Advances in the study of Siouan languages and linguistics

Edited by

Catherine Rudin

Bryan J. Gordon

Studies in Diversity Linguistics 10

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

Contents

Preface

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

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 The majority of work on Siouan languages is unpublished, existing only in the form of conference papers or manuscripts.[2] This volume is a step toward making information on Siouan languages more broadly available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

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

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

[2] Many of these unpublished works are collected in the electronic Siouan Archive, maintained by John Boyle at the University of California at Riverside.

All Siouan languages possess a rich variety of applicative affixes, confirming Polinsky's (2013) observation that applicatives are common in North America and adding another language family to her list of applicative-rich families in the area. Helmbrecht (2006) 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, Murasugi (2000) 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. Ho-Chunk 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

[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.

languages which have the unusual feature of a phonemic voicing distinction in 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" languagesPronominal Argument Hypothesis (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 2003; Johnson 2016; Johnson, Rosen & Schuck 2016; Rosen 2016).

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, Kanza, Omaha and Ponca, and likely Michigamea as well (Kasak 2016; 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 transliterate all Lakota data throughout the volume using the orthography of the *New Lakota Dictionary* (Ullrich 2012).

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 Ho-Chunk, Kanza, and Osage. Part II opens with Linda Cumberland's interview with Robert Rankin about his work with Kanza language programs. Jimm Goodtracks, Saul Schwartz, and Bryan Gordon present three

different perspectives on Baxoje-Jiwere language retention. Justin McBride applies formal syntax to the solution of a pedagogical problem in teaching Kanza. 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 Ho-Chunk 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 Kanza 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 Kanza. 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 Nation led to a grammar and dictionary of that language (see Cumberland 2016), 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 Kanza as well as more theoretical courses in phonology, syntax, and historical linguistics. Perhaps Bob's greatest gift to the field was his encouragement of others. At conferences and on the Siouan List email forum, he was unfailingly patient and encouraging, answering all questions seriously, explaining linguistic

terms to non-linguist participants and basic facts of Siouan languages to general linguists with equal enthusiasm and lack of condescension.

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

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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 (**Haldeman1859**; **Haldeman1860**). 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.

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 (**Maximilian18391841**) brief vocabulary of Kaw, Kanza or Kansa (**Rankin1994**), 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 **Lesley1881** 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' (**Haldeman1859** also produced in book form as **Haldeman1860**). 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 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 **Lepsius1863** 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). **Haldeman1860** 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 (**Jones1909**) 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 **Haldeman1860** a corrected and book-length edition of **Haldeman1859** 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.

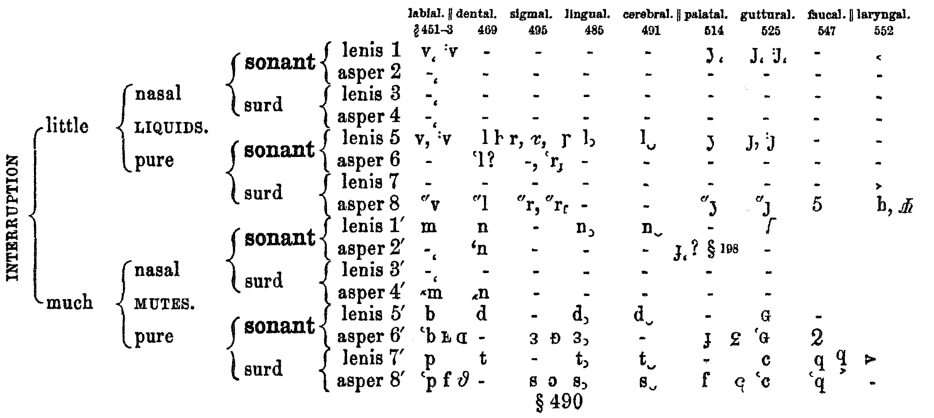
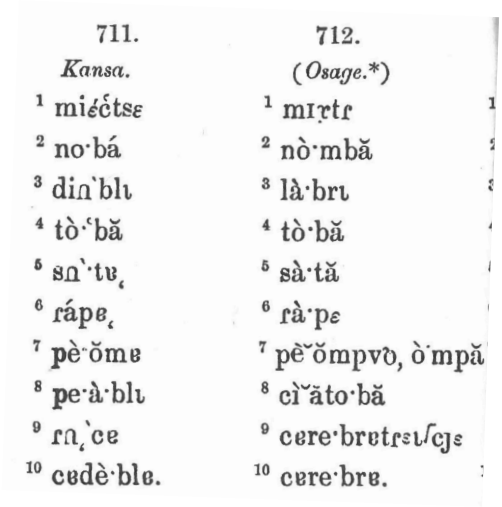


