Historical Riddles in Cheyenne: A Re-examination of Goddard's
Soʔtaaʔe Evidence

Author(s): Danny K. H. Alford

*Proceedings of the Fifth Annual Meeting of the Berkeley Linguistics
Society* (1979), pp. 438-452

Please see “How to cite” in the online sidebar for full citation information.

Please contact BLS regarding any further use of this work. BLS retains
copyright for both print and screen forms of the publication. BLS may be
contacted via <http://linguistics.berkeley.edu/bls/>.

The Annual Proceedings of the Berkeley Linguistics Society is published online
via [eLanguage](#), the Linguistic Society of America's digital publishing platform.

HISTORICAL RIDDLES IN CHEYENNE

A Re-examination of Goddard's So?taa?e Evidence

--Danny K.H. Alford (UCB)*

0. The Problem

The Cheyenne language of SE Montana and Oklahoma has been a riddle for American Indian scholars for over 120 years, since at least 1856 when Latham published word lists including Cheyenne and Arapaho. It was not apparent for many years that Cheyenne and Arapaho were actually Algonkian languages, being so different from the familiar Central-Eastern Algonkian languages. Truman Michelson (1933) said of Cheyenne:

Cheyenne is a strongly divergent member of the Algonquian stock. It seems as if the transformation has been self-evolved and not due to extraneous influence....The speechform has remained Algonquian....[I]t may be said that none of the above-mentioned languages [Cheyenne, Arapaho, and Blackfoot] contributes very much towards the reconstruction of the parent Algonquian language. An exception must be made in one or two cases where Cheyenne is archaic.

Michelson felt Cheyenne was archaic, strongly divergent--yet since its speechform was clearly Algonkian, he was forced to say that the unusual changes were not due to outside influence, such as language-contact. It perhaps did not occur to Michelson that language-contact with an archaic and divergent but still Algonkian tribe could have caused some of the unusual sound-shifts (such as PA *p becoming in sometimes identical environments preaspirated, preglottalized, a strong or weak glottal, or n, or h, or zero; the reflexes of PA *k are likewise unusual, and even more problematical.)

1. An Attempted Solution: Thesis

After over three years of continuous fieldwork on the Northern Cheyenne Reservation,[1] I began publishing in 1975 my conclusions that the Cheyenne language of today is a **dynamic language-synthesis** between the Intermediate-Cheyenne (hereafter **I-Ch**) of the Central-Eastern Algonkian stock and a little-known early Algonkian language called So?taa?e (previously spelled Sutaio, hereafter **So?**)--whose name wasn't mentioned by either Boas or Powell and never makes it onto the American Indian language-grouping maps. I catalogued some of the systematic variations in a paper on the prehistory of the Cheyennes (Alford 1975), and in 1977 at BLS I showed for the first time that the divergent plurals were explainable by assuming two separate historical groups and lineages. I also showed that the ways Cheyenne and Arapaho plurals diverged from normal PA plurals were intriguingly similar.[2]

2. Antithesis

That called forth a reply from Ives Goddard (1977) of the Smithsonian Institution, "The Sutaio Dialect of Cheyenne: A Discussion of the Evidence." In it, he published "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" from the notes of George Bird Grinnell (1905) and Truman Michelson (1913), saying:

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.[3]

Goddard firmly rejected this *So?taa?e Hypothesis*, and in order to hasten its demise, he

published over 100 forms previously unknown to me. He explained away my language examples by saying:

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 in 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 questions,[4] 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.[5]

Goddard characterizes my So?taa?e work as having a certain amount of inherent implausibility, categorically stating that the archival forms do not confirm any systematic tendency for the Sutaio forms to differ by the absence of **-k-**. Goddard feels strongly that the claim that **glottal** can be a reflex of PA ***-k** (or ***nk** or ***hk**) is not correct; that I have confounded So?taa?e with *simple*[6] male/female distinctions. He concludes 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.* (emphasis mine)

3. A Re-examination of Goddard's Evidence: Analysis

Leaving aside the question of whether the living knowledge of a group can be said to exist as surely as do printed speechforms collected and interpreted through the conceptual framework of an outsider, what does Goddard's data reveal?

Not only did Goddard's authenticated So?taa?e word-forms provide substantiating evidence for my claims, the subsequent research has led me into deeper implications for all Algonkian studies.

Goddard is indeed correct that the Grinnell data do not provide many useful systematic differences between Cheyenne and So?taa?e, but a fuller re-examination is in order for Michelson's data (which Goddard terms "rather less straightforward than Grinnell's"). I would like to draw the reader's attention to **TABLE 1** at the conclusion of this paper, which lists many of Michelson's So?taa?e and Cheyenne forms (quoted by Goddard), with appropriate phonemic approximations (mine).

Analysis of the restored phonemic forms shows quite a number of interesting differences between So?taa?e and Cheyenne.

1. **dog**: Along with #40, this pair shows the So? form coming directly from the PA *aθemwa* (felt by Cheyennes to be the older form), with the I-Ch form unrelated to the standard PA form; it has been my contention for years that the I-Ch form comes from the PA "seal (barking-one) + dimin", **aaskikwa + hsa*. #40 shows the ancient ?ah/x- initial.

