Chapter 9

Baxoje-Jiwere Grammar Sketch

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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 It expands upon prior published and unpublished documentation, based upon fieldwork conducted from 1986-96. 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.

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. Stanley.[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.

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 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 a special seminar on Siouan languages. About nine eager students enrolled in the

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[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.

course, the author 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,[2] 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, rather than phonemic per se. Likewise, it tends to appear only in word-final position for a limited set of morphemes, namely interjections and sentence final

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[2] 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 original materials are archived at Luther College, Decorah, Iowa.

particles/enclitics. In those instances, its phonetic abruptness carries an iconic meaning of emphasis, doubt, or even impatience (c.f. Tables 9 and 10).

2.1.2 Affricates

As with the stop series, there are three contrasts: plain affricates /č/-/ǰ/, aspirated /čʰ/, 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': *šuñe* in Ioway vs. *suŋe* in Jiwere.[3] 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, i̧/.

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 *na̧mpʰo* 'finger'.[4]

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

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[3] 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.

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

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 it on the same recording. No minimal pairs clearly establish phonemic significance to vowel length between etymologically unrelated words.[5] 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 (Wedel 1996:432; Schweitzer 1996:447).

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.

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[5] 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.

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' (Good Tracks n.d.), or *gísa* 'to laugh at another (v.)' vs. *gisá* 'a knot (n.)' (Dorsey n.d.) When a root word with two sylla-bles 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.[6]

2.4 Syllable structure

There is a strong tendency to end all syllables with a vowel,[7] 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 following consonant clusters may begin a syllable:

(1) a. stop + liquid: br- *bra-* 'separated, spread in layers, sliced, flat'
      gr- *grų* 'to curse'
   b. stop + glide: *p^{h}y-* *p^{h}yubrą* '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- *šgųñį* 'no; not; (does) not'
      θg- *θga* 'to be white' (old form)
      hg- *hga* 'to be white' (Ioway)

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[6] Cf. discussions of Dorsey's Law in Miner (1979) and Hale and White Eagle (1980).

[7] 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 Hoçąk from Jiwere.

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' (L.W. Robinson ms.)
	θn-	*θni* 'cold' (possibly archaic; Dorsey in Good Tracks n.d.)

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.

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. (Hoçąk 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 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

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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:

(2) *Čʰúgwá   -wi   re.*
House-enter DEF.PL IMP (male speaker)
[from čʰi 'house'+ ugwe̲ 'to enter' + -wi̲ 'DEF.PL ' + re 'IMP(male)']
'Come in the house, you-all.' [Marsh 'Giants' Bk2 LN49]

(3) *Iwálà   -wi ho.*
yonder go   DEF.PL HORT
[from i-'there'+ wa-'directional' + re̲ 'to go'+ -wi̲ 'DEF.PL'+ ho 'HORT(male)']
'Let's go over there!' [Marsh The Twins LN65]

(4) *He-   grahi kʰi.*
1P.AGT- love   DECL (female speaker)
[from ha̲-1P.AGT + grahi 'love' kʰi DECL(female)]
'I love him.'

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.[8] 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:ruǰe* 'table' < *wa-* 'indefinite object' + *a-* 'upon' + *ruǰe* 'eat'. Without the locative *a-* 'upon', the first vowel is not lengthened, and the stress remains on the second syllable: *warúǰe* 'something to eat, food.' Because there is a ∅ 3rd person pronominal prefix, 'food' sounds identical to the 3rd person singular sentence 'He ate (something).'

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

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.[9] The prefixes meaning inalienable possession are bound morphemes similar in shape to 1st and 2nd singular Patient person pronouns, but they differ in having an expressed 3rd person form (which is sometimes dropped in fast speech). (See Table 2 for personal pronominal prefixes.)

