4) A -?n- cluster seems to be always So?taa?e, corresponding to the Cheyenne -?h- form: as in "fish" noma?he (CD) vs. noma?ne (SD); or "three" na?he (CD) vs. "eight" na?no'hto (SD).

Finally, on another level, it appears that pluralization by STRESS-SHIFTING is uniquely Cheyenne-proper, innovatively as far as I can tell, while pluralization by AFFIXING in the old PA way is more characteristic of So?taa?e.

As you may now begin to fully appreciate, there was much more treasure awaiting Michelson than he even perhaps dared hope for, and it is our loss that he was turned away from more deeply exploring.

6.3. Male/Female Speech and Gender-Shift

Another topic which I shall but briefly mention here is that of differences in male and female speech--totally archaic and quite difficult to uncover in modern Cheyenne speech. Luckily, James Shoulderblade, an elder informant of mine who could read the old Petter writing system and was of immense help in the preparation of the new dictionary, had an older brother who could still remember phrases of male speech.

The two most productive differences between male and female speech are (1) that female speech has -sk- where male has -šk- (as well as regressive š-ing, as in "purse" ve'?ho?é-sesko (FS), versus ve'?ho?é-šesko (MS)); and (2) the second-initial vowels are often recycled through the great vowel shift pattern again, as in the female and male equivalents for "knife" (arch), motse (Ch t always --> ts / -e) and mota.

Finally, we must realize that our linguistic terms "ANIMATE" and "INANIMATE" but barely convey the true spiritual reality which is implicit in the understanding of GENDER-SHIFTS. Ordinarily "inanimate" objects may be imbued with power, or special importance, after which they are referred to as being "animate". The

word for "fingers" differs from the word for "rings" only by the latter having the inanimate -tse suffix: mo?eškonó(tse); similarly "beetles" and "spoons", haméškonó(tse); likewise the "ladybugs" and "playing cards", móhenéšemonó(tse); and many other homonyms (since all are identical in singulars).

7.0. The Plurality Puzzle Unraveled

Given the following positional frame, where a Cheyenne noun ends in

FIG-7

stem	(arch)	(dimin)	(n)	(anim)	(anim)	(inan)	(inan)
	(pl/ob)				(pl/ob)	(pl)	
1	2	3	4	5	6	7	8

and given the following FEATURES attached to the noun stems in the lexicon, along with their appropriate mappings into the above framework, we can finally predict the plural forms of Cheyenne nouns from their singulars.

- A. [INANIMATE] This is the most basic Algonquian feature, and retains highest importance in this system as well.
- B. [GENDER-SHIFT] This will account for forms which exhibit both AN and INAN pluralizers of the modern variety (as in some of the eight plurals for "knives", which have INAN pluralizers following AN ones.) In the simpler and more usual shift, inanimates newly considered animate simply drop the final -tse marker which signals both number and gender.
- C. [MASCULINE] We will not here be specifically treating the -šk- versus -sk- problem, though we recognize its presence; but here the vowel alternation in the second-initial syllable, distinguishing for instance the (more innovative) masculine pronunciation for "knife" mota from the feminine motse; or the later de-pluralized singulars motáhke, moťéške. (These both contain the archaic Cheyenne pluralizer -hke.) Masculine forms seem to be both innovative and out-moded: which is to say, this masculine/feminine speech split is not a normal Algonquian feature to be posited in the proto-language; its presence in Arapaho (Atsina), closely related as we see now to Cheyenne, suggests that this speech split was perhaps an interesting language borrowing from non-Algonquian peoples with

whom the Cheyenne/Arapaho groups made contact on the plains.

D. [SO?TAA?E] Cheyenne-proper plurals seem dominated by -e- vowels, while So?taa?e plurals show corresponding -o- vowels. In surprise we see that it is the more archaic So?taa?e animate pluralizer -o?o, not the Cheyenne -hke, which has become the productive one (again consistent with high-prestige value) in the modern Cheyenne language-fusion. And here, not final -nV loss or devoicing, but syllable-collapse (e.g., -?ono- > -no: "dish/es" = heto'hko(notse) (CD) or vetoo?o, vetoonotse (SD), where the latter plural is one syllable shorter because of So?taa?e syllable-collapse.) CD Stress-shifting ("dog" ho'tame, hota'me versus (SDA) ho'tame, hota'meho) was not recognized by the So?taa?e as pleasing for pluralizing, preferring the old-fashioned suffixing. Inanimate singulars end in -otse.