Figure 1: A digest of consonantal symbols in **Haldeman1860**

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) **Haldeman1860** provided data in the form of 75 cardinal numeral sets from 1–10 from a wide range of languages of Europe, Asia and North America (plus Grebo from Liberia). A number of these were Algonquian, Muskogean and Iroquoian languages in addition to numerals from Makah, Chinook, Comanche, Jicarilla Apache and the Yuman language Iipay ʿAa. Among the languages on which Haldeman tried out his spelling system are the Dhegiha Siouan language Kanza (for which he also provided some Santee parallels for certain forms from **Riggs1852** 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 **Rood1975** 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 **Rankin1994** showed, Max von Wied (**Maximilian18391841**) had described sounds in various Dhegiha languages (Wied documented Omaha, Ponca, Kanza and Osage) quite well within the limitations of his annotated Franco-German spelling system. This means that though his work is superb for its time he missed many crucial details and failed to record other details consistently. Haldeman's



711.	712.
Kansa.	(*Osage.**)
1 miɛ́ctsɛ	1 mɪɾtɾ
2 no·bá	2 nò·mbă
3 diɲ`blɪ	3 là·brɪ
4 tò·ˈbă	4 tò·bă
5 sɲ`·tu꜀	5 sà·tă
6 ɾápɐ꜀	6 ɾà·pɛ
7 pè·ŏmɐ	7 pĕ˘ŏmpvɒ, ò·mpă
8 pe·à·blɪ	8 cì˘ăto·bă
9 ɾɲ꜀`ce	9 cɐre·brɐtɾɛɪ/cjɛ
10 cɐdè·blɐ.	10 cɐre·brɐ.

Figure 2: Numeral data from Kanza and Osage (**Haldeman1860**)

KANSA (=cɒnᵊɒ.)

634. *The vowel* Y, French *u*, is found here, although very rare in the aboriginal languages of North America. In our examples we add (in parentheses) the Dacòta equivalents, but placing Riggs' diacrits *after* instead of over the letters, as g· (which is compared with ghain,) s′, English *sh;* h·, 'a deep surd guttural;' c′, Eng. *tsh;* z′ Eng. *dzh;* *n*, as in English *sing*, and French *bon*, the two being confounded after eighteen years study by a number of missionaries. Probably both sounds occur, as in Kansa.

ear,	nɐtá (nog·e)	*forehead,*	pĭèsᵋsᵋ (ité)
eye,	ɪɾtátɐ˘/ɐ˘ (is´tá)	*fan,*	ĭcīlăɟɐ (ic´ádu)
brow,	ɾtáhɪɾăbă (is´táh·e, *eye-ridge.*)	*pipe,*	nŏnóbă (c´*a*ndúhupa, c´*a*ndí, tobacco.)
mouth,	ìhă (i)	*knife,*	mòhɛ (mi*n*ná)
tongue,	ɟéssɛ* (c´ez´í)	*warm,*	mɐ.ɾtjèa˙v
nose,	pɲh* (póg·e)	*leggins,*	hy`/ɢă (hu*n*ská)
nostril,	pɲrʊ′ɾɐ (póg·e-oh·dóka, nose-hole.)	*shirt,*	ɒscɒ´scŏʊcɹdo꜀ʊdă (*o*nh·doh·da.)