Table 1

Kin term[10]	Inalienable possessive prefix		
	1st person sg.	2nd person sg.	3rd person sg.
Father	hį́-ka		
	'my father/FaBr'		
	hį-daje	naje <ri-aje	aje < i-aje
	(old) 'my father'	'your father'	'his/her father'
Mother	hį́-na		
	'my mother/MoZ'		
	hį́-hų	đi-hų /ri-hų	i-hų
	archaic 'my mother'	'your mother/MoZ'	'his/her mother/MoZ'
Man's elder brother	hį-yįna	ri-yįna	i-yįna
	'my elder brother'	'your elder brother'	'his elder brother'
Woman's brother	hį-čįdo	ri-čįdo	i-čįdo
	'my(FEM) brother'	'your(FEM) brother'	'her brother'
Grandfather	hį-tʰuga	ri-tʰuga	i-tʰuga
	'my grandfather'	'your grandfather'	'his/her grandfather'

3.1.2 Address form -o 'speaking to this one'

While *hįtʰára* 'my friend' is the unmarked referential form, a person would switch to *hįtʰáro* 'My friend (address form)' while speaking directly to the special friend (formally established as cultural role).[11] Kin terms also take the same address morpheme when speaking directly **to** that person. The identical final vowel to /o/

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[9] 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' *ičičįŋe* (O.), *ičičįñe* (I.)]: *ihdóge* 'elbow', *iréje* 'shoulder', *isdą* 'eye'.

[10] See Good Tracks dictionary for complete inventory.

[11] 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

substitution happens to 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).[12] 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 they should call the author *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,' 'bucks,' and 'bulls'.

(5) Gender affixes: *-do* 'MASC'; *-mį* 'FEM'
    a) ičʰi**dó**įñe 'boy-child'   < i- 'at/around'+ čʰi 'house'+ -do 'MASC'+
                                      -įñe 'small/DIM' [Ioway]
    b) ičʰi**mįŋ**(e) 'girl-child'   < i- 'at/around'+ čʰi 'house' + -mį FEM +
                                        -įŋe 'small/DIM' [Otoe]
    c) tʰa**do** 'buck, male deer'   < tʰa 'deer'[13] + -do 'MASC'
    d) čʰé**do** 'bull buffalo'   < čʰé 'buffalo, bison' + -do 'MASC'

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].

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

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between the two, to be recognized by this word *-tʰara* '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).

[12] 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.

b. *Hḭnų́-   š'ḭŋe 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 (Rankin 2008:481) and Lakota (Ullrich 2008:708).

Numerals One through ten are the basics from which other numbers are expressed,[14] 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 follows 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*.

(7) *i-* 'ordinal marker': [Marsh n.d. 'The Giant' Book 2]
   a. LN 25 walúxawe i̱θátʰą daháʔe [< i- 'ordinal marker'+θátʰą 'five']
          'bundle fif<u>th</u> it.is.standing-that.one'
   b. LN 30 walúxawe i̱šágwe daháʔe [< i- 'ordinal marker' + šágwe 'six']
          'bundle six<u>th</u> it is standing-that one'
   c. LN 34 walúxawe i̱šáhmą daháʔe [< i- 'ordinal marker' + s'ahmą 'seven']
          'bundle seven<u>th</u> it is standing-that one'

(8) (*i-* 'ordinal marker') + *-yą* 'indefinite article' [Marsh 'The Wanderer']
   a. LN 34 dáñí̱yą utʰą́ʔi̱wagi ašku̧
          'A thir<u>d</u> time he makes them appear to him, it seems.'
   b. LN 35 hetále idóyą dahági síge alé gų́ʔwašku̧ [i=dowe=yą dahági]
          'Then-it-is the four<u>th</u> time-it is again it-is this-he do it-it seems.'

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[14] 'Nine' *sǫkhe* contains a root shared with the Dhegiha languages as well as several Algonquian languages in the Great Lakes region, according to Rankin (2008:481).

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3.1.5 Compound nouns

Jiwere-Baxoje compound nouns[15] often have the modifying word precede the base noun, while other times the modifier(s) follow it.