2. **bear**: The So? form here is, given Michelson's transcriptions, more properly *voope* [woopi], with a corresponding I-Ch form *vo'hpe* [wo'hpi]. The *woopi* form is not in use in ModCh, but (as Goddard himself points out) the corresponding I-Ch form *vo'hpe-na'hkohe* is in current use even today with the meaning "polar (white) bear". However, Michelson did not record "wohpi-", but "woopi-", a So?taa?e form. There is another So? form but rarely heard today, *naa?ohe*. This form, as well as a multitude of others, shows that what Leman refers to as Goddard's Law (Goddard 1977: final V1-V2# --> V1-V.-V2#, explaining the unexpected appearance of supposedly all Cheyenne glottals) is actually, although incorrectly stated, an interesting statement of a

historical phonology rule of **So?taa?e**, not Cheyenne.

5. **tree**: The So? form (today meaning "timber") is cognate with "bow(-wood)": PA **me?tekwi*, So? (bow-wood) *ma?taa?e*, Ch (bow) *ma?tahke/ma?tehke*. I have been unable to discover the PA antecedent to the Ch form *hoohete*.

22. **foot**: Notice also in TABLE 4 that the Nawanthinahena forms and the So? forms are nearly identical. I-Ch forms sometimes share the same rules, sometimes not (especially those concerning PA *k reflexes).

23. **arm**: In this and other forms, So? uses the indefinite possessor *ma-* while Ch tends often to use the definite 3rd person possessor *he-*. [7]

32. **elk**: Michelson's forms reflect the archaic form *mo?e* as being So?, while the Ch form is, according to regular correspondences, from the old word for "moose", **mooswa* -> *me'he*, synthesized with *mo?e* to give *mo?e'he*.

37. **arrow**: The Cheyenne form has never made any sense to me until now, since the standard PA form **a?wi* gives only *-(h)otse*. The So?, with archaic *?ax-* initial, circumscribes the normal first syllable *maa-*.

39. **stone axe**: Although apparently Goddard did not realize it, the So? form differs from the I-Ch form by exactly what is not supposed to be shown in this data--a non-functional ? vs hk distinction. (See TABLES 2 and 3 below).

41. **my daughter**: Notice the vowel differences *e/o*.

52. **knife**: Notice here another ?/hk distinction, with the So? not existing today.

57. **badger**: Here is a *long-vowel plus glottal* versus *short-stressed vowel plus hk*, exactly what is expected from differing derivations from a PA form. [8]

58. **bat**: Although both forms are substantially the same, both contain a glottal where ModCh contains an hk or n. Also note vowel differences between the So? and ModCh forms.

76. **finger nail**: Note the *e/a* vowel difference.

79. **red stone (pipe)**: Notice the *-noo?o* versus *-?ohko* forms. These are classical So? vs I-Ch distinctions: *n/?*, *oo/o*, *?/hk*.

92. **guts**: Here is the male speechform (*?c* or *?ty*) showing up in So?, while the normal Cheyenne form is *?k*, intriguingly close to Shawnee *?k's*.

94. **navel**: Note again the interesting So? *n* vs. I-Ch *?* correspondence. Although Leman has written on a PA **k* to Ch *n* correspondence, the intermediate step containing glottal has been consistently overlooked. [9]

So although Goddard has stated that "...Michelson's forms do not confirm any systematic tendency for the Sutaio forms to differ by the absence of *-k-*", I believe that items 39, 52, 57, 58, and 79 display exactly this distinction when one reconstructs phonemes rather than letters. Comparison with PA forms will show that the So? glottals in the above words are *indeed* reflexes of PA **k*, **hk*, or **nk*, as I have claimed.

4.1 Normal View of Plains Indian History

Without going deeply into the traditional conceptions of Western, Central, and Eastern Algonkian subgroups, let's begin with a rough sketch of the normal view of Proto-Algonkian history. It's something like a game of dominoes, starting with Crees and Chippewas in the north and many Algonkian tribes around the Great Lakes, the Eastern tribes ranging themselves along coastal positions. Then the whiteman enters the picture. As he's moving in on the east coast, the fleeing Chippewas come down from the north and bump the Sioux, who bump the Cheyenne living in Minnesota at the mouth of the Mississippi--and the Cheyenne move on over to North Dakota. Sometime after 1700 the Sioux, bowing to the pressure from the Chippewas again, move into Cheyenne territory as the Cheyennes move further west. The Arapahoes follow the Cheyenne movements almost exactly, winding up generally south of the Cheyennes, while at some point the Blackfoot wind up north of the Cheyennes. During an historic incident the Cheyennes run into this unimportant So?taa?e tribe, adopt the tribe and assimilate the people so that they're never heard from again.

This normal conception has one problem: it is too simplistic to fit the data regarding the highly divergent Cheyenne, Arapaho, and Blackfoot languages. Further, as we shall see, our very English names for tribes and the uncomprehending ways in which we have labelled one group of Native Americans a *tribe*, and another group merely a *dialect*, have until now rendered this problem opaque.

4.2 The So?taa?e Conception of Plains Indian History

Now let's back up conceptually and begin again, starting with an observation by James Mooney in the 1912 Bureau of American Ethnology *Bulletin #30: Handbook of American Indians*:

Driven out by the Sioux, the Cheyenne moved w. toward Missouri r., where their further progress was opposed by the *Sutaio*--the *Staitan* [10] of Lewis and Clark--a people speaking a closely cognate dialect, who had preceded them to the w. and were then apparently living between the river and the Black-hills. After a period of hostility the two tribes made an alliance... (they wound up in SDakota, where Lewis and Clark found them in 1804).

