Advances in the study of Siouan languages and linguistics

Change your subtitle in localmetadata.tex

Edited by

Catherine Rudin & Bryan J. Gordon

Studies in Diversity Linguistics ??

Studies in Diversity Linguistics

In this series:

1. Handschuh, Corinna. A typology of marked-S languages.
2. Rießler, Michael. Adjective attribution.
3. Klamer, Marian (ed.). The Alor-Pantar languages: History and typology.
4. Berghäll, Liisa. A grammar of Mauwake (Papua New Guinea).
5. Wilbur, Joshua. A grammar of Pite Saami.
6. Dahl, Östen. Grammaticalization in the North: Noun phrase morphosyntax in Scandinavian vernaculars.
7. Schackow, Diana. A grammar of Yakkha.
8. Liljegren, Henrik. A grammar of Palula.
9. Shimelman, Aviva. A grammar of Yauyos Quechua.

ISSN: 2363-5568

Advances in the study of Siouan languages and linguistics

Change your subtitle in localmetadata.tex

Edited by

Catherine Rudin & Bryan J. Gordon

Catherine Rudin & Bryan J. Gordon (eds.). 2016. *Advances in the study of Siouan languages and linguistics*: *Change your subtitle in localmetadata.tex* (Studies in Diversity Linguistics ??). Berlin: Language Science Press.

This title can be downloaded at:
http://langsci-press.org/catalog

ISBN: 000-0-000000-00-0 (Digital)
000-0-000000-00-0 (Hardcover)
000-0-000000-00-0 (Softcover)
ISSN: 2363-5568

Cover and concept of design: Ulrike Harbort
Fonts: Linux Libertine, Arimo, DejaVu Sans Mono
Typesetting software: XeLaTeX

Language Science Press
Habelschwerdter Allee 45
14195 Berlin, Germany
langsci-press.org

Storage and cataloguing done by FU Berlin

./langsci/graphics/FULogo_sw_CMYK.pdf

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

Contents

Preface **vii**

Acknowledgments **xv**

I Historical Linguistics and Philology

1 A forgotten figure in Siouan and Caddoan linguistics: Samuel Stehman Haldeman (1812-1880)
Anthony Grant **3**

2 Reconstructing post-verbal negation in Kansa: A pedagogical problem
Justin T. McBride **15**

3 Baxoje-Jiwere grammar sketch
Jill D. Greer **33**

Indexes **77**

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.

References

References

Rankin, Robert L. 1977. From verb, to auxiliary, to noun classifier and definite article: grammaticalization of the siouan verbs 'sit', 'stand', 'lie'. In Robert L. Brown, Kathleen Houlihan, Larry G. Hutchinson & Andrew MacLeish (eds.), *Proceedings of the 1976 mid-america linguistics conference*, 273–83. Minneapolis: University of Minnesota Linguistics Department.

Trechter, Sara. 1995. *The pragmatic functions of gendered clitics in lakhota.* Lawrence: University of Kansas (Doctoral dissertation).

Bonneau, José. 1992. *The structure of internally headed relative clauses.* Montreal: McGill University. (Doctoral dissertation.)

Cole, Peter. 1987. The structure of internally headed relative clauses. *Natural Language and Linguistic Theory* 5. 277-302

Gordon, Bryan J. 2009. "Artifiers" in Mississippi Valley Siouan: A novel determiner class. (Paper presented at the annual meeting of the Linguistic Society of America, San Francisco, 8-11 January 2009.)

Helmbrecht, Johannes. 2002. Nouns and verbs in Hocank (Winnebago). *International Journal of American Linguistics* 68(1). 1-27.

Helmbrecht, Johannes. 2006. Applicatives in Siouan languages: A study in comparative Siouan grammar. (Paper presented at Siouan and Caddoan Languages Conference, Billings, Montana.)

Ingham, Bruce. 2001. Nominal and verbal status in Lakhota: A lexicographical study. *International Journal of American Linguistics* 67(2). 167-192.

Jelinek, Eloise. 1984. Empty categories, case, and configurationality. *Natural Language and Linguistic Theory* 2. 39-76.

Kayne, Richard S. 1994. *The antisymmetry of syntax*. Cambridge, Massachusetts: MIT Press.

Koontz, John E. 1995. Michigamea as a Siouan language. (Paper presented at the 15th Siouan and Caddoan Languages Conference, Albuquerque.)

Murasugi, Keiko. 2000. An Antisymmetry analysis of Japanese relative clauses. In Artemis Alexiadou, Paul Law, André Meinunger and Chris Wilder, eds., *The syntax of relative clauses*, 231-64. Amsterdam: John Benjamins.

Oliverio, Giulia. 1996. *A grammar and dictionary of Tutelo*. Lawrence: University of Kansas. (Doctoral dissertation)

Polinsky, Maria. 2013. Applicative constructions. In: Dryer, Matthew S. and Haspelmath, Martin (eds.) *The world atlas of language structures online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. (Available online at http://wals.info/chapter/109, Accessed on 2015-08-23.)

Rankin, Robert L. 1977. From verb, to auxiliary, to noun classifier and definite article: Grammaticalization of the Siouan verbs sit, stand, lie. In R. L. Brown et al., eds., *Proceedings of the 1976 MidAmerica Linguistics Conference*, 273-83. Minneapolis: University of Minnesota.

Rankin, Robert L.; Richard T. Carter; A. Wesley Jones; John E. Koontz; David S. Rood and Iren Hartmann, eds. 2015. *Comparative Siouan Dictionary*. Leipzig: Max Planck Institute for Evolutionary Anthropology. (Available online at http://csd.clld.org, Accessed on 2015-09-25.)

Shaw, Patricia A. 1980. *Theoretical issues in Dakota phonology and morphology*. New York: Garland.

Trechter, Sara. 1995. *The Pragmatic Functions of Gendered Clitics in Lakhota*. Lawrence: University of Kansas. (Doctoral dissertation.)

Watanabe, Akira. 2004. Parametrization of quantificational determiners and head-internal relatives. *Language and Linguistics* 5. 59-97.

West, Shannon. 2003. *Subjects and objects in Assiniboine Nakoda*. Victoria: University of Victoria. (Doctoral dissertation.)

Williamson, Janis. 1987. An indefiniteness restriction for relative clauses in Lakhota. In Eric Reuland and Alice ter Meulen, eds., *The representation of (in)definiteness*, 168-190. Cambridge: MIT Press.

Woolard, Kathryn. 1998. Simultaneity and bivalency as strategies in bilingualism. *Journal of Linguistic Anthropology* 8(1). 3-29.

Acknowledgments

We are grateful to everyone who helped with this project, especially the many people who served as chapter reviewers and volume reviewers. Special thanks to Deniz Rudin for his invaluable typesetting assistance.

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

./langsci/graphics/langsci_spinelogo_nocolon.pdf

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*, 3–13. 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 ʻAa. 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 (1839–1841) had described sounds

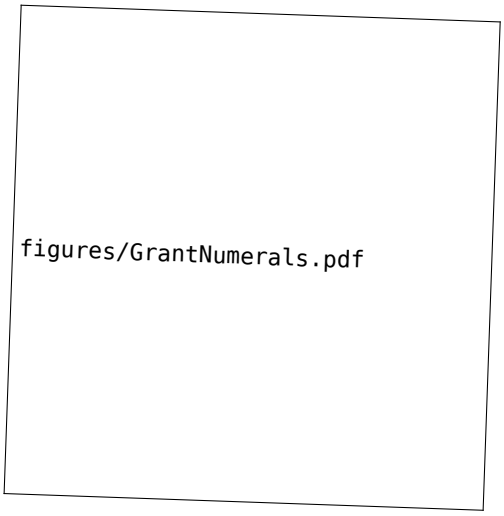

Figure 2: Numeral data from Kanza and Osage (Haldeman 1860: 3, sections 711, 712)

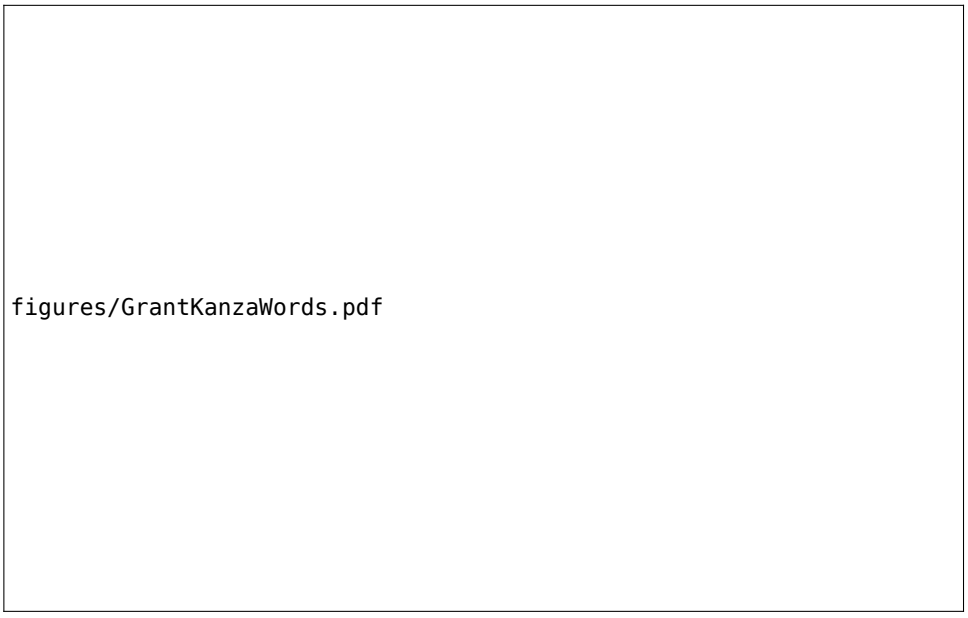

Figure 3: Lexicon from Kanza, with some Dakota parallels from Riggs (1852) (Haldeman 1860: 3, section 634)

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 García 1760 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 Kelly & Local (1989), 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 Cumberland & Rankin (2012). 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 (Cumberland & Rankin 2012) 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.

Acknowledgment

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

References

Cumberland, Linda A. & Robert L. Rankin. 2012. *Kaá^{n}ze íe wayáje: an annotated dictionary of kaw (kanza)*. Kaw City, OK: Kaw Nation.

García, Bartolomé. 1760. *Manual para administrar los santos sacramentos de penitencia, eucharistia, extremaunción, y matrimonio, dar gracias después de comulgar, y ayudar a bien morir a los indios de las naciones pajalates, orejones, pacaos, pacóas, tilijayas, alasapas, pausanes y otras muchas diferentes, que se hallan en las missiones del río de san antonio, y río grande, pertenecientes a el colegio de la santíssima cruz de la ciudad de querétaro, como son: los pacuaches, mescales, pampopas, tacames, chayopines, venados, pamaques, y toda la juventud de pihuiques, borrados, sanipaos, y manos de perro*. Mexico City: Imprenta de los herederos de Doña María de Rivera.

Haldeman, Samuel Stehman. 1859. Analytic orthography: an investigation of the sounds of the voice, and their alphabetic notation. *Transactions of the American Philosophical Society* 11. 259–401.

Haldeman, Samuel Stehman. 1860. *Analytic orthography*. Philadelphia: J. B. Lippincott & Company.

Haldeman, Samuel Stehman. 1872. *Pennsylvania dutch, a dialect of south german with an infusion of english*. London: Nicholas Trübner & Company.

Jones, Daniel. 1909. *The pronunciation of english*. Cambridge: Cambridge University Press.

Kelly, John & John Local. 1989. *Doing phonology: observing, recording, interpreting*. Mancester: Manchester University Press.

Lepsius, Carl Richard. 1863. *Standard alphabet for reducing unwritten languages and foreign graphic systems to a uniform orthography in european letters*. 2nd edn. London: Williams & Norgate.

Lesley, J. Peter. 1886. Memoir of samuel stedman haldeman, 1812–1880. *Biographical Memoirs of the National Academy of Sciences* 2. 139–172.

Pilling, James Constantine. 1887. *Bibliography of the siouan languages* (Bureau of American Ethnology Bulletin 5). Washington: Government Printing Office.

Quintero, Carolyn. 2009. *Osage dictionary*. Norman: University of Oklahoma Press.

Rankin, Robert L. 1978. The unmarking of quapaw phonology: a study of language death. *Kansas Working Papers in Linguistics* 3. 45–52.

Rankin, Robert L. 1982. A quapaw vocabulary. *Kansas Working Papers in Linguistics* 7. 125–152.

Rankin, Robert L. 1994. Notes on the kansa word list of maximilian, prince of wied. *Kansas Working Papers in Linguistics* 19(2). 201–210.

Riggs, Mary Ann Clark. 1852. *An english and dakota vocabulary*. New York: R. Craighead.

Rood, David S. 1975. *Wichita grammar*. New York: Garland Publishing.

Rood, David S. 1996. Sketch of wichita, a caddoan language. In William C. Sturtevant & Ives Goddard (eds.), *Languages* (Handbook of North American Indians 17), 580–608. Washington: Smithsonian Institution.

zu Wied-Neuwied, Maximilian Alexander Philipp. 1839–1841. *Reise in das innere nord-america in den jahren 1832 bis 1834: 2 textbände und 1 bildband mit illustrationen von karl bodmer*. Koblenz: Verlag J. Hölscher.

Chapter 2

Reconstructing post-verbal negation in Kansa: A pedagogical problem

Justin T. McBride

Despite the fact that there are no L1 speakers of Kansa, and the handful of learners are mostly novice-range speakers, the Kaw Nation has been actively engaged in revitalization efforts for many years. The absence of speaker knowledge poses a major problem for curriculum developers insofar as the quality of Kansa pedagogical materials is often limited to what can be uncovered from analysis of documentary materials — mostly those of Dorsey and Rankin. These sources, though essential, are far from complete. For instance, they lack many constructions that potential language learners would want to know, including how to express what in English is captured by the word *wouldn't*. In such cases, syntactic analysis can be used to reconstruct certain areas of Kansa grammar. Kansa is a left-branching, head-marking language with canonical (S)OV word order. Several features of its syntax seem to complicate an X-Bar treatment of Kansa, but the placement of negation (NEG) in the post-verbal complex seems to violate a number of principles all at once. This gives rise to contradictory expectations for its location in different contexts. In this paper, I discuss one way of reconstructing Kansa NEG to fill a pedagogical need. While not arriving at any definite theoretical conclusion, I do arrive at a possible one, and conclude with a set of recommendations for curriculum developers dealing with this and other such problems. KEYWORDS: [Kansa, negation, modality, language revitalization, reconstruction, syntax in language pedagogy]

1 Introduction

Among the many problems plaguing the revitalization efforts of languages without L1 speakers is that a large number of the useful, conversational things that learners might want to say are simply unknown. These may include greetings and pleasantries, common expressions for introducing self and others, stating likes and dislikes, making and fulfilling requests for additional information, telling time, and so on — all of which people use with great frequency in their own L1s and expect to be able to say in an L2. In fact, language teachers usually want to

./langsci/graphics/langsci_spinelogo_placolor.pdf

Justin T. McBride. 2016. Reconstructing post-verbal negation in kansa: a pedagogical problem. In Catherine Rudin & Bryan J. Gordon (eds.), *Advances in the study of siouan languages and linguistics*, 13–32. Berlin: Language Science Press. DOI:??

teach these sorts of conversational forms early on in classes as stock constructions that can build both competence and confidence in their learners. However, with no speakers around to ask, there may only be the products of linguistic research available as the next best thing. Perhaps there is a dictionary, a text series, or simply a set of field notes. Yet, even the most diligent field worker may not think to elicit very practical expressions such as 'hello, my name is [blank],' 'I did not understand what you said; please repeat it,' or 'how do you say [blank] in the [blank] language?'

The case of the Dhegiha Siouan language Kansa (also known as Kanza or Kaw) is precisely as described above. Dorsey's 1880s-era field work yielded a rather large set of slip files, two dozen texts collected from nine separate consultants, and hundreds of pages of ethnographic notes, all of which Rankin used in his own extensive work with the last Kansa speakers in the 1970s and early 1980s. Following the deaths of his consultants, Rankin continued working on Kansa for the rest of his life. Neither Dorsey nor Rankin intended their work to be used as-is for revitalization and curriculum development purposes, but this is what happened: Such efforts must begin somewhere, and their material was the logical starting point. Fortunately, Rankin was willing to contribute to this enterprise, and he often worked on Siouan language pedagogy side-by-side with other linguists (these included myself and several other contributors to this volume), both in the classroom and behind the scenes. Yet, even with Rankin — himself a lifelong educator — and a team of Siouanists at the head of Kansa language classes, the learner outcomes were often far less than could be expected of other beginning language classes; the source material was simply incomplete. As a consequence, many basic things remain unknown for Kansa and, accordingly, unused among language learners.

Consider a common English expression such as 'She *wouldn't* go, 'Mike *wouldn't* do that,' 'they *wouldn't* give it to me,' or the like. To my knowledge, there is no recorded translation of this expression in the available Kansa materials. I honestly cannot recall the exact circumstances of how this lacuna was discovered, but I remember that it came up in the Kaw Nation's Thursday night community language class in Kaw City, Oklahoma, in the mid-2000s. Perhaps some thoughtful student simply asked, "How do you say, 'she wouldn't go,' in the language?" Surely I knew that the answer to the question would involve post-verbal negation and some use of both the potential and non-continuative enclitics, but I was flummoxed as to how to order these elements. Whatever the circumstances may have been, once it became apparent that I could not immediately provide an answer based on my working knowledge of Kansa syntax, I probably explained that

I would have to do more research and return with a definite solution later. Little did I know then that I *wouldn't* have a satisfying answer the next week, month, or even year!