(9) a. čʰina   'village' < čʰi 'house' + -na 'horizontal?'
     b. čʰina wanaxi   'cemetery' < čʰina 'village' + wanaxi 'spirit, ghost'
     c. walúšge čʰiną   'giant(s) village' [Marsh n.d. 'The Wanderer' Ln 100]
     d. hį́dų́ŋe-nʿąwų́ʔšų   'mouse + paths.indeed' [Marsh n.d. 'The Wanderer' Ln 67]
     e. wanaxi waxoñitʰą   'spirit/ghost + be holy/sacred' [Davidson 1997]
     f. máyą uhą̀we   'heaven' < 'land + full.of.light' [Davidson 1997; Good Tracks n.d.]
     g. máyą wàtahe   'Wanderer' < máyą 'land' +wa- 'directional' + dahe 'be standing'
     h. wą́ŋegíhi   'Chief/Headman' <wąŋe 'man' + gi-ʿBEN/DAT' + -hi 'CAUS'
     i. wąʔkwás'ose   'warrior/veteran/soldier'< wąŋe 'man' + was'ose [16] 'brave'
     j. wąʔšige   'person' < wąŋe 'man' + šige 'again'+/or -ge 'NOM'
     k. wąʔší k'uč'e   'man-hunter' < wąʔšige 'person' + k'uč'e 'to kill'
     l. tʰà waθlų   'roasted deer' < deer + to roast [Marsh n.d. 'The Wanderer' Ln. 175]
     m. iśtą čʰi   '(menstrual) period' [literally 'be alone-house']

These words can also include names, i.e. *mąkʰa ruǰe* 'medicine eaters' denoting those who participate in the religious traditions surrounding the sacred sacrament peyote.

3.1.6 Culture contact and word coinage

There was strong resistance to borrowing from European languages throughout Plains tribes in general,[17] so it is not surprising that Jiwere-Baxoje speakers also

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[15] In other Siouan languages, e.g. Lakota and Crow, there can be a greater degree of noun incorporation. See Ullrich (2008:738) and Gracyzk 1991.

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

[17] Cf. Brown 1999, also Larson n.d.

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, wheel: *ahu* 'wing' > wheel (wagon/car).[18]

(10) a. wagon = námąñį < na 'wood' + mąñį 'moving/walking'

b. train = námąñį dàk'o < námąñį 'wagon' + dak'o 'thunder/fire'

c. photographs/pictures = įje wagaxe < įje 'face' + wagaxe 'writing'

d. Saturday = hąwe ukʰiθre 'day-half' < hąwe 'day' + ukʰiθre '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 2 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 table's 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.[19]

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[18] 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).

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

Table 2: Conjugating different verbs with nouns attached

Jiwere gloss	[N+[PRONOUN-V]]	[N+V] PRON.-AUX	PRONOUN-[N+V]
1) hóθige 'to fish' ['fish + split']	ho-**he**-θige '**I** am fishing'	-	-
2) nąsǰe phiskųñi 'to be unkind' ['heart be good-not']	nąsǰe-**hį**-phiskųñi '**I** am unkind'	-	-
3) nąsǰe pʰi 'to be kind' ['heart be-good']	nąsǰe **ri**-pʰi '**you** are kind'		
4) nąt'ųdą '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 **hįñįwi** '**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.' (1st response) roruθ'ani '**I** am shook up'	roruθ'a **hįñi-wi** '**we**'re shook up' (2nd response)	-
7) iroθetʰą 'to abuse' ['body + ?']	-	-	iriroθetʰą '**you** were abused' (1PSg & PL also)
8) irokʰupʰi 'to be handsome' ['body +?look+good']	-	irokʰupʰi **hįñiwi** '**we** look good' [<añi 'to have']	i-**ri**-roskʰupʰi '**you** are handsome' (1PSg also)
9) rosje 'to sweat' [<'body+?']		rosje-**ri**-ñe 'they made **you** sweat' [CAUS.]	**wawa**-rosjewi '**we**'re sweating' (1P Sg. 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' (1P Sg. & Pl. also)
12) hoxga 'to hiccup' [<ho 'voice' + sound symbolic xga]			**ha**-hoxga mąñi '**I** am hiccupping'
13) hoxu 'to cough' [<ho 'voice' + sound symbolic xu]	-	-	**ha**-hoxu 'I coughed.'

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 /∅/, so the conjugation pattern is unknown: *tʰá čʼèhi mą̃ñà* '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 following three prefixes all incorporate the basic *wa-* 'indefinite object' (sometimes contracted with a locative prefix also) to action word(s).