E. [DIALECT ADAPTED] This feature will allow, for instance, for a Cheyenne plural shown by stress-shift (as in "dog" above) to also have a So?taa?e pluralizer, or for -ke- to become So?taa?e -ce-, or for a -k- to delete or become a glottal, etc. These forms are then Cheyenne-Dialect-Adapted (CDA) or So?taa?e-Dialect-Adapted (SDA).

F. [STRESS-SHIFT] From whatever source, possibly deep in Pre-Proto-Algonquian, this feature on the stem will allow stress-shifting in animate plurals, with or without additional suffixing. The rule for this is very simple: taking the unsuffixed form as basic, plural stress will be on the penultimate vowel while singular stress will be on the antepenultimate vowel UNLESS prevented by a stress on the 4th-vowel-from-end, in which case the "singular stress" will drop since Cheyenne does not seem to tolerate two stressed vowels in a row. Compare "dog/s" ho'tame, hota'me; "badger" ma?ha'hko?e, ma?hahko'?e; "pine" ?e'stoto?e, ?e'stoto'?e; "lion" nano'se?hame, nano'se?ha'me; and "frog" oo'naha?a, oonaha'?a.

G. [-nV# LOSS IN SINGULAR] This postulated relic of an Ojibwa-type nasalization stage (also needed for at least Arapaho, Shawnee, and Natick) seems to have been peculiar at first to the Cheyenne-proper dialect alone, since Petter listed a So?taa?e-adapted form of mo?cəhano (moxcan) as the most commonly heard pronunciation for "shoe" in his day, as opposed to the modern Cheyenne mo?keha.

H. [SYLL-COLL] Syllable-collapse, as mentioned earlier, is predictably So?taa?e since it depends on the presence of a glottal in a certain position for operating; it operates analogously to Cheyenne devoicing in function, reducing word-length by a syllable. With the discovery of this, it should be noted, we can now understand more clearly what we called ?/n alternation in early plurals formulations--just as the "animization" of former-inanimates lets us dispense with the so-called e/o alternation.

I. [OBVIATIVE] An ANIMATE reading will ultimately have to know whether the noun is grammatically proximate or obviative. Since Cheyenne obviative is number-indifferent, it will not even need to know whether the word is singular or plural if obviative; if proximate, the plural information will be necessary. In Cheyenne, the syllable -o'ho replaces the final vowel of the proximate-singular (unmarked) form:

FIG-8

"woman"	he?e, he?eo?o	[+OBV]	he?o'ho
"man"	hetane, hetaneo?o	[+OBV]	hetano'ho

J. [PLURAL] This refers to productive pluralizers of both dialects: the animate -o?o (SD) and -ho (unclear pedigree); and the inanimates -e(s)tse (CD) and -otse (SD).

K. [ARCHAIC PLURAL/OBVIATIVE] This is an ad-hoc label for a set of forms having -hke, -he, & -V?e in the position just following the stem, all of which look suspiciously like once-active plurals and obviatives. This also includes stress-shift. As Sapir mentions in "Time Perspective..." (1968:441):

In every language there are a number of grammatical processes and elements that have ceased to be alive, as it were; that are no longer productive of new analogies, but that appear restricted in use to a limited number of stereotyped forms. Such grammatical features are clearly only survivals of features that were formerly more typical and more freely usable. They imply a considerable age for the words they affect. This matter becomes of cultural interest when the words affected by irregular grammatical processes are of cultural reference.

In many cases where the archaic plural is present, it seems to have at a later point been re-analyzed as a singular form. For example, there is no modern

singular/plural distinction in Cheyenne for "elk/s": mo?e'he, mo?e'he. But an old-timer can tell you that there used to be a shorter singular form, {note the stress-shift} mo'e. Other re-pluralization occurrences, most typically So?taa?e (SDA) animate or inanimate pluralizers being added to existing Cheyenne (CD) animate pluralizers, involve stress-shift changes, which Sapir's quote would thereby also predictably posit as archaic.

L. [DIMINUTIVE] Finally, for this discussion, the stem ideally should carry information which will cause the diminutive suffix to be added in its appropriate place, and there are slightly different processes for the various dialects, which I am not prepared to discuss here.