Part of the problem lies in just how one would go about trying to find the answer. It would ideally involve reviewing the available texts and field elicitations with an eye toward finding how Dorsey, Rankin, or someone else may have recorded it. Those working on Kansa have, of course, done a great deal of secondary research like this; the lacunae are numerous, the learners are curious, and the available scholarly analysis is of high quality. Nevertheless, the construction does not appear in the materials. Failing that, the next step would involve reconstructing the form from a set of near-matches combined with knowledge of the language's syntax. Yet, syntax is one area where Kansa and the other Dhegiha languages are not always described in the greatest detail. Both Rankin's brief grammatical sketch of Kansa 1989 and his later sketch of Quapaw **Rankin2005** discuss a variety of syntax topics, as does Quintero's (2004) book-length grammar of Osage. But all of these works are overviews of Dhegiha grammar, and are ultimately too general to offer fine-grained perspective on such a specific question.

In this chapter, I will attempt a basic generative syntactic analysis of Kansa post-verbal negation. Bear in mind that I am ultimately looking for a pedagogical solution, not a theoretical one. As such, I do not advocate any particular theory of formal syntax and feel fairly free to borrow liberally from several eras of transformational grammar all at once. I am fully aware that this juxtaposition of concepts may make my analysis problematic for strict syntacticians, and perhaps also for dedicated pedagogues who may find any such analysis tedious to begin with. I do this not to alienate potential readers or to break any new theoretical ground, but simply to predict an unattested enclitic order using the formal means within my disposal. I also hope that my analysis and the discussion that follows will help to shed some light on a few philosophical principles that I consider very important to anyone working in Siouan languages:

- Gaps in the available documentation of languages are not necessarily insurmountable challenges;
- Grammar must occasionally be reconstructed in order for it to be taught;
- Formal analysis is not, by mere virtue of its formality, better than other means of acquiring grammatical knowledge; yet

- Formal analysis of some manner or another can serve practical pedagogical purposes.

1.1 X-Bar considerations

Kansa, like other Mississippi Valley Siouan languages, particularly those of the Dhegiha branch, is head-marking with a canonical (S)OV word order (see, for example, Quintero (2004: 421) for the Dhegiha language Osage; **Rankin2005** for Quapaw, also Dhegiha; and Cumberland (2005: 369) for Assiniboine, a Dakotan language). Moreover, it appears to follow the same sort of left-branching syntactic pattern that Boyle (2007) described for Hidatsa (Missouri Valley Siouan). Although this paper is concerned with the syntax of the Kansa post-verbal complex, it is important to point out some grammatical features that complicate an X-Bar analysis of Kansa, including those as follows.

(a) Left-branching: Tree structures for Kansa and the movement of elements within them appear to run counter to the right-branching patterns typical of X-Bar theory.

(b) Radical pro-drop status: For the most part, only nominal subjects and objects appear independently in the sentence, the former presumably in the [SPEC, TP]; all else is handled by verbal inflection.

(c) Concept of word: Just how much of enumeration and derivation is left up to morphology versus syntax is essentially still up for grabs; as a consequence, so, too, are the classifications of enclitics, auxiliaries, affixes.

(d) Abstract tense: The TP in Kansa is at best misnamed given the language's general absence of tense marking, and the projection below the topmost Kansa CP is probably little more than an agreement checking level.

These features are crucial to any full description of Kansa syntax, and they have very interesting implications for syntactic theories as a whole. Nonetheless, while I take these points as fundamental assumptions for the analysis that follows, they are actually not altogether relevant for me to discuss in greater length given the narrow focus of this chapter.

1.2 Aspect

Tense may be absent in Kansa, but verbal aspect is quite developed. Figure 1 shows the general division of aspect in Kansa. The primary division is between

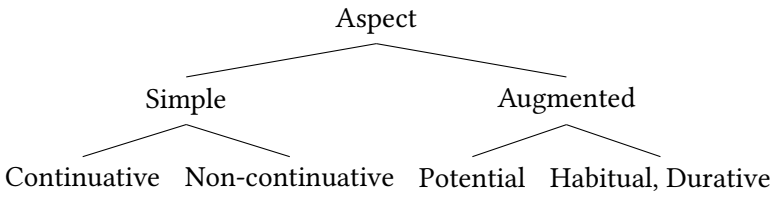

Figure 1: Kansa aspect

what I have termed simple and augmented aspect. Simple aspect is obligatory in all clauses while augmented is not. Simple aspect is further divided into continuative/imperfect (CONT) and non-continuative/perfect (NCONT) aspects, which are in complementary distribution. CONT is marked on verbs through a complex series of post-verbal enclitics (**Rankin2005** argues that these enclitics "are actually conjugated as fully-fledged auxiliary verbs" in the closely related Dhegiha language Quapaw; see also **Rankin2004** for a much more detailed discussion) that also carry with them a sense of the subject's physical orientation in space. These include such categories as CONT-LIE, CONT-SIT, CONT-STAND, CONT-MOVE, etc. Moreover, these auxiliaries agree with the phi features of the verbal subjects. NCONT, on the other hand, is marked in two ways: A null form (-∅) is used with 1SG, 1DU, and 2SG subjects; the verbal enclitic *-(a)be*[12] is used with 1PL, 2PL, and 3CN subjects. This suggests a person and number configuration as shown in Fig. 2. The augmented division includes potential (POT)[3] on the one hand and several habitual (HAB) and durative (DUR) aspects on the other. HAB and DUR function syntactically in the same way as POT. I classify these as augmented due to the fact that they can be combined as needed with either simple aspect to generate compound aspects such as POT CONT, POT NCONT, HAB NCONT, etc. POT consists of the underlying enclitic *ce*, which only surfaces as such when no other post-

[1] I have written the initial vowel in parentheses to avoid a digression into what is occasionally known as ablaut in Siouan. Suffice it to say, this initial vowel surfaces only when the final vowel of the element to which it attaches ends in *-e*, presumably due to a V1+V2=V2 rule involving Kansa /e/ and /a/. For a more detailed treatment of this phenomenon throughout Siouan, see Rankin (1995).

[2] Both to save space and to preserve consistency with source material where appropriate, all Kansa words in this chapter are written only in the practical orthography. This system is phonological in nature, but uses fewer special characters, allows digraphs and trigraphs, and makes use of English-based capitalization and punctuation standards that potential language learners may regard as normal.

[3] Note that POT is occasionally regarded in the Siouan literature as an irrealis marker (see Quintero 2004; 2009).

verbal elements — aspect or mood — follow it; this is very rare, but it does occur. It most often takes the shape of *ta* through a sequence of regular phonological changes.[4] Though the phonology of this variation is understood, the mechanism behind it is not, a fact that raises some interesting questions about its enclitic status. Note that Figure 2 is concerned with the post-verbal arrangement of person and number considerations, and there are pronominal prefixes that are shared between numbers for the same person, including, for instance, for 1DU and 1PL and for 2SG and 2PL.

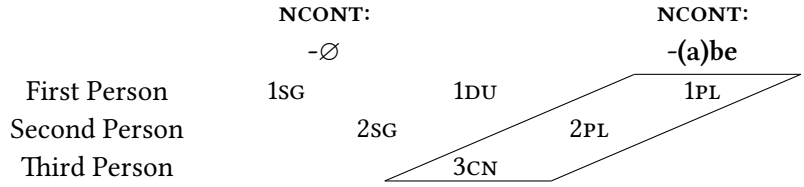

Figure 2: Person and number categories in Kansa with respect to NCONT marking

1.2.1 POT enclitic status

POT, unlike other post-verbal enclitics, is syntactically dependent on what comes before it (it is enclitic to the main verb, presumably as the head of a PotP) but phonologically dependent on what comes after it (its shape is determined by its proximity to the end of the clause). Furthermore, owing perhaps to its consonantal rather than vocalic onset,[5] it does not interact phonologically with the main verb. As such, the POT enclitic is somewhat different from that of, say, NCONT.[6]

1.2.2 Aspect order

The clauses in example (2) and their templatic arrangement in Table 1 illustrate some representative combinations of the major aspects and the order in which

[4] The so-called ablaut considerations mentioned in footnote 1 are presumably responsible for two allomorphs of the POT enclitic surfacing in different post-verbal phonetic environments. These forms include *ce* and *ta*, the former of which further exhibits routine spirantization of the initial stop before a front vowel.

[5] The other augmented aspect enclitics, HAB and DUR, also feature consonantal onsets, a fact that may strengthen the notion of augmented aspect as a natural class in Kansa.

[6] The fact is represented in the Kansa practical orthography by a space between the main verb and POT where no such space is left between the main verb and NCONT.

they typically occur post-verbally.[7] [8] [9]

suggestion for formating the linguistic content in the tables

(1) *Wipághe tá mi^{n}khe.*
∅-wi-p-(g)aghe *ta* *mi^{n}khe*
3CN-2CN.PAT-1SG.AGT-1SG.CONT.SIT POT 1SG.AGT.make
V POT CONT/NCONT
'I will make them for you' (KR, p. 192)

end of suggestion

BJG suggestion

(2) a. Wipághe tá mi^{n}khe.
∅-wi-p-(g)aghe *ta* *mi^{n}khe*
3CN-2CN.PAT-1SG.AGT-1SG.CONT.SIT POT 1SG.AGT.make
'I will make them for you' (KR, p. 192)

b. Yuzé ta akhá.
∅-∅-yuze *ta* *akha*
3CN-3CN-take POT 3CN.CONT.REST
'S/he was about to take it.' (KR, p. 200)

c. Hne tábe.
hn-(y)e *ta* *-(a)be*
2PL.AGT-GO POT -NCONT
'You (PL) will have gone.' (KR, p. 192)

d. Ozhú tábe.

[7] In this paper, I mark pronouns using AGT for agent and PAT for patient, without regard to the various inflectional realizations found throughout Dhegiha; the use of null pronouns in third person makes the classification as agent or patient irrelevant. I mark number using SG for singular, DU for inclusive dual, and PL for plural. I also use CN, after Kelly's (1992) Hebrew gender convention, to represent so-called common number in third person where singular and plural have collapsed in Kansa.

[8] All clausal examples in this paper come from sentences in McBride & Cumberland (2009), *Compiled Kanza texts*, or McBride & Cumberland (2010), *Kanza reader*, abbreviated CKT and KR, respectively. Corresponding page numbers appear after the English glosses.

[9] The analysis of pronominals here differs from that presented either in Quintero (2004) or **Rankin2005** where all 1SG.AGT and 2SG.AGT pronominals are represented by archiphonemic WA- and YA-, respectively, and phonological rules are needed to explain their phonetic realization. To simplify things, I have simply shown final realizations in the analysis.

o-∅-∅-zhu *ta* *-(a)be*
in-3CN-3CN-pour POT -NCONT
'S/he would plant it.' (KR, p. 111)

Table 1: Order of post-verbal aspect elements

example	V	POT	CONT/NCONT
(2a)	∅-wi-p-(g)aghe	ta	mi^{n}khe
(2b)	∅-∅-yuze	ta	akha
(2c)	hn-(y)e	ta	-(a)be
(2d)	o-∅-∅-zhu	ta	-(a)be

end of BJG suggestion

Table 2: Order of post-verbal aspect elements

	V	POT	CONT/NCONT
(1) *Wipághe tá mi^{n}khe.* 'I will make them.' for you (KR, p. 192)	*∅-wi-p-(g)aghe* 3CN-2CN.PAT-1SG.AGT-1SG.AGT.make	*ta* POT	*mi^{n}khe* 1SG.CONT.SIT
(2) *Yuzé ta akhá.* 'S/he was about to take it.' (KR, p. 200)	*∅-∅-yuze* 3CN-3CN-TAKE	*ta* POT	*akha* 3CN.CONT.REST
(3) *Hne tábe.* 'You (PL) will have gone.' (KR, p. 192)	*hn-(y)e* 2PL.AGT-go	*ta* POT	*-(a)be* -NCONT
(4) *Ozhú tábe.* 'S/he would plant it.' (KR, p. 111)	*o-∅-∅-zhu* in-3CN-3CN-pour	*ta* POT	*-(a)be* -NCONT

Sentences (1-4) suggest the following canonical order of post-verbal aspect elements: V, POT, CONT/NCONT. This can be represented in tree form as shown in Figure 3.

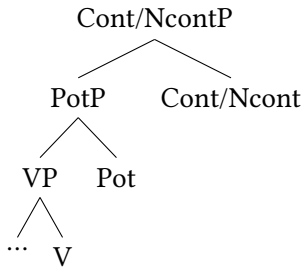

Figure 3: Order of post-verbal aspect elements

2 The problem, in formal terms: NEG and aspect

Kansa syntax involves the use of post-verbal negative (NEG) enclitics, particularly as used in different aspect combinations. Kansa NEG has two separate forms: It appears either as *-(a)zhi* or *-mazhi*, the latter of which is only used with 1s subjects.

2.1 NEG with POT and CONT

When NEG is used in either CONT or POT CONT aspects, it appears consistently before both, as shown in the clauses of Table 3.

Table 3: Order of post-verbal NEG, CONT, and POT elements

	V	NEG	POT	CONT
(5) *Gó^{n}yazhi akhá.*	*∅-∅-go^{n}ya*	*-(a)zhi*		*akha*
'S/he does not want it.	3CN-3CN-want	-NEG		3CN.CONT.REST
(CKT, p. 211)				
(6) *Ashká^{n}mazhi tá mi^{n}khe.*	*a-shka^{n}*	*-mazhi*	*ta*	*mi^{n}khe*
'I will not be stirring.'	1SG.AGT-move	-1SG.NEG	POT	1SG.CONT.SIT
(CKT, p. 40)	around			

These examples suggest a canonical order of V, NEG, POT, CONT, as seen in Figure 4.

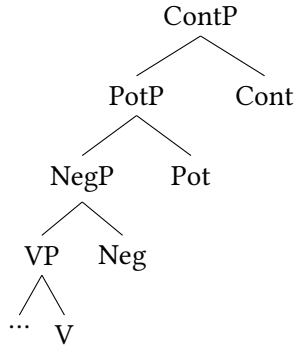

Figure 4: Order of post-verbal NEG, CONT, and POT elements

2.2 NEG with NCONT

However, when NEG appears with the phonetically realized NCONT *-(a)be*, it seems to fall after NCONT, as seen in the clauses of Table 4.[10]

Table 4: Order of post-verbal NEG and NCONT elements

	V	NCONT	NEG
(7) *Píbazhi.*	*∅-pi*	*-(a)be*	*-(a)zhi*
'S/he was bad.'	3CN-be.good	-NCONT	-NEG
(CWK, p. 208)			
(8) *Shká^{n}bazhi.*	*∅-shká^{n}*	*-(a)be*	*-(a)zhi*
'S/he did not stir.'	3CN-move.around	-NCONT	-NEG
(KR, p. 180)			
(9) *A^{n}yá^{n}kikiyabazhi.*	*a^{n}(g)-i-∅-kiki-ye*	*-(a)be*	*-(a)zhi*
'We did not see each other.'	1AGT-to-3CN-RECIP-see	-NCONT	-NEG
(KR, p. 263)			

Here, the order appears to be V NCONT NEG. This contradicts the canonical orders seen above, as demonstrated in Figure 5.

In short, the data suggest that NEG appears both before the slots reserved for

[10] The verb in (9) undergoes a complex phonological process that turns the pronominal a^{n}(g)- + the instrumental i- into a^{n}ya^{n}-.

(1-2)	V		POT	CONT		
(5)	V	NEG		CONT		⇐
(6)	V	NEG	POT	CONT		⇐
(3-4)	V		POT	NCONT		
(7-9)	V			NCONT	NEG	⇐

Figure 5: Contradictions of Kansa NEG placement

POT and simple aspect and after the slot reserved for simple aspect. Note that there do not appear to be clearly identifiable examples of NEG with POT NCONT, the case that would best clarify the ambiguity of Kansa NEG placement and help me to answer the question I was posed about the Kansa equivalent of *wouldn't*. With no attested form in the corpus, it is difficult to say whether it is an ungrammatical form or simply a gap in what was recorded. How would the combination of NEG, POT, and NCONT look with a 3CN subject where *-(a)be* would most certainly surface? Would it appear as *tabázhi, -(a)zhi tábe,-(a)bazhi ce*, or something else entirely? What would such a form tell us of the syntax of Kansa negation? It seems that the Kansa equivalent of the English sentence 's/he would go,' *ayé tábe*, would provide insight into how the equivalent of 's/he would not go,' might look. Yet, the data do not steer us toward any clear solution.

2.3 NEG with person and number

One final consideration must be mentioned before commencing a proper examination of the problem set. Recall that the phonetic realization of NCONT is restricted to only 1PL, 2PL, and 3CN subjects. Thus, the remainder of forms, namely those with 1SG, 1DU, and 2SG subjects, will not clarify these issues. This can be seen in Table 5.

