Advances in the study of Siouan languages and linguistics

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Edited by

Catherine Rudin & Bryan J. Gordon

Studies in Diversity Linguistics ??

Studies in Diversity Linguistics

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To Bob, whose knowledge was matched only by his generosity.

Contents

Preface

This volume presents a group of papers representing a range of current work on Siouan[1] languages, in memory of our colleague Robert L. Rankin, a towering figure in Siouan linguistics throughout his long career, who passed away in February of 2014.

Beyond honoring a beloved colleague, our aim in this volume is to bring a variety of issues in Siouan linguistics to the attention of the linguistic community. The Siouan language family is a large and important one, with branches geographically distributed over a broad swath of the North American plains and parts of the southeastern United States. This puts it in contact historically with several other families of languages: Algonquian, Iroquoian, Caddoan, Uto-Aztecan, and Muskogean. Siouan languages are, or were historically, spoken by the members of at least 25 ethnic/political groups. One Siouan language, Lakota, is among the handful of indigenous North American languages with younger speakers today. Siouan languages have occasionally risen to prominence in general linguistics, for instance in the study of reduplication (Shaw 1980); and Omaha and Crow (Apsaalooke) have lent their names to two of the basic categories of kinship systems in anthropology. Nonetheless, the Siouan family has been underrepresented in the descriptive and typological literature, and most of the languages in the family are severely understudied. The majority of work on Siouan languages is unpublished, existing only in the form of conference papers or manuscripts.[2] This volume is a step toward making information on Siouan languages more broadly available and encouraging deeper investigation of the myriad issues they raise.

From the perspective of linguistic typology, Siouan languages have many notable features. Many of these features stand to challenge typological generalizations. Here we briefly sketch a few of the most characteristic features of the Siouan family.

[1] "Siouan" is not to be confused with "Sioux", a controversial term referring to Lakota and Dakota people, rarely to Nakota/Nakoda people too, but never correctly to people of other traditionally Siouan-language-speaking communities.

[2] Many of these unpublished works are collected in the electronic Siouan Archive, maintained by John Boyle at the University of California at Riverside.

All Siouan languages possess a rich variety of applicative affixes, confirming Polinsky's (2013) observation that applicatives are common in North America and adding another language family to her list of applicative-rich families in the area. **Helmbrecht2006** divides the applicatives into three templatic slots: locative applicatives, benefactive applicatives, and applicative markers; all of the Siouan languages sampled by Helmbrecht possess at least two applicative morphemes.

All Siouan languages are strongly head-final, and the consensus among syntacticians working with Siouan languages is that all but the supraclausal projections (and even some of these) are underlyingly head-final in Siouan languages, contra Kayne's (1994) Antisymmetry theory.

All Siouan languages have head-internal relative clauses. A series of strong claims regarding the typological implications of head-internal relative clauses (cf. Cole 1987; Murasugi 2000), including purported distinctions between "Japanese-type" and "Lakota-type" constructions (cf. Watanabe 2004; Williamson 1987; Bonneau 1992), propelled Lakota into the debates of theoretical syntax. It has been pointed out that head-internal relative clauses of the kind found in Lakota and other Siouan languages lack the island restrictions found in other languages. On the other hand, **Murasugi2000** argues that languages with head-internal relative clauses must also have head-external relative clauses, which is not true in Siouan languages.

All Siouan languages have verbal affixes which index subject possession of or relationship with the object. They vary with respect to contexts of obligatoriness of these affixes.

Many Siouan languages have grammaticalized systems of speaker-gender marking, with gender-specific morphology for speech-act markers, address terms, and kinship lexemes.[3] Such usage varies depending on stuational factors, however, especially in the case of speech-act markers; see for instance Trechter (1995).

Many Siouan languages have a modal CCV morpheme shape. This does not necessarily imply a preference for CCV phonetic realizations, but may indicate such a preference in the distant past. Another unusual prosodic feature is the preference for second-syllable stress in most Siouan languages. Hoocąk may be the only attested language with default third-syllable stress in the world.