* Pronounce each *s*, and the *h*.

Figure 3: Lexicon from Kanza, with some Dakota parallels from **Riggs1852** (**Haldeman1860**)

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 (**Haldeman1860**). But he did not make the leap (as **Garcia1760** had done for Coahuilteco) by discovering that what made these sounds distinctive from other speech sounds but similar to one another was their common possession of ejective quality, with the corollary that ejectives should be represented consistently. As a result he was unable to indicate the ejective quality of the final consonant in Caddo *wists'i* 'one'. In fact, Haldeman's attempts at transcribing Caddo (for instance Haldeman's <vátɐt'> for *waadat* 'earth', in which he fails to hear that the medial stop is voiced: **Haldeman1860**) 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 **Haldeman1860**) 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 (**Haldeman1872**). The discussion in **Pilling1887** and the brief account in **KellyLocal1989** written incidentally by the academics who taught phonetics to this author, are rare exceptions to this neglect.

Haldeman's data on Osage, comprising merely the cardinal numerals from 1 through 10, and the corresponding forms in Kanza, help us to get a better sense of his transcriptional techniques. Modern Osage data are from **Quintero2009** and Kanza data from **CumberlandRankin2012** Original transcriptional systems have been preserved. We note that the two languages, though very close, are represented differently in regard to orthographic conventions employed to indicate postalveolar sibilants, vowel length and nasalized vowels.

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

3 Modern counterparts of the data

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

Table 1: Cardinal Numerals (**Haldeman1860**)

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

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

Table 2: Additional Kanza lexicon (**Haldeman1860**)

	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

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 <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 **Haldeman1860** available from archive.org.)

The forms are in general readily identifiable from recording of the languages over a century later, as the references from the Kanza and Osage dictionaries show (**CumberlandRankin2012** for Kanza, and **Quintero2009** 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 *kdébną*; **Rankin1982**). 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*; **Rood1996**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 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

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

'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 languages 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 (Robert L. Rankin'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.

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Chapter 2

NP-internal possessive constructions in Hoocąk and other Siouan languages

Johannes Helmbrecht

Languages usually have more than one construction to express a possessive relationship. Possessive constructions in an individual language usually express semantically different relations, which are traditionally subsumed under the notion of possession such as part-whole relationships, kinship relationships, prototypical ownership, and others. Hoocąk and the other Siouan languages are no exception from this many-to-many relationship between possessive constructions and semantic kinds of possession. The present paper deals with NP-internal types of possession in Siouan languages leaving aside constructions that express possession on the clause level such as benefactive applicatives, reflexive possessives and the predicative possession. The NP-internal possessive constructions will be examined according to the semantic/syntactic nature of the possessor (regarding the Animacy Hierarchy), and the semantic nature of the possessed (alienable/inalienable distinction). I will begin with an analysis of Hoocąk and will then compare the Hoocąk constructions with the corresponding ones in some other Siouan languages. At least one language of each sub-branch of Siouan will be discussed. It will be shown that the choice of different NP-internal possessive constructions depends on both semantic scales (the Animacy Hierarchy and the alienable/inalienable distinction), but in each Siouan language in very individual ways.

1 The structure of NP-internal possessive constructions

It may safely be assumed that all languages have grammatical and lexical means to express a possessive relation between an entity A and an entity B. Semantically, possession is a cover term for a broad range of distinct relations, which are expressed by possessive constructions (PC) in the languages of the world. Central to the notion of grammatical possession are the relations of ownership, whole-part relations, and kinship relations. Less central to the general notion of possession are attribution of a property, spatial relations, association, and perhaps nominalization. All these relations may be expressed by NP-internal possessive

constructions in English as exemplified in Table 1.[1]

Table 1: Semantics of possessive relation in the broad sense (cf. **Dixon2010**)