Mooney gives much information about the relationship between the So?taa?e and Cheyenne, Lewis and Clark having regarded them (as well as Arapaho) as distinct tribes. Mooney also published important information about the order of placement around the camping circles of these tribes (in time-honored observance of the Sun Dance and other ceremonies) which has been either overlooked or uninterpretable until now. Careful reading will reveal that the So?taa?e (or extremely close dialect groupings of them) occur within the Cheyenne, Arapaho, and Blackfoot language groups.

In other words, what everyone until now has been calling merely a "dialect" of Cheyenne must be seen as the *So?taa?e language*, an important member of a new sub-grouping, *Southern-Plains-Algonkian*, which split off from some Proto-Algonkian at a very early time. [11] The So?taa?e were on the Plains already when the Cheyennes, Arapahoes, Blackfoot, Sioux, etc., got there. The So?taa?e adopted in the Cheyenne and Arapaho and sent another group up to live with the Blackfoot. That means that Cheyenne and Arapaho, two Central-Eastern languages, obey, as I earlier claimed, understandable sound-shift changes until a certain point; they diverge in many of the same ways, and those ways can be accounted for as the language-fusion brought about by close contact and intermarriage with an older Algonkian tribe, the So?taa?e. (Some So?taa?e can probably also be found among the Sioux.) All of these tribes participate in the Sun Dance, which many acknowledge they got from the So?taa?e (along with Plains Indian sign language, which came from the same source in the south.) [12] Let us examine more closely now the strength of this So?taa?e influence, keeping in mind Meillet's advice that:

We must determine which social structure corresponds to a given linguistic structure, and how, in a general manner, changes in social structure are translated into changes in linguistic structure.

4.3 Synthesis: Realignment of Cheyenne And Arapaho

Kroeber and Michelson recorded information about the Nawathinahena "dialect" of Arapaho, noting that it diverged away from Arapaho proper and towards distinctly Cheyenne sounds. But, said Michelson (1935), "Summing up, we may say that there is little, if any, reason to consider Nawathinahena a transition from Arapaho to Cheyenne." True enough, it may not be a *transition* per se--but what if Nawanathinahena, like So?taa?e, got to the Plains before the Arapaho, and adopted the Arapaho in? What if, in fact, Nawathinahena and So?taa?e are actually close dialects of the same language? I will shortly present my evidence that this is so.

David Shaul [13] believes that the so-called Nawathinahena dialect-group of

Arapaho is traditionally allied with the Kiowa-Comanche people, who were the natural traders of the Plains, the culture-bearers of religious observances, sign language, musical rhythms, and later horses and guns. Mooney says the So?taa?e preceded the other Plains Indians, so let's suppose that they were influenced by the Kiowa in the area where they settled. Then the Cheyenne and Arapaho arrived nearly simultaneously at a later date (and perhaps also the Blackfoot further north) and were adopted by this obscure So?taa?e tribe, which explains the seeming simultaneous unusual sound shifts.

Haas (1966) states: "...at the present time little evidence has been presented for any new subgroupings of Algonkian, though some may emerge as work progresses." I propose just such a new subgrouping of Algonkian, called **Southern-Plains-Algonkian (SPA)** and it consists of various dialects, such as So?taa?e and Nawathinahena, of an Early-Algonkian language. (This SPA is to be strictly distinguished from former conceptions of Proto-Plains-Algonquian which include Blackfeet, Arapaho, Cheyenne, etc., who in this schema must be seen as **Late-Plains-Algonkian**.)

5. The Evidence for So?taa?e

TABLE 2 shows more doublets and some non-doublets sorted as to their So?taa?e language or Cheyenne language affiliation. Note that were it the case that "all putative cases" consisted, as Goddard claims, exclusively of doublets which have diminutive/non-diminutive functional contrast,[14] my bold conclusions might logically be called into question: but here are cases of So?taa?e verb-forms which persisted into ModCh intact and without contrasting I-Ch forms, obeying So?taa?e sound changes. In TABLE 3 I break that data down into sound correspondences between Proto-Algonkian, So?taa?e, and I-Cheyenne.

TABLE 4 is an interesting variation of the So?taa?e rules as recorded by Truman Michelson (1935). A fascinating footnote to history, revealed here for the first time, is that the so-called Nawathinahena ("dialect of Arapaho") rules recorded almost a half-century ago by Michelson are intriguingly similar to the shared So?taa?e and I-Cheyenne rules of TABLE 3, and closer to So? than I-Chey by important rules. In fact, if you apply Michelson's Nawathinahena rules to PA forms you will often find nearly exact So?taa?e forms as listed in a Cheyenne dictionary. We may now amend Michelson and Kroeber by saying that Nawathinahena diverges distinctly toward **So?taa?e** sounds, as well as I-Cheyenne. Nawathinahena and So?taa?e are dialects of the same language (SPA), accounting for the unusual sound shifts in Cheyenne and Arapaho; elements of So?taa?e phonology have been in the literature unrecognized for 63 years under the English name "Arapaho", while So?taa?e was categorized as a dialect under "Cheyenne".[15]

TABLE 4 also compares some Nawathinahena words collected by Kroeber while working on Arapaho, and as discussed by Michelson, with the nearly identical forms in the So?taa?e language, some of which are recorded in the Alford and Leman *English-Cheyenne Student Dictionary*. Furthermore, careful perusal of the *Ethnology Bulletin* 30 of the Smithsonian Institution will reveal that the ModChey tribal-name for "the southerners" of their group, the **So?woni?a**, is much like the ModArap tribal-name for their southern group, the **Na?wunena** (obviously cognate forms, with vowel-variations and ?/n alternation), also known as the **Nawathinahena**. Therefore, whenever Algonkianists claim that the differences in northern and southern dialects of Arapaho or Cheyenne are slight (as even I have done in the past), that merely obscures the further understanding that not only does "Southern" mean "So?taa?e", but since the masculine/feminine speech distinctions (as reported by Flannery for Atsina, and Alford

for Cheyenne) were unknown to the Cheyenne before they arrived on the Plains, then ultimately **NORTHERN (LATE-PLAINS-ALGONKIAN)** used concerning Cheyenne or Arapaho means those direct descendants of Central-Eastern languages who were adopted into the Soʔtaaʔe tribes, alternatively meaning the female dialect of today; and **SOUTHERN** refers to the Soʔtaaʔe and Nawathinahena language group, as well as masculine speech characteristics.