Most Siouan languages have ejective stops. The Dhegiha branch is notable for a four-way glottal-state distinction in its stop series (voiced/lenis, tense/pre-aspirated, ejective and aspirated). Outside of the Dhegiha branch are many Siouan languages which have the unusual feature of a phonemic voicing distinction in

[3] In the case of kinship terms, lexical choice is driven by the gender of the "ego" deictic center, which coincides with speaker gender when there is 1st-person inflection.

fricatives but not in stops.

Verbs play some typologically unusual, prominent roles in Siouan languages. Diachronically, many grammatical items which rarely grammaticalize from verbs in other languages tend to derive from verbs in Siouan languages. For instance, Rankin (1977) documents the derivation of classifiers and articles from verbs. In some Siouan languages, the source verbs and target grammatical items continue to exist in parallel with substantial semantic overlap. The Omaha positional article *t^{h}o^{n}* 'obviative animate specific standing', for instance, is homophonous with the root of *át^{h}o^{n}* 'stand on'.

This diachronic tendency is mirrored by synchronic flexibility. Siouan languages tend to verb freely — to use nearly any open-class stem as a verb. Thus Lakota *wimačhaša* 'I am a man' is derived from the nominal stem *wičhaša* 'man/person' with the 1st-person stative pronominal ma-.

Dhegiha articles (which have many features in common with positional classifiers in e.g. Mayan languages; see Gordon, 2009) are homophonous with postverbal and postclausal functional items like subordinating conjunctions and aspect and evidentiality markers. They have considerable semantic overlap with them too, a fact which comprises another area of blurriness between nominal and verbal syntax: In Ponca, *niáshi^{n}ga-ama* may mean 'the [proximate animate plural specific] people', but also may mean either 'they are people' or 'I am told s/he was a person'. Plurality is a part of the semantics of -ama in both the nominal and the first clausal interpretation. To make matters more interesting, these kinds of ambiguity are not always easily resolved by context alone, and may suggest a "simultaneity" (cf. Woolard 1998) at work as part of speakers' competence.

This flexibility, that is, the ability of one and the same root to function in both nominal and verbal contexts, has led to some discussion on the status and quality of the noun/verb distinction in Siouan languages (see e.g. Helmbrecht, 2002, and Ingham, 2001).

Nominal arguments in general are not required in Siouan languages, thematic relations being signaled by pronominal or agreement markers within the verb — including zero markers. This makes Siouan languages relevant to debates about the existence of "pronominal argument" languages (Jelinek 1984) and to the related issues of whether there are languages with truly nonconfigurational or flat structure. The preponderance of evidence in Siouan is for the existence of hierarchical structure, specifically including a VP (for instance, West, 1998; Johnson, this volume; Johnson et al, this volume; and Rosen, this volume).

Although Siouan languages have many remarkable features in common, they vary on many others. Some Siouan languages have noun incorporation, while

others do not. Some Siouan languages have stress-accent systems, and others have pitch-accent systems. Dhegiha languages are notable in having as many as eleven definite/specific articles indexing features such as animacy, proximacy/obviation (or case), posture/position, number, visibility, motion and dispersion; meanwhile other Siouan languages have no fully grammaticalized articles at all.

Some Siouan languages reflect longtime cultural presence on the Plains, while others are located as far east as the Atlantic Coast, and many more show cultural aspects of both regions. Dhegiha-speaking peoples (Quapaw, Osage, Kaw, Omaha and Ponca, and likely Michigamea as well (Kasak (this volume), Koontz 1995) likely lived at the metropolis at Cahokia, perhaps at a time before any of the descendant groups had separated, and have many Eastern Woodlands-style features of traditional governance and religion, in sharp contrast with the more Plains-typical cultural features of close Lakota and Dakota neighbors and relatives.