(11)   a.   wa-
      wagáxe 'paper' < wa=INDEF.OBJ + gaxe 'to scratch, write'
      waruwaha 'bundle'< wa + ruwaha 'to show with hands'

   b.   wi-
      wí:ų 'tool' < wa=INDEF.OBJ + i- 'at, to' + ʔų 'to do, make, create'
      wí:ró:ha 'kettle' < wa + i- + róhą 'plenty, lots, much, many'
      wí kʰą̀hį 'bridle' < wa + i- + kʰą̀hį 'blood-vessel, sinew, cord' [Marsh 'The Outsider' Ln. 65]

   c.   wo-
      wočʰexi 'difficult times, trials' < wa=INDEF.OBJ + u-'in' + be.cruel/stingy?
      wóyąwe 'festivity' < wa= + u- + yąwe 'sing'? [20]

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 1 (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, Marsh n.d., also Hopkins and Furbee n.d.).

   [-10] 1st person patient pronouns:
      hiį =singular 'me'
      wa$_1$ = dual 'us two'

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[20] 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).

[-9] The second *wa*- set:

wa$_{2a}$- 'them, something' Indefinitely extended object (also detransitivizes the verb)

wa$_{2b}$- 'toward, directional' [precedes all person prefixes except *hiį*- 1st p. patient 'me']

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

(12)   a.   ***wa**naxi* 'spirit, ghost'

< wa$_{2a}$- 'indefinitely extended object' + naxi 'breath, life'.

   b.   *Hinage **wa**-t^{h}a   -naha   waye:re   na?*

Woman **them**-I.see those-ones who-are-they Q

[wa-'them' a-t^{h}a 'I see' (irreg. verb)]

'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.[21] The next case illustrates directional *wa*- frequently found in prayer songs.

(13)   *hįyįno   **wa**- hį   -na -wi*

OurElderBrother DIR- 1PL.AGT -go -DEF.PL

'We're going toward Our Elder Brother (Jesus).' (Davidson 1997)

[-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$_1$- + a- 'on'

wo: < wa$_1$- + u- 'in'

wi: < wa$_1$- + i- 'at, to, by'

[-7] Object/patient pronouns:

wa$_{1b}$- 'us (speaker & another, usually listener)'

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[21] 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.

ri- 'thee (2nd person singular)'
mį- 'me (1st person singular)'

[-6] Agent pronouns (1st and 2nd person):
    ha-, he- 'I/1st p. singular agent'
    ra-, re- 'thou/2nd p. singular agent'
    a-, e- '3rd p. plural Agent' with motion verbs only[22]

[-5] Reflexive *kʰi-* '(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 *kʰi* reduplicates, giving *kʰikʰi*, it adds the sense of reciprocal action 'to/with each other'.

[-4] Possessive *gra-* 'one's own'
The possessive prefix gives additional information about social relations between persons and things mentioned in the verb complex.

(14) Excerpt from the Otoe-Missouria Flag Song:
       E-gra-ña-gri-ñe.

e-	***gra-***	*añi*	*+a-*	*-gri*	*-ñe*
3obj[Ablaut]-	poss-	have	+3pl	-came.back.(home)	-pl.indef

       'They brought it (the flag) back home.' (Greer 2008)

[-3] Benefactive/dative *gi₁-* 'for, to'

[-2] Instrumentals (describing how an action was completed):
    ba- 'by cutting'
    bo- 'with a blow'
    da- 'by heat or cold'
    gi₂- 'with object away from the body, by pushing or striking with an
       object'
    ną- 'with foot/feet'
    ra₂- 'by mouth, teeth'
    ri- 'with held object, toward the body, pulling with an object/tool'
    ru- 'with hand, toward oneself, by pulling with the hand'
    wa₃- '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 (Rankin 2005:483). They make very specific distinctions in the world of human activity. 'Long horizontal object being cut

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[22] 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 *etʰawe* 'his (singular)', *etʰewi* 'theirs (definite pl.)', and *aré* 'it is' (independent pronoun that primarily serves as demonstrative now, loosely 'that').

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 *wa₃-* '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' (Rankin 2005:483-485); however, I have not found data pertaining to that distinction in Jiwere-Baxoje thus far.

