The Sutaio dialect of Cheyenne:
A Discussion of the Evidence

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The Sutaio dialect of Cheyenne became incorporated into the Cheyenne tribe in the protohistoric period. By tradition they were encountered by the Cheyenne somewhere on the Plains, and just as a fight was breaking out the two groups recognized that they spoke the same language and agreed not to fight, but to join together. Just exactly what the Sutaio spoke and how different it was from Cheyenne has been a mystery ever since. This paper reviews the few scraps of information that exist on Sutaio and the problem of to what extent elements of Sutaio origin may have been incorporated into the Cheyenne language as we know it today.

It appears that the only data obtained from Cheyennes who claimed to have learned some Sutaio from Sutaio speakers at a time when older Sutaio still spoke the language are in notes of George Bird Grinnell and Truman Michelson collected in the early years of this century. Grinnell's data are in a letter to William Jones of April 21, 1905 (Grinnell 1905). A note indicates that he obtained his information among the Southern Cheyenne in 1901. This seems to be the best Sutaio on record and the most likely, of what is available, to represent genuine examples of what the Sutaio spoke. The forms and phrases given are clearly volunteered, rather than elicited. Since it is most likely that they were remembered because of their divergence from the corresponding Cheyenne expressions, they probably present an exaggerated picture of the degree of difference between the two forms of speech. Grinnell's information about Sutaio is presented here in its entirety; the phonemic Cheyenne forms (underlined) are from Alford and Leman (1976), supplemented and corrected by a personal communication from Wayne Leman (1978) and a few forms from Leman (1977). The forms are given as found in the manuscript, but the presentation has been rearranged:

"By all the testimony that is to be had the Suh'tai language was very harsh and guttural. It was hard to understand the words spoken, and difficult to comprehend them even if they were clearly heard."

"Picking Bones Woman pronounces the word, Sōh'taiyu. She says the Suh'tai always began to talk by saying, hāyahch'. This reminds one of the Blackfoot exclamation haiya'."

<table>
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<th>Sutaio</th>
<th>Cheyenne</th>
<th>Cheyenne (phonemic)</th>
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<tr>
<td>'wife'</td>
<td>nā wūhk'</td>
<td>na tsī ìm'</td>
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<tr>
<td>'a long way off'</td>
<td>hā'āchh'</td>
<td>hā'āish</td>
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<tr>
<td>'going to play'</td>
<td>ni tai' ah tsi'm'</td>
<td>ni'ta nū wīt'tsi'm</td>
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<tr>
<td>'dizzy'</td>
<td>na mi gēn'i öhk'ā</td>
<td>na vīn'I üts</td>
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netātsema  
nahtsē?eme  
nāhtsē?emę  
haa?ēse  
naevenēohtse
"These are some of the calls of an old Sūh'taǐYū crier long ago. The words for men and women in his calls are Cheyenne, the others Sūh'taǐYū. The Sūh'taǐ always repeated their words twice, while the Cheyennes were satisfied with a single call."

'It is going to be stormy'

\[
\begin{align*}
\text{It is}\quad &\text{Insh nkāāā} & \text{Insh kō} & \text{--?--} \\
\text{be stormy'} & \text{[2X]} & \text{ha'ō} & \\
\end{align*}
\]

\(\text{('It is going to snow)\text{ enēşēhko?hane?ha}}\)

'drizzling rain'

\[
\begin{align*}
\text{'it is}\quad &\text{čēsnsh ka ne'ha} & \text{Insh ko} & \text{a'nīh} \\
\text{drizzling} & \text{[2X]} & \text{hmahu} & \\
\text{rain'} & \text{[2X]} & & \\
\end{align*}
\]

\(\text{('he ist'sa hē īst'sa?hē īst'sa he?estse sa? -māhane}}\)

'women, get wood'

\[
\begin{align*}
\text{'women, get}\quad &\text{māh kī hān' } & \text{[2X]} \\
\text{the wood'} & \text{hmahu} & \\
\end{align*}
\]

\(\text{('he ist'sa hē īst'sa he?estse sa? -māhane}}\)

'men and women, go together'

\[
\begin{align*}
\text{'men and women, go together'} & \text{hē ī'yu hōn'ūt} & \text{heiu} & \text{[2X]} \\
\text{vē'ō tsīm} & \text{vē'ōhtsema} & \\
\end{align*}
\]