Since Goddard (1974) has already suggested that Nawathinahena needs to be subgrouped separately from the three other Arapaho dialects, we find it perfectly reasonable to suggest that, Soʔtaaʔe being set off from Cheyenne in distinct ways that resemble Nawathinahena, **Soʔtaaʔe** and **Nawathinahena** now be understood as a single subgrouping that cuts across the I-Cheyenne and I-Arapaho languages (with possible smaller incursions into I-Blackfoot and I-Siouan); that they deserve the title **Southern-Plains-Algonkian**, as well as recognition for their Pre-Proto-Algonkian archaisms. All this will have interesting consequences in a total reexamination of today's shaky Proto-Algonkian framework (Alford, forthcoming). [16]

NOTES

*I would like to thank a number of people for their important contributions to this paper: *Mary Haas* has been a tremendous help in assessing the probability value of the basic conclusions presented here; *Marilyn Silva* encouraged me to submit an abstract on this topic; *Larry Morgan* knows how helpful he was in getting this paper off the ground; *Ives Goddard* published archivally authenticated Soʔtaaʔe data previously unknown to me, which strengthened my case; *Wayne Leman* sent me copies of recent Cheyenne materials (including Goddard's paper) which I desperately needed; and, of course, *Sageeth in Canada*. I would like to acknowledge the long-standing debt I have to a number of Cheyenne informants: *James Shoulderblade*, *Henry Scalpcane*, *Aaron Whiteman*, *Ted Risingsun*, *James Spear*, *Joe Little Coyote* (former Keeper of the Sacred Hat), *John Woodenlegs* (former President of the Northern Cheyenne Tribe), *James Medicine Bird*, *Charles Sitting Man*, and many, many more.

[1] It has been suggested that maybe the Cheyennes were pulling my leg about speechforms being Soʔtaaʔe. Anyone who knows my work is aware that this is certainly not the case since, as project linguist and administrator for a federally funded bilingual education program, I was given all possible help by the Cheyennes for the express purpose of my organizing and passing on to their descendants true knowledge about the language. Since only one of known Soʔtaaʔe heritage can become Keeper of the Sacred Buffalo Hat (the Soʔtaaʔe covenant with the Great Mystery), or Keeper of the Sacred Arrows only if of true Cheyenne heritage, it is of ultimate importance for every Modern Cheyenne to know his heritage, and it is therefore common street knowledge as to who is Soʔtaaʔe and who is Cheyenne in modern times. Knowing that, the field-linguist merely follows around the various Soʔtaaʔe individuals and records their varying speechforms. The fact that certain forms are recorded in the Alford and Leman (1976) *English-Cheyenne Student Dictionary* as being Soʔtaaʔe is the direct result of an elaborate and thorough authentication procedure by Cheyenne tribal elders who are anxious that true language information be passed on to their grandchildren, and their living cultural authentication must take precedence over any contrary archival information which has been filtered through the white culture's often insufficient categorization procedures (illustrated by facets of this paper).

[2] I have also suggested that the divergent plurals are not of true Cheyenne lineage, but of Soʔ lineage.

[3] If Goddard means to imply here that the Soʔtaaʔe spoken today, corresponding to Church Latin, only within the context of the Sun Dance or Sacred Hat Ceremony, represents less-genuine examples of what the Soʔtaaʔe speak/spoke, he is misinformed. The present paper will demonstrate that there are situations in which **ONLY** the Soʔtaaʔe form has survived, in verbs for instance, and they are precisely the forms which would not be reasonably forthcoming from a Cheyenne who was being asked by a "writing-down whiteman"

to give words with two forms.

[4] This is an apt statement of the "Summer Fieldworker Syndrome". It is perhaps to be expected that the stranger-whiteman who breezes in from a city sometime after the snow and ice melt and the ground and air warm up again, asking impertinent questions about tribal language, history, and knowledge, without showing a genuine interest in giving technical help in return, may discover his information somewhat limited as when compared with that of a full-time on-site linguist who is living on a reservation and fulfilling a technical function for the tribe.

[5] Goddard implies here and elsewhere that my "alleged" (*elder-authenticated*) Soʔtaaʔe words are spurious or misanalyzed just because they are today actually in use as Cheyenne words, whereas the *archivally-authenticated* Soʔtaaʔe words were supposedly no longer in use earlier in the century. I suggest that it is merely one's underlying assumptions (known in other disciplines as the "experimenter effect") which determine how data will be analyzed and evaluated; that it is a point of fact, not conjecture, that Soʔtaaʔe speech-forms are currently in use in Modern Cheyenne, and those Soʔtaaʔe forms follow the same patterns of historical sound change as do those Michelson forms noted by Goddard.