[-1] 2ⁿᵈ person *s-*

Archaic form that stands for 'you' (2ⁿᵈ person) on a small number of specific verb stems. Siouan scholars have found related forms in the Mississippi Valley subgroup (e.g. Quapaw allomorph *š-/ž-*), even extending into Proto-Siouan, suggesting it is of ancient origin (Rankin 2005:479-480). Over time, it was probably replaced in less common verbs by the regular 2ⁿᵈ person forms *ra-, ri-*, but remained in very frequent verbs, which are more resistant to change.

(15) *Arastawi kʰe.*

a- ra-   s   -da -wi   kʰe

on you.AGT archaic.2 see PL.DEF MASC.DECL

'You (all) see it.' (Final line, Otoe-Missouria Flag Song, Greer 2008)

[0] Verb root/stem

[+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*, as in *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 (something)' are still present.[23] 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.

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[23] 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 later 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' (Taylor 1976, Hopkins 1987). 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'.

(16) *Hịyịno*   *| Wak^hąda- yịŋe | mąya čegi wahire nayị-**wa-ra***
      Our-elder-Brother|God-   son)|land this sick   stand-|**them-you(make)**
      na
      and|.' (Davidson 1997)

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

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

[+2] Negation *-skųñị* **'not'**

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

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

(18) *wa-wa...-wi,   hǐ-...-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 dual form. The two potential plurals above differ by whether the people or things being referenced represent given or new information.[24]

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.

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[24] 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...'

(19) wówak'ųñawi

< *wa*	-∅-	*u-*	*wa-*	*k'ų*	*-ña*	*-wi*
12PAT	-(**it**)-	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)

[+5][25] **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 Rankin (n.d.). The *e-* itself ablauts to *a-* with verbs of motion[26]

[+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 "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 8, 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 PRO prefixes, which strongly tend to be animate for practical contextual reasons. The same pattern is found in most SOV languages (Rankin 2005:490).

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.[27]

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[25] While Rankin (n.d.) 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.

[26] Comparatively speaking, there is not yet an elegant historical explanation of ablaut across the various members of the Siouan language family (Rankin 2005:466-468).

[27] 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.

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.[28] They include:

> máñį 'going around, moving (in the characteristic way for that creature)'
> mína 'sitting /dwelling'
> náŋe 'be in a sitting position'
> háŋe 'be in a lying or reclining position'
> dáhe 'be in a standing /upright position'
> náyį 'to stand something/someone up'

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 section B). Each person's role is also 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' with 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 *ra₂-* and patient *ri₂-*, and also second person plural agent and patient forms. See Table 3 for further illustration.

Table 3: 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-wa-	wa-wa-[+ -wi]	ri-	ri-[+ -wi]

*The second form with final /e/ is an example of the vowel change that takes place when the prefix is followed by certain derivational morphemes such as *gra-* 'one's own

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[28] In addition to the continuative aspect, Rankin (2005:484-485) 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 8.

(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)'.[29] A potential origin for this word is *nąhje* 'heart' plus *u-gi-dą* 'be depressed toward' (Whitman 1946:243). 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 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 3rd person *eᵗʰawe* 'his/hers (singular)' or *eᵗʰewi* '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.[30] Once again, the /a/-/e/ alternation is likely another example of ablaut.

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

Table 4: Personal pronouns (Hamilton and Irvin 1848, Marsh n.d.)

Person	Independent	Possessive
1 Singular	mįre	mįtʰáwe
1 Dual Inclusive	hįre	hįtʰáwe
1 Plural Inclusive	-	hįtʰéwi
2 Singular	rire	ritʰáwe
2 Plural	-	ritʰéwi
3 Singular	éʔe	etʰáwe
3 Plural	aré	etʰéwi

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.

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

[30] Marsh n.d., Taylor 1976.