Michelson's data are rather less straightforward than Grinnell's (Michelson 1913). He gives several sets of words from Bull Thigh (reputed to be 81) and some short lists from Wrapped Hair ("about 74"). Both of these men were Northern Cheyennes who were living among the Southern Cheyenne in Oklahoma when interviewed by Michelson in August, 1913. It seems clear that neither was a real speaker of Sutaio in 1913, although they must have used the language to a certain extent with relatives in earlier years. Bull Thigh appears to have learned what he knew of the language from his paternal grandparents, both Sutaios. "In his grandfather's time nearly all Sutaio spoke the language;" but his grandfather died over 60 years previously (about 1853). Wrapped Hair claimed to have spoken Sutaio with his father, but had not spoken it since the latter's death 50 years previously (about 1863). He also claimed to be the only Northern Cheyenne who could speak Sutaio, with the possible exception of Peter Shell, and could recall only Old Crow as a speaker in Oklahoma. He denied that White Bull could speak it and said that Left Hand Bull (apparently another speaker) had recently died. He said there was not much difference between Sutaio and Cheyenne: "they can converse." Before his wordlist appears Michelson's note: "Wrapped Hair says he has forgotten a lot of it."

Michelson's forms are given here in their entirety and in the order in which they were elicited, except as noted. Phonemic Cheyenne forms have been added when available, as above. Further notes on these forms follow the presentation of the data:

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Sutaio | Cheyenne | Cheyenne (phonemic)
---|---|---
1. 'dog' | hōtām | hōtame | oēšēso (pl. -ēšehe)
2. 'bear' | wōpinaxkū | nāxku | nāhohe
3. 'fox' | wōwōxtciāmitūs | wāksiu | vēnhēso (pl. -ēšehe)
4. 'wolf' | nísto | hō?ni? | hō?nehe
5. 'tree' | matāa | hōotsitu | hōohtseto (pl.)
6. 'lion' aXáiests maxpívavikis nanúsíham nanóse?hame
7. 'duck' maxpívavikis šísíju šé?šeo?o (pl.)
8. 'prairie dog' axwistivuxststs oñiniwunusk ónone-vóneške
9. 'rabbit' oxtakxínu wáxko vóňkooho
10. 'skunk' tsihúxameuststs xáño xaó?o
11. 'snake' oxtamiwúñunsts šísínówuts šé?šenovotse
12. 'moccasins' kumhiwútsi mutcánuts mo?čéhanóts
14. 'man' wosistán hitán hetane
15. 'woman' wív he? ké? e
16. 'boy' ka’škun "same" ké?eškóne 'child'
17. 'girl' wív [blank]
18. 'chief' tsíváwounts tsíváhlíntsts tse-véhóvosts
19. 'foot' má’is matcíku máhtsé?ko
20. 'arm' ma’ats heats ké?ahtsé 'his arm'
21. 'chin' mišístuts matsó máhtséštó?ó

The following day a third set of forms was obtained from Bull Thigh:

30. 'beaver' ahomái homá?e hóma?e
31. 'goose' ãhoxwíni/i hina?i hëna?e
32. 'elk' axmó? mó?e mo?e, mo?eñe
33. 'turtle' amaxpímainu mág?e?o ma?eno
34. 'squirt-reel' ahaxútkuwaís noë?e no? (k)ée?e
35. 'stone' witkonóatsits ho/oná ho?honáa?e
36. 'arrow' áxmáhuts máhuts maahótse (pl.)
37. 'bow' axmátsk mátski ma?tášške
38. 'stone'axe' hóóux hóókoxe

There follows the second set of forms from Bull Thigh:

39. 'foot' hetsehinistutú mo/ís’kun mo?éshkono (pl.)
40. 'White Dirt' axwó?utsina wó?utsina voetséna?e 'clay'
41. 'Dirt' (Sutaio leader)
Bull Thigh:

40. 'dog' ahéstam o/ískasi (See no. 1.)
41. 'my dau-
  pher'
ghter'
42. 'my son' náhisa náa náe?ha
43. 'my  grand-
  father'
4ánámsí̱m námísi námísi namáshéme
47. 'my  younger
  brother'
nioùnisım nésima násémáhe
48. 'my  older
  brother'
tsíuxahehtu ná'ni na?ne
51. 'pipe' aihpotuts (? heóhko
52. 'toba-
cco' heowipúctitutu tsinímoxku cf. tse?néemo?o
55. 'ankle' axmaiś (ve?ho?o?o 'ankle-
víyuhu (?) bone'
57. 'badger' axmahá u maaxku ma?háhko?e
58. 'bat' amsíanutsio-
  nona mátsianu-
  oonáhe (See no. 2.)
60. 'frog' ahaona na onhá oonáha?e
62. 'cane' atuktaiya-
  hukctuyu ho?kóhtohe
63. 'bear' amomátahe máaxku ma?háhko?e (See no. 2.)