3 Analysis

3.1 Enclitic placement

NCONT and NEG resemble one another more than they resemble POT, both syntactically and phonologically. This fact at least suggests they are members of a common grammatical class. For one, as neither independent words nor simple suffixes, NCONT and NEG seem to be subject to more restrictive placement considerations than the CONT auxiliaries in the post-verbal environment. This

Table 5: Ambiguity involving NEG with null NCONT

	V	NCONT	NEG	NCONT
(10) *Kó^{n}blamazhi.*	*∅-k-(g)o^{n}-bl-(y)a*	*-∅?*	*-mazhi*	*-∅?*
'I do not wish	3CN-1SG.AGT-want$_1$	-NCONT	-1SG.NEG	-NCONT
it. (KR, p. 188)	-1SG.AGT-want$_2$			
(11) *Phímàzhi*	*ph-(h)i*	*-∅?*	*-mazhi*	*-∅?*
'I did not reach.	1SG.AGT-arrive.there	-NCONT	-1SG.NEG	-NCONT
there (KR, p. 92)				

distinction seems to be reinforced by the fact that NCONT and NEG are phonologically dependent on preceding material. Secondly, their placement appears to be more restricted than that of POT.

Logically speaking, there are three environments in which NCONT or NEG may occur: 1) after POT; 2) after one another (e.g., NEG after NCONT); or 3) after the main verb. There have already been examples of the first two, but let us review all three for the purpose of classifying these environments.[11]

(12) *ahíbe* ← Environment 1: NCONT after V
3CN.AGT.MOVE.arrive.NCONT
s/he arrived there (KR, p. 92)

(13) *shká^{n}bazhi* ← Environment 2: NEG after NCONT
3CN.AGT.move.NCONT.NEG
s/he did not stir (KR, p. 180)

(14) *ozhú tábe* ← Environment 3: NCONT after POT
in.3CN.3CN.pour POT.NCONT
s/he would plant it (KR, p. 111)

At this point, it is necessary to distinguish between the distributions of NCONT versus NEG. In the data above (as elsewhere in Kansa), at no time does NCONT appear after NEG. Also, recall the complementary distribution of NCONT and CONT, a distribution that is unlike that of NEG and CONT. On the other hand, (7-9) above demonstrate that NEG can appear after the NCONT enclitic. If one further stipu-

[11] Concerning (12) *ahíbe*, Kansa has a class of motion verbs including 'go', 'come', etc. that include a motion prefix *a-* on certain forms. I have termed this MOVE in the gloss. Note that the semantics of these verbs does not preclude use of them in either continuative/imperfect or non-continuative/perfect aspect; both are completely grammatical.

lates that NEG follows the null realization of NCONT in (10-11), it is possible to claim that NEG in Environment 2 is required to attach to NCONT whenever possible. Furthermore, while NEG can appear with either POT (7-9) or CONT (5-6), it appears unable to come after either of these. Thus, the distribution of NCONT and NEG is as follows:

(15) Distribution of NCONT: Environments 1 and 3

(16) Distribution of NEG: Environments 1 and 2

NEG presumably arrives in these environments by means of head-to-head incorporation and/or excorporation as described by Roberts (1991).[12] It can either arrive at the verb (Env. 1) in continuative/imperfect aspect or at the the main verb plus NCONT (Env. 2) in non-continuative/perfect aspect. Such enclitic lowering derives a new verb. Thus, NEG appears to attach to the lowest verb in the TP as seen in Figures 6 and 7.

3.2 Feature expansion and prediction

This solution is not particularly satisfying for several reasons. The first is that feature checking does not appear to motivate the enclitic lowering. It is possible, however, to adjust for this simply by adding features that may or may not be checked through movement. We may assume, however, that if an enclitic of any type can move to check a nearby feature, it will do so. Such a process would account for all enclitic lowering. The second drawback is that if NEG lowers before NCONT, the order of enclitics will be incorrect. Therefore, NCONT must somehow lower first. The third is that the status of the enclitics within the tree structures is not as clear as one would like. Are they really V heads, or are they just NEG, NCONT, POT, CONT heads? If they head their own projections, it would seem that their classifications together or separately would require a great deal of justification. On the other hand, classifying them all as V heads would require perhaps even more justification.

Nevertheless, these are exclusively theoretical concerns, and there are mechanisms within formal syntax that can be used to address them. My goal here is not to grind a theoretical axe, but merely to find a pedagogical answer to a student's question. Does my model do this? Yes: The predicted order of post-verbal elements in a Kansa sentence equivalent to English 's/he would not go' is as fol-

[12] Roberts defines excorporation as "successive cyclic head-to-head movement where one head simply 'passes through' another, first incorporating and then moving on" (1991: 211).

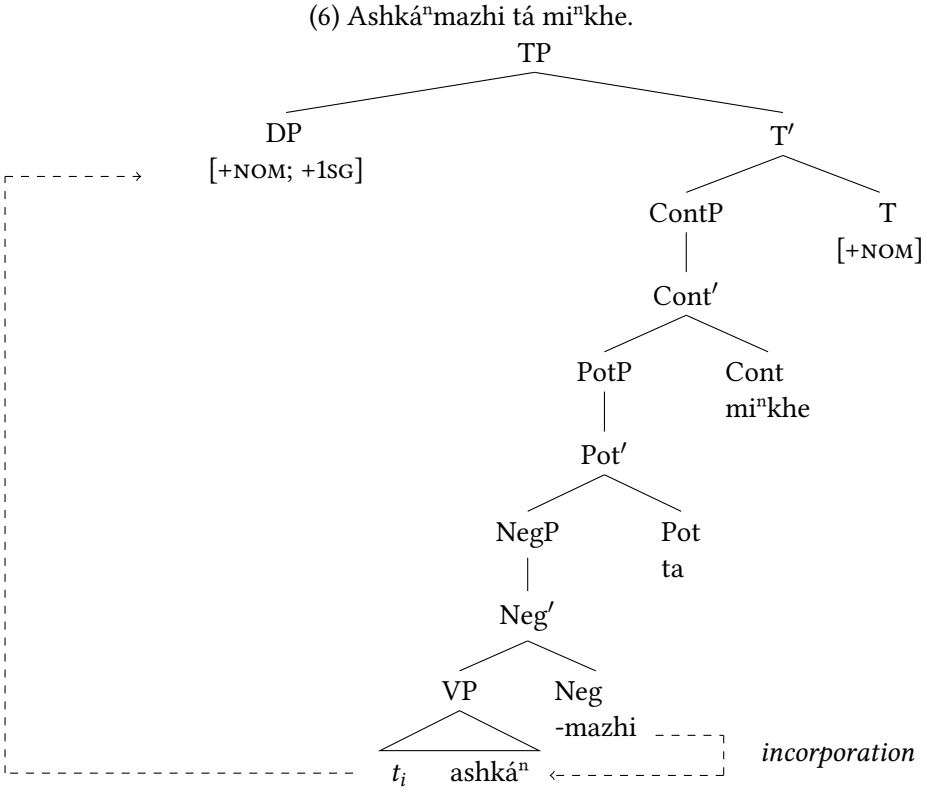

Figure 6: Tree of (6) NEG with CONT aspect

lows: V POT NCONT NEG, or *ayé tabázhi*. This consists of an inflected main verb, *ayé* (3CN.AGT.MOVE.go), followed by a compound enclitic *tabázi*, consisting of *ta* (POT), *-(a)be* (NCONT), and *-(a)zhi* (NEG).

I was happy with this possible solution, but — given the aforementioned theoretical concerns — not entirely so. Thus, when I presented an earlier version of this paper at the 2011 Siouan and Caddoan Languages Conference, I put the question to several Omaha and Ponca Elders in attendance. While they seemed to indicate that such a construction would not be at all common in their respective languages, they agreed that the cognate form of Kansa *tabázhi* would be the preferred option. This does not confirm the Kansa prediction, of course, but it does seem to suggest that the analysis leading to my prediction was at least on

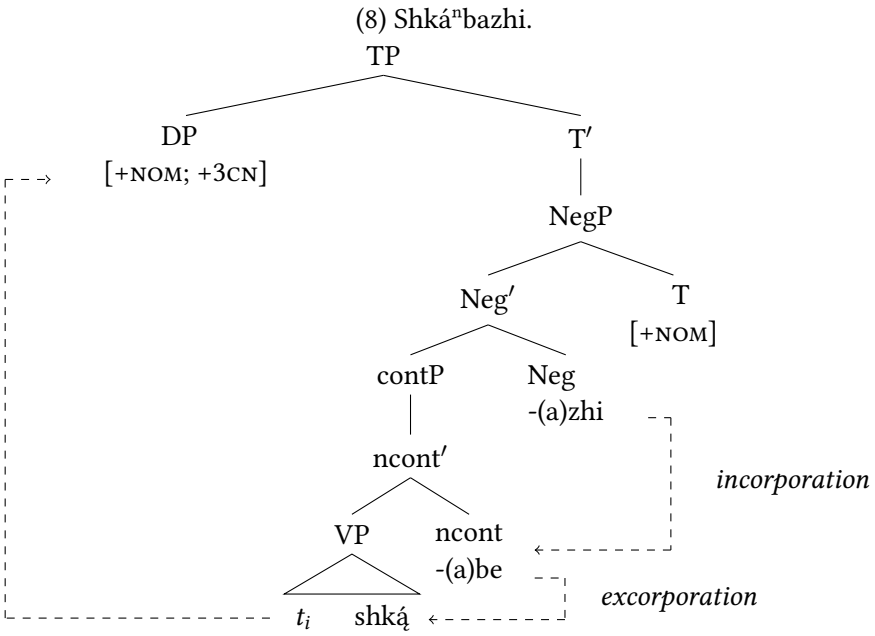

Figure 7: Tree of (8) NEG with NCONT aspect

the right track.

4 Conclusion

In this chapter, I have shown how syntactic analysis of textual data relating to a question put forth by an eager learner can be used to extend our knowledge of Kansa and fill in gaps in the source material. But numerous big conceptual questions remain, even beyond the theoretical ones mentioned above. For instance, how useful is this this particular analysis and application if, as has been apocryphally suggested for Omaha-Ponca, the English expression may occur at a far higher frequency than the equivalent Kansa expression? With no L1 speech community around to offer guidance, perhaps there is no way to answer this question. On the one hand, the deployment of a form that would not have been used in earlier times is the very nature of language. On the other hand, if it pragmatically separates the L2 speakers of Kansa from L1 and L2 speakers of very closely

related languages, its use may work against larger speech community goals privileging the taking of cues from still vital Siouan languages rather than English. On a different level, is the prediction of an order of post-verbal elements, even one seemingly matching cross-linguistic evidence, a sufficient stopping place for analysis? Perhaps the predicted result offers a false confidence in the approach taken. Put in a slightly more philosophical way, is extensive analysis done on a dormant language of any value on its own terms, or does it derive its true worth from practical application in revitalization efforts? Certainly from the perspective of potential learners, the language benefits when it can be put to greater use, regardless of what theoretical or applied linguists may say. As I mentioned earlier, there are many, many problems that plague such situations!

In spite of these challenges, work like this can be useful both to linguistic theory and for practical purposes. For starters, it can be used to show that even deep holes in the available documentation can be filled with a little theoretical elbow grease. This is comforting to know, and I hope that my analysis can show one way that it can be done. There are, of course, others. My speaking with the tribal Elders at the conference was what ultimately gave me confidence in my solution. I was lacking this confidence after just looking at the problem from a theoretical point of view. Nevertheless, in order to frame the question properly so that it could even be asked (and later taught), I did require some preliminary reconstructive work. The mere formality of the theory underpinning that reconstructive work did not make my solution somehow correct, but neither did it make it unattainable. At the risk of closing this chapter perched atop a linguist's soap box, I would add that language teachers should not fear formal syntax; it is just one more arrow in their quiver, and I hope I have shown here that it can be put to service in solving practical pedagogical problems.

Abbreviations

1, 2, 3 = first, second, third person; AGT = agent; CN = common number; CONT = continuative/imperfect aspect; DU = dual; DUR = durative; HAB = habitual; MOVE = motion-verb prefix; NOM = nominative; NCONT = non-continuative/perfect aspect; PL = plural; PAT= patient; POT = potential; RECIP = reciprocal; REFL = reflexive; SG = singular;

References

Boyle, John P. 2007. *Hidatsa morphosyntax and clause structure*. Chicago: University of Chicago (Doctoral dissertation).

Cumberland, Linda A. 2005. *A grammar of assiniboine: a siouan language of the northern plains*. Bloomington: Indiana University (Doctoral dissertation).

Kelly, Page H. 1992. *Biblical hebrew: an introductory grammar*. Grand Rapids, MI: William B. Eerdmans Publishing Company.

McBride, Justin T. & Linda. A. Cumberland (eds.). 2009. *Compiled kanza texts*. Kaw City, OK: Kaw Nation.

McBride, Justin T. & Linda A. Cumberland (eds.). 2010. *Kaá^{n}ze wéyaje – kanza reader: learning literacy through historical texts*. Kaw City, OK: Kaw Nation.

Quintero, Carolyn. 2004. *Osage grammar* (Studies in the Anthropology of North American Indians). Lincoln: University of Nebraska Press.

Quintero, Carolyn. 2009. *Osage dictionary*. Norman: University of Oklahoma Press.

Rankin, Robert L. 1989. Kansa. In Takashi Kamei, Rokuro Kono & Chino Eiichi (eds.). Trans. by Akira Yamamoto, *Languages of the world*, vol. 2 (The Sanseido encyclopaedia of linguistics), 301–307. Tokyo: Sanseido Press.

Rankin, Robert L. 1995. *On Quapaw (and Siouan) ablaut*. Paper presented at the Siouan and Caddoan Languages Conference, Albuquerque, NM, July 1995.

Roberts, Ian. 1991. Excorporation and minimality. *Linguistic Inquiry* 22(1). 209–218.

Chapter 3

Baxoje-Jiwere grammar sketch

Jill D. Greer

This synchronic grammar follows a descriptive approach to Jiwere-Baxoje of the Mississippi Valley branch of the Siouan language family. It expands upon prior published and unpublished documentation, based upon fieldwork conducted from 1987-96. Jiwere-Baxoje-Nyut'achi is a "sleeping language," with no fully fluent speakers at present, but with revitalization efforts underway in each of the three native communities of Red Rock and Perkins, Oklahoma, and White Cloud, Kansas. The sketch begins with phonology, morphology, then syntax, with special attention to the complex system of verbal affixes; the interesting phenomenon of noun-incorporation within certain verbs; verb classes (regular stems, irregular stems in *r/l, w*, and *d*, and the causative construction); positional verbs, which may serve as auxiliary verbs; and SOV word order, with clause-final and utterance final enclitics marking relation to the following clause, source of evidence, sentence type, and gender of speaker. The topic of language variation concludes the sketch, with gender differences documented for greetings and interjections; brief tables illustrate phonological and lexical distinctions associated with both tribal dialects. KEYWORDS: [Jiwere-Baxoje, Ioway, Otoe-Missouria, Chiwere, descriptive grammar]

1 Introduction

Baxoje-Jiwere belongs to the Mississippi Valley branch of the Siouan language family, and is the native language of the Plains/Prairie tribes known today as the Otoe-Missouria and Iowa (Goddard 1996: 3,8). While their original homelands were in northern Missouri, southeastern Nebraska, and the state of Iowa, during the late 19th century, the two tribes relocated to a north-central portion of Indian Territory in an attempt to avoid Euro-Americans' increasing encroachment on their reservations and the assimilation policies of the BIA. One segment of the Iowa chose to stay on a portion of their original reservation near the Missouri River in northeastern Kansas (Wedel 2001; Schweitzer 2001).

The following sketch is based upon fieldwork in central Oklahoma which I conducted mainly between 1987 and 1996 while a graduate student and research assistant within a larger team, led by Dr. Louanna Furbee, and including Lori A. Stan-

./langsci/graphics/langsci_spinnlogo_nocolor.pdf
Jill D. Greer. 2016. Baxoje-jiwere grammar sketch. In Catherine Rudin & Bryant P. Gordon (eds.), *Advances in the study of Siouan languages and linguistics*, 33–76. Berlin: Language Science Press. DOI:??

ley.[1] The research was conducted with the permission of the 1987 Otoe-Missouria Tribal Council, among members of both the Otoe-Missouria and the Ioway Tribes living in an approximately 100 mile radius of Red Rock, OK. It was funded initially by a University of Missouri Faculty Development Grant, then generously supported by the National Science Foundation Documenting Endangered Languages Program and the American Philosophical Society's Phillips Fund.

Báxoje is the Ioway tribe's name for their people and language. Jíwere is the native Otoe term for themselves (and the language), while Nyút'achi refers to the Missouria people/language.[2] The native language spoken by these two tribes has frequently been called *Chiwere* in the existing literature (Whitman 1947; Marsh n.d.; Wedel 2001; Schweitzer 2001). However, because this spelling makes it more likely for English speakers to mispronounce the first sound of the Otoes' self-name, I prefer to use <J> instead, because the voiced allophone is far less likely to be aspirated by language learners with English as their first language. GoodTracks also follows this orthographic shift.

In addition to the two contemporary communities centered in Red Rock and Perkins, Oklahoma, respectively, there is also a Northern Ioway Nation located on their original Reserve in White Cloud, Kansas. Sadly, there are no L1 speakers of Baxoje-Jiwere, but a few individuals may be semi-speakers. Language renewal efforts are underway in each of the small communities, so there is hope that while yet sleeping, the ancestral tongue may still be awakened.

Many factors led to this particular effort to document Jiwere-Baxoje, but the original impetus was the collegial friendship between two University of Chicago linguists (both students of Eric Hamp), the late Robert L. Rankin and N. Louanna Furbee. These two scholars both landed jobs in the Midwest, the former at KU in Lawrence, Kansas, and the latter just a few hours away at Mizzou. They remained in touch throughout the 1970s and 80s. As Bob adopted Siouan languages as his primary research focus, he saw the urgent need for more linguists. He would tease Louanna that since she was employed by the primary research university in the state that was named for one dialect of this highly endangered Siouan language, it was her duty to start doing research on it.