One seemingly minor but in fact quite significant issue in Siouan linguistics is the matter of language names and their spelling. Often this involves a self-designation in competition with a name imposed by outsiders. Even when an autonym gains currency among linguists there is sometimes no agreed spelling; so for instance the Otoe self-designation is written Jiwere or Chiwere. For the most part in this volume the choice of language designations has been left to the individual chapter authors. However, after a volume reviewer pointed out that the language of the Ho-Chunk or Winnebago people was spelled no less than ten different ways in various chapters, we encouraged authors to choose one of the two spellings used on the tribe's web site: Ho-Chunk or Hoocąk. Most have voluntarily complied. In a related move, we decided to retranscribe all Lakota data throughout the volume using the now-standard orthography of the *New Lakota Dictionary* (Ullrich et al, 2008).

The volume is divided into four broad areas (Historical, Applied, Formal/Analytical, and Comparative/Cross-Siouan) described in more detail in separate introductions to each part of the volume. Part I consists of five chapters on historical themes: Ryan Kasak evaluates the evidence for a relationship between Yuchi and Siouan; David Kaufman discusses the participation of some Siouan languages in a Southeastern sprachbund; Rory Larson summarizes current knowledge of Siouan sound changes; and Kathleen Danker and Anthony Grant investigate early attempts to write Hoocąk, Kanza, and Osage. Part II opens with Linda Cumberland's interview with Robert Rankin about his work with Kaw language programs. Jimm Goodtracks, Saul Schwartz, and Bryan Gordon present three different perspectives on Baxoje-Jiwere language retention. Justin McBride ap-

plies formal syntax to the solution of a pedagogical problem in teaching Kaw. This applied-linguistics section ends with Jill Greer's sketch grammar of Baxoje-Jiwere. Part III contains formal analyses of individual Siouan languages. David Rood proposes an analysis of /b/ and /g/ in Lakota using the tools of autosegmental phonology and feature geometry. John Boyle elucidates the structure of relative clauses in Hidatsa. Meredith Johnson, Bryan Rosen, and Mateja Schuck, in a series of three interrelated chapters, discuss syntactic constructions in Hoocąk including resultatives and VP ellipsis, which they argue show the language has VP and an adjective category. Part IV consists of three chapters which take a broader view of grammar, considering data from across the Siouan family. Catherine Rudin compares coordination constructions across Siouan; Bryan Gordon does the same with information structure and intonation, and Johannes Helmbrecht with nominal possession constructions.

All four of the areas represented by this volume are ones to which Bob Rankin contributed. His scholarly publications centered primarily around Siouan historical phonology, but included works ranging from dictionaries to toponym studies, from philological investigation of early Siouanists to description of grammaticalization pathways. He was deeply involved in language retention efforts with the Kaw Language Project. Other interests included archeology, linguistic typology, Iroquoian and Muskogean languages, and the history of linguistics.

Bob was a major figure in Siouan linguistics, a mentor to nearly all living Siouanists, and a mainstay of the annual Siouan and Caddoan Linguistics Conference meetings for decades. Trained in Romance and Indo-European linguistics, with a specialty in Romanian (Ph.D. University of Chicago 1972), he shifted gears soon after leaving graduate school, and became an expert in Siouan languages, especially the Dhegiha branch, with special focus on Kaw. From the mid 1970s through the end of his life, he devoted himself to Siouan studies, both practical and scholarly. His long association with the Kaw Tribe led to a grammar and dictionary of that language (see Cumberland, this volume), and he also produced a grammar of Quapaw, and briefly conducted field work on Omaha-Ponca and Osage. At the University of Kansas he directed dissertations on Lakota (Trechter, 1995) and Tutelo (Oliverio, 1996) as well as several M.A. theses on Siouan languages, and taught a wide variety of courses including field methods and structure of Lakota and Kansa as well as more theoretical courses in phonology, syntax, and historical linguistics. Perhaps Bob's greatest gift to the field was his encouragement of others. At conferences and on the Siouan List email forum, he was unfailingly patient and encouraging, answering all questions seriously, explaining linguistic terms to non-linguist participants and basic facts of Siouan

languages to general linguists with equal enthusiasm and lack of condescension.