Here there are some notes about Bull Thigh's grandparents, followed by two more forms:

64. 'I see a-
  him' aknawóctca
65. 'girl' nainowušts9 heîkaøkun hó?e-ka?esko
66. 'woman' vivc hé?e hó?e (cf. no. 18)
68. 'young  kasowa
  man' kášowa

"stands for young men, young women, and children"
71. 'bas-
  tard' áhmosìkaka- *émoomsós *émoomeso

Here there is a note in brackets: "Bull Thigh says the a-
part is the only difference between Sutaio and Cheyenne; the
rest the same." The first form given with this character-
istic is 29; others are 30, 32, 37, 38, 39, and (omitted
above) 44, 45, 46, 50, 54, 56, 59, and 61 (some of these
have slight variations of transcription or differences of
number). It will be seen that others of Bull Thigh's Sutaio
forms also have this prefixed element; it is spelled a-, a-,
aC-, aC-, aC-, aC, aC-, aC-, ahá-, ai-, and in perhaps other
slightly variant ways. Bull Thigh's fourth set of forms
follows (64 through 74):
After a few miscellaneous notes is the fifth set of forms (75 through 98):

75. 'jugular' ācmi·mainim máximai· ma?xe-ma?e (?)
76. 'finger' amístohivo mactohiv máhtéohevo
77. 'lance' amxomó xomó xomó?ó o
79. 'red' axmaininóo máleuxkć ma?e-he?óhko

In the fourth and fifth sets of forms those differing only by the addition of the prefixed a- (or a variant), except for differences of transcription or of number, are 64 (the only verb form), 66, 69, 72, 73, 74, 78, 81, 85, 87, 88, and 95. Those differing only in having a prefixed ami- (variants: am-; acm-, axmi-) are 76 (with third-person-possessed form), 77, 80, 89, 91, and 96. For 83 (‘catfish’) both words are the same; for 86 and 97 (‘toad’ and ‘elbow’) no Sutaio words are given.

The information obtained from Wrapped Hair consists mostly of notes on Sutaio societies and Sutaio tales. His Sutaio words all have the prenoun (or in one case preverb) ami-; those showing other differences from Cheyenne, or otherwise of interest, are given here:

99. 'dog' āmíšioiškis o/iskís
104. 'skunk' amíši·inisá·ta xáo (See no. 10.)
107. 'snake' amíšiho/ivi-vaniuts šišín (Cf. no. 13.)
109. 'guts' amíšivai·ianners hoótsts (Cf. no. 92.)
114. 'tree' amíšimát·ta hoóhtsts (Cf. no. 5.)
115. 'lake' amíšionótat niyán ne?hane
119. 'I see him' natamišivoóm navóóm navóomo

Amid further forms of this nature appears this note: "Wrapped Hair talked a little in Sutaio. The amiši was frequent. Milton said part of the rest different from Cheyenne, but mostly like Cheyenne. The terminations nearly the same." A second set of forms from Wrapped Hair (123 through 133) also differs only in having the amiši-
A third set, consisting of five society names (134 through 138), also differs only by having amisi-, except in one case:

134. 'Red amis Cotowan- máhohivus ma?óhóohevase Hoof' utxi 'Red-Shields'

It seems clear that, in contrast to Grinnell, Michelson obtained his forms by elicitation, asking for specific words (almost exclusively nouns) in various semantic categories. For one thing, three glosses have a query in both columns (nos. 11, 35, and 97—'possum', 'pumpkin', and 'elbow'). It is evident, too, that in the later sessions the Sutaio forms became less and less convincing when the informants got into the rut of simply giving the Cheyenne words with prefixed elements (of increasing length). A number of the other proffered Sutaio forms appear likely to be Cheyenne synonyms or other semantically close words:

2. vóhpe-náhkohe 'white bear'; 'polar bear' (Alford and Leman 1976.6), 'grey or white bear' (Petter 1915.99).
5. and 114. ma?ta?e 'forest'; the agreement between the two speakers may be significant, however.
7. máhpéva vē?kēso 'in-the-water bird'.
10. A participle meaning 'he who smells bad'; cf. eoxemeeoz 'it smells bad' (Petter 1915.983).
13. As the added gloss suggests, this is a form of a verb meaning 'to crawl'; cf. e-ame-vonehne 'he's crawling' (Alford and Leman 1976.132).
17. and 68. Probably both represent vo?éstane 'person'.
22. Perhaps *maheño 'hoof'; cf. heheso 'hoof' and mazhess, mazhehess 'hoof' (Petter 1915.492, 553). This word is from Proto-Algonquian (PA) *wesi'í 'his foot' and may have been an archaic Cheyenne word or the genuine Sutaio word.
31. A prenoun or other prefixed element added to the Cheyenne word.
32. Prefixed a-, prenoun máhpé- 'water', and the Cheyenne word.
41. Conceivably natse 'my nephew'.
42. nanéso 'my child'.
47. A prefixed element (?) plus the Cheyenne form.
49. Prefixed ai- and he?potótse, the modern word for 'cigarette'.
62. Possessive prefix (?) plus ho?kóhtóheonótse 'canes'.
71. Prefixed ah- plus some combination of root émoos- and ka?éskóne 'child'.

prefixes, except one:

126. 'beaver' amisCóma-a amíshiho-nisin homá. (See no. 30.)
82. máhpe-mo?éhe 'moose', literally 'water elk'.

One set of Bull Thigh's Sutaio forms seems to show a tendency to differentiate them from the corresponding Cheyenne by the addition of medial n's; compare 60., 82., 90., 93., and 94. If this is a real pattern perhaps 98. ('wrist') is a nasalized form of 'ankle' (cf. 55.) and 79. ('red stone (pipe)') is a nasalized version of a putative *ma?e-he?66?o, or the like, with the variant of the word for 'pipe' that Petter (1915.821) writes eó. Alford (1977.232) gives noma?ne 'fish' as Sutaio beside Cheyenne noma?he, but cf. noman (Petter 1915.482) and the qualification "possibly" in Alford and Leman (1976.39).

It appears that Michelson's informants were struggling to remember the Sutaio words they had heard many years before, and that they sometimes gave Cheyenne words or systematically altered forms of Cheyenne words in response to Michelson's inquiries. There are, however, a number of forms which have a claim to being considered genuine Sutaio words. Both Bull Thigh and Wrapped Hair seem to agree that of the two Cheyennes words for 'dog' (oe?keso and hotame, the latter considered older) the first is basically the Cheyenne word and the second the Sutaio, though they also seem to imply that both could be used in both languages (1., 40., 99.), and it might be noted that oe?keso is not in Petter's dictionary (Petter 1915). Bull Thigh twice gave wiv (vivc) for 'woman'; this calls to mind PA *wi?walli 'his wife' and would be notable for lacking the third-person prefix he- that Cheyenne adds to words of this shape. Final determination of just which forms are likely to be Sutaio will have to await further study.

Recently Dan K. Alford has claimed, in his Cheyenne dictionary (Alford and Leman 1976) and in an article on the Cheyenne plural (Alford 1977), that there are traces of Sutaio in modern Cheyenne. This evidence is very different in character from the data from Grinnell and Michelson. It is based exclusively on an interpretation of the doublets which are found in Cheyenne for a large number of words, in almost all cases involving multiple treatments of PA *k. An obvious explanation of multiple reflexes, when found in any language, is the postulation of dialect mixture: one reflex was proper to one dialect, the other to the other dialect, and when the dialects became mixed both forms were retained, resulting in the existence of doublets showing no differentiation of meaning. The hypothesis is an easy one, but in the absence of historical information it can be hard to prove. For one thing, the testimony of native speakers is not always reliable on the identification of the origins of the forms in their language, and there is an observed tendency, perhaps as the result of the way anthropologists and linguists ask the questions, to explain variants as coming from other submerged dialects formerly spoken by members of the community. In the present case it should be
noted that Alford's alleged Sutaio words are actually in use as Cheyenne words, while those provided by Grinnell's and Michelson's informants were recalled, however imperfectly, as words used by known Sutaio speakers.