These features, then, are needed by at least the elder Cheyenne speaker (modern children don't know many of these dialectal forms) in order to derive plurals from singular forms; admittedly, this could have been done on the children's model, but explanation of relic morphemes was a purpose here.

To see exactly what effect all this has on our original multiple noun classes of FIG-1, see APPENDIX 1. The double-pluraled words are found in APPENDIX 2.

8.0. The Very Regular Cheyenne/So?taa?e Plurals

In conclusion, now that we have the proper historical framework through which to view our Cheyenne pluralizing operations, we can reduce our once-so-unruly plurals classes to a fairly regular Algonquian system, similar to that of Arapaho.

FIG-9

	ANIMATE	OBVIATIVE	INANIMATE
PA	*-a, *-aki	*-ali, *-ahi	*-i, *-ali
Ch	+ki stress-sh	--	+he +ete
So	+o?o +ho		+oho +ote
Ar	+o?o o/e +oho		+oho

Please notice that with Cheyenne-proper there is a pre-occupation with the accuracy of the ultimate vowel (regular sound changes) at the expense of the penultimate, suggesting a late onset of devoicing--we saw final vowel voicing earlier in Shawnee, Kickapoo, and Fox. So?taa?e, on the other hand, is consistently more accurate in the value of the penultimate vowel, with the final vowel often a copy vowel similar to Arapaho's.

Now it may be better understood by Algonquianists why PA/Cheyenne correspondences often look "funny"--because of a lack of knowledge concerning So?taa?e, the "Cheyenne" words used were not always of strict Cheyenne heritage; hence, large numbers of non-matching correspondences. Much work remains to be done in order to fully describe the dual PA/Cheyenne/So?taa?e lines of historical derivation.

*NOTE

This paper is presented with gratitude to Mary Haas for her valuable insights and assistance; the fieldwork for this data was done over four years in residence on the Northern Cheyenne Reservation in southeastern Montana. My sincere thanks are extended to my many Cheyenne informants.

The careful reader will please note that I have regularized various Cheyenne and Algonquian spellings within the text of this paper for Petter and Michelson. In the present computer-assisted print-out, normal apostrophe (') next to vowel indicates stress of preceding vowel, while overstrike apostrophe (é) indicates a voiceless vowel and overstrike quotation mark over s (ſ) indicates "esh".

APPENDIX I: Feature Reduction of Noun Classes

- Aa. +o?o = SD < *aki
 Ab. +h_o = SD < *ahi (?)
 Ac. e/ö shift = anim < *inan (gender shift), usu. SD
 Ad. +no = underlying in sg but not manifest there, SDA to CD.
 Ae. stress = CD innovative, relic form

- Af. ?/n shift = syllable-collapse process, SD
 Ag. +ne = underlying in sg but not manifest there, CD
 Ah. +hne = relic CD

- Ia. ?/n, +tse = SD syllable-collapse: actually
 +no,+tse
 Ib. +no,+tse = SDA
 Ic. +tse = CD
 Id. e/o, +tse = SD
 Ie. +ne, +(s)tse = CD with +ne underlying in sg.
 If. +V?estse = V?e (arch SD) + normal inan.

APPENDIX II: Multiple Pluraled Nouns

- a. [brain] hesta'hpe: hesta'hpéstse, hesta'hpótse
 b. [log] maxe: maxéstse, máxeotse
 c. [badger] ma?ha'hko?e: ma?hahko'?e,
 ma?hahko'?eo?o
 d. [dog] ho'tame: hota'me, hota'meho
 e. [bug, insect] meškeso: meškesono, meškesoneo?o
 f. [mourning dove] hemene: hemeneo?o, hemenéheo?o
 g. [liver] he?e: he?éstse, he?enéstse
 h. [finger, ring] mo?eško: mo?éškonono, mo?éškonótse
 i. [knee] manéstane: manéstanéstse, mmaanéstaneo?o
 j. [pine] še'stoto?e: šestoto'?eo?o, šestoto'?eho
 k. [knife] motse: motšéške, motšéškestse, motseo?o,
 motseonótse, motšéškeotse.
 mota: motáhke, motahkéstse, motao?o,
 motaotse, motáhkeo?ótse.

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