Following his untimely passing, a special session was held at the 2014 Siouan and Caddoan Linguistics Conference to organize several projects in Bob's honor: The first of these was publication of the Comparative Siouan Dictionary, an immense project comparing cognates across all the Siouan languages, undertaken by Rankin and a group of colleagues in the 1980s. It had been circulated in various manuscript forms but never published. Thanks to David Rood (another founding member of the CSD project), with help from Iren Hartmann, the CSD is now available online (Rankin et al, 2015). The second project was a volume of Bob's conference papers and other previously unpublished or less accessible work, to be collected and edited by a group headed by John P. Boyle and David Rood; that volume, tentatively titled *Siouan Studies: Selected Papers by Robert L. Rankin*, is currently in progress. The third project was a volume of Siouan linguistic work in Bob's memory, which has taken the shape of the present volume.

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Part I

Historical Linguistics and Philology

Chapter 1

A forgotten figure in Siouan and Caddoan linguistics: Samuel Stehman Haldeman (1812-1880)

Anthony Grant

In the light of Bob Rankin's Dhegiha work this paper examines some of the earliest recorded material on Kanza and Osage, collected and transcribed by the naturalist Samuel Stehman Haldeman in an alphabet of his own devising (Haldeman 1859, 1860). Although his transcriptions fail to capture many crucial phonetic and phonemic distinctions, they are useful as records of earlier and more conservative forms of these languages. KEYWORDS: [Kanza, Osage, orthography, phonetic transcription, history of linguistics]

1 Introduction

Robert Rankin's examinations of earlier sources on Native American languages which have rarely been the subject of fuller description impel us to look at the work of other early collectors of data on Siouan and Caddoan languages. We may mention for instance his paper on Max von Wied's brief vocabulary of Kaw, Kanza or Kansa (Rankin 1994), Nor should we overlook his splendid salvage work on Kanza (the name I will use henceforth in this paper) and Quapaw, and his pivotal role in the organization of the Siouan-Caddoan Conferences.

One researcher is almost overlooked nowadays (despite a memoir by Lesley 1886 which hymns his activities while getting its dedicatee's name wrong). The naturalist, sawmill manager and avocational linguist Samuel Stehman Haldeman (1812-1880) was mostly known to the linguists in the 19th century for his 'Analytic Orthography' (Haldeman 1859, also produced in book form as Haldeman 1860). This was a prizewinning attempt to construct a universal phonetic alphabet, based on Latin letters (and following some precepts of Classical Ciceronian Latin pronunciation, for instance <C> for /k/ and <V> for /w/) but enhanced with some created symbols. It also added a number of diacritics, for documenting

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Anthony Grant. 2016. A forgotten figure in siouan and caddoan linguistics: samuel stehman haldeman (1812-1880). In Catherine Rudin & Bryan J. Gordon (eds.), *Advances in the study of Siouan languages and linguistics*, 3–14. Berlin: Language Science Press. DOI:??

phonetic data in the world's languages, especially from previously undescribed languages of North America and elsewhere.

This work represented a determined effort to describe and notate speech sounds, for which it was awarded the Trevyllian Prize in London against eighteen contenders. And there its reception ground to a halt. The alphabetic system, based on what Haldeman assumed were Classical Latin letter-values, was well-adapted to indicate certain aspects of vowel quality and quantity and basic consonantal distinctions. But his pioneering work is one of several such pre-International Phonetic Association schemes proposed in the 19th century, of which Lepsius (1863) is the most famous and influential, and it is cumbrous. Because it required a large number of special fonts and diacritics it was difficult to reproduce, with the result that nobody save Haldeman ever adopted it.