The variations which Alford proposes to explain as due to dialect mixture are \( ?k \sim ? \) (e.g. no?kée?e \sim no?ée?e 'squirrel'), \( \text{hk} \sim \emptyset \), and \( k \sim \check{c} \) before e (e.g. ma?hankses\~ ma?haeso \sim ma?hah\check{c}eso 'old man'). His claim is that the forms with \( k \) are native Cheyenne words, those without \( k \) (or with \( \check{c} \) in place of \( k \)) being of Sutaio origin. Under this interpretation PA *\( k \), *\( nk \), and *\( hk \) would give \( \text{hk} \) in Cheyenne but \( \emptyset \) in Sutaio; PA *\( xk \), *\( \theta k \), *\( \check{x} k \), and *\( ck \) would give \( ?k \) in Cheyenne but ? in Sutaio; and \( \check{c}e \) would have been the Sutaio treatment of \( k \) in words borrowed from Cheyenne. The borrowing of words between the dialects, with concomitant "adapting," and the subsequent obliteration of the distinctness between the two are assumed to account for the mixture of forms in modern Cheyenne. In addition to a certain amount of inherent implausibility there are some specific difficulties with this hypothesis, however:

1) Although an explanation, albeit an ad hoc one, is offered for the double, or multiple, treatment of PA *\( k \) and *\( k \)-clusters, nothing is said about the double treatment of PA *\( p \) and *\( p \)-clusters, which show an identical pattern except for lacking any parallel to the palatalization of \( k \) to \( \check{c} \): \( \text{hp} \sim \emptyset \) from one set of sources and \( \emptyset \) from another. It would certainly seem reasonable to expect the solution to the problem of the reflexes of PA *\( k \) to be similar to, or at least compatible with, the solution to the problem of the reflexes of PA *\( p \), but it is clear that these problems cannot be solved by postulating two dialects with different but regular sound laws. For while some words lose both *\( p \) and *\( k \) and some retain both, others lose one and not the other: \( \text{t\ddot{a}e\acute{e} 'night'} \) (\( \text{<PA *tepexkwi} \)) and \( \text{pa\acute{k}\ddot{e} 'ashes'} \) (archaic; \( \text{<PA *penkwi} \)), but also \( \text{paa\acute{e} 'ashes, dust'} \) (\( \text{<penkwi} \)) and \( \text{p\acute{a}\ddot{e}on 'back'} \) (\( \text{<xpe\acute{kwan} \})\), \( \text{v\acute{e}\acute{e} 'sweet'} \) (\( \text{<wi\acute{e}skwep} \)) and \( \text{ah\acute{e} 'gum'} \) (\( \text{<peki\acute{w}a} \)).