Table 5: Regular verb paradigm

PERSON	ACTIVE VERB	STATIVE VERB	TRANSITIVE VERB
1 Singular	ha-mąñį 'I walk/move'	hį-yą , mį-yą 'I sleep'	ha-k'e 'I dig (it)/ I dug (it)'
1 Dual Inclusive	hį- mąñį 'We 2 walk'	wawa-yą 'We 2 sleep'	hį-k'e 'We 2 dig (it)'
1 Plural (definite)	hį- mąñį-wi 'We-all walk (>2)	wawa-yą -wi 'We-all sleep'	hį -k'e-wi 'We-all dig (it)'
2 Singular	ra-mąñį 'You(sg) walk'	ri-yą 'You(sg) sleep'	ra-k'e 'You (sg)dig (it)'
2 Plural (definite)	ra-mąñį-wi 'You-all walk'	ri-yą -wi 'You-all sleep'	ra- k'e-wi 'You-all dig (it)'
3 Singular	∅-mąñį 'He/she/it walks'	∅-yą 'He/she/it sleeps'	∅-k'e 'He/she/it digs (it)'
3 Plural (definite)	∅-mąñį-wi 'They walk' (known)	∅- yą-wi 'They sleep' (known)	∅- k'e-wi 'They dig (it)' (known)
3 Plural (indefinite)	∅-mąñį-ñe 'They walk' (unknown)	∅- yą-ñe 'They sleep' (unknown)	∅- k'e -ñe 'They dig (it) (unknown)

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

All irregular verb stems begin with *d-, r-*, or *w-* sounds (Whitman 1946:243). 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:[31]

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[31] 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 (Dorsey n.d.

D- Stems [d becomes t in 1ˢᵗ person; 2ⁿᵈ person pronominal AND archaic 2ⁿᵈ person *s, š*]

a-da 'to see'	a<u>t</u>a	'I see (it/him/her)'
	ara<u>s</u>da	'You(sɢ) see (it…)'
	<u>h</u>áda	'We two (1sɢ & 2sɢ) see (it,…)'
	<u>h</u>ádawi	'We (ᴘʟ) see (it,…)'[32]
	ada	'he sees her/it'
	a<u>ri</u>ta	'I see you'
	a̧ra<u>š</u>da	'You(sɢ) see me'
	<u>h</u>átawi	'we (ᴘʟ) see him'
	<u>wawa</u>dáwi	'(he) sees us (ᴘʟ)'

R- Stems [r becomes d in 1ˢᵗ person; 2ⁿᵈ personal pronominal; archaic 2ⁿᵈ person *s, š*]

rumi 'to buy'	ha<u>d</u>umi	'I bought (it)'
	ra<u>st</u>umi	'You (sɢ) bought (it)'
	hárumi	'We two bought (it)'
	rumi	'He/she bought (it)'

W-Stems [w becomes p in 1sɢ. ᴀɢᴛ; ∅ regular 2ᴀɢᴛ, archaic 2ⁿᵈ person *s, š* OR 2ᴀɢᴛ and archaic 2ⁿᵈ person *s, š*]

awáđo 'to point at, point to'	ápađo	'I point at (it)'
	ašwáđo	'You point at (it)'
	háwađowi	'We (ᴘʟ) point at (it)'
	awáđo	'He/she/it points at (it)'

There may be exceptions to these general patterns, as in the verb *re* (Ioway)/*đe* (Otoe) 'to go'; while the stem appears to fit the stem-initial critera for an R-stem verb (at least in Ioway), there is a different consonant shift. The 2nd person *šre* 'You (SG) go' follows the archaic 2nd P. *s* inflection, but instead of the predicted **hate* 'I go' as one might expect, the correct form is *hajé* 'I go'. Perhaps the Otoe version (now archaic) as given by Dorsey (n.d.) reflects a more conservative form, and a different verb class historically. (*The asterisk in this case denotes an unattested form, which may be ungrammatical.)

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.[33]

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[32] Stress shifted left to reflect a 'heavy' syllable resulting from two vowels coalesced together, a-plus hi̧- 1ᴘᴀᴛ

[33] While English lacks the motion verb equivalent to the vertitive, the compound noun 'home-coming' is perhaps the closest in meaning and emotional power.

Otoe-Missouria patriotic songs often have this powerful motion verb, poetically high-lighting the fear involved when soldiers leave home, and joy when they return safely to their families.[34] Motion verbs are also distinguished by a 3rd person plural prefix *a-* which ablauts 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-* and the possessive *gra-*. (See Table 6).

Table 6: Jiwere motion verb stems (Taylor 1976:293)

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 coincident.

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 a distinct 1st and 2nd 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:[35] 1) location of speaker 'my spot here' *jĕ-*, 2) location of listener 'your spot' *se-*,[36] 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-* 'motion toward' may follow 1st or 2nd person forms to complete the variety of distinctions recognized.