His good-natured urging came to fruition in 1987, when a critical mass of graduate students interested in language study surrounded Louanna and she offered

[1] Stanley's 1990 Ph.D. dissertation includes a life history of Dr. Truman W. Dailey, one of the primary speakers and contacts within the Otoe-Missouria Tribe, available at the University of Missouri-Columbia Library.

[2] Because the Missouria language was not recorded, I omit the name Nyút'achi when referencing the language in general, although the Missouria people and history are remembered in Otoe tribal heritage in the conjoined name today.

a special seminar on Siouan languages. About nine eager students enrolled in the course, myself included. Bob came to Mizzou to give a beginning workshop to Louanna's class, with stacks of handouts full of concrete suggestions such as questions to ask and topics to cover in the field.

His help did not end there, but continued throughout the years, giving feedback on papers, guiding our elicitation of forms for the Comparative Siouan Dictionary, reading much earlier versions of this sketch, and countless other generous acts on his part. Thus, without the initial friendship between Robert L. Rankin and N. Louanna Furbee,[3] there would have been no Missouri Jiwere Language Project grammar. This work is dedicated to them both. All errors are of course my own.

2 Sound system (phonology)

2.1 Consonants

2.1.1 Stops

There are three sets of stops distinguished by these features:

a. Aspiration /p^h, t^h , k^h/

b. Glottalization /p', t', k'/

c. Plain (neither aspirated nor glottalized) /b, d, g/

The "plain" sounds can be either voiced or voiceless, but the two allophones would have been heard by native speakers as the "same." Different scholars of Baxoje-Jiwere have used either or both [p/b, k/g, t/d] for the plain (lenis) series. Variation may have existed between closely related forms within the three historic speech communities, within some families, or even with particular speakers. Notes by earlier researchers suggest that individuals' speech did display such tendencies, but the data are too limited to address such topics at present (Whitman 1947). In addition, the glottal stop /ʔ/ does appear in word-initial, medial, and word-final positions, but in the first two instances, it serves primarily to prevent amalgamation and preserve semantic content before certain vowel-initial morphemes such as verb stems. In those settings, its function is morphological,

[3] The essential role of Louanna Furbee as major professor, grant writer, P.I., fieldworker, editor, friend, and all around pillar of strength cannot be overemphasized. The MCLP (Missouri Jiwere Language Project) original materials are archived at Luther College, Decorah, Iowa.

rather than phonemic per se. Likewise, it tends to appear in word-final position only for a limited set of morphemes, namely interjections and sentence final particles/enclitics. In those instances, its phonetic abruptness carries an iconic meaning of emphasis, doubt, or even impatience (c.f. Tables 18 and 19).

2.1.2 Affricates

As with the stop series, there are three contrasts: plain affricates /č/-/ǰ/, aspirated /č^{h}/, and glottalized /č'/.

2.1.3 Fricatives

The plain series has a larger set of sounds than the glottalized versions.

a. Plain: /θ ð s š x h/

b. Glottalized: /θ' s' x'/

2.1.4 Nasals

The four nasal consonants are /m n ñ ŋ/. The latter two phonemes /ñ/ and /ŋ/ were significant as indices of tribal identity. Baxoje speakers favored *ñ* in words where Jiwere speakers typically said *ŋ*, such as 'horse': *šu**ñ**e* in Ioway vs. *su**ŋ**e* in Jiwere.[4] However, there are clear cases of /ñ/ in both dialects, such as the shared indefinite plural *-ñe*. Word-initial /n/ often palatalized to [ñ] before front high vowels /i, į/.

The /ŋ/ cannot occur word initially, and probably is historically derived from phonological environments where a velar stop followed a nasal vowel. Note that there is a very strong tendency to pronounce an epenthetic homorganic nasal consonant when nasal vowels precede stops, probably for economy of effort, or making the word "smoother," as some elders liked to put it, as in the /m/ in *nąm**m**p^{h}o* 'finger'.[5]

[4] That example also illustrates another common pronunciation difference between the distinct versions of this language, namely the plain /s/ at the beginning of words for Otoe, where Ioway produces /š/ instead.

[5] Amelia Susman's (1943) work on Hoocąk (Winnebago) mentioned the same tendency in that very closely related Siouan language.

2.1.5 Liquids

There has been some difficulty defining and representing the liquid sound in Baxoje-Jiwere. Phonetically, it has been described as resembling an unreleased "flap" [d] like the medial sound in *latter*, the plain [r] found in Spanish, and a variation upon the [l] sound (Whitman 1947: 235); Rankin also included [ð, n, y] as possible phonetic reflexes (Wedel 2001: 346; Schweitzer 2001: 447). For orthographic consistency, the symbol /r/ will be used.

2.1.6 Glides

Glides include /w/ and /y/.

2.2 Vowels

2.2.1 Oral vs. Nasal.

There are both oral and nasal vowels in Baxoje-Jiwere. They include /a i o u e/ and /ą į ų/. Frequently /ą/ would be realized as a nasalized schwa.

2.2.2 Vowel allophones as gender indexicals.

Phonetic vowel quality sometimes differs significantly in particular words used by female speakers especially; in those contexts, there is also an [ɛ] and sometimes an [æ]. These variations are limited to a particular small domain of the overall vocabulary of the language, and serve a social-indexical function. (Cf. section 5.2. on sentence final particles and interjections.)

2.2.3 Vowel length.

Robert Rankin transcribed long vowels from a recording of a key word list by a Jiwere speaker, but I have been unable to perceive length on the same recording. No minimal pairs clearly establish phonemic significance of vowel length between etymologically unrelated words.[6] Thus, at present there is scant evidence to support the idea of *phonemic* vowel length, although the revised Plains volume of the Handbook of North American Indians presents a list of long and short vowels, based on Rankin's analysis (**Wedel1996 Schweitzer1996**).

[6] John Boyle's student presented a brief paper on this topic based on spectrographic analysis of MCLP recordings, but that paper has not been published.

However, there are very prolonged vowels that occur when morphological boundaries have been "blurred" during amalgamation. The greatly extended length preserves the mora from the contracted morpheme, and sometimes affects the stress pattern as well. It seems to be primarily a morphological rather than phonological process.

2.3 Stress/accent

Stress is both volume and pitch-based, with phonemic value in Baxoje-Jiwere, as in *ráwe* 'beaver' and *rawé* 'to count' (Goodtracks n.d.), or *gísa* 'to laugh at another (v.)' vs. *gisá* 'a knot (n.)' (**DorseyND**) When a root word with two syllables has additional affixes attached to it, the basic stress (and pitch) pattern can change, typically with primary stress shifting to the left in the case of prefixation, and addition of a secondary stress in the case of infixes or suffixes. An adequate prediction of stress patterns is beyond the scope of this grammar.[7]

2.4 Syllable structure

There is a strong tendency to end all syllables with a vowel,[8] thus (V) and (CV) are very frequent syllable shapes. Initial consonant clusters are allowed (CCV), but examples of CCCV have not been discovered, nor have (VCC). The consonant clusters shown in Table 1 may begin a syllable.

2.5 Longer sound patterns/prosody

For length constraint, phrase level prosody is included under the later section labeled Syntax.

2.6 Phonological processes

2.6.1 Elision.

One of the most common changes, elision is characteristic of rapid speech, such as the final vowels mentioned in Footnote 8 which frequently are deleted.

[7] Cf. discussions of Dorsey's Law in **Miner1979** and Hale & White Eagle (1980).

[8] The few exceptions to the preference for vowel-final syllables would be represented as a CVC structure. However, such instances only appear in informal speech and seem to be elision. During quick speech, the final unstressed vowel disappears, yet speakers give the full "precise" pronunciation with final vowel if asked to repeat or clarify what they said. This seems to have been a major aspect of the historical sound changes separating Hoocąk from Jiwere.

Table 1: Syllable-initial consonant clusters

a. stop + liquid:	br-	*bra-*‘separated, spread in layers, sliced, flat’
	gr-	*grų* ‘to curse’
b. stop + glide:	p^hy-	*p^hyúbrą* ‘mint, medicine tea, Indian perfume herb’
	gw-	*gwák’ų* ‘to wipe off, scrape off, dry one’s self (body)’
c. fricative + stop:	sd-	*sdą* ‘to stop, cease, leave off’
	sg-	*sga* ‘to be white, shiny’
	šg-	*šgúñį* ‘no; not; (does) not’
	θg-	*θga* ‘to be white’ (old form)
	hg-	*hga* ‘to be white’ (Ioway)
d. fricative + liquid:	sr-	*sroge* ‘to remove object from inside hole’
	θr-	*θríje* ‘easily, softly, slowly’
	xr-	*xra* ‘eagle’
e. fricative + glide:	sw-	*swąhi* ‘to soften’ (flesh, leather, stale bread)
	šw-	*šwąra* ‘soft (buckskin, flesh, cloth)’
f. fricative + nasal:	sn-	*sni* ‘cold’ (**RobinsonND**)
	θn-	*θni* ‘cold’ (possibly archaic; Dorsey in (Goodtracks n.d.)

2.6.2 Vowel harmony and nasal spread

The nasal quality of a nasal vowel may “spread” regressively (from right to left) to nearby vowels. (Hoocąk scholars have documented such nasality spread not just to directly adjacent vowels, but also across the consonants /h/ and /w/ to the closest non-adjacent vowel (Helmbrecht & Lehmann 2010: 7–8).

2.6.3 Vowel ablaut.

This well-known phenomenon within Siouan languages involves /a/ and /e/ which may alternate in a variety of settings, especially before particular verbs or certain suffixes, suggesting it is morphologically conditioned. Motion verbs are one set of verbs that trigger ablaut. Some verbs ending in *-e* such as *ugwe* ‘to enter’ and *re* ‘to go’ will also ablaut to final *-a* before *-wi* ‘definite plural’ as does the indefinite plural *ñe* > *na* before the definite *-wi* also. Conversely, verbal prefixes with final /a/ will ablaut to /e/ before the possessive *gra-* and the verb *udwáñį* ‘to fail to reach, fail to come up to’ (Whitman 1947: 239-40), as well as *doye* ‘to

break'. The instrumental prefix *gi-* 'by hitting' (with an ax, hammer, or other object in the hand) will trigger ablaut from /a/ to /e/ in the pronominal prefixes which attach directly to it. The dative *gi-*, however, will not trigger the same vowel change, despite the identical phonetic shape, supporting the idea that it is not a purely phonological process.

Examples:

(1) *Čʰúgw**á**-wi re.*
house.enter-DEF.PL IMP(male speaker)
[from čʰi 'house'+ ugwe 'to enter' + -wi 'DEF.PL']
'Come in the house, you-all.' [Marsh 'Giants' Bk2 LN49]

(2) *Iwál**à**-wi ho.*
yonder.go-DEF.PL HORT(male speaker)
[from i-'there'+ wa-'directional' + re 'to go'+ -wi 'DEF.PL']
'Let's go over there!' [Marsh The Twins LN65]

(3) *H**e**-grahi kʰi.*
1P.AGT-love DECL(female speaker)
[from ha-1P.AGT + grahi 'love']
'I love him.'

An alternative analysis accounts for the vowel change before *-gra* 'POSS' and *-gi* 'DAT/BEN' as two vowels coalescing. Since the key morphemes in question are consonant initial, there would have to be an underlying vowel, either /e/ or /i/. The /e/ matches the target vowel, and parallels the 3PL form found in the independent pronoun *eʔe*, and the possessive *etháwe* 'his/hers/its' and *ethéwi* 'theirs'. But there is precedent within Baxoje-Jiwere for /a/ + /i/ to become /e/, which Whitman (1946:239) called 'amalgamation.' The volume reviewer likewise suggested that possibility, *igra-*. That shape/meaning resembles the 3PL inalienable prefix on kin terms (Table 2), which parallels cognate Lakota forms and matches the reconstructed Proto-Siouan *i- Possessive (on non-verbs) (Rood 1979). This analysis also reserves the term 'ablaut' to stem-final vowels, as has been the norm within Siouan scholarship. [9]

[9] Unfortunately, *udwáñį* 'to fail to reach, come up to' and other verbs with separable prefixes preceding PRON prefixes also show the shift from final /a/ to /e/, [*uhédwañį* 'I fail to reach'] and these cases do not fit neatly into the proposed explanation (**Whitman1946**).

3 Words/morphology

3.1 Nouns

Many nouns can function fully as verbs, complete with the extensive system of prefixes and suffixes described later in the verbal template. Siouan languages are classified as strongly verb oriented, with very few prefixes or suffixes limited only to nouns.[10] Certain verbal prefixes transform that state/action into something more noun-like, as in the following example, wherein the verb 'to eat' becomes 'something to eat upon': *wá:ruje* 'table' < *wa-* 'indefinite object' + *a-* 'upon' + *ruje* 'eat'. Without the locative *a-* 'upon', the first vowel is not lengthened, and the stress remains on the second syllable: *warúje* 'something to eat, food.' Because there is a ∅ third person pronominal prefix, 'food' sounds identical to the third person singular sentence 'He ate (something).'

3.1.1 Possessing: inalienable vs. alienable

Native American languages often distinguish people and things extremely close to a person's identity and self (INALIENABLE) versus other entities that separate more easily (ALIENABLE). The former category includes kinship terms and in Baxoje-Jiwere, the formal social ties of friendship and parenthood.[11] The prefixes meaning inalienable possession are bound morphemes similar in shape to first and second singular person patient pronouns, but they differ in having an expressed third person form (which is sometimes dropped in fast speech), as shown in Table 2. (See Table 8 for personal pronominal prefixes.)

3.1.2 Address form -o 'speaking to this one'

While *hi̧t^{h}ára* 'my friend' is the unmarked referential form, a person would switch to *hi̧t^{h}áro* 'my friend (address form)' while speaking directly to the special friend (formally established as cultural role).[13] Kin terms also take the same address

[10] Helmbrecht (2002) gives an extended discussion of ways to distinguish between nouns and verbs in Hoocąk (Winnebago).

[11] While body parts may be inalienably possessed in other languages, it is not the case in Jiwere-Baxoje. Frozen remnants of such a system are evidenced if one interprets the initial *i-* in the following body parts as representing the third person *i-* inalienable prefix found in kin terms and other life-long social relationships like formal friendship and parenthood ('(his/her) child' *ičičį̃ŋe* (Otoe), *ičičį̃ñe* (Ioway)): *ihdóge* 'elbow', *iréje* 'shoulder', *isdą* 'eye'.

[12] See Goodtracks (1992 – present) dictionary for complete inventory.

[13] The friendship would have been initiated by parents of two children of the same sex, formalized with a ceremonial feast, and thereafter a lifelong bond of reciprocity and obligation existed

Table 2: Inalienable possession

Kin term[12]	Inalienable possessive prefix		
	1st person sg.	2nd person sg.	3rd person sg.
Father	hį́-ka 'my father/FaBr'		
	hį-daje (old) 'my father'	naje <ri-ąje 'your father'	aje < i-aje 'his/her father'
Mother	hį́-na 'my mother/MoZ'		
	hį́-hų archaic 'my mother'	đi-hų /ri-hų 'your mother/MoZ'	i-hų 'his/her mother/MoZ'
Man's elder brother	hį-yį́na 'my elder brother'	ri-yį́na 'your elder brother'	i-yį́na 'his elder brother'
Woman's brother	hį-čį́do 'my(FEM) brother'	ri-čį́do 'your(FEM) brother'	i-čį́do 'her brother'
Grandfather	hį-t^{h}úga 'my grandfather'	ri-t^{h}úga 'your grandfather'	i-t^{h}úga 'his/her grandfather'

morpheme when speaking directly **to** that person. The identical substitution of /o/ for final vowel affects line-final words in songs as well (Davidson 1997). There is no vowel variation by gender for this morpheme.

3.1.3 Names

A proper name uniquely identifies someone, for both address and referential purposes. It also may encode key identity features (gender, clan membership, personal attributes/characteristics, or significant events relating to that person).[14] Both dogs and horses were named also (Cf. Whitman 1936 for traditional Otoe-Missouria dog names).

Gender Some names were identical for both genders within the same clan, but often a woman's form differed by the addition of *-mį* 'feminine' suffix. A nickname could be coined to tease someone, as when one elder told another

between the two, to be recognized by this word *-t^{h}ara* 'friend'. The ultimate duty came at the death of one friend, when the other would sit with the deceased's body for the duration of the wake, traditionally 4 days before burial would take place (Whitman 1936, Davidson 1997).

[14] The Reverend James Owen Dorsey collected names, their meanings, and clan identification during his brief fieldwork in the late 19th century. The Smithsonian Institution has his field notes, truly a rich resource for individuals interested in discovering more about names, now available in their digital archive.

they should call me *Toské-mį* 'Quick/Speedy-Woman,' because I had done something so quickly that it surprised them. While names for men were not specially marked, there was a masculine morpheme *-do* that occurs in words for male noun referents such as 'boy,' 'buck,' and 'bull'; see Table 3.