2) There is a functional opposition between the two variants of many words in the many cases where the form with \( k \) is the diminutive of the form without: e.g. \( \text{ho?hon\acute{a}\acute{e} 'rock'} \) and \( \text{ho?hon\acute{a}hke 'stone (smaller)'} \); \( \text{pa?\acute{e}\acute{e}pa\acute{\ddot{e}}on 'camel'} \) (literally 'hump-backed one') and \( \text{pa?k\acute{e}pa\acute{\ddot{e}}on 'brama bull'} \) (literally 'small hump-backed one'), with the \( k \) retained from PA *\( p\acute{e}k\acute{w}kw- 'lump- or mound-shaped' but not in 'back'--see above); \( \text{m\ddot{a}h\acute{e}o}\acute{o} 'house' \) (underlying \( \text{<maheo(n-) /} \)) and \( \text{m\acute{a}he\acute{e}ko 'shed'} \) (underlying \( \text{<mahehko- (n-) /} \)); \( \text{ma?\acute{e}t\acute{e}a 'iron'} \) and \( \text{ma\acute{k}\acute{a}et\acute{a} 'coin, money, metal; piece of metal (Petter 1915.704)'} \); and numerous other examples, as noted by both Petter (1915.630, 662, and passim) and Alford (1977.231). Even if there were no problems of internal inconsistency in assuming dialect mixture as the source of this opposition, it would surely be unlikely for Cheyenne to have borrowed large numbers of nouns and verbs from Sutaio and systematically kept the
original forms, with retained k, as the corresponding diminutives. It may also be noted that there is at least one comparable case of a diminutive with hp beside a non-diminutive with  from PA *p: hotóa?a 'buffalo bull' (underlying //hotóa//, from PA *aya·pe·wa) beside hotóhpa?ehe 'steer' and hotoxpaess 'buffalo bull between one and three years old' and hotoxpaess, hotoxpaess 'small buffalo bull, not four years old' (Petter 1915.193). There are also forms in which diminutive hk appears instead of historically expected hp: šéʔšēʔšesō (underlying //šěʔšēhk-eso(n)−/) 'duckling' beside šéʔšőʔo 'duck, ducks' (<PA *šiʔ·ʔi·pa, -aki); hohkeehe 'mouse', reshaped from PA *a·pikwes(iw)a. These forms with unoriginal k and other forms showing k in diminutives for some but not all cases of PA *k (e.g. 'brahma bull', above) make it clear that there is or has been in Cheyenne a process of extending k as a mark of diminutivization, according to some as yet unformulated pattern. It is possible that regular sound laws originally determined the retention or dropping of PA *k and *p, and that the diminutivization rule has extended the retained consonants beyond the environments in which they historically occurred; or perhaps the regular dropping of *k and *p was blocked from the start in diminutives under certain conditions. In any case, to the extent that the retention or restoration of PA *k as Cheyenne k can be accounted for by a morphological rule, the postulation of interdialect borrowing becomes superfluous. And in fact, for almost all of the doublets in Petter's dictionary the form with k is specified to have a diminutive meaning, including many which are not differentiated by Alford and Leman. For example, emoʔōhtavō ~ emoʔkōhtavō 'it is black', given as dialect variants in Alford and Leman (1976.23), are given as emoxtavō 'it is black' and emoktava 'it is black (lighter shade or a small surface)' by Petter (1915.136; from PA *maxkate·w- 'black'); hetōkonōtse ~ hetōonōtse (-vetōonōtse) 'dishes' (Alford and Leman 1976.32) are hetōkonoxz 'small bowls' and vetōonoz 'large bowls' (Petter 1915.171; from PA *wela-kanali); hoʔēvooʔōtse ~ hoʔēvohkōtse 'meat' (Alford and Leman 1976.67; underlying //hoʔēvo(hk)-ote//) are hoevoxz 'meat (large amount)' and hoevoxkoz 'meat (small amount)' (Petter 1915.697; from PA *aškye·wakwi, reshaped with noun final *-ay). It seems likely that the few doublets in Petter's dictionary that are given without any difference of meaning were also originally contrasting diminutive and nondiminutive forms; e.g. hokto ~ hooxto 'cane' (Petter 1915.208; presumably hoʔkôhtoho ~ hoʔōhtoho).

3) Grinnell's and Michelson's forms do not confirm any systematic tendency for the Sutaio forms to differ by the absence of k. The numerous instances of k reflected in Grinnell's data are especially noteworthy. In Michelson's lists several of the forms showing k in both languages or  for k in both languages are in disagreement with dialect identifications in Alford and Leman's dictionary or with the implications of Alford's hypothesis. For example, Bull Thigh used kaʔēškōne 'child' as a Sutaio word (nos. 19. and 71.), rather than the putative Sutaio form kaʔeʔōne (Alford
and Leman 1976.20); and on the other hand he appears to have used *môšéškanetsenoonahe for 'bat' in both dialects (no. 58.), beside which Alford and Leman (1976.6) give only the k-forms môšéškanetsenoonahe ("Cheyenne") and môšéškanetsënoona ("Sutaio"). The only words which conform to the pattern predicted by Alford's hypothesis are Bull Thigh's words for 'stone axe' (39.) and 'badger' (57.) and Wrapped Hair's words for 'guts' (in contrast to Bull Thigh's words for 'guts', which both appear to have had k—misheard once as [t]; no. 92.); these all show Sutaio forms which could well be the k-less counterparts of the Cheyenne forms given by Alford and Leman, presumably *hóoxe, *ma?hâo?e, and *vé?eonešëstse. The last of these, however, is the only form given for Cheyenne by Petter (1915.617): maveonešsz 'intestines' (with indefinite-possessor prefix ma—). In sum, it would seem unlikely that Sutaio and Cheyenne underwent different sound changes affecting PA *k and *p, but there may have been a tendency for Sutaio to use the originally nondiminutive forms and Cheyenne the diminutive forms, at least of some words, and this could well lead some speakers, when pressed, to declare that the k-less variants are really or originally Sutaio.