Entity A	Possessive relation	Entity B	English example
Possessor	⟷	**Possessed**	
	Ownership		my car/ Peter's house
	Whole-part		Mary's teeth/ the teeth of the bear
	Kinship		Peter's wife/ my daughter
	Attribution of property		her sadness/ his age
	Spatial relation		the front of the house/ the inside of the church
	Association		Jane's teacher/ her former school

Not all of the different kinds of relations in Table 1 can be expressed by possessive constructions in all languages, but in most cases ownership, whole-part, and kinship relations are covered by their NP-internal PCs. It is still an open question whether there is a general semantic notion of possession that covers all relations expressed by PCs. There is at least one prominent approach to possession which claims that there is a semantic prototype with a core and a periphery (cf. Seiler's prototype approach (**Seiler1983**; **Seiler2001**); and a critical examination of it in **Helmbrecht2003**). Others reject this idea (cf. for instance **Heine1997 Dixon2010** and others).

Languages usually have more than one syntactic construction expressing possessive relations on the clause level as well as on the NP level. In Tables 2 and 3, there are examples of different possessive constructions from Hoocąk,[2] English and German for illustrative purposes.

The present paper deals only with PCs on the NP level. Languages often possess more than just one NP-internal PC, as is the case for instance in English. English has the *of*-construction and the genitive *=s* construction to express possession NP-internally; similarly for German. If there are two or more NP-internal PCs in a language, the choice of these constructions often depends on the semantic and syntactic category of the possessor and/or the semantic type of the possessed entity.

[1] See **Dixon2010** for a more detailed discussion of these relations.

[2] Hoocąk, formerly also known as *Winnebago*, is a Siouan language still spoken in Wisconsin. Hoocąk together with Otoe, Ioway, and Missouria forms the Winnebago-Chiwere sub-branch of Mississippi-Valley Siouan. For the widely accepted classification of Siouan languages see, for instance, **Rood1979** Mithun (1999: 501), and Parks & Rankin (2001).

Table 2: A brief typology of possessive constructions (part 1, Clausal)

level	construction type	examples
Clause	predicative possession	English *I **have** a blue car.* *The blue car **belongs** to me.*
	external possession[a] (possessor raising)	Hoocąk (BO979) *Huuporo=ra **hį**-teek-ire …* knee=DEF **1E.U**-hurt-SBJ.3.PL 'When my knees hurt, … '
	dative of interest	German *Sie schneidet **ihm** die Haare* she cuts **him.DAT** the hair 'She cuts his hair.'
	beneficiary -possessor polysemy	Hoocąk (**Helmbrecht2003**) *Wažątírera hįįgí'eenąą.* *wažątíre=ra hi<**hį-gí**>'e=nąą* car=DEF <**1E.U-APPL.BEN**>find=DECL 'He found the car for me.'/ 'He found my car.'
	possessive reflexive	Hoocąk (**HelmbrechtLehmann2010**) *Hinįk=ra nąąk<**kara**>t'ųp='anąga* son=DEF <**POSS.RFL**>embrace(SBJ.3SG&.OBJ3SG)=and 'He (i.e. the father) embraced his son, and …'

[a] See, for instance, **PayneBarshi1999** on types of external possession.

Table 3: A brief typology of possessive constructions (part 2, Non-clausal)

level	construction type	examples
NP	juxtaposition (no marking at all)	Hoocąk (**Helmbrecht2003**) *Peter=gá šųųk=rá* ‘Peter’s dog’ Peter=PROP dog=DEF
	genitive attribute (genitive case marker on possessor)	English *Peter**’s** dog*
	prepositional attribute	German *der Hund **von** Peter* DEF dog **of** Peter ‘Peter’s dog’
	pronominal index on possessed noun (possessor marking on possessed)	Mam (**England1983**) ***t**-kamb’ meenb’a* 3SG-prize orphan ‘the orphan’s prize’
	mixed strategy (genitive case marking plus pronominal index)	Turkish (**Kornfilt1990**) *Ayşe-**nin** araba-**sı*** Ayşe-GEN car-3SG ‘Ayşe’s car’
	nominalized predicative possession	Hoocąk (**Helmbrecht2003**) hicųwį́ waháara *hicųwį́ **wa-háa=ra*** aunt obj.3PL-have.kin(1E.U)=DEF ‘my aunts’
Word	nominal compounds	German *das Regierungsauto* *das Regierung-s-auto* DEF government-LINKER-car