Haldeman's system is elaborate but just how successfully or consistently he applied his own transcriptional system is moot. For instance in his Chinese data (actually Cantonese), he fails to indicate any tones for the numerals for Guangzhou Cantonese, although he makes an effort to do so for the nearby Macanese variety of Cantonese. Haldeman uses the phonetic terminology of his time, with *surd, sonant, lenis, asper*, employed where modern phoneticians talk about *voiceless, voiced, unaspirated* and *aspirated* sounds, and with *sigmal, lingual, cerebral, guttural* and *faucal* used for modern *alveolar, dental, retroflex, velar* and *uvular* respectively, He also talks about "pure" (non-nasalized) and nasal sounds, and arrays consonants according to their degree of "interruption" (plosives are the most "interrupted" consonants in this scheme); see Figure 1. He also divided consonants into *mutes* (plosives and nasals) and *liquids* (other consonants). Haldeman (1860: 83, 369) recognizes thirty four vowel qualities, which he arranges in a dense A-shaped diagram, and he indicates vowel quantity with macrons and breves. Unlike Daniel Jones (Jones 1909) he does not propose a scheme in which the distinction between back [ɑ] and front [a] is crucial.

The concentration in this work is on Haldeman's Dhegiha-language data, though observations from his work on Caddo and Wichita will be added where relevant. (Unfortunately I lack sufficient modern lexical data to give as full an analysis with modern examples of the Caddo and Wichita data as I would wish.) Data from Haldeman's work are taken from Haldeman (1860), a corrected and book-length edition of Haldeman (1859). Haldeman divided his work into sections (often extremely short and usually corresponding to paragraphs), in addition to the book being paginated. Both modes of reference will be used here.

Figure 1: A digest of consonantal symbols in Haldeman (1860: 121, section 576)

2 Haldeman the Americanist and his work on Dhegiha

In addition to a number of versions of the Lord's Prayer (including those in Cherokee and Wyandot) Haldeman (1860) provided data in the form of 75 cardinal numeral sets from 1-10 from a wide range of languages of Europe, Asia and North America (plus Grebo from Liberia). A number of these were Algonquian, Muskogean and Iroquoian languages in addition to numerals from Makah, Chinook, Comanche, Jicarilla Apache and the Yuman language Iipay ʿAa. Among the languages on which Haldeman tried out his spelling system are the Dhegiha Siouan language Kanza (for which he also provided some Santee parallels for certain forms from Riggs 1852; see Figure 3). He also provided data from the Caddoan languages Caddo (which Haldeman referred to as "Nadaco") and Wichita (referred to as "Waco" but identical with the Wichita recorded in the 20th and 21st centuries, for instance in Rood (1975). In each case the data presented are cardinal numerals from 1-10 and some additional lexicon (over 40 such items in the case of Caddo and 10 from Wichita), evidently recorded by Haldeman from native speakers and not previously listed elsewhere. Haldeman also collected the numerals from 1-10 in Osage; see Figures 2 and 3.

As Rankin (1994) showed, Max von Wied (**Maximilian18391841**) had described

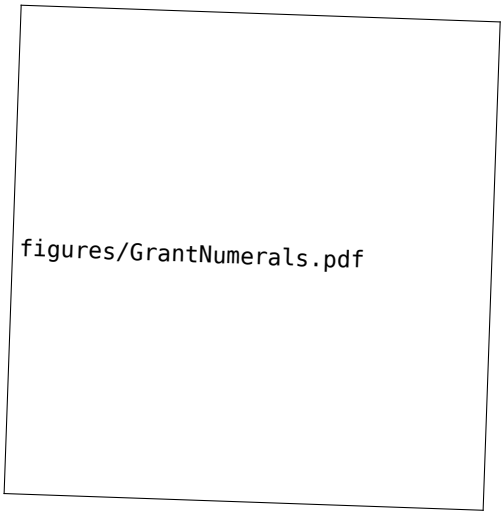

Figure 2: Numeral data from Kanza and Osage (Haldeman 1860: 3, sections 711, 712)