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

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

[36] This form *se-* with initial /s/ representing the 2nd person is very likely related to the archaic 2nd person /s/ found in conjugations of some conservative (irregular) verbs also (Rankin 2005:480).

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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):

(20) *Go:čʰi Hįyįno*   *hį*   *-ha* *-wi*   *-yi-yi*
      now   Our.Elder.Brother(male.spkr) we-2AGT -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 all Siouan languages, and can create interesting semantic sets differing by a single consonant sound (Rankin 2005:468-469). 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 Hoçąk and Dakota in particular. Baxoje-Jiwere sound symbolic vocabulary sets include:

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'
tópĕ	'pattering sound', nątótopĕ 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)[37]
kh'é-ghe,	'crow (bird, n.)' [initial syllable imitating crow's call] (Dorsey
kh'á-ghe	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.[38]

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 *upʰa'pʰarehi* 'understanding only bits and pieces, imperfectly comprehending' comes from *upʰarehi* 'to understand, notice, investigate'[39] 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

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

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

[39] 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).

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:

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

Other items elicited include the repeated form + the normal diminutive suffix, *-iñe* 'little one': *mamáɉñe* 'baby' (Ioway), *haháɉñe* 'baby colt, horsey' (Davidson 1998).

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,[40] 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, …').

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[40] 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.

4.1.3 Article(s)

Indefinite article *-yą, -iyą* 'a, one' is derived from the word for 'one' *iyą́kʰi*.[41] Definite article is *-ge*.[42] *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 (Rankin 1977, 2005; Rood and Taylor 1996:455).

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 and Irvin 1848)
> taheda 'how far?'
> danáha, danáhaje 'which?'[43]

(21) *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 7 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.

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

[42] 41Until 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 Hoçąk 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.

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

Table 7. Comparison of demonstrative pronouns to deictic directional prefixes

Demonstrative Pronouns		Deictic Directional Prefixes (Hopkins 1988)	
jeʔe	'this one'	je-	1 LOC 'near me', 'this here'
seʔe	'this one [near you]'	se-	2 LOC 'near you' [also še- Ioway]
		i-	inclusive 12 LOC 'here'
eʔe	'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'
gaʔe	'that one'	ga-	'there'

Aré 'it is' "points" back at something previously mentioned, and appears with great frequency in the texts collected by Gordon Marsh (Hopkins and Furbee n.d.) It can be paired with the emphatic bound morpheme *-sų* 'indeed' (*aréʔsų* '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 textit-sge 'if', *-da* 'when', *-sji* 'but, although', *nuʔa* 'but'. The temporal particle fills that function as follows:

(22)   *Hįyįno|*   *wo-waxoñitą*   *ritʰawe urakʰi-ñe*   **da|**
     'Our.Elder.Brother| ceremony-sacred your   they.tell.about-INDEF.PL **when|**
     waʔų   *warupʰi.*   *Rire [∅] a-ñe*   *(h)na*
     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).[44]

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*[45] 'the one(s) that X' immediately follows the clause it

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

[45] Dorsey (n.d.) 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: *tʰą gri were **daha**,*

acts upon, as in *hinage at^ha naha* 'the woman that I saw' (lit. 'woman I saw (her) that one').

(23) a. Relative clause as the object of the sentence:
      John hinage at^ha   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^ha 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 1st person and verb stating 'I am telling you' to do something. Sometimes 2nd person form is also omitted. The "pragmatic skewing" occurs because overt 1st and 2nd 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*:

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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. Rankin 2005: 469-475, 485-487).

(24) *Hįyįno   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 *tʰo*. '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.

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

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

   c. *Ra- gusta   dagure?*
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 surviving 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,[46] there is no data on unique Missouria dialect features.[47] At the phonological level, the following general tendencies have been noted (Table 8). It is not as simple as always substituting one sound for another, yet listeners certainly noticed the distinctions.[48]

5.2 Gender marked speech

Three distinct lexical sets signal speaker's gender.

1. Kinship The first set is kin terms as outlined in Good Tracks' 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 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

Table 8. Dialect differences

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[46] 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).

[47] 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.

[48] 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.)