Table 3: Gender affixes: *-do* 'MASC'; *-mį* 'FEM'

a) *iǰʰi**dó**įñe* 'boy-child'	< i- 'at/around'+ čʰi 'house'+ -do 'MASC'+ -įñe 'small/DIM' [Ioway]
b) *iǰʰi**mį**ŋ(e)* 'girl-child'	< i- 'at/around'+ čʰi 'house' + -mį FEM + -įŋe 'small/DIM' [Otoe]
c) *tʰa**do*** 'buck, male deer'	< tʰa 'deer'[a] + -do 'MASC'
d) *čʰé**do*** 'bull buffalo'	< čʰé 'buffalo, bison' + -do 'MASC'

[a] With white-tailed deer, a buck is clearly the "marked form" if the visible feature of antlers was the primary basis for assigning group membership.

Diminutive suffix *-įŋe, -šį́ŋe* [O-M]; *įñe, šį́ñe* 'small /DIM [Ioway]'. There are also cases in Ioway tales where the protagonist's name is created from a verb + diminutive suffix: [V + DIM > Name].

(4) a. *Bé-ñe-ɟ́ŋe*
throw.out-INDEF.PL-DIM
'The Outcast' < 'Little One(They)Threw Away' [Marsh 'The Outcast' Ln. 141]

b. *Hįnúɰ́-šį́ŋe číla*
my.first.son-DIM dear
'My dear Little-Son' [Marsh 'The Wanderer' Ln. 200]

3.1.4 Number

Nouns do not inflect for plural or case; numerals may follow the noun to give an exact number, or verbal suffixes reveal plural information instead. Numbers may act as stative verbs, with patient inflection, as also happens in other Siouan languages such as Quapaw (**Rankin2008**) and Lakota (Ullrich 2008: 708).

Numerals One through ten are the basics from which other numbers are expressed. Eleven through nineteen are formed using the formula 'X over ten' lit. 'ten-over-one': *grebrą agri (i)yąkʰi*, 'ten over two', etc. Multiples of ten become

'two tens' (lit. 'ten (be) two') *grebrą núwe*, 'two tens over one', up to ninety-nine. An interesting example of word coinage is the large quantity 'one thousand'; it is expressed by the word *kóge* 'box or trunk', because shipments of money (presumably annuity payments from Washington, D.C.) arrived in packing boxes, each of which held one thousand dollars.

Ordinal numbers Baxoje-Jiwere may use either a prefix *i-* or a suffix *-yą*.

(5) *i-* 'ordinal marker': [Marsh n.d. 'The Giant' Book 2]

a. *walúxawe i-θát^{h}ą dahá?-e*
bundle ORD-five it.is.standing-that.one
'that fifth upright bundle' (LN 25)

b. *walúxawe i-šágwe dahá?-e*
bundle ORD-six it.is.standing-that.one
'that sixth upright bundle' (LN 30)

c. *walúxawe i-šáhmą dahá?-e*
bundle ORD-seven it.is.standing-that.one
'that seventh upright bundle' (LN 34)

(6) (*i-* 'ordinal marker') + *-yą* 'indefinite article' [Marsh 'The Wanderer']

a. *Dáñ-ĺ=yą (ut^{h}ą?ịwagi aškų).*
three-ORD=INDEF
'A third time (he makes them appear to him, it seems).' (LN 34)

b. *Hetále idóyą dahági síge alé gų́?waškų.*
hetále i-dowe=yą dahági síge alé gų́?waškų
then.it.is ORD-four=INDEF time.it.is again it.is.this he.do.it.it.seems.'
'And then, he does it again for the 4th time, it seems' (LN 35)

3.1.5 Compound nouns

Jiwere-Baxoje compound nouns,[15] shown in Table 4 often have the modifying word precede the base noun, while other times the modifier(s) follow it. These words can also include names, i.e. *mąk^{h}á ruj̀è* 'medicine eaters' denoting those who participate in the religious traditions surrounding the sacred sacrament peyote.

[15] In other Siouan languages, e.g. Lakota and Crow, there can be a greater degree of noun incorporation. See Ullrich (2008:738); de Reuse (1994); **Gracyzk1991**

Table 4: Compound nouns

a. *čʰína*	'village' < čʰi 'house' + -na 'horizontal?'
b. *čʰína wanàxi*	'cemetery' < čʰina 'village' + wanaxi 'spirit, ghost'
c. *walúšge čʰìna*	'giant(s) village' [Marsh n.d. 'The Wanderer' Ln 100]
d. *hį́dúŋe-nąwų*	'mouse + paths' [Marsh n.d. 'The Wanderer' Ln 67]
e. *wanáxi waxòñitʰą*	'spirit/ghost + be holy/sacred' [Davidson 1997]
f. *máyą uhąwe*	'heaven' < 'land + full.of.light' [Davidson 1997; Good Tracks n.d.]
g. *máyą wàtahe*	'Wanderer' < máyą 'land' +wa- 'directional' + dahe 'be standing'
h. *wáŋegíhi*	'Chief/Headman' <wąŋe 'man' + gi-'BEN/DAT' + -hi 'CAUS'
i. *wą?kwás'ose*	'warrior/veteran/soldier'< wąŋe 'man' + was'ose [a] 'brave'
j. *wą?šige*	'person' < wąŋe 'man' + šige 'again'+/or -ge 'NOM'
k. *wą?ší k'uč'e*	'man-hunter' < wą?šige 'person' + k'uč'e 'to kill'
l. *tʰà waθlų*	'roasted deer' < deer + to roast [Marsh n.d. 'The Wanderer' Ln. 175]
m. *istą čʰi*	'(menstrual) period' [literally 'be alone-house']

[a] Whitman (1947) noted glottal stop marking morpheme juncture. It seems especially prevalent when the deleted sounds/syllable involves /ŋ/.

3.1.6 Culture contact and word coinage

There was strong resistance to borrowing from European languages throughout Plains tribes in general,[16] so it is not surprising that Jiwere-Baxoje speakers also chose to coin new words, or extend the meaning of existing words. For instance, the Ioways chose the part of a bird that powers its motion to name that revolutionary object, the wheel: *ahu* 'wing' > wheel (wagon/car).[17]

[16] Cf. Brown (1999), also **LarsonND**

[17] Keith Basso described the Western Apache (Athabaskan) words for automobiles in similar ways, but in that case it was a hand/arm = front wheel and foot = rear wheel set extension (1990: 17).

(7) a. wagon = *námąñį* < na 'wood' + mąñį 'moving/walking'
b. train = *námąñį dàk'o* < námąñį 'wagon' + dák'o 'thunder/fire'
c. photographs/pictures = *įje wagaxe* < įje 'face' + wagáxe 'writing'
d. Saturday = *hąwe uk^{h}ìθre* 'day-half' < hąwe 'day' + uk^{h}íθre 'half, be split into two' [because the Tribal Agency was open from morning to noon on Saturdays]
e. piano = *nayąwe* 'wood sings' < na 'wood' + yąwe 'to sing'

The existing word for 'metal' *mąðe* originally referred to copper, available from the Great Lakes region in particular, and found throughout late Woodland through Mississippian periods in the Mississippi River valley and tributaries. European silver and gold coins were called 'white/light' or 'shiny' metal, *mąðé θka*. The different types of coins led to this unique descriptor for 'penny' < 'coin (white/shiny-metal)+ red' *mąðé θka šùje*. This new unit formed a single compound noun, as shown by the phrase *mąðé θka šùje iyą* 'a penny, one penny.'

3.1.7 Degrees of noun incorporation

Table 5 demonstrates various ways that the words now functioning as compound verbs are conjugated. The left-most column represents the least degree of noun incorporating into the verb, because the personal pronominal prefixes still attach directly to the verb: [Noun [Pronominal prefix + Verb]]. Or a speaker might prefer to add an auxiliary verb to carry person/number inflections, rather than inflect the main verb; see center column. Finally, a fully fused/incorporated noun-verb lexeme accepts the pronominal prefixes attaching directly to the left-most edge of the word, as represented in the far right-hand column [Pronoun + [Noun + Verb]]. The table shows some variation, and speaker preference seems to have been involved. Forms with *ho* 'voice' (11-13) appear to be more fully fused than other nouns were.

There is an intriguing case from another Marsh text in which the noun seems strongly associated with a certain verb but it was in the third person with ∅ affix, so the conjugation pattern is unknown: *t^{h}á č'èhi mąñà* 'he went deer-hunting' [Marsh 'The Wanderer' Ln.47]

3.1.8 Nominalizing prefixes

Certain prefixes commonly attach to verb stems to form a nominal. To illustrate, the three prefixes in (8) all incorporate the basic *wa-* 'indefinite object' (sometimes contracted with a locative prefix also) to action word(s).

Table 5: Conjugating different verbs with nouns attached

Jiwere gloss	[N+[PRON-V]]	[N+V] PRON-AUX	PRON-[N+V]
1) hóθige 'to fish' ['fish + split']	ho-**he**-θige '**I** am fishing'	-	-
2) nąsje p^{h}iskụñį 'to be unkind' ['heart be good-not']	nąsje-**hį**-p^{h}iskụñį '**I** am unkind'	-	-
3) nąsje p^{h}i 'to be kind' ['heart be-good']	nąsje **ri**-p^{h}i '**you** are kind'	-	-
4) nąt'ų́dą 'to pity'	nąt'ų-**he**-dą '**I** pity him'	-	-
5) irodaxra 'to have a fever' ['body-burn/be hot']	iro-**hį**-daxra '**I** have a fever' iro-**ri**-daxra '**you** have a fever'	irodaxra **hįñį́wi** '**we** (PL) have a fever' [añį 'have']	-
6) iroruθ'a 'to be shaken up, excited' ['body be-pushed?']	**wawa**-roruθ'a**wi** '**we**'re shook up pl.' (first response) roruθ'ani '**I** am shook up'	roruθ'a **hįñi**-**wi** '**we**'re shook up' (second response)	-
7) iroθet^{h}ą 'to abuse' ['body + ?']	-	-	**iri**roθet^{h}ą '**you** were abused' (1PSG & PL also)
8) irok^{h}up^{h}i 'to be handsome' ['body +?look+good']	-	irok^{h}up^{h}i **hįñi**wi '**we** look good' [<añi 'to have']	i-**ri**-rosk^{h}up^{h}i '**you** are handsome' (1PSG also)
9) rosje 'to sweat' [<'body+?']	-	rosje-**ri**-ñe 'they made **you** sweat' [CAUS]	**wawa**-rosje**wi** '**we**'re sweating' (1PSG also)
10) dąwe 'to awaken, open eyes' [<isdą 'eye(s) + move']	-	-	**ha**-dąwe '**I** awakened'
11) hohga 'to belch' [<ho 'voice' + sound symbolic hga]	-	-	**ra**-hohga '**you** belched' (1PSG & PL also)
12) hoxga 'to hiccup' [<ho 'voice' + sound symbolic xga]	-	-	**ha**-hoxga mąñi '**I** am hiccupping'
13) hoxu 'to cough'[a] [<ho 'voice' + sound symbolic xu]	-	-	**ha**-hoxu 'I coughed.'

[a] Note 12 is lexicalized, as is its Lakota cognate, relative to Biloxi, which treated 'cough' still as separable, inflecting after *ho* 'voice' (Rankin et al. 2003: 186)

(8) a. wa-
wagáxe ‘paper’ < wa ‘INDEF.OBJ’ + gaxe ‘to scratch, write’
warúwaha ‘bundle’< wa + ruwaha ‘to show with hands’

b. wi-
wí:ų ‘tool’ < wa ‘INDEF.OBJ’ + i- ‘at, to’ + ʔų ‘to do, make, create’
wí:ro:ha ‘kettle’ < wa + i- + róhą ‘plenty, lots, much, many’
wí:k^{h}ąhį ‘bridle’ < wa + i- + k^{h}ąhį ‘blood-vessel, sinew, cord’ [Marsh ‘The Outsider’ Ln. 65][18]

c. wo-
wó:č^{h}exi ‘difficult times, trials’ < wa ‘INDEF.OBJ’ + u-‘in’ + be.cruel/stingy’
wóyąwe ‘festivity’ < wa + u- + yąwe ‘sing’? [19]

3.2 The verb and its many parts

3.2.1 The verb template

In Siouan languages, the most complex morphology involves the verb, which may include basic verb stem, plus up to ten “slots” or positions for a number of possible prefixes, as well as at least four positions for potential suffixes. Figure **??** (at end of chapter) is the representation of all fourteen potential affix positions and which prefix/suffixes can appear in each of those places.

Described in more detail, beginning at the front or left-most position of an inflected verb, the prefixes may occur as follows (Whitman 1947: 246, **MarshND** also **HopkinsFurbeeND**). Negative numbers represent positions preceding the verb root; positive numbers follow the root.

Position [-10] 1st person patient pronouns:
hį =singular ‘me’
wa$_{1a}$ = dual ‘us two’ (first half of separable morpheme)

Position [-9] The second *wa-* set:
wa$_{2a}$- ‘them, something;’ indefinitely extended object (also detransitivizes

[19] Length is presumed here from the overall language pattern. Marsh rarely marked vowel length in the narratives, except on interjections within dialogue, when they were greatly lengthened for emphasis.

[19] This form and derivation is from Jimm Goodtracks. Marsh ‘The Outcast’ Ln 160 gives *wóyawe* with non-nasal /a/, perhaps from to *yawe* ‘stab’ (which might refer to the preparation of meat for feasting or the the piercing that took place during mourning a chief).

the verb)
wa$_{2b}$- 'toward, directional' [precedes all person prefixes except *hį-* 1SG. patient 'me']

Two examples of the first meaning, *wa-*$_{2a}$, give an idea of its flexibility as both derivational and inflectional morpheme:

(9) a. ***wa****naxi* 'spirit, ghost'
< wa$_{2a}$- 'indefinitely extended object' + naxi 'breath, life'.
b. *Hinage* ***wa****-t^{h}a* *naha* *waye:re* *na?*
woman PL.PAT-1SG.see those.ones who-are-they Q
'Who are the women that I saw?'

Whitman considered directional *wa-* to parallel both *gra-* and *gi-* of template positions -3 and -4 in some functions.[20] The next case illustrates directional *wa-* frequently found in prayer songs.

(10) *Hįyįno* ***wa****-hį-na-wi.*
OurElderBrother DIR-1PL.AGT-GO-DEF.PL
'We're going toward Our Elder Brother (Jesus).' (Davidson 1997)

Position [-8] Locatives:
a- 'on, upon, over',
u- 'in, within, into',
i- 'at, to, by' (Whitman 1947: 241)

The locatives combine with the prefix *wa*$_{2a}$- (indefinitely extended object) to make a "heavy" syllable with a longer vowel, which usually attracts stress (Cf. nominal prefixes.)

wa: < wa$_{2a}$- + a- 'on'
wo: < wa$_{2a}$- + u- 'in'
wi: < wa$_{2a}$- + i- 'at, to, by'

[20] Cf. Boyle (2009) for a discussion of the *wa-* prefixes across the Siouan languages, quoting the late Carolyn Quintero on Osage *wa-*, which was especially interesting. Based on these analyses, it may be more elegant to conclude that in Baxoje-Jiwere there is only one *wa-* which does a wide variety of things to the verb, including the various functions within the different glosses given above. At present, it does not seem crucial to determine whether they are best described as two distinct morphemes *wa-*, or as a single *wa-* quite flexible in meaning. In the future, as more work on comparative Siouan *wa-* emerges, perhaps the issue can be resolved.

Position [-7] Object/patient pronouns:

wa$_{1b}$- 'us (1PL.PAT; speaker & another, usually listener)'
ri$_1$- 'thee (2SG.PAT)'
mį- 'me (1SG.PAT)'

Position [-6] Agent pronouns (first and second person):

ha-, he- 'I/1SG.AGT'
ra$_1$-, re- 'thou/2SG.AGT'
a-, e- '3PL.AGT' with motion verbs only[21]

Position [-5] Reflexive *k^{h}i*- '(to) one's self'

This prefix relates the event/state described by the verb back to the agent, usually translated as 'one's self.' If *k^{h}i* reduplicates, giving *k^{h}ik^{h}i*, it adds the sense of reciprocal action 'to/with each other'.

Position [-4] Possessive *gra*- 'one's own'

The possessive prefix gives additional information about social relations between persons and things mentioned in the verb complex.

(11) Excerpt from the Otoe-Missouria Flag Song:
E-gra-ña-gri-ñe.
*e-**gra**-añi+a–gri-ñe*
3OBJ[ablaut]-POSS-have+3PL-come.back.(home)-PL.INDEF
'They brought it (the flag) back home.' (Greer 2008)

Position [-3] Benefactive/dative *gi$_1$*- 'for, to'

Position [-2] Instrumentals (describing how an action was completed):

ba- 'by cutting'
bo- 'with a blow'
da- 'by heat or cold'
gi$_2$- 'with object away from the body, by pushing or striking with an object'
nį- 'with foot/feet'
ra$_2$- 'by mouth, teeth'

[21] Whitman did not list the *e-/a-* prefixes within the ordering of preverbal elements, probably because they are limited to motion verbs. However, since motion verbs do occur frequently, it seems preferable to include them as possibly archaic forms. The two also occur in 3rd p. possessive pronouns *et^{h}awe* 'his (singular)', *et^{h}ewi* 'theirs (definite pl.)', and *aré* 'it is' (independent pronoun that primarily serves as demonstrative now, loosely 'that').

ri$_2$- 'with held object, toward the body, pulling with an object/tool'
ru- 'with hand, toward oneself, by pulling with the hand'
wa$_3$- 'with hand away, by pushing with the hand'

According to Whitman (1947:246), these nine prefixes transform a passive verb into an active one, or a stative verb into a transitive one (**Rankin2005**). They make very specific distinctions in the world of human activity. 'Long horizontal object being cut in two' *-gruje* is an interesting yet abstract verbal root; someone or something must do the cutting, and the various ways that action is accomplished can be encoded very precisely (and concisely) with these prefixes, as in *wa$_3$-* 'with hand away (from agent's body)' *-gruje* > *wagruje* 'to saw'. Siouan scholars have sometimes distinguished between "inner" and "outer" instrumentals, with the latter a smaller set consisting of 'by extreme temperature/heat', 'by cutting with a knife,' and 'by shooting/blowing' (**Rankin2005**); however, I have not found data pertaining to that distinction in Jiwere-Baxoje thus far.