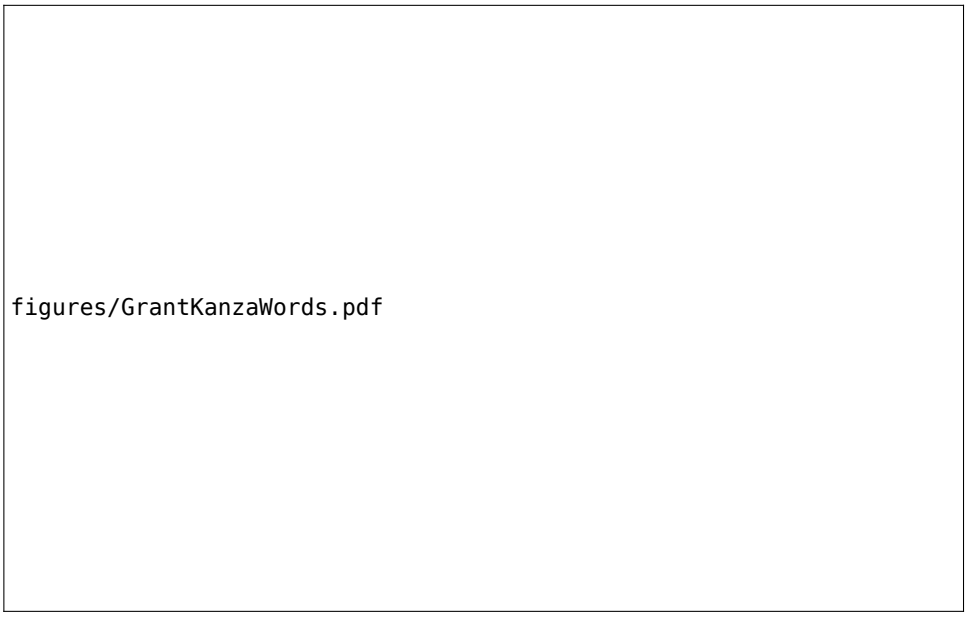

Figure 3: Lexicon from Kanza, with some Dakota parallels from Riggs (1852) (Haldeman 1860: 3, section 634)

sounds in various Dhegiha languages (Wied documented Omaha, Ponca, Kanza and Osage) quite well within the limitations of his annotated Franco-German spelling system. This means that though his work is superb for its time he missed many crucial details and failed to record other details consistently. Haldeman's system was theoretically more precise as far as it went (although there is little consistent coverage of tones and essentially none of consonants which are ingressive, velaric, or other kinds of clicks). But it was deployed less consistently and less accurately. His records of Kanza and Osage do show an ability to indicate primary stress using acute accents, while grave accents are used to indicate a variety of vowel qualities, short vowels are marked with breves, long vowels with postvocalic dots, and vowel nasalization is represented with the ogonek or Polish hook placed at the bottom of the line after the vowel.

Working on small amounts of material (often only the numerals from 1-10) from a large number of languages, Haldeman recognized that some sounds were problematic in terms of his descriptive criteria, as his discussion of the two ejectives Caddo /t'/ and Wichita /k'/ shows (Haldeman 1860: 3, section 448 and 131, section 574). But he did not make the leap (as **Garcia1760** had done for Coahuilteco) by discovering that what made these sounds distinctive from other speech sounds but similar to one another was their common possession of ejective quality, with the corollary that ejectives should be represented consistently. As a result he was unable to indicate the ejective quality of the final consonant in Caddo *wists'i* 'one'. In fact, Haldeman's attempts at transcribing Caddo (for instance Haldeman's <vátɐt'> for *waadat* 'earth', in which he fails to hear that the medial stop is voiced: Haldeman 1860: 3, section 633) are scattershot enough to be unreliable. Even so he recognized that the Caddo word for 'cheek' used a dental or alveolar rather than a velar nasal.

His array of consonantal types was defective in other respects. Although Dhegiha languages contain ejectives, the small samples from Kanza and Osage which Haldeman cites happen not to include any of these sounds; Haldeman would probably have been unable to indicate these, as they are not provided for in his consonantal chart, and his encounters with them in Caddo and Wichita left him uncertain as to the nature and phonetic structure of the ejectives which he encountered there. He also lacked a consistent way of indicating the glottal stop, either initially, medially or finally, which is a special problem when recording Caddo data. Nor did Haldeman's system capture the three degrees of phonemic vowel length which are present in Wichita (although Haldeman 1860: 3, sections 353-355) provides the wherewithal to do this.