4) Finally there is the matter of the variants with ce for ke. These differ from the variants with and without k in showing no apparent functional contrast, and on this basis alone they are unlikely to have the same sort of origin. Petter gives only the forms with ce in his dictionary, spelled by him c, which he describes as a [tY] (Petter 1915.vi). 19 Michelson in his later Cheyenne fieldwork encountered both ce and ke and found that, though both were equally idiomatic among both the Southern and Northern Cheyenne, the ce forms were thought to be old-fashioned and some speakers used only the ke forms (Michelson 1935.156). Michelson's word lists from Bull Thigh and Wrapped Hair show both ce and ke, with no apparent pattern (see nos. 15. and 69.), but he obtained the following significant information from his interpreter Milton Whiteman: "man says nimutce = Wrapped Hair"; "woman says nimuke"; "woman mostly have slightly different way of pronouncing names from men". Wayne Leman (personal communication 1978) informs me that these forms are respectively némo?ce and némo?ke. It appears that the ce forms were originally proper to men's speech, but that with the breakdown of this institution of older Cheyenne society the ce forms have lingered in use in some cases as archaic or otherwise marked variants. There is independent evidence of the existence of phonetic differentiation in earlier men's and women's speech, as both Petter (1915.231) and Alford (1977.232) report that for modern ešk the men's pronunciation was [ešk] but the women's was [esk], the latter being also used by children according to Petter. Thus the men's speech was consistently palatalizing, but the modern language has in one case generalized the women's form and in the other case the men's form. 20 It is possible that there may yet be a few elderly Cheyennes who consistently differentiate the two styles. In any event it would not be surprising for modern Cheyennes
to assume that the \( \xi e \)-variant of archaic men's speech must be from the now extinct Sutaio dialect; significantly, Alford was apparently also told that the [eskl pronunciation was Sutaio, in the case of amèske 'grease' (Alford and Leman 1976.48).

It seems, then, that it is unlikely that the phonological alternations in modern Cheyenne discussed here go back to different phonological histories of the Cheyenne and Sutaio dialects. In addition to the considerations reviewed above it may be said that it would certainly not be expected for an obvious characteristic of Sutaio to be recalled in the 1970's that was unknown two or three generations ago to Cheyennes who had personally known Sutaio speakers in their youth. The search for Sutaio words still recalled among the Cheyenne may yet bear fruit, but for the present it must be concluded that Grinnell's few forms together with whatever can be salvaged from Michelson's lists are the only data on Sutaio that exist.

NOTES

1 The English name Sutaio is a borrowing from the Cheyenne plural so?taeo?o.

2 In the phonemic transcription of Cheyenne ts is a unit phoneme, reflecting underlying \(/t/\) before e; ê, à, and ô are voiceless, as are all final vowels; é, etc., have high pitch and ë, etc., have mid pitch, but since the latter was not recognized in Alford and Leman (1976) there are inconsistencies in the marking of pitch in the cited forms. For the optional variant of k before e (see below), ĉ is written instead of Alford and Leman's ts. Conjectural phonemicizations are asterisked; these have been written on the basis of available information. Only phonemic transcriptions have been underlined.

3 In Michelson's phonetic transcriptions a (intended for small capital a) is a low central vowel; tê is \([\xi]\); the smooth breathing (\( ^\circ \)--here transcribed \( ? \)) and raised dot (\( ^\cdot \)) inconsistently record glottal stop; the rough breathing (\( c \)) is a weak \([h]\); a vertical line (here transcribed /) indicates a syllable boundary or nondiphthongization of adjacent vowels; raised syllables are voiceless; š (and apparently also s') is a lamino-alveolar. These notes are Michelson's first attempt at recording Cheyenne and do not have the phonetic consistency of his later work on the language. In quoting from Michelson (and Petter, below) self-evident abbreviations have been silently expanded. The numbering is mine.

4 The second e is uncertain.

5 It is not clear that na?ne is idiomatic (Wayne Leman, personal communication 1978); perhaps Michelson's form is
what Petter (1915.189) wrote nanéhâ.