[6] As we shall see, the male-female distinction is far from a simple and well-understood one. The Algonkian languages are not known for their male-female dialect distinctions, the Atsina dialect of Arapaho and Soʔtaaʔe being two recognizable counterexamples. If it can be shown that both Arapaho and Cheyenne picked up these male-female distinctions from specific outside contact, or even perhaps that they are archaisms from an earlier Proto-Algonkian time which did not survive in most of the Central-Eastern languages, an important new understanding will be gained.

[7] The significance of this is that I-Ch forms tend to begin with #h- wherever possible, a characteristic not classically shared by Soʔ forms. The conscientious reader will note that very few of Petter's (1915) forms ever begin with #h- (cf. Petter's explanation at the beginning of the H section of his dictionary); this is explained quite concisely by the conclusions of this paper, that "male" and "Southern" Cheyenne are more closely Soʔtaaʔe than is "Northern", and both kinds of forms are found abundantly (almost exclusively) in the Petter Dictionary, which was mostly researched and prepared while Petter was in Oklahoma.

[8] As with most examples I work with, "Goddard's Law" does not work very well here: this VVʔ/Vʔhk alternation does not occur word finally, and the differences can be accounted for quite economically by straightforward sound changes without the postulation of a complicated intervening rule. Long Soʔtaaʔe vowels are clearly ARCHAIC features of Pre-Proto-Algonkian which have survived as short-stressed (in Cheyenne) or merely short vowels before aspirated (or nasalized) consonants in other Algonkian languages.

[9] The *k -> ? -> n situation can be seen most clearly in the possessive prefixes from Algonkian to ModCh. It has been repeatedly claimed by myself and others that the second-person prefix ne- was borrowed from a Siouan language, but that claim is vacuous once the intermediate pattern with glottal is ascertained from archaic words, such as "friend":

PA	PPA	CH
*ni-	ne-(sene)	na-
*ki-	?e-(sene)	ne-
*wi-	ve-(sene)	he-(ve)-

[10] Note that Lewis and Clark's **Staitan** is exactly equivalent to the blending of the morphs Soʔtaae + **hetane** (hetane = man).

[11] It is clear from the Cheyenne legends that we have not yet fully unravelled the wanderings of the Intermediate-Cheyennes in this paper; the Cheyennes may have split off from PA with Soʔtaaʔe, at some point being separated from the Soʔtaaʔe while on the east bank of a flooding (Missouri or Mississippi) river, then wandering northward and eastward to find Algonkian relatives, some later traveling west and south to rejoin their Soʔtaaʔe relatives. This is at least one possible scenario, according to certain legends and facts.

See fuller treatment in forthcoming dissertation.

[12] It is here postulated that the Cheyenne, Arapaho, Sioux, and other later Plains tribes acquired Sign Language from the So?taa?e, who in turn received it from the Kiowa-Comanches, who had acquired it from ancient sources in central Mexico. Jack Du Bois in this volume explains the ancient origin of Sign Language, coexistent with ancient Mayan hieroglyphs. This is the same Kiowa trade-route that brought horses, drum-beats, and guns to the Plains.

[13] UCB, personal communication

[14] Goddard has implied that since many of the doublet forms I have previously published have a functional normal/diminutive contrast (the So? form consistently the unmarked case, and the I-Ch form consistently the marked or diminutive), I have been recording morphophonemic rather than dialectal differences. Nothing could be further from the facts. That the I-Ch forms have a diminutive meaning is very simply explained: when the Cheyennes were adopted in by the So?taa?e, that did NOT have the effect of totally Cheyenne-izing the So?taa?e language: rather, So? forms unknown to I-Ch speakers were learned and vice-versa, and when there were competing So?/I-Ch forms for the same word, the k-forms were assigned diminutive readings, reflecting their late-entering status on the Plains.

[15] I must draw attention here to a very Whorfian perspective about words and worldview: the information needed to solve the present So?taa?e/Cheyenne puzzle has been present in oft-read literature for over half-a-century, but unrecognized because it seemed to pertain instead to Arapaho and Nawathinahena. Which was first, the words, the worldview, or the Native Americans? I believe a moment's reflection will suffice to reveal that historically American Indian tribes were named out of sheer ignorance of the existential conditions, or because of miscommunication (*Nootka* is what those Indians kept telling the whitemen: *Go around!*) [thanks to Larry Morgan for that], and it is clear in this case that the words created a verbal-net of worldview to be cast over pre-existing native classifications, which worldview has been reinforced over the generations in various kinds of historical books. But the English language worldview simply does not fit the existential Native American facts, as shown in this paper.

[16] As this manuscript entered final stages, J. Youngblood Henderson (formerly an Assistant Professor of Native American Studies, UC Berkeley, Youngblood is Southern Cheyenne and Chickasaw by birth and upbringing, and is a most valued source for tribal knowledge of Native Americans) gave me permission to use him as a source for the following ideas, which substantially modify the tone and significance of the above presentation.

The importance of the So?taa?e in Plains History as outlined in the present paper is correct on one level, but its deeper importance has been missed because of hidden assumptions which Western linguistics holds about the nature of language itself. You have missed the important point about many native cultures around the world: there is often one type of language used for daily conversation (profane), and another kind of language used for prayer and singing (sacred), just as Europeans had their spoken languages and then Latin. We people sometimes distinguish between the medicine language of our shamans, our priestly class, and the warrior language of daily conversation. Conversational languages can vary from place to place, and those variations are geographical boundaries expressed verbally, but the ancient prayer languages like So?taa?e remained mostly unchanging. Prayer languages have a deeper medicine power than the outer conversational styles, and are more closely linked to emotions and values. Recent study has shown that South American shamans tend to know double the vocabulary of other people in various villages, although the shamans travel outside the village little; they know more because they know the sacred language and its accompanying concepts as well as the profane. You can think of the people being called So?taa?e here as more a priestly class than a social tribe. The same cultural conduit that brought the warrior horses and guns had the more important function of unifying the people on a deeper level with prayer language, smoke, peyote, music, rituals, and sign language.