As a result of these and other shortcomings, Haldeman's work has received

rather little attention from modern phonologists or indeed other linguists. Even Haldeman himself made no use of the system in his work on Pennsylvania German (Haldeman 1872). The discussion in Pilling (1887) and the brief account in **KellyLocal1989** written incidentally by the academics who taught phonetics to this author, are rare exceptions to this neglect.

Haldeman's data on Osage, comprising merely the cardinal numerals from 1 through 10, and the corresponding forms in Kanza, help us to get a better sense of his transcriptional techniques. Modern Osage data are from Quintero (2009) and Kanza data from **CumberlandRankin2012** Original transcriptional systems have been preserved. We note that the two languages, though very close, are represented differently in regard to orthographic conventions employed to indicate postalveolar sibilants, vowel length and nasalized vowels.

Dhegiha languages share a number of crosslinguistically marked features in their segmental phonology. These include the differentiation of nasalised from oral vowels, the differentiation of geminate and lengthened stops, of preaspirated and voiceless ejective stops, and the use of a high front rounded vowel. Modern forms are given below (Kansa <u> is /y/ and superscript <n> represents nasalization, indicated in Osage by an ogonek).

3 Modern counterparts of the data

In Tables 1 and 2 are given modern equivalents in Kanza and Osage for Haldeman's data in figures 2 and 3.

Note that what are written as single plosives in the modern Kanza orthography are actually geminates, thus <k> is /kk/.

4 Remarks on the forms

The materials here represent examples of impressionistic phonetic transcriptions, which is what we would expect in a work from the pre-phonemic era. The Kanza and Osage words in Haldeman's material (especially the former) are recorded with comparatively greater detail than numerical data from some of the other languages are. Indeed the Kanza numerals are recorded with greater detail by Haldeman with respect to accent than they are in the present orthography. But the forms are not necessarily noted with greater accuracy, and neither system indicates the differences between the various voiceless stop series clearly. Tense stops in Kanza in Haldeman's transcription are represented by the use of bold consonantal characters, so that Haldeman's <p> is [p ∼ ph], <**p**> is [pp] while

Table 1: Cardinal Numerals (Haldeman's sections 711 and 712)

	Kanza	Osage
1	mi^{n}xci	wįxce
2	no^{n}bá	ðǫǫpa
3	yábli^{n}	ðáabrįį
4	dóba	tóopa
5	sáta^{n}	sáhtą
6	shápe	šáhpe
7	péyo^{n}ba	hpéeðǫǫpa
8	kiadóba	hkietóopa
9	shá^{n}ka	lébrą hce wįįke
10	glébla	lébrą

Table 2: Additional Kanza lexicon (Haldeman's section 634)

	Kanza
Ear	na^{n}tá
Eye	ishtá (note ishtá toho 'iris' and ishtáka^{n}ha 'eyelid')
Brow	ishtáhin
Mouth	i (Haldeman's form iha is 'mouth-skin' or 'lips')
Tongue	léze
Nose	pa
Nostril	pa xlóge
Forehead	pe
Fan	ijéayuzúbe (fan hung over baby's face)
Pipe	nannónba
Knife	mánhín
Warm	moshcé
Leggins [sic]	húyuyinge
Shirt	ókiloxla

<ʻp> is [hp] in his Kanza work. (This fact is clearer in the version of Haldeman's work published in the Transactions of the American Philosophical Society than in the acid-heavy and aged brown paper of the version of Haldeman 1860 available from archive.org).

The forms are in general readily identifiable from recording of the languages over a century later, as the references from the Kanza and Osage dictionaries show (**CumberlandRankin2012**) for Kanza, and Quintero 2009 for Osage). The few differences are instructive.