Position [-1] 2nd person *s-*

Archaic form that stands for 'you' (second person) on a small number of specific verb stems. Siouan scholars have found related forms in the Mississippi Valley subgroup (e.g. Quapaw allomorphs *š-/ž-*), even extending into Proto-Siouan, suggesting it is of ancient origin (**Rankin2005**). Over time, it was probably replaced in less common verbs by the regular second person forms *ra-, ri-*, but remained in very frequent verbs, which are more resistant to change.

(12) *Arastawi k^{h}e.*
a-ra-s-da-wi k^{h}e
on-you.AGT.archaic.2-see-PL.DEF MASC.DECL
'You (all) see it.' (Final line, Otoe-Missouria Flag Song, Greer 2008)

Position [0] Verb root/stem

Position [+1] Post-positioned person affixes + causative suffix *-hi* 'to make something happen, to cause something'

One way to form an active verb from a stative one is by adding the causative suffix *-hi*; so *č'e* 'to die' becomes *č'ehi* 'to kill' (literally 'to cause to die'). Since the causative *-hi* occurs after the verb stem, personal pronoun affixes also come after the verb, but immediately before the *-hi*, rather than their usual pre-verbal positions. Sometimes the *-hi* itself is omitted (as in the following example), but the pronominals' marked position after the verb, plus the meaning 'to cause (some-

thing)' are still present.[22] The word *nayįhi* 'to heal, cure' literally means 'to cause one to stand up, to stand X up.' The chorus of a NAC song by Edward Small (Ioway) exemplifies an instance where *-hi* does not overtly appear. Still, the translation and the location of the PRO prefixes after the verb stem *nayį* 'to stand' give evidence of the causative *-hi* having an underlying presence.

(13) *Hįyį́no | Wak^{h}ąda- yįŋe | mąya čegi wahire nayį-**wa-ra***
Our-elder-Brother | God- son) | land this sick stand-|**3PL.PAT-2.AGT**
na
and|
'Elder Brother, Son of God, you heal the sick in this land.'(Davidson 1997)

Likewise, it occurs in this sentence from missionary scholars Hamilton & Irvin (1848: 43), #53):

(14) *Č'e-wa-*[∅]*-hi k^{h}e.*
kill-3.PL/INDEF-EXT-OBJ-3-CAUS DECL(male.speaker)
'He killed them'.

Position [+2] Negation *-skųñį* 'not'

Position [+3] General Plural suffix *-ñe* 'they/them'
Usually limited to third persons, Whitman (1947) called it an indefinite form; perhaps the term 'general plural' is more appropriate.

Position [+4] Definite Plural *-wi* 'DEF.PL'
Usually 'we' or 'you-all', it may occur with any grammatical person

(15) *wa-wa…-wi, hį-…-wi, ra-…-wi, ri-…-wi, ∅…-wi).*
(1PL-PAT…-PL, 12AGT…-PL, 2AGT…-PL, 2PAT…-PL, 3…PL)

Both suffixes can pluralize any personal pronoun, no matter if that pronoun is in the role of an actor, patient or object (direct or indirect). They only index number, and definiteness vs. indefiniteness. Specifically, it says there are more than one for second and third person forms, and three or more for the first person

[22] One possible origin of this unusual case of pronominal prefixes shifting to the end is that *hi* was once truly an independent verb, and over time, the forms were re-analyzed by speakers as single unified words. Then the initial verb of the compound was no longer conjugated. In that light, it is interesting to note that there is another *hi*, the motion verb meaning 'arrive here' (**Taylor1976 Hopkins1987**). That would parallel English idioms such as 'to come to pass' for 'happen, take place,' or 'go and X' as in 'Sam went and punched the man'.

dual form. The two potential plurals above differ by whether the people or things being referenced represent given or new information.[23]

Thus, they are not interchangeable. They reference the speaker's knowledge about the group, how specific group membership is, whether persons' identities are known, if they have already been mentioned in a story before this point or not, and so on. It makes sense for the definite plural to appear with the first person plural for pragmatic reasons. It is difficult to imagine a situation in which 'we' might mean a group with unknown or uncertain membership. Second person plurals also usually take the definite plural, for the same reason, although some rare exception might occur. However, it is very possible to imagine situations involving third persons to be either definite ('the gourd dancers from Red Rock, Oklahoma') or indefinite in nature ('everyone on Earth who knew my uncle'). Just as one might expect, zero third person-inflected verbs occur with either plural suffix, depending on the meaning intended.

(16) *wówak'ųñawi*
wa-∅-u-wa-k'ų-**ña-wi**
12PAT-3PAT-LOC-12PAT-gave-**INDEF.PL**('they')-**DEF.PL**('us')
[vowel ablaut to *ña* from INDEF.PL *-ñe* when before *-wi*]
'They gave it to us.' (Whitman 1947: 240)

Position [+5] Mood/Aspect *-hñe, -hna* 'will, shall'

The modal suffix seems similar to a future tense, but probably is more accurately expressed as 'an action that is not yet completed' according to **RankinND**[24] The *e-* itself ablauts to *a-* with verbs of motion.[25]

Position [+6] Evidential and gender indexical particle.

It is not clear that these enclitics are actually part of the verbal complex, rather than serving as an audible coda indexing the gender identity of the speaker of an utterance and the degree of certainty of the speaker for the information given. The enclitics are not tied absolutely to the speaker's gender, but may also reflect the gender of a character during dialogue in a narrative, or original speaker's gender in reported speech/quotatives). They do not seem to function as truly

[23] Think of the parallel indefinite article being used in the formula which begins many English fairy tales, 'Once upon **a** time, there was **a** princess…'

[24] While **RankinND** included auxiliary verbs, adverbial intensifiers, positionals, and more within his comparative Siouan post-verbal template, this analysis will not follow his template for those morphological elements at this time.

[25] Comparatively speaking, there is not yet an elegant historical explanation of ablaut across the various members of the Siouan language family (**Rankin2005**).

"free" morphemes, as they carry only secondary stress, and there is basically no pause between the verbal complex and the sentence-final particle, which tend to form a single prosodic contour. Because it is such a rich and complex set, with meanings that are not easy to gloss, these particles are listed in Table 18, rather than being included in the verbal template per se.

3.3 Auxiliary verbs

Auxiliaries may appear alone, inflected with the full variety of verbal prefixes. When they are not the main verb, they will follow it (and any verbal suffixes attached to it). In third person and inanimate subjects, the auxiliary verbs may not be inflected, but otherwise they would still bear first and second person prefixes, which strongly tend to be animate for practical contextual reasons. The same pattern is found in most SOV languages (**Rankin2005**).

Positionals/modals. After the main verb, there is often a second verb expressing the action or position of the agent, or a distinct clause describing the activity/position of the speaker. If one witnessed an event, a proper Baxoje-Jiwere description would include whether someone was sitting, lying, standing, or moving around while it occurred.[26] Beyond clarifying the bodily orientation of the person or thing being described, there are also various aspectual meanings that may be conveyed. One such aspect is continuative as if the action takes place over an extended time frame, rather than occurring at a single moment or limited duration.[27] They include:

mą́ñį 'going around, moving (in the characteristic way for that creature)'
mį́na 'sitting /dwelling'
nąŋe 'be in a sitting position'
hąŋe 'be in a lying or reclining position'
dáhe 'be in a standing /upright position'
nąyį 'to stand something/someone up'

[26] Davidson 1997 outlined the key role these auxiliary verbs played in creating vivid images in Native American Church songs composed by Otoe-Missouria and Ioway speakers.

[27] In addition to the continuative aspect, **Rankin2005** also distinguished a habitual ('always') aspect (Quapaw *nq*), an imperfective 'used to X' derived from Proto-Siouan /*ʔõ/ 'do', a potential 'will/would X' (Quapaw *tte*). Negation, imperative, and narrative forms were grouped with the auxiliary aspects, too. More complex moods could be created with combinations of these forms, such as potential + continuative, or negative potential continuative 'to not go on X-ing'. However, I have grouped the imperative and narrative particles with the general sentence-final enclitics, in Table 18.

3.4 Pronominals

Baxoje-Jiwere has overt prefixes for first and second persons, while third person is represented by ∅ morpheme. There are also three numbers expressed: one (singular), we two (dual inclusive), or more than two (distinguished by the plural suffixes discussed in §??). Each person's role is identified relative to the action of the verb, as agent/actor or patient/object. There is potential confusion caused by homophony between one allomorph of first person singular patient *hį-* 'me' and the first person dual agent *hį-* 'we two'. The other allomorph for 1PAT.SG, *mį-*, mirrors the form in the independent first person pronoun, as well as the independent possessive first person pronoun. The first person plural can only be expressed by addition of the definite plural suffix *-wi* (see (+4) above), denoting the speaker, hearer, and one or more additional people as either agents *hį-…wi*, or patients *wa-wa-…wi*.

'You' is composed of second person singular agent ra_2- and patient ri_2-, and also second person plural agent and patient forms. See Table 6 for further illustration.

Table 6: Personal pronominal prefixes

	1SG 'I/me'	1DUAL 'we/us two'	1PL 'we/us all'	2SG 'thou/thee'	2pl 'you'
Agent	ha- (he-)	hį-	hį-[+ -wi]	ra- (re-)	ra-[+ -wi] (re-) [+ -wi]
Patient	mį- hį-	wa_{1a}- wa_{1b}-	wa_{1a}-[+ -wi] wa_{1b}-[+ -wi]	ri-	ri-[+ -wi]

The parenthetical forms with final /e/ show the vowel change that takes place when the prefix is followed by certain derivational morphemes such as *gra-* 'one's own' (possessive), represented in the verb *gra-hi* 'to love, have pity on someone'. The agentive forms *ha-* 'I', *ra-* 'thou' will become *he-*, *re-* in other complex verbs such as *nąt'udą* 'to pity (someone/something)'.[28] A potential origin for this word is *nąhje* 'heart' plus *u-gi-dą* 'be depressed toward' (**Whitman1946**). If that analysis is correct, the benefactive prefix *gi-* 'for' would be the conditioning morpheme for that particular case. Another example is *gi-t'ą* '(it) flies', despite the fact that

[28] Whitman (1947) has the plain [u] here while I heard it as a nasal [ų], perhaps just spreading from the surrounding environment (Davidson 1997).

the *gi-* prefix itself only is fully apparent in the plain ∅ third person form (Whitman 1947: 242).

Third person singular is typically marked by a zero morpheme, although an *e-* prefix may rarely occur, especially with the possessor prefix 'one's own', and with independent possessive third person *et^{h}awe* 'his/hers (singular)' or *et^{h}ewi* 'theirs'. The demonstrative form *-ʔe* combines with many prefixes, including third person *e-*, resulting in *eʔe* 'it is that one.' Motion verbs provide an exception to that rule, with an *a-* prefix in plural contexts.[29] Once again, we see an /a/-/e/ alternation.

Independent pronouns, shown in Table 7, appear for emphasis or clarity, but are not required grammatically to complete a sentence, provided that the verb is properly inflected.

Table 7: Personal pronouns (Hamilton & Irvin 1848, **MarshND**).

Person	Independent	Possessive
1 Singular	mí̱re	mi̱t^{h}áwe
1 Dual Inclusive	hí̱re	hi̱t^{h}áwe
1 Plural Inclusive	-	hi̱t^{h}éwi
2 Singular	ríre	rit^{h}áwe
2 Plural	-	rit^{h}éwi
3 Singular	éʔe	et^{h}áwe
3 Plural	aré	et^{h}éwi

3.5 Conjugating verbs

3.5.1 Regular verbs

A verb stem is considered REGULAR if it follows the verbal template of prefixes in its ordering, and the stem itself does not change in form, regardless of any shift in person or number. Verbs are grouped according to whether they are ACTIVE or STATIVE, with the agentive pronominal prefixes inflecting the active verbs, and the patient pronominal prefixes forming the subject of stative verbs, as well as the objects of transitive verbs; see Table 8.

[29] Marsh n.d., **Taylor1976**

Table 8: Regular verb paradigm

Person	Active verb	Stative verb	Transitive verb
1SG	ha-mąñį	hį-yą , mį-yą	ha-k'e
	'I walk/move'	'I sleep'	'I dig (it)/ I dug (it)'
1DU.INCL	hį-mąñį	wawa-yą	hį-k'e
	'We 2 walk'	'We 2 sleep'	'We 2 dig (it)'
1PL.DEF	hį-mąñį-wi	wawa-yą-wi	hį-k'e-wi
	'We-all walk (>2)	'We-all sleep'	'We-all dig (it)'
2SG	ra-mąñį	ri-yą	ra-k'e
	'You(sg) walk'	'You(sg) sleep'	'You (sg)dig (it)'
2PL.DEF	ra-mąñį-wi	ri-yą-wi	ra-k'e-wi
	'You-all walk'	'You-all sleep'	'You-all dig (it)'
3SG	∅-mąñį	∅-yą	∅-k'e
	'He/she/it walks'	'He/she/it sleeps'	'He/she/it digs (it)'
3PL.DEF	∅-mąñį-wi	∅-yą-wi	∅-k'e-wi
	'They walk'	'They sleep'	'They dig (it)'
	(known)	(known)	(known)
1SG.INDEF	∅-mąñį-ñe	∅-yą-ñe	∅-k'e-ñe
	'They walk'	'They sleep'	'They dig (it)'
	(unknown)	(unknown)	(unknown)

3.5.2 Irregular verbs stems in D-, R-, W-.

All irregular verb stems begin with *d-, r-*, or *w-* sounds (**Whitman1946**). Note that the stem-initial consonant defines the class, and determines which conjugation will be irregular; however, there may also be prefixes attached to that stem. When any of those prefixes come before the personal pronoun, they do not influence each other (no amalgamation). These irregular verbs share another anomaly; in second person agent forms, in addition to the expected *ra-*, the archaic Siouan second person *s-* also appears (Slot -1 on Verbal Template). Examples of irregular compound stems include:[30]

[30] Twentieth century elicitations seem to exhibit a tendency toward including the regular pronominal prefixes, in addition to the verb stem changes. However, Dorsey's slip file only has one speaker who doubles the inflection on these forms; this tendency to move toward the regular pattern may reflect the decline in everyday language use, leading to a preference for the most familiar inflections to be added onto the irregular verb stem changes (**DorseyND**).

D- stems The stem's initial /d/ becomes /t/ to indicate 1AGT, instead of having the regular first person agent pronominal *ha-*. The stem change does not occur in any other person; even first person patient constructions take regular 1AGT *hį-*. Second person agentive form is doubly inflected; both 2AGT *ra-* and archaic 1AGT *s-* attach to the stem initial consonant; see Table 9.

Table 9: D- stem

a-dá 'to see'	á̲ta	'I see (it/him/her)'
	aráṣ̲da	'You(SG) see (it…)'
	hą́da	'We two (1SG & 2SG) see (it,…)'
	hą́dawi	'We (PL) see (it,…)'[a]
	adá	'he sees her/it'
	aríta	'I see you'
	ą́raš̲da	'You(SG) -Archaic 2P see me'
	wáwadáwi	'(he) sees us (PL)'

[a] Stress shifted left to reflect a "heavy" syllable resulting from two vowels coalesced together, *hį-* 1PAT plus *a-* 'on' LOC.

R- stems There are two irregular verb classes beginning with /r/. In the first paradigm, shown in Table 10, the liquid /r/ is followed by back vowels /a, u/, giving *ra-* or *ru-* as the stem's first syllable. First person agent is marked by /r/ becoming /d/. The second person form inflects twice, with regular 2AGT /ra-/ and archaic 2AGT /s, š/.

Table 10: R-stem 1

rumi 'to buy'	haḍumi	'I bought (it)'
	raṣtumi	'You (SG) bought (it)'
	hárumi	'We two bought (it)'
	rumi	'He/she bought (it)'

The second subclass of irregular verb stems, shown in Table 11, begin with /r/ paired with front vowels /i, e/. The /ri-, re-/ verb stems demonstrate a shift from /r/ to /j/ to mark 1AGT forms, while the archaic 2AGT /s, š/ morpheme inflects the unchanged stem alone.

W- stems These verbs have an initial voiceless bilabial glide /w/ which becomes

Table 11: R- stem 2

ré ‘to go’	haj̲é	‘I go’
	sre	‘You go’
	hį̨re	‘We two go’
	hį̨rewi	‘We go (pl.)’
	ré	‘He/she/it goes’

a voiceless aspirated bilabial stop /p/ in the 1AGT form. The regular 2AGT *ra-* may be present with some verbs, but is absent in others, while all W-stems take the archaic 1AGT /s, š/ inflection; see Table 12.