REFERENCES

- Alford, D.K.H. (1975) "Linguistic Speculation on the Pre-History of the Cheyenne People." Cowan, Ed. *Papers of the Sixth Algonquian Conference, 1974*. National Museum of Man, Mercury Series, Canadian Ethnology Service Paper No. 23. Ottawa.
- _____, Wayne Leman, et. al. (1976) *English-Cheyenne Student Dictionary*. Montana Council for Indian Education, 517 Rimrock Rd., Billings, MT 59102. (\$4.50)
- _____, (1977). "A Plurality Puzzle Unravalled (Or, The Importance of Being So?taa?e)". In *Proceedings of the Third Annual Meeting of the Berkeley Linguistics Society*. UCBerkeley.
- Flannery, Regina. (1946) "Men's and Women's Speech in Gros Ventre." *IJAL*, V.12, No.3, pp133-5.
- Goddard, Ives (1974) "An Outline of the Historical Phonology of Arapaho and Atsina." *IJAL*, V.40, No.2, pp102-116.
- _____, (1977). "The Sutaio Dialect of Cheyenne: A Discussion of the Evidence." *Papers of the Ninth Algonquian Conference, 1977*. William Cowan, Ed.
- Haas, Mary R. (1966) "Vowels and Semivowels in Algonkian." *Language* 42.479-88.
- Kroeber, A.L. (1916) *Arapaho Dialects*. University of California Publications in Archaeology and Ethnology, 12:71-138.
- Michelson, Truman. (1933) "Phonetic Shifts in Cheyenne". *IJAL*, 8.78.
- _____, (1935). "Phonetic Shifts in Algonquian Languages" *IJAL*, 8.131-71.
- Petter, Rudolphe. (1915) *English-Cheyenne Dictionary*. Kettle Falls, WA.

TABLE 1

In this table are archivally-authenticated So?taa?e-Cheyenne differences from Goddard, with my added phonemicization.

meaning	So?taa?e	(I-)Cheyenne
1. dog	hōtām /hótame/	oeskasiu /oehkaseho/
(40. dog	ahótām /?ah-ótame/)	
2. bear	wōpinaxkū /woopi-/	náxku /náhkohe/
5. tree	matáa /ma?taa?e/	hóotsitu /hóoheteto/
22. foot	má-is /ma?ese/	matciku /mahte?ko/
23. arm	má gts /ma?ahte/	heats /he?ahte/
30. beaver	áhōmái /?ah-oma?e/	homá /homa?e/
32. elk	axmó- /?ax-mo?e/	móe /mo?ehe/
37. arrow	axmáhuts /?ax-maahote/	máhuts /maahote/
39. stone axe	hóoux /ho?oxe/	húkoj /hohkoxe/
41. my daughter	nats /nahte/	naxtún /nahtona/
52. knife	mo-isó- /mo?esoo?o/	mútskj /motehke/
57. badger	axmahá-u /?ax-ma?haa?o?e/	maáxku? /ma?hahko?e/
58. bat	amusianutsionong /?a-mose?anotse?oonoane/ cf., ModCh /mosehkanetsenoonahé/	
76. fingernail	amístohivo /?a-méhtoohevo/	ma'tohiv /mahtoohevo/
79. red stone	axmaininóo /?ax-ma?e-nenóo?o/	máieuxk /ma?e-he?óhko/
92. guts	avjtionists /?a-ve?ceonete/	hevíkcionists /heve?keonete/
94. navel	ahístarmi /?ah-ehtane/	histá /hehta?e/

TABLE 2

In this table, I have given specific language reflexes, where known, of PA words; where the words give little specific clues as to their origin, or where there are competing forms, those are found in the ModChey column. Note that I have at times substituted capital letters for nasalization, fricatives of debated quality, devoicing, etc.

Meaning	*PA	I-Ch	ModChey	So?
-----[PA *p's]				
S	#p	#p	#?	#p
ashes	peNkwi	paAke		paa?e
grease	pemye		?ame	
gum	pekiwa	?ahke	?ahč	
nighthawk	pihkwa			pe?e
S (?)	#p	#t		
flute	pepikwani	tahpeno (prob. dissimilation)		
S	-p	-0	-0, -p	-p
break wind	-pekit-		-panest-	
grind	-pooxkoneeni			-pe'ena
cessation	-pooni-		-e'ne-	
err	-pat-	- oht-		
hit	-pakamee-		- oomo'-	
S	#pw, -pw		#n	
alien, enemy	#pwaáΘa		#noto	
thigh	-pwaami		-nome	

S	p	hp	hp, ?	? , 0
bull, buffalo	?ayaapeewa	hotoOpe		hoto'a?a, hoto'a-
die	-nepo-			-naa'e-
embrace	-apen-			-o?an-
water	nepyi	mahpe		
white	waapi	wo'Ope		woopi
	(aakem		wo'?kome	woo?ome)

S	Np	hp
up, beyond	-ompi-	-heEpe-
brain	-empi	-aApe

S	hp, sp, xp	?p, ? , 0
lung	-ohpan-	-e?pon-
above	?e?peme-	he?ama
arm	-?petoni	-?ahte(n-)
flies up	-wespi?lee	-e e?ha
sleep with	-wiixpeem-	-ve' am-