Most interesting in this regard are the numerals, especially 'nine' and 'ten'. In Osage 'nine' is a subtractive compound ('ten lacking one') involving 'ten' and an allomorph of 'one'. But Kanza uses the widespread form, possibly reconstructible as *kišąkka*, which is recorded for several Mississippi Valley and Ohio Valley Siouan, Muskogean and Great Lakes Algonquian languages. Modern Osage has simplified the onset of 'ten', though Haldeman had what would nowadays be represented as /kar-/ (or maybe /gar-/; his depiction of voicing is not always trustworthy). The form in Dhegiha has irregular reflexes elsewhere in Dhegiha: Omaha-Ponca *gthéba*,[1] where <th> is /ð/, has lost the liquid found in the second syllable in other Dhegiha languages and in earlier records of Omaha-Ponca (compare Quapaw *kdébnq*: Rankin 1982: 3). The glide which separates the prefix from the form for 'three' in Kanza 'eight' has been apprehended by Haldeman as a front vowel, although the hiatus in the corresponding Osage form has been recognized by Haldeman as such.

Both the Kanza and Osage forms in Haldeman's work include forms of what was originally the enclitic *-xci* 'only' at the end of the form for ONE, and this pan-Dhegiha word is a form which was later borrowed into Caddo as *wists'i'*. Note also the initial [di-] in Kanza 'three', now replaced by /j-/ <y->, and the fact that Haldeman did not notice the nasalization of the vowel in the first syllable of Kanza 'two'. The form 'eight' in Haldeman's Osage is reflected in the modern language, in modern Kanza and (as a loan, namely *kiyátaw*: Rood 1996:608) in modern Wichita. But the earlier form for 'eight' based on 'three' is used in Haldeman's Kanza as a parallel to the form for 'seven' (itself a compound involving 'two'). Primary stress and vowel length and nasalization are well represented in Haldeman's work, especially for Osage.

Of the nouns in Haldeman's record of Kanza, most are similar to their modern counterparts. For the rest, if one allows for a modicum of close phonetic detail (for instance the realization of /a/ as a low rounded vowel in 'nose'), the quality of transcription is rather high. 'Eyebrow' may end in a form of *sábe* 'black' but this

[1] http://omahalanguage.unl.edu/dictionary/

is uncertain, while material which is less easy to identify is attached to the end of 'eye' and 'shirt'. The occasional weakness in Haldeman's powers of perception is seen in the fact that the consonantal sounds in the second part of 'nostril' are represented in Haldeman's work by his symbol for /ʃ/, while the initial consonant of 'tongue' has changed in the 120 or so years between Haldeman's work and Bob Rankin's. 'Warm' seems to include an enclitic, which may be the masculine declarative enclitic *(ey)ao*. Haldeman's remarks about the phonetics of 'nose' and 'tongue' are somewhat surprising, as modern Kanza does not permit [h] in coda position and does not use geminate consonants.

5 Conclusion

Data on Haldeman's recording of Dhegiha language data have been presented and the success or otherwise of Haldeman's system in coping with the segmental phonology of these languages, especially the complex consonantal systems, has been evaluated. Haldeman's ability correctly to hear the phonetic features of a language seems to have varied in competence from one language to another. Although his Kanza and Osage data are the most accurately recorded Dhegiha data of their time (and although very little else was available for Kanza when Haldeman's data appeared), his transcription is still far from adequate. This is possibly the result of his imperception of certain sounds. Nonetheless the transcriptions list some forms which differ in phonological shape or sense from the modern forms of these words, and as such they have some historical significance.

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I first heard of Bob's Siouan work in the 1980s and grew to know it better in the course of the following decade, thanks to his generosity and that of Dave Costa, which I eagerly acknowledge. Bob's example of someone switching linguistic fields and taking the opportunity to document languages before they passed completely out of existence (which he accomplished at a time before language endangerment was regarded as an important concern) impressed me greatly, as did his use of philological sources. Having presented a paper at the Siouan-Caddoan Conference I was lucky enough to have dinner with him and Giulia Oliverio at the SSILA Meeting in Albuquerque in 1995, where he was kindly, erudite and hilarious company. The study of Native American language is so much the poorer for his passing.

not cited in text: Rankin 1978, Rankin 2005

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