Table 12: W- stem

awáđo ‘to point at, point to’	áp̲ađo	‘I point at (it)’
	aš̲wáđo	‘You point at (it)’
	háwađowi	‘We (PL) point at (it)’
	awáđo	‘He/she/it points at (it)’

Additional verbs may conjugate regularly in all other persons, but preserve the archaic 2AGT /s, š-/ inflection. These mixed verbs include common words: *e* ‘to say, *hijé* ‘reach a standing position’, *áñį̨* ‘to have’, *hiwé* ‘reach a lying position’, and *dahé* ‘be standing’ (**Whitman1946**).

3.5.3 Other special conjugation patterns: motion verbs

Like all Siouan languages, the Baxoje-Jiwere system of motion verbs has a rich set of distinctions. One intriguing dimension is the vertitive, which allows a concise and powerful way of expressing the notion of leaving home or predicting a safe homecoming.[31] Otoe-Missouria patriotic songs often have this powerful motion verb, poetically highlighting the fear involved when soldiers leave home, and joy when they return safely to their families.[32] Motion verbs are also distinguished

[31] While English lacks the motion verb equivalent to the vertitive, the compound noun ‘homecoming’ is perhaps the closest in meaning and emotional power.

[32] Scholars of related Siouan languages such as Assiniboine have also analyzed these verbs in terms of how they appear in traditional narratives, where the notion of ‘belonging’/ home location also can be used to mean the place where a person or animal was located at the

by a 3rd person plural prefix *a-* which changes to *e-* in the same conditioning environments in which 1st and 2nd person prefix vowels also shift from /a/ to /e/, namely before the benefactive prefix *gi$_1$-* and the possessive *gra-*. (See Table 13).

Table 13: Jiwere motion verb stems (**Taylor1976**)

Destination:	Arriving Motion		Motion Prior to Arrival	
	non-vertitive /	vertitive	non-vertitive /	vertitive
here . . .	jí	grí	hú	gú
there . . .	hí	-	rá	grá

Note the initial consonant cluster echoes the possessive prefix [*gra-* 'one's own']; the shared phonological shape plus semantic congruity between vertitive and possesive is surely no coincidence.

3.6 Adverbials

There are basic adverbial morphemes that may combine to express a wide range of meanings, with parallels to the personal pronouns (both independent and bound) in recognizing not only distinct first and second persons ('I' vs. 'you'), but also 'we two (you and I),' dual inclusive.

3.6.1 Spatial elements

Baxoje-Jiwere identifies five distinct places relating to the discourse context:[33] 1) location of speaker 'my spot here' *ǰe-*, 2) location of listener 'your spot' *se-*,[34] 3) shared area of persons conversing together 'our here' *i-* (location of both you and me), 4) 'there' *ga-*, beyond the immediate discourse zone, e.g. a distant but visible location, and 5) 'place beyond their sight (usually far away) *hari-* (similar to archaic English *yonder*). These spatial elements combine with morphemes that distinguish between a fixed spot close at hand (*-gi*), a stationary spot slightly further off (*-da* 'at there'), and motion toward a location (*-gu* 'to'). The directional sense of the prefix *wa$_{2b}$-* 'motion toward' may follow first or second person forms to complete the variety of distinctions recognized.

beginning of the story (by the river/point A), versus where they ended up later on (inside a cave/point B) (Cumberland 2005).

[33] My M.A. thesis details the system of deixis in Baxoje-Jiwere (Hopkins 1988).

[34] This form *se-* with initial /s/ representing second person is very likely related to the archaic 2AGT /s/ found in conjugations of some conservative (irregular) verbs also (**Rankin2005**).

3.6.2 Negatives

Two basic forms can negate the main verb, *skųñį* 'not' and *ñįŋe* '(be/have) nothing'. Thus, while the stative verb *pʰi* 'be good' expresses a positive attribute, the opposite meaning results from adding *skųñį* 'not', giving *pʰi-skųñį* literally 'good-not'; 'no good, bad, ornery'. At the clausal level there can be additional ways to make it clear that something is false. (Cf. the section on syntax, especially the evidential enclitics in sentence final position.)

3.6.3 Time elements

While some Baxoje-Jiwere words for space do apply metaphorically to time, there are also specific temporal adverbs. They tend to occur at the beginning of the sentence, as in this verse from NAC prayer-song composed by the late George Washington Dailey (Otoe-Missouria):

(17) *Go:čʰi Hįyįno* *hį-ha-wi-yiyi*
now Our.Elder.Brother(male.spkr) 1PL.AGT-say-PL.DEF-chant
'Oh, My Lord, we're calling upon Your name, now.' (Davidson 1997)

3.7 Other morphological processes

3.7.1 Sound symbolism

In Jiwere-Baxoje, there are two characteristics of such mimetic words that attempt to recreate certain sounds or material aspects of the world:

a. Often they use fricatives, which sometimes form sets of related words which vary only in the fricatives' place of articulation.

b. Many also are stative verbs, especially ones related to topics of color shade, intensity of hue, or other changes in sense perception, as in volume of noise, or roughness of texture.

This phenomenon is common in most Siouan languages, and can create interesting semantic sets differing by a single consonant sound (**Rankin2005**). The "lighter/less intense" word is usually associated with a front and/or upper place of articulation, while the greatest intensity of meaning is found with the "deepest" back sounds. It has been documented for Hoocąk and Dakota in particular. Baxoje-Jiwere sound symbolic vocabulary sets include those in Table 14.

Table 14: Sound symbolism

šá-kh'e	'1) swishing sound made in water 2) sound made by hitting or dragging of a chain'
thá-kh'e	(probably th = θ) '1) rattling of a rattlesnake; 2) rattling of corn in granary or in pile outside'
khó-kh'e	'ripping of calico, roar of falling water, sawing or scraping sound of tool on wood, whizzing of a whirled stick ('a bullroarer) (Dorsey 1892: 3)
to-tó-khe	'repeated sharp sounds, such as the crackling or snapping of twigs and small branches, or frequent gunshots'
tópě	'pattering sound', nątótopě no gloss given (I posit 'the sound of dancing feet')
ʔé-ghe,	'the sounds of filing, grating, gnawing, or scratching on metal, bone, hard wood, etc.' (Dorsey 1892: 4-6)[35]
kh'é-ghe, kh'á-ghe	'crow (bird, n.)' [initial syllable imitating crow's call] (Dorsey 1892: 8)
ká-ghe	"

Note also the terms for upper body noises with variation in the medial fricative: *hohga* 'to belch' [*ho* 'voice' plus sound symbolic *hga*]; *hoxga* 'to hiccup' [*ho* 'voice' plus sound symbolic *xga*].

Although this is not an exhaustive list, let me add my personal favorite, *hé ʔši* 'sneeze', which beautifully imitates the sound of sneezing, and takes an active/agentive conjugation.[36]

3.7.2 Reduplication

Adult/standard reduplication Another kind of sound symbolism is reduplication, copying part (or all) of a particular word. If a stative verb such as a color is reduplicated, it means the color is scattered here and there (as in patches, spots, stripes), rather than in a continuous or "solid" distribution. For an active verb, it gives an iterative meaning, whereby *gis'é* 'drip' becomes *gis'és'e* 'drip several drops'. For less concrete activity, the reduplication can convey that the verb's action is somehow partial or incomplete. For example, the form *up^{h}a'p^{h}arehi*

[35] Dorsey's orthography for consonants retained here.

[36] Dorsey gave Dhegiha *hé-tchį* 'sneeze' (Kwapa *hĕ-shį*), and 'snore' *zhą-khdhú-de* (1892: 8).

'understanding only bits and pieces, imperfectly comprehending' comes from *up^{h}arehi* 'to understand, notice, investigate'.[37] In Jiwere-Baxoje, reduplication seems to have been a very productive process.

Reduplication in baby talk In addition to adult reduplication, there is also "baby talk" or caretaker speech, a simplified version of ordinary phonological forms. Based on the limited sample available, it appears to have involved producing an exact copy of a monosyllabic morpheme, such as CV-CV. If the word is polysyllabic, then everything after the first syllable would be deleted. Some of the morphemes have been so simplified that it is not always clear from which word the simplified "baby" form originated. However, the primary difference between adult reduplication and "baby talk" is semantic. The latter had no notion of something being repeated or scattered. Caretaker speech must have made it easier for little ones to learn to speak. Perhaps it originated as an adult imitation of the adorable way young children pronounce things themselves. Examples are in Table 15. Other items elicited include the repeated form + the normal diminutive suffix, *-iñe* 'little one': *mamá**ịñe*** 'baby' (Ioway), *haháị**ñe*** 'baby colt, horsey' (**Davidson1998**).

Table 15: Baby talk reduplication

dáda	'something to eat'
ǰíǰi	'hot (to touch)'
nąną	'something forbidden because of potential danger or pain'
bobo	'penis' abbreviated from *buje* 'acorn cap, penis'

4 Word order/syntax

Baxoje-Jiwere is classified as an SOV language. However, a verb (for third person forms, a "plain" (uninflected) verb) may function as a grammatical sentence,[38]

[37] The latter example came from the late Rev. Arthur Lightfoot and Dr. Truman W. Dailey conversing about white missionaries' partial understanding of Indian beliefs (MCLP July 1992).

[38] There also needs to be a final particle that tells the gender of the speaker, as well as how certain the speaker is of the information being given, and the way the listener should respond (by listening and talking, by obeying what was said, by joining in with the speaker). These S-final particles are discussed in a later part of the grammar.

since the independent pronouns are optional, and there is a ∅ third person pronominal prefix corresponding to 'he, she, it.'

4.1 Noun phrases

4.1.1 Adjectival forms.

The head noun should come first in the noun phrase, followed by everything that describes it in any way, including stative verbs showing shape, color or size ('large, round, yellow'), which may also inflect as a main verb in other contexts, demonstrating they are not true adjectives.

4.1.2 Determiners, demonstratives, articles and more.

Determiners identify which person or thing is being discussed, if it is a specific individual(s) or a generic one, how many there are, and so forth. They include quantifiers, demonstratives, and at least one definite article and an indefinite article, which all follow their "head". So 'a white horse' when spoken in proper Baxoje-Jiwere order would be 'horse white a' *šųñe ska iyą* Ioway / *suŋe θka iyą* Otoe-Missouria. Quantifiers would begin with specific numerals, as well as other words relating to quantity of a group for countable objects and for animate beings ('few, many, all, most, …') or for quantities of mass nouns such as flour, soup, water and so forth ('some, much, little, …').

4.1.3 Article(s)

Indefinite article *-yą, -iyą* 'a, one' is derived from the word for 'one' *iyą́k^{h}i*.[39] Definite article is *-ge*.[40] *Gilbert-ge daniŋe.* '(That) Gilbert was drunk (again)!'

While earlier researchers did not identify a definite article for Jiwere-Baxoje, it seems likely that this is an oversight, due to the relatively small amount of data collected, and its lack of frequency compared to the English definite article. There certainly needs to be further examination in this area, considering its complexity in other Siouan languages (**Rankin2005**; Rankin 1977; Rood & Taylor 1996: 455).

[39] Lakota also utilizes the 'one' morpheme as an indefinite article (Ullrich 2008: 755-756).

[40] Until very recently I followed Marsh's analysis of Jiwere-Baxoje, which included no definite article. I would like to thank Johannes Helmbrecht (2015 p.c.), and Iren Hartmann (2008 p.c.), whose wonderful work on Hoocąk and excellent questions about possible cognates in Jiwere have forced me to reconsider the function of *-ge.* I cannot explain how it was overlooked, except that its representation in the data collected was too infrequent to attract notice. More review of the existing data is needed to confirm the current interpretation.

4.1.4 Interrogatives

Those words that are used to ask questions about quantity or number fall into this category.

tahéna 'how many, how much?' (*tana* in Hamilton & Irvin 1848)
taheda 'how far?'
danáha, danáhaje 'which?'[41]

(18) *Bi-rawe tahena ra-gusta ja?*
'moon-count how.many 2P.AGT-want(irreg.verb.2/s-/) Q.FEM
'How many calendars do you want?'

4.1.5 Indefinite quantifiers

Such words give information as to scope, for instance which members of a collective group are included (or excluded) in the utterance. For example:

dáhi, áhi 'each, every'
bróge 'all'

Table 16 presents the demonstrative pronouns paired with the corresponding deictic directional prefixes. Note the latter's strong parallels to and semantic association with discourse participants/persons in the context of the speech event.

Table 16: Comparison of demonstrative pronouns to deictic directional prefixes

Demonstrative Pronouns		Deictic Directional Prefixes (Hopkins 1988)	
je?e	'this one'	je-	1 LOC 'near me', 'this here'
se?e	'this one [near you]'	se-	2 LOC 'near you' [also še- Ioway]
		i-	inclusive 12 LOC 'here'
e?e	'it is he/ that one'	e-	3 LOC 'near her/him/it'
are	'it is'	a-	*unattested; possible ablaut form of /e/ with *re* 'to go'
ga?e	'that one'	ga-	'there'

[41] Cf. the similarity of sound shape in the cognate set found in Lakota (Rood & Taylor 1996: 455-457).

Aré ‘it is’ “points” back at something previously mentioned, and appears with great frequency in the texts collected by Gordon Marsh (**HopkinsFurbeeND**) It can be paired with the emphatic bound morpheme *-sų* ‘indeed’ (*aré?sų* ‘indeed!’ (emphatic)), and even ‘stacked’ with the first person deictic prefix *je-* ‘this (here)’ to give *járe* ‘this one-it is’, and other additional complex compounds.

4.2 Subordinate clauses

Main clauses normally occur sentence-finally, while subordinators(s) transform the first clause(s) into a supporting or modifying syntactic role, signaling duration, exact sequence of events, if events were actual or potential, etc. These subordinating particles include *-sge* ‘if’, *-da* ‘when’, *-sji* ‘but, although’, *nu?a* ‘but’. The temporal particle fills that function as follows:

(19) *Hįyįno|* *wo-waxoñitą* *rit^{h}awe urak^{h}i-ñe*
‘Our.Elder.Brother| ceremony-sacred your they.tell.about-INDEF.PL
***da**|* *wa?ų* *warup^{h}i* *Rire [∅] a-ñe* *(h)na*
when| the.work wonderful(it.does) you 3- say-INDEF.PL Imperfect.’
‘Elder Brother, when they tell about Your ceremony and the wonderful work it does, they say it’s You.’

This complex sentence begins with a kin tem (addressed to Jesus), a subordinate clause indicated by subordinator *-da* ‘when’, then finally the main clause (Davidson 1997 Song #16).[42]

4.2.1 Relative clauses.

The Baxoje-Jiwere language tends to place the head noun first within the relative clause. An optional special marker *-naha*[43] ‘the one(s) that X’ immediately follows the clause it acts upon, as in *hinage at^{h}a naha* ‘the woman that I saw’ (lit. ‘woman I saw (her) that one’).

(20) a. Relative clause as the object of the sentence:

[42] Edward Small (Ioway) composed this song after being healed during a NAC worship service.

[43] **DorseyND** gave *daha* as another potential relative clause marker, in an example sentence referring to an object rolling under a tent flap that was not fastened down: *t^{h}ą gri were **daha**, ruθewi re* ‘**That which** has gone outside, get ye’ (spelling and punctuation adapted to modern conventions). Further study on Jiwere-Baxoje demonstratives’ potential relationship to positional verbs in a classificatory system is very much needed (Cf. **Rankin2005**).

John hinage at^{h}a naha uk^{h}ič'e k^{h}e.
John woman I.saw.(her) that.one (he)spoke.with.(her) MASC.DECL
'John spoke with the woman that I saw.'

b. Relative clause as the subject of the sentence:
Hinage at^{h}a naha John uk^{h}ič'e k^{h}e.
Woman I.saw that.one John (she).spoke.with.(him) MASC.DECL
'The woman that I saw spoke with John.'

c. Relative clause as the direct object of the verb phrase:
Sam wawagaxe hapagaxe naha araje khe.
Sam book I.wrote.it that-one (he).read.it MASC.DECL
'Sam read the book that I wrote.'

Because the relative clause marker is optional, and the 3rd person pronoun is zero, it can be difficult to translate some sentences, even though the general meaning is clear.

4.3 Conjoined clauses

The conjunction *heda* 'and' may occur at the beginning of the second sentence. Within more rapid speech sequences, it is common to instead have the particle *-na* 'and' occur at the end of the first main clause, separating it from the one to come.

4.4 Beyond statements: Other kinds of sentences

4.4.1 Directives/requests/commands.

These ways to "boss" others are linguistically interesting because many languages omit both first person and verb stating 'I am telling you' to do something. Sometimes second person form is also omitted. The "pragmatic skewing" occurs because overt first and second person forms may be considered too direct, and thus rude (Heath 1998). This politeness pattern holds true with Baxoje-Jiwere directives. One speaks to children in a more direct manner than adults, since few question the authority of parents/elders to tell kids what to do. If speaking to an adult, it would be more polite to use a different form, *ne/nɛ*. However, songs demonstrate expressing a plea with the stronger command particle, *re*:

(21) *Hiyįno wa-a-wa-da-wi re*
Our.Elder.Brother 1PAT-look.at-DEF.PL [command (male speaker)]
'Elder Brother, look at us!' (Davidson 1997)

Finally, one may make a very polite request by using the dual/first person inclusive plural form with hortative enclitic *t^{h}o*. 'Let us all call on the Creator's name', or 'Let's go to the handgame!'