6 The ts and u are uncertain.

7 The first n is unclear.

8 The final û is unclear.

9 This word has the added comment: "used for boys and girls when young."

10 What is here transcribed nau` is perhaps better read nauts.

11 The I could be t; the -n could be -m.

12 At least not as a word for 'dog'; perhaps, however, this is òë&g, òëciss 'scabby, small dog (when the hair comes off in spaces)' (Petter 1915.400).

13 Underlying //ehk// is phonemic éëk (or esk, see below) (Davis 1962.39-40).

14 The claim that ? can be a reflex of PA *-k (or *nk or *hk) is not correct (pace Alford 1977.230). All putative cases involve word-final sequences of the shape -VV?V which can be accounted for by the following (historical and synchronic) rule: All word-final sequences of two vowels, whether of the same or different quality, are broken up by an inserted sequence of vowel plus glottal stop (-V1V2 → -V1?V2V2). If V2 is e the inserted vowel copies V1 (−V1V1?e); otherwise V2 is the vowel copied (−V1o?o or −V1a?a). (Probably the rule was basically that -V1V2 → -V1?V1V2, with the replacement of *-ae?e and *-oe?e by -aa?e and -oo?e being due to a later assimilation rule.) This rule accounts for such forms as the following: aa?e 'year' (underlying //ae(n-)//, plural aenôtse; from PA *pepo(•)nwi 'winter'); méo?o o 'road, path' (//meo(n-)//, pl. meonôtse; PA *mye·hkani); mée?e 'feather' (//mée(n-)//, pl. mëenô; PA *mi·kwena); -o?o 'animate plural' (after vowels; //o// <PA *-aki). Further examples are in the text below. In a few cases this rule applies to an antepenultimate sequence of vowels: vée?eeso 'tooth' (//vêsës-// <PA *wi·pië; maho?vôo?ôtse 'ear' (//maho?vôt-// <PA *mehtawakayi); ñëô?ôtse 'ghost' (//ñôt-// <PA *ñë·paya, with the generalization of -e as the singular ending of both animate and inanimate nouns that have not lost the final syllable); heséoe?ôtse 'medicine' (//hesëëët-// <PA *weëëe·piëk- 'root' + -*ay-); vëno?òôo?ôtse 'tripe' (//vëno?òô-// <PA *wi·nâ·?ôkayi 'rumen'); nemeo?ôtse 'song'; and the words for 'penis' (cited above) and 'meat' (below). All but the first in this list end with a noun-final //ot-// from PA *-ay-; perhaps this is the regular treatment before certain word-final -Ce sequences.

15 I hope this is a fair summary of the hypothesis, which I find hard to follow in some places.
There are several cases of Cheyenne initial p- from PA *p- (e.g. peʔe 'nighthawk', from PA *pi-ʃkwa), but apparently no cases of the retention of initial *k-; note ʃkohke 'crow, raven' (Alford and Leman 1976.29); 'crow, little raven' (Petter 1915.887), from PA *ka-ʃka kiwa 'raven' (with dissimilation of *...hk...hk to ...k...hk). There are also a number of Cheyenne forms which appear to show n from PA *k, and a couple apparently with n from *p: tonoʔeva 'fall, autumn' (< *takwa ki-), henőme 'thigh' (< *wepwa mi).

The k-less variant of words with -eʃk- sometimes has -eš- (Alford 1977.232); the status and history of these forms is uncertain.

It might be observed incidentally in connection with the spread of -oʔo (//-o//; cf. -o in 'feathers' in note 14) as the animate plural ending of vowel-stems that ʃeʔʃeoʔo 'ducks', which is the expected phonetically regular reflex of the Proto-Algonquian plural, and perhaps other similar plurals could well have been the starting point from which this suffix was generalized.

Davis (1962.36) writes this segment tʃ, described as an alveopalatal stop, with the remark that it "is apparently replaced in some dialects by an affricate at the same point of articulation," which he writes ʃ.

Atsina, the northernmost member of the Arapaho subgroup of Algonquian, also has a men's speech characterized by palatalization: where the men have ʃ and ʃtʃ (which may or may not be separate phonemes) the women have [kʃ] (Flannery 1946; Salzmann 1969; Goddard 1974.103, footnote 2, last paragraph). Both synchronic and historical aspects of the Atsina case remain unclear, however.