I. Phonological variation	Baxoje	Jiwere
A. Difference in fricatives:		
1. Word initially	[š]	[s]
	šúñe	súŋe
	'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 [j]	[ʔǰ/hǰ]	[sǰ]
	nąʔǰe, nąhǰe	nąsǰe
	'heart'	'heart'
B. Difference in nasal consonants:		
1. Medial position, esp. before final -e	[ñ]	[ŋ]
	čʰidói**ñ**e	čʰidói**ŋ**e
	'little boy'	'little boy'
II. Select lexical differences		
A. Nouns:	mamáiñe	šúwe
	'little baby'	'little baby'
B. Interjections:	sik'	dąrah
	'incredible!'	tan-rah [Marsh]
		'incredible!'

2. Sentence final particles The second set of gender-indexical terms distinguish between declarative statements, requests,[49] commands, dubitatives, quotatives, and more.[50] These important enclitics audibly punctuate the sentence, informing the listener how to interpret the speech segment. (See Table 9 below. The list may not be exhaustive.) These enclitics occur in combination with each other, especially when expressing emphasis: $k^he\ hų?$ 'Indeed!'('This I declare! male speaker').[51]

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.

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

[50] Trechter (1993) 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.

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

Table 9. Sentence final particles showing mood, evidentiality and gender

S-final particle type	Male speaker	Female speaker
Declarative 1	kʰe	kʰi
Declarative 2 Completed Action 'not continuing into present' (Dorsey)	k'a	hą
Inference (2nd hand source) 'I think'	no	na (?)
Command	re	rɛ, ræ
Polite Command	ne	nɛ

Table 9 continued

S-final particle type	Male speaker	Female speaker
Inclusive request 'Let us ...' / 'Would that'	tʰo , dáhò, hdaʔo	tʰa
Question marker (optional)	ĕ	ǎ
Tag question	ʔa	kʔa
Narrative marker 'It seems'	asgų	asgų
Quotative	ʔe	ʔɛ
Emphatic	hų́ʔ	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 10.) 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.

Table 10. 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[52]
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!'	hé:hą	háraʔ
(negative response, as in niece/ nephew teasing uncle/aunt too harshly; surprised in a bad way)	[also glossed as doubting truth]	
'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: (Rankin n.d.)
'Yes' (Affirmative)	hújé	h'ujè
'No' (Negative)	hiñégo	hiñéga

Abbreviations

The following abbreviations are used: 1,2,3 - first, second, third person, 12 - first+second person (first person dual), AGT - agent, BEN - benefactive, CAUS - causative, DAT - dative, DECL - declarative, DEF - definite, DIM - diminutive, DIR - directional, EMPH - emphatic, EXT - extended, FEM - feminine, HORT - hortative, IMP - imperative, INDEF - indefinite, LOC - locative, MASC -masculine, NOM - nominalizer, OBJ - object, PAT - patient, PL - plural, POSS - possessive, Q - question, SG - singular.

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[53] See Schwartz n.d. for persuasive evidence confirming many Siouanists' hunch that Gordon Marsh is the true author of the 1947 Iowa-Otoe grammar in IJAL.

-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 2ndP	VERB STEM	CAU	NEG	PL1	PL2	ASP MOOD
hį- 1 dual AGT *wa₁ₐ* 1p PAT	*wa₂ₐ* 'them, something, indefinitely extended object' *wa₂ᵦ-* 'toward, directional'	*a-* 'on' *i-* 'at' *u-* 'in'	*wa₁ᵦ* *hį-* 1stp SG *ri-* 2nd p.SG	*ha-, he-* '1pSG' *ra-, re-* '2pSG' *a-* 3rd p.PL MOT. verbs	*kʰi-* 'self'	*gra-* 'one's own'	*gi-* 'for, to'	*ba-* 'by cutting' *da-* 'by heat or cold' *giᵢ-* 'with obj. away from one's body, pushing with something' *na* 'by foot' *ra-* 'by mouth/teeth' *ri-* 'with obj. moving toward one's body, pull-ing with something' *ra-* 'with hand, toward one's body, pulling'	*s-*		*-hi* 'make, cause [+pers. affixes]'	*sgúnį* 'not'	*=ñe* 'gen [Whitman's inde-'	*=wi* 'definite'	*hna,* 'fut, incompletive'

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