4.4.2 Questions

There are three ways to correctly form questions:

a. Declarative sentence + sentence-final question particle. Word order does not vary; it is an evidential ending particle that signals an answer is expected, because the speaker is asking, not telling something. As with many of these ending particles, the exact form varies by the speaker's gender: *ǰe* 'Q (male speaker)' / *ǰa* 'Q (female speaker)'.

b. By using interrogatives such as *wayé:re* 'who (is it)?' or *dagú:re* 'what (is it)?' The interrogative word receives the special question-sentence melodic contour, which includes lengthening the stressed vowel greatly and making its pitch higher, plus pronouncing the final syllable's pitch lower than usual.

c. Finally, one can create a question by simply omitting all S-final particles, and using the interrogative intonation pattern. See (25b) below. In Ioway/Otoe-Missouria speech, the question pattern is made with a much longer (and slightly higher pitched) vowel in the penultimate syllable of the sentence, and a drop to a lower pitch in the last syllable.

(22) a. *Wabúθga ra-gústa ǰà?*
bread 2SG-want(it) Q.female.speaker
'Do you want any bread?'

b. *Wabúθga ra-gú:sta?*
bread 2SG-want(it)
'You want some bread?'

c. *Ra-gústa dagúre?*
2SG-want(it) what(is.it)
'What (do) you want?' or 'You want what?'

5 Variation in speech by social group

5.1 Tribal identity and language use

The Otoe-Missouria and Ioway people spoke mutually intelligible dialects of one language. After a devastating enemy attack in the late 18th century, most surviv-

ing Missouria fled from their village in Missouri to the Otoe village in southeast Nebraska (Schweitzer 2001). Geographic separation between these two tribes ended about forty years before any language records exist. Although recognition of a leader, "Missouri Chief," is documented in Indian Territory ca. 1885,[44] there is no data on unique Missouria dialect features.[45] At the phonological level, general tendencies have been noted (Table 17). It is not as simple as always substituting one sound for another, yet listeners certainly noticed the distinctions.[46]

5.2 Gender marked speech

Three distinct lexical sets signal speaker's gender.

1. Kinship The first set is kin terms as outlined in Goodtracks' dictionary. Gender is distinguished not only of referent (mother vs. father, etc.) but certain terms vary by sex of speaker as well, especially siblings' words for each other and words for one's in-laws. Birth order establishes seniority and thereby determines respect relationships, and is reflected in words denoting sons, daughters, and siblings, which served as familial address terms.

2. Sentence final particles The second set of gender-indexical terms distinguish between declarative statements, requests,[47] commands, dubitatives, quotatives, and more.[48] These important enclitics audibly punctuate the sentence, informing the listener how to interpret the speech segment. (See Table 18. The list may not be exhaustive.) These enclitics occur in combination with each other, especially when expressing emphasis: *kʰe hų?* 'Indeed!'('This I declare! male speaker').[49]

[44] Cf. the diary of Miss Emma DeKnight, who taught at the Otoe tribal boarding school at that time (DeKnight ms., University of Oklahoma Archives, Norman, OK).

[45] J. O. Dorsey identified a tiny bit of data as specifically Missouri, but it related to only a single speaker, so I prefer to avoid any discussion of the Missouri dialect at present.

[46] There has been intermarriage for a long time, so 100% dialect consistency for a speaker would be very unlikely, regardless of tribal membership. Dialects may be a matter of tendencies, rather than always/never. Family members might use different speech within a household, such as Mr. and Mrs. Small, Ioway and Otoe respectively. The couple understood each other but didn't speak exactly the same (Marsh n.d.).

[47] Earlier scholars have often called the "inclusive request" form in Table 18 the HORTATIVE. marker, related to the rather old-fashioned word to "exhort" someone to do something.

[48] **Trechter1993** presents a thorough analysis of gender enclitics, including the circumstances where a speaker's gender was not the determining factor, for various pragmatic and contextual reasons, including quoted speech.

[49] Dorsey's manuscripts gave the male declaratives as distinguished by tribe, with *kei* as the Otoe form and *ke* as Ioway, while he listed *kʰi* 'Ioway female declarative', but *hą* for Otoe women's equivalent.

Table 17: Dialect differences

I. Phonological variation	Baxoje	Jiwere
A. Difference in fricatives:		
1. Word initially	[š]	[s]
	šúñe	**s**úŋe
	'horse'	'horse'
2. In consonant clusters		
a) before [g]	[sg/hg]	[θg]
	wa**h**ge	wa**θ**ge
	'dish/plate'	'dish/plate'
	hga	**θ**ga
	'(be) white'	'(be) white'
b) before [ǰ]	[ʔǰ/hǰ]	[sǰ]
	ną**ʔ**je, ną**h**je	ną**s**je
	'heart'	'heart'
B. Difference in nasal consonants:		
1. Medial position, esp. before final -e	[ñ]	[ŋ]
	č^{h}idói**ñ**e	č^{h}idói**ŋ**e
	'little boy'	'little boy'
II. Select lexical differences		
A. Nouns:	maináiñe	šúwe
	'little baby'	'little baby'
B. Interjections:	sik'	dąrah
	'incredible!'	tan-rah [Marsh]
		'incredible!'

Note that a narrator will use the character's gender marker during dialogue, rather than indexing his or her own identity. Based on the songs I collected, while mixed gender singing does occur (females may join in during various worship and powwow songs), it is the men who traditionally begin the songs, and texts reflect that with male forms.

Table 18: Sentence final particles showing mood, evidentiality and gender

S-final particle type	Male speaker	Female speaker
Declarative 1	k^he	k^hi
Declarative 2	k'a	hą
Completed Action 'not continuing into present' (Dorsey)		
Inference (2nd hand source) 'I think'	no	na (?)
Command	re	rɛ, ræ
Polite Command	ne	nɛ
Inclusive request 'Let us ...' / 'Would that'	t^ho , dáhò, hda?o	t^ha
Question marker (optional)	ǰe	ǰa
Tag question	ʔa	kʔa
Narrative marker 'It seems'	asgų	asgų
Quotative	ʔe	ʔɛ
Emphatic	hųʔ	æ, ʔa, ʔ
Surprise/excitement 'Exclamation point!'(Dorsey)	t'o	t'ų:

3. **Interjections** The final morpheme set indexes a speaker's gender, and is usually sentence initial. (See Table 19.) It is sometimes only a subtle difference, such as a final vowel shift, while other forms show little apparent derivational relationship between the two forms at all.

Acknowledgments

Various sources of funding have supported this work over the years, from the initial grants which made my graduate work possible as research assistant to Dr. N.

Table 19: Interjections showing mood and gender

Interjection gloss	Male speaker	Female speaker
'Oh, my!' (Pity, love, sympathy, compassion)	hé:hą	inà:, hina:
'Say! Hey!' (Change subject)	kàró	unknown
Joy, Happiness (while singing or talking)	íyà	íyà[a]
Greeting/Acknowledgement, Thank you! Approval/ Sanction	ahó, hó	ahá, há
'Hmph! Aw, Heck!' (critical/doubtful; prior speaker isn't telling it right)	dɛʔ (Both male and female forms = short vowel [ɛ]	hɛʔ
'Well! (GT) Whew!' (Almost!; something nearly happened, but didn't, either good or bad)	gwí, kwí	hí
Interjection gloss	Male speaker	Female speaker
'Well, well [Whitman]; Oh, my!' (negative response, as in niece/ nephew teasing uncle/aunt too harshly; surprised in a bad way)	hé:hą [also glossed as doubting truth]	hára ʔ
'My goodness! Surely not! No way!' (Negative response; surprise, shock)	báʔ, hubaʔ, húʔ húbaʔ (L-R in order of increasing emphasis)	dóʔ, dóʔò (greater emphasis) ga: (**RankinND**)
'Yes' (Affirmative)	húję́	húję̀
'No' (Negative)	hiñégo	hiñéga

[a] Not traditionally female but some use it now.

Louanna Furbee [NSF "Documenting the Chiwere Language" BNS 88-18398 and 902-1337], APS "Chiwere Oral Traditions" [Jill D. Greer, P.I.], as well as linguistic consulting work with Jimm GoodTracks, P.I. for his dictionary project [NSF "Ioway-Otoe-Missouria Dictionary Project" BNS 0553585].

Abbreviations

1, 2, 3 = first, second, third person; 12 = first+second person (first person dual); AGT = agent; AUX = auxiliary; BEN = benefactive; CAUS = causative; DAT = dative; DECL = declarative; DEF = definite; DIM = diminutive; DIR = directional; DU = dual; EMPH = emphatic; EXT = extended; FEM = feminine; HORT = hortative; IMP = imperative; INDEF = indefinite; INCL = inclusive; LOC = locative; MASC = masculine; NOM = nominalizer; OBJ = object; ORD = ordinal; PAT = patient; PL = plural; POSS = possessive; PRON = pronoun; Q = question; SG = singular.

References

Basso, Keith H. 1990. Semantic aspects of linguistic acculturation. In Keith H. Basso (ed.), *Western apache language and culture: essays in linguistic anthropology*, 15–24. Tucson: University of Arizona Press.

Boyle, John P. 2009. *The indefinite prefix [*wa-] in the Siouan languages*. Paper presented at the Siouan and Caddoan Languages Conference, University of Nebraska – Lincoln, June 2009.

Brown, Cecil H. 1999. *Lexical acculturation in native american languages* (Oxford Studies in Anthropological Linguistics 20). Oxford: Oxford University Press.

Cumberland, Linda A. 2005. *A grammar of assiniboine: a siouan language of the northern plains*. Bloomington: Indiana University (Doctoral dissertation).

Davidson, Jill D. 1997. *Prayer-songs to our elder brother: native american church songs of the otoe-missouria and ioway*. Columbia: University of Missouri (Doctoral dissertation).

Davidson, Jill D. 1999. Reflections on linguistic fieldwork in two native american communities. *Practical Anthropology* 21(2). 28–33.

Dorsey, James Owen. 1892. Siouan onomatopes. *American Anthropologist* 5(1). 1–8.

Works in list of references but not cited in text: Davidson 1999,Dorsey

there are several Hopkins&Furbe no date. Please make sure which ones are cited in the text

Goddard, Ives. 1996. Introduction. In William C. Sturtevant & Ives Goddard (eds.), *Languages* (Handbook of North American Indians 17), 1–16. Washington: Smithsonian Institution.

Goodtracks, Jimm G. (ed.). 1992 – present. *Baxoje, jiwere-nyutâji, maûnke ichê wawagaxe: ioway, otoe-missouria language to english dictionary*. Boulder, CO: Center for the Study of Native Languages of the Plains & Southwest.

Goodtracks, Jimm G. n.d. *Welcome to the Ioway, Otoe-Missouria Language website*. Topeka, KS: Baxoje Jiwere Ichˆe – Ioway Otoe-Missouria Language Project.

Greer, Jill D. 2008. The otoe-missouria flag song. In Jie Zhang (ed.), *Proceedings of the 2007 mid-america linguistics conference* (Kansas Working Papers in Linguistics 30). Lawrence: University of Kansas.

Hale, Kenneth & Josie White Eagle. 1980. A preliminary metrical account of winnebago accent. *International Journal of American Linguistics* 46. 17–34.

Hamilton, Rev. William & Samuel Irvin. 1848. *An ioway grammar*. Highland, KS: Presbyterian Mission Press.

Heath, Jeffrey. 1998. Pragmatic skewing in 1 ↔ 2 pronominal combinations in native american languages. *International Journal of American Linguistics* 64(2). 83–104.

Helmbrecht, Johannes. 2002. Nouns and verbs in hocank (winnebago). *International Journal of American Linguistics* 68(1). 1–27.

Helmbrecht, Johannes & Christian Lehmann (eds.). 2010. *Elements of grammar, learner's dictionary* (Hocąk teaching materials 1). Albany: State University of New York – Albany Press.

Hopkins, Jill D. 1988. *Deixis in chiwere*. Columbia: University of Missouri – Columbia (Master's thesis).

Koontz, John E. 1985. A syncopating conjugation *k- stem in lakota. *International Journal of American Linguistics* 51(4). 483–484.

Rankin, Robert L. 1977. From verb, to auxiliary, to noun classifier and definite article: grammaticalization of the siouan verbs 'sit', 'stand', 'lie'. In Robert L. Brown, Kathleen Houlihan, Larry G. Hutchinson & Andrew MacLeish (eds.), *Proceedings of the 1976 mid-america linguistics conference*, 273–83. Minneapolis: University of Minnesota Linguistics Department.

Rankin, Robert L., John P. Boyle, Randolph Jan Graczyk & John E. Koontz. 2003. A synchronic and diachronic perspective on 'word' in siouan. In Robert Malcolm Ward Dixon & Alexandra Y. Aikhenvald (eds.), *Word: a cross-linguistic typology*, 180–204. Cambridge: Cambridge University Press.

de Reuse, Willem. 1994. Noun incorporation in lakota (siouan). *International Journal of American Linguistics* 60. 199–260.

Rood, David S. 1979. Siouan. In Lyle Campbell & Marianne Mithun (eds.), *The languages of native america: historical and comparative assessment*, 236–298. Austin: University of Texas Press.

Rood, David S. & Allan R. Taylor. 1996. Sketch of lakhota, a siouan language. In William C. Sturtevant & Ives Goddard (eds.), *Languages* (Handbook of North American Indians 17), 440–482. Washington: Smithsonian Institution.

Schweitzer, Marjorie. 2001. Otoe and missouria. In Raymond J. DeMallie & William C. Sturtevant (eds.), *Plains*, vol. 13 (Handbook of North American Indians), 447–461. Washington: Smithsonian Institution.

Susman, Amelia. 1943. *The accentual system of winnebago*. New York: Columbia University (Doctoral dissertation).

Ullrich, Jan F. (ed.). 2008. *New lakota dictionary*. 1st edn. Bloomington, IN: Lakota Language Consortium.

Wedel, Mildred W. 2001. Iowa. In Raymond J. DeMallie & William C. Sturtevant (eds.), *Plains*, vol. 13 (Handbook of North American Indians), 236–246. Washington: Smithsonian Institution.

Whitman, William. 1936. *The oto*. New York: Columbia University Press.

Whitman, William. 1947. Descriptive grammar of ioway-oto. *International Journal of American Linguistics* 13(4). 233–48.

is Trechter 1993 or 1995?

-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5
PRO	INDEF	LOC	PAT OBJ	AGT Actor	REF	POS	DAT BEN	INS	Arch 2Pers	VERB STEM	CAU	NEG	PL1	PL2	ASP MOOD
hį- 12AGT *wa*$_{1a}$- 1PL.PAT	*wa*$_{2a}$- 'them, something; indefinitely extended object' *wa*$_{2b}$- 'toward', directional	*a-* 'on' *i-* 'at' *u-* 'in'	*hį-* 1SG *wa*$_{1b}$- *ri*$_{1}$- 2SG	*ha-*, *he-* 1SG *ra-*, *re-* 2SG *a-* 3PL motion verbs	*k*^{h}*i-* 'self'	*gra-* 'one's own'	*gi-* 'for, to'	*ba-* 'by cutting' *bo-* 'with a blow' *da-* 'by heat or cold' *gi*$_{2}$- 'with obj. away from self, pushing with something' *nạ* 'by foot' *ra*$_{2}$- 'by mouth/teeth' *ri*$_{2}$- 'with obj. moving toward self, pulling with something' *ru-* 'with hand, toward self, pulling' *wa*$_{3}$- 'with hand away, by pushing with hand'	*s-*		*-hi* 'make, cause' [+pers. affixes]	*=sgúñį* 'not'	*=ñe* 'gen' [Whitman's indefinite]	*=wi* 'definite'	*=hna* 'future, incompletive'

Figure 1: Verbal template: Prefix slots in order = verb = suffix slots

Name index

Boyle, John P., 18, 49
Brown, Cecil H., 45

Cumberland, Linda. A., 21
Cumberland, Linda A., 8, 10, 18, 21, 60

Davidson, Jill D., 42, 45, 49, 52, 54, 55, 61, 66, 67
Dorsey, James Owen, 62

Eric Hamp, 34

García, Bartolomé, 7
Goddard, Ives, 33
Goodtracks, Jimm G., 38, 39, 41
Greer, Jill D., 50, 51

Haldeman, Samuel Stehman, 3–8, 10
Hale, Kenneth, 38
Hamilton, Rev. William, 52, 56, 65
Heath, Jeffrey, 67
Helmbrecht, Johannes, 39, 41
Hopkins, Jill D., 60, 65

Irvin, Samuel, 52, 56, 65

Jones, Daniel, 4

Kelly, John, 8

Lehmann, Christian, 39
Lepsius, Carl Richard, 4
Lesley, J. Peter, 3
Local, John, 8
Louanna Furbee, 33, 34, 35n3

McBride, Justin T., 21

Pilling, James Constantine, 8

Quintero, Carolyn, 8, 10, 17–19, 21

Rankin, Robert L., ix, 3, 5, 8, 10, 19, 47, 64
Reuse, Willem de, 44
Riggs, Mary Ann Clark, 5, 6
Robert L. Rankin, 34, 35
Roberts, Ian, 27
Rood, David S., 5, 10, 40, 64, 65

Schweitzer, Marjorie, 33, 34, 37, 69
Susman, Amelia, 36

Taylor, Allan R., 64, 65
Trechter, Sara, viii
Truman W. Dailey, 34n1

Ullrich, Jan F., 43, 64

Wedel, Mildred W., 33, 34, 37
White Eagle, Josie, 38
Whitman, William, 34, 35, 37, 39, 42, 45, 48, 49, 52, 53, 55, 56

langsci/graphics/didyoulikethisbook.pdf

Change your backtitle in localmetadata.tex

Change your blurb in localmetadata.tex