S	p	hk	0
rabbit	waaposwa	vo'Okooh	-vo' ohe

(poss. *p -> So? ?/0, reanalyzed in Ch as ? -> hk)

-----[PA *t's]

S	#t, -t	#t, -t	#t, -t	#t, -t
autumn	takwaaki			tono'e-
night	tepeFki			ta a?e
act towards	-tootaawoo-	-te'Etovo		

S	t, Nt, Ht	ht	ht	ht
black	maHkateewi	mo?koOta'wi		mo?oOta'wi
buy	-ataawe-	-oOto'wa		
evergreen	siiNta-	se'Eto-		
ear	-htawakayali		-htovo otote	

S	?t	?t	?t	?t
bow (-wood)	me?teekwi	ma?taAke	ma?teEke	ma?taa?e

-----[PA *k's]

S	#k, -k	#h, -h	? ?/0, -h	? ?/0, -h
close	-kepenee-	-hahpana		
crow	kaak-kaakiwa		?o'koOke	?o'koo?e
day	kiisokwe			?e'xe(ne-)
dry	-kahkya			-o?o

S	k	hk	?/n/0
fox	waakwehsa	wo'Okeso	-ho' ohe
dwelling	wiiki(waami)	ve'Eke	vee?e, ve' e(ome)
axe		ho'Okoxe	(h)o'?oxe
pipe	oxpwaakan-		he?o'hko(n-)
badger	me?Θa-akwaFkwa		ma?ha'Ako?e
			?e?oo?o, -nenoo?o
			(?ax-)ma?haa?o?e

S	kw	hk	hk, ?k, n	?/n
knee	me-ketekwa			ma-nehtane

nephew	-ΘeNkwaΘe-		-tenota
ant	eelikwa	hátehke	
fox	waakwehsa	wo'Okeso	-ho' ohe
skunk	sekaakwa	xa'Ake	xao'ʔo,xao'ne

S	nk	hk	ʔ/0
ashes	peNkwi	paAke	paaʔe
star	aΘaaNkwa	hoto'hke	
lie down	ʔinkihʔine		-ʔe eʔe
fall against	-paNki		-poo e-

S	hk	hk	ʔk	ʔ/0
black	mahkateewi		mo'kohtawe	mo'ohtawe
cloud	wahkwí-			voʔe
grandmother	noohko-	ne'Eke-		
spoon	ʔeemehkwaan-	ha'meEko(n-)		
louse	-ehkomi			-a eme
press down	-tahkoskawaa-			too e ovo

S	Fk	ʔk	ʔk	ʔ,0
path, trail	myeexkanawi			me' oʔo,-ono-
blood, red	meskwi		maʔke-	maʔe
fire	waʔkweteewi			hoʔehta(-ve)
beaver	ameΘkwa		homaʔe	
acorn	anaaΘki-			hono'ʔe
women	oΘkoowaki			heʔeoʔo
grind	-pooxkoneeni			-pe' ena

[PA *ʔ's]

S	ʔ	ʔ		
(many examples above; *ʔ always remains unless forced out by another ʔ or n)				
S	#ʔV	#hV	#hV	#ʔV, #hV
(many examples above; Ch prefers #hV and So? prefers #ʔV)				

[PA *m, *n's]

S	#n..(p)	#m	#m
summer	niipen		me'aneva
water	nepyi	mahpe	

S	ny	n
five	nyaanlan-	no'ho(n-)
rock	ʔaʔsenyeeki	hoʔhonaʔe

S	n	n/?
elbow	metoskwani	mahteʔooʔo, -oono
feather	miikwan(ak)i	meeʔe, me'eno
path	myeexkanawi	me'oʔo, me'ono

[PA *l's]

S	l	t	t
man	ʔilenyiwa		hetane
fat	wiilenwi	veta-hke	vete-hke

S	ʔl	ʔh	ʔn
---	----	----	----

beard	mii?letonaa-	me'hahte(no-)	
kill	ne?le-	na?ha	
turkey	me?ʒii?leewa		ma?xe'?ne

S	Nl	h
name	wiiNleewa	-ve'he
nurse	nooNlaawa	-ne'ho

S	lw	s
pleasant	melwi	-mase-

-----[PA *y's]

S	y	t
matter.pus	myeeyi	matse
ghosts	ciipaya	se'oto (sg=o?ote)
ear	-htawakayali	-htovootote (sg=oo?ote)

-----[PA *fric's]

S	θ	t	t	t
dog	?aθemwa		hotame	
tobacco	θe?θeemaawa			te?nemoo'o

S	θi (cy)	se	se
flies (noun)	oocyewa(ki)	he'se(o?o)	
food	miicim-	me'se-	
from (there)	-oNcya	heso	
root (medicine)	ocyeepixkali		(h)ese'eo?otse

S	?θ	?h		?n
daught-n-law	ne?θema	na?hame		
brother,elder	ne?θehsali			na?neha
enlarge	neme?θe-kenee-		nama?haa?ana	
three.eight	ne?Fwi	na?he (3)		na?no' - (8)

S	hθ	h		h
father	nooHθa			ne'ho'e
ten	metaatahθwe	mahtoOtoha		

S	s,hs	h	h	h
animal	awes-		hovahe	
arise	-pasekwiiwa			-ohaa?e
aunt	sekwihsa			-haa?e, -haahe-
elk	maskooswa		mo'e'he	
island	menehsi		manahe'-	
nest	wasye?θanwi		vohe?so	