With regard to the possessor, the choice of the PC may depend on the specific NP type of the possessor. For instance, if the possessor is expressed by means of a possessive pronoun a different construction may be used than with a possessor expressed by a lexical noun phrase. If the possessor is a proper name or kinship term this may determine the selection of a specific PC, too. Animacy proper of the possessor, i.e. possessor NPs with a human, animate or inanimate common noun, may play a role as well. The implicational scale that brings together these different NP-types that may be relevant for the choice of different NP-internal PCs in Siouan languages as well is called Animacy Hierarchy (AH). The AH is a scale that describes many different grammatical phenomena cross-linguistically. The AH is usually considered as: 1/2 > 3 > proper noun/kin term > human common noun > animate common noun > inanimate common noun (cf. for instance **Dixon1979 Comrie1981 Croft2003**).

With regard to the possessed, it can be observed that the choice of the NP-internal PC depends on the semantic class of the possessed, i.e. these languages often have two sets of nouns, so that set_1 nouns designating the possessed entity require one type of the PC, and set_2 nouns designating the possessed entity the other. This classification of nouns with regard to PCs is better known under the heading alienable versus inalienable distinction. Alienable nouns usually designate entities that can be owned in the prototypical sense implying that the possessor has full control over these possessed entities; for instance the possessor can sell them, give them away, and so on. The class of inalienable nouns is much more heterogeneous with regard to the semantics; inalienable nouns designate entities that bear a close association to the possessor implying that the possessor has no or only a limited control over them. Often, kinship terms, body-part terms, and other relational nouns (local/spatial nouns) belong to this class. With regard to the formal marking of the respective PCs, the following possibilities can be distinguished (cf. **Dixon2010**):

i. the alienable PC is similar to that for inalienable possession with an added grammatical element;

ii. the grammatical marking for alienable possession is longer than that for inalienable possession;

iii. the alienable PC requires a classifier, the inalienable construction does not;

iv. overt marking only in an alienable PC;

The possibilities i-iv cover the cross-linguistic observation that inalienable PCs tend to be shorter and morphological less complex than alienable PCs. In other

words, the PC for alienable possession is always more marked than the PC for inalienable possession. In what follows it will be shown that this observation also holds in general for the different NP-internal PCs in Siouan.

2 Methodical remarks

The goal of this study is to search for all different NP-internal PCs in selected Siouan languages and to describe the conditioning factors for their choice. The guiding hypothesis is that the syntactic/semantic properties of the possessor (Animacy Hierarchy) and the semantic properties of the possessed (alienable vs. inalienable) is a fruitful notional frame for the discovery and the description of the splits in the expression of possession; cf. Table 3.

Typological studies on possession show that the properties of the possessive relation itself such as actual possession vs. possession in the past, temporary possession vs. permanent possession, close possession vs. loose possession and so on, may trigger a constructional split too, in some languages (cf. **Dixon2010**). This is, as far as I can see, not the case in Siouan languages. Therefore, these semantic parameters won't play a role in the rest of the paper.

Table 4: Semantic/syntactic parameters for constructional splits in NP-internal possessive constructions.

Semantic-syntactic properties of the possessor (Animacy Hierarchy)	Semantic properties of the possessive relation	Semantic properties of the possessed (alienable - inalienable)
pronoun (SAP/3rd person)	temporal/ closeness	A) ownership
proper name	temporary/ permanent	B) whole-part relation
kinship term	close/ loose	C) kinship relation
common noun	general type of possession	D) attribution
[human]		E) orientation/ location
[animate]		F) association
[inanimate]		G) nominalization

The properties of the possessor and the possessed as summarized in Table 4 serve as a kind of questionnaire or guideline for the search for constructional splits in the various grammatical descriptions of Siouan languages that are used here. The data and descriptions of PCs are taken from the grammars that are available for the different Siouan languages. For Hoocąk, data from a text corpus

and from fieldwork sessions will be taken.

I will exclude the question of the relation between NP-internal PCs and the clause level PCs for later research. My own experience with text data from Hoocąk makes me think that clause level PCs are often preferred over the NP-internal PCs at least in Hoocąk, but this needs to be shown in more detail.

3 NP-internal possession in Hoocąk

Hoocąk and Chiwere (Missouria, Otoe, Ioway) are closely related and constitute the Winnebago-Chiwere sub-branch of the Mississippi Valley group of the Siouan languages. Hoocąk is taken as a representative of this sub-branch, then.

Hoocąk has no possessive pronouns comparable to English *my, your, his, her*, etc., no nominal case marking in general, and no genitive case marker in particular. In addition, there are no connectives, linkers or possessive markers, i.e. grammatical forms that indicate a possessive relation between two nominals. Hoocąk has in principle two different types of NP-internal PCs. The first one is a simple juxtaposition of two nouns without any special possessive marking, see example (1) below. The second type of PC is a complex construction with an inflected verb of possession, e.g. *=hii* 'have.kin' plus a definite article nominalizing the entire construction illustrated in example (1b). Without this definite article, we have a clause expressing a kind of predicative possession.

(1) Hoocąk (**Helmbrecht2003**)

a. *Petergá šųųkrá*
Peter=gá šųųk=rá
P.=PROP dog=DEF
'Peter's dog'

b. Hoocąk **Helmbrecht2003**
hicųwį́ wahaará
hicųwį́ wa-haa=rá
aunt OBJ.3PL-have.kin(1E.U)=DEF
'my aunts'

Both types of NP-internal PC will be discussed in more detail in the subsequent sections.

3.1 Juxtaposition

The semantic/syntactic type of the possessor does not require the choice of the juxtaposition PC in Hoocąk with one exception. If the possessor is a speech act participant or a third person, the second construction type with the nominalized possessive verb has to be chosen obligatorily (see §3.2 below).

The following series of examples demonstrates that neither the AH – except with regard the pronoun/noun distinction – nor the distinction between alienable vs. inalienable nouns have any effect on the expression of attributive possession in Hoocąk. The example in (2) is an attributive possessive relation with a proper name as possessor and a kinship term as possessed noun. The relation is inherent and inalienable. The definite article is required.

(2) Hoocąk (**Helmbrecht2003**)
Petergá hi'ącrá
Peter=gá hi'ąc=rá
P.=PROP father=DEF
'Peter's father'

The possessive relation in (3a) is a part-whole relationship with a human possessor and a body-part term as possessed. The possessive relation is inherent and inalienable. The same holds for the examples in (3b)-(3c). The whole PC needs to be specified by a determiner, i.e. the definite article, or a demonstrative pronoun. If there is a definite article following the possessor (cf. (3b)), then it is the possession of a specific and definite possessor. If the indefinite article follows the possessor (cf. (3c)), it is the possession of an indefinite possessor.

(3) Hoocąk (**Helmbrecht2003**)
a. *hinúk hišja=rá*
woman face=DEF
'the woman's face'
b. *hinúk=**rá** hišja=rá*
woman=**DEF** face=DEF
'the face of the (specific/definite) woman'
c. *hinúk=**ízą** hišja=rá*
woman=**DEF** face=DEF
'the face of an (indefinite) woman'

The PCs in (4) and (1) (above) are alienable. Both contain alienable possessed nouns, the inanimate noun *hiráati* 'car' and the animate noun *šųųk* 'dog'. The possessor is a human being (proper name) in both cases.

(4) Hoocąk (**Helmbrecht2003**)
John=ga hiráati=ra
J.=PROP car=DEF
'John's car'

The possessive relation in (5) includes a body-part term as possessed noun (inseparable, inalienable) with a non-human possessor. The example in (6) represents a part-whole relation with an inanimate object as possessor and an inanimate object as possessed (separable, alienable). Both possessors in (5) and (6) can be interpreted either as specific or as generic.

(5) Hoocąk (**Helmbrecht2003**)
wijúk huu=rá
cat leg=DEF
'the leg(s) of the/a cat'

(6) Hoocąk (**Helmbrecht2003**)
važątíre hogis=rá
car circular.part=DEF
'the wheel(s) of a/the car'

Note that the constructions in (5) and (6) often resemble a nominal compound with the first noun specifying the second noun thus creating a new word and concept instead of expressing a possessive relation. For instance, the Hoocąk word *nąąhá* 'bark' is a compound of the noun *nąą* 'tree' and *haa* 'skin, pelt, hide' thus giving the new concept 'tree skin' which corresponds to 'bark' in English. This combination of two nouns is a nominal compound on phonological grounds. The vowel in the second noun is shortened, which is a normal word-internal process in Hoocąk. However, the boundary between compound and juxtaposition is often blurred and the function "the first noun specifies the second" can be found in phrasal juxtaposition as well as in nominal compounding. The expressions in (5) and (6) are certainly phrasal in nature. Both words in these expressions have their own primary accent and there are no sandhi processes between the two nouns.

The same type of construction employed for the expression of possession in the preceding examples is also used for the expression of spatial relations. There

are numerous local nouns such as *coowé* 'front part', *nąąké* 'back part', *rook* 'inside', *hihák* 'top, surface', and so on, which are used to express the specific local/spatial relation of an object vis-à-vis the spatial region of another object. The local nouns are the possessed nouns in these constructions. They designate the spatial position of the possessor. The possessor functions as the reference point (cf. **Langacker1993**) of the localization, it represents the object with regard to which another one is localized, cf. the examples in (7). The clitic *=eja* 'there' is a local adverb almost obligatorily used in these constructions.

(7) Hoocąk (**Helmbrecht2003**)

a. *šųųkrá hirarúti coowéja ʻakšąną*
šųųk=rá **hirarúti coow=éja** ʻak=šąną
dog=DEF **car** **front=there** be.lying=DECL
'The dog is (in a lying position) in front of the car.'

b. *šųųkrá hirarúti hihákeja jeenąą*
šųųk=rá **hirarúti hihák=eja** jee=ną
dog=DEF **car** **top=there** be.standing=DECL
'The dog is (in a standing position) on the top of the car.'

c. *šųųkrá hirarúti rookéja nąkšąną*
šųųk=rá **hirarúti rook=éja** nąk=šąną
dog=DEF **car** **inside=there** be.sitting=DECL
' The dog is (in a sitting position) inside of the car.'

The expressions in examples (2) through (7) show that the semantic nature of a lexical possessor does not trigger a shift to another construction type: this holds if the possessor is a proper name (=*ga* PROP), human noun (=DEF/=INDEF/=Ø), animate noun (=DEF/=INDEF/=Ø), or inanimate noun (=DEF/=INDEF/=Ø). In addition, the expressions in (2) through (7) show that there is no alienable-inalienable distinction: the same construction type is chosen with kinship terms, body-part terms, relational spatial nouns, as well as with alienable nouns. The possessor noun may be marked by a definite (DEF), an indefinite (INDEF) article, or by zero. If the possessor is a proper name (PROP), it will be marked by the proper name marker. The entire PC is always definite (DEF) (marked on the possessed noun) except with spatial nouns. They are usually marked by means of a local adverb clitic *=eja* 'there' which – in this respect – could also be analyzed as a general local postposition. The examples also show that this type of PC may express real ownership, part-whole relations, kinship relations, and spatial relations.

3.2 Nominalized verbal possessive constructions

The juxtaposition of two nominals is a general construction type to express possession and other binary relations in Hoocąk. There is, however, an alternative NP-internal possessive construction, which indeed exhibits a classification of nouns: inalienable nouns such as kinship terms, domestic (pet) animals, and alienable nouns. These alternative constructions are in each case a nominalized version of the possessive predication employing different possessive verbs for different types of possessed entities. The nominalized possessive clauses appear in the same syntactic position as the juxtaposed nouns, i.e. in a noun phrase position of the clause.

(8) Hoocąk (**Helmbrecht2003**)

a. ***John=gá hiráati=ra*** *hacáa=nąˀ*
J.=PROP car=DEF see(1E.A&OBJ.3SG=DECL
'I see John's car.'

b. ***John=gá hiráati hanį=rá*** *hacáa=nąˀ*
J.=PROP car own(SBJ.3SG&OBJ.3SG)=DEF see(1E.A&OBJ.3SG)=DECL
'I see John's car.'

Both clauses in (8) have the same translation, but speakers indicate that they prefer the nominalized variant over the juxtaposed variant. The same constructional pairs exist for possessive constructions with kinship terms and pet animals (domestic animals). These nominalized possessive clauses represent a kind of transition from attributive to predicative possession. The general structure of these nominalized possessive clauses is given in (9).

(9) General structure of the nominalized verbal possessive construction
[(N-POSSESSOR$_i$) N-POSSESSED$_j$ PRO$_j$-PRO$_i$-Verb of possession=DET]$_{NP}$

If the possessor is a speech act participant or third person, these nominalized PCs are the only possibility. Since the possessor is often a topic (given and definite) in discourse and hence expressed pronominally as a 3SG, this type of PC prevails in discourse over the alternative juxtaposition. Note that 3SG arguments are always marked zero on the verbs. Both entities X$_{possessor}$ and Y$_{possessed}$ are cross-referenced in the verb of possession utilizing the two different series of pronominal prefixes, the actor/subject series for the possessor and the undergoer/object series for the possessed. The verbs of possession are treated as regular transitive verbs.

If the possessor is a lexical human noun, this construction type competes with the juxtaposition type of PCs dealt with in the preceding section; cf. the following examples in (10).

(10) Hoocąk (**Helmbrecht2003**)

a. *Peterga hi'ąc hiirá*
Peter=ga hi'ą̨c **hii**=ra
P.=PROP father have.kin=DEF
'Peter's father'

b. *Peterga šų́ųk nįįhíra*
Peter=ga šų́ųk **nįįhí**=ra
P.=PROP dog have.pet=DEF
'Peter's dog'

c. *John=gá hiráati **hanį**=rá*
J.=PROP car own=DEF
'John's car'

The verbs of possession that are used in the PCs in (10) are restricted in their usage. The verb *=hii* 'X has Y as kin' can only be used with kinship terms or with terms designating close friends. This verb is homophonous with the causative auxiliary *=hii* 'to cause'. There are reasons to believe that both verbs are historically cognate, and that they should be considered as different usages of one verb rather than homonyms. The main reason for this analysis is that the causative verb *=hii* has an irregular personal inflection, and the possessive verb *=hii* shows exactly the same pattern.

The possessive verb *nįįhí* 'X has Y as pet' is used only with pet animals. Usually, pet animals are domesticated animals such as cats, and dogs, etc. The semantic boundaries of this class are not clear-cut. Historically, *nįįhí* is presumably a combination of **nį* 'to live, living thing', which does not occur independently in Hoocąk and the causative auxiliary *=hii*.[3] The verb *nįįhí* shows the same inflectional irregularities as the causative verb *=hii*.

The possessive verb *hanį* 'to own' is a regular (lexical) transitive verb designating the possession of alienable entities such as inanimate objects, artifacts, animals, and so on. Body parts belong to this group of nouns, too. It is restricted to

[3] **nį* is the reconstructed Proto-Mississippi-Valley Siouan form for 'live, be alive' (cf. **RankinEtAl2015AccessMay**). This form can be found in other verbs in Hoocąk such as *nįįhá* 'to breathe' or in *nįį'ąp* 'be