S	?s	?h	?h,?n	?n
Culture Hero	wii?sahkee-	ve'?ho?e (also spider, whiteman)		
fish	namee?sa	noma'?he		noma'?ne
gall	owii?sopi	heve'?hehpe		

S	ns	s
---	----	---

claw	-škanša		-oso-
coal,ember	kaxkanšyeewi	ho?ko'se	(h)o?o'se
S	(h)š		š/x
duck	šipšipa		še?še
grandchild	noošisema		[ne'še] > ne'xahe
sun	kiišo?θwa		e'še?he
two,twice	niišwi		neše, nexa
hole	waaši		voxe
tail	wešekwani		hevaxe
firewood	mehši		maxe
S	?š		?x
big	me?ši		ma?xe
cross	-aa?še-		-o?xa'-
-----[PA *vowels]			
S	e		o
first	ne?tame		no?tome
rock	?a?senya	ho'hona'hke	ho'honaa'e
S	(y)a		e
able to	mate		mesta
pity	-šaweelemaa-		-ševatamo
tailfeathers	waθanyali		votonete
S	i		o
jaw	-taapixkan(al)i		-to'o?o,-to'onote
root	ocyepixkali		hese'eo?ote, -otote
=====			

TABLE 3

In this table, we find some of the sound-shift rules describing the data above in Table 2, from Proto-Algonkian to Cheyenne and So?taa'e. We are not sure exactly how long ago I-Ch and So? merged (after the famous skirmish), and are not sure yet how many sound changes were shared before they originally broke up (perhaps many of the vowel-shifts and t-creations were shared early on), but we can see that in many respects I-Ch and So? words have in recent times become closer to each other. This is especially evident in reading Rev. Petter's Dictionary forms which, gathered mostly in Oklahoma among So?taa'e, tend to show #? rather than #h (although some #h is shared with Arapaho and Nawanathinahena), as well as odd vowel-differences, fewer -k-s, more male dialect -c-s, and especially more (usu. unrecorded) glottals.

	*PA -> I-Ch	shared	*PA -> So?
1.	*-hk- -> hk		*-hk- -> ?/0
2.		*a -> o,a	
3.		*e -> a	
4.		*o,*i -> e	
5.	*xk,*šk -> hk		*xk,*šk -> ?
6.			*xkw -> ?
7.		*tc -> ts	
8.		*θ -> t	
9.		*l -> t	
10.		*m -> m	
11.		*w -> w,v	

12.	*p -> hp		*p -> ?/0
13.	*VV -> V		*VV -> VV
14.	*mp -> hp		(??)
15.	*#k -> #h		*#k -> #?/#_
16.	*k(w) -> hk		*k(w) -> ?
17.			*#-n -> ?/n alt
18.	*?l -> ?h		*?l -> ?n, ?h
19.		*nl -> h	
20.		*lw -> s	
21.		*y -> t/? alt	
22.	*Øi -> tse		*Øi -> se
23.	*?Ø -> ?h		*?Ø -> ?n
24.		*hØ -> h	
25.		*(h)s -> h	
26.	*?s -> ?h		*?s -> ?n

Note that this table is set up to show the similarities with items 1-11 in Table 4, and after that follows the data arrangement in Table 2.

TABLE 4

In this table we find the sound-shift rules for Proto-Algonkian to Nawathinahena as described by Michelson earlier in this century, along with Nawanathinahena words and their corresponding So?taa?e equivalents. This evidence, added to Michelson's discussion, shows that while So?taa?e and Nawanathinahena are not *exactly* the same, in comparison with Cheyenne, Arapaho, and other Central-Eastern languages, So? and Naw are closer to each other than would reasonably be expected of two dialects of separate languages.

Sound Shift	Meaning	Nawanathinahena	So?taa?e
1. *hk -> ?	black	moxtsia /mo?ohtea-/	/mo?ohta-/
2. *a -> a,o			
3. *e -> a	nose	mais /ma-ese/	/-ese-/
	mouth	matin /matine/	/-matene-/
	blood	mao- /ma(?)o-/	/ma?o-/
	my gr-fthr	(h)amacim /-amaseme/	/nameseme/
	(both Ch and Arapaho have -seme)		
	beaver	hamaha? /hamaha?e/	/homa?e/
	eye	masixsan /ma-sixsan/	/ma-?exan-/
	bow	ma?axta /ma?axta/	/ma?taxce/
	daughter	naxtaana- /na-htaana-/	/na-hto'na/
	ten	maxtoxtahaha /mahtohta-/	/mahtohto/
4. *e -> o	leg (>arm)	mo?oxts /mo?ohte/	(/ma?ahte/)
5. *xk -> ?	nose, beak	mais /ma-?ise/	/-?ese/
	turtle	ma'ana- /ma?ana/ /ma?eno/	—
6. *xkw -> ?	woman	hihi'i /hi-hi?i/	/he?e/ —
7. *tc -> ts	leg (>arm)	mo'oxts /mo?ohte/ /ma?ahte/	—
8. *Ø -> t	dog	hatam /hatame/	/hotame/
9. *l -> t	man	hiten /hitene/	/hetane/
10. *m -> m	beaver	hamaha' /hamaha?e/	/homa?e, *homaha?e/
	fuel-wood	ma' /mahe/	/maxe/
	trail, road	mihiana /mihyana/	/me(y)ono-/
11. *w -> w,b	four	nyaba- /nyawa/	/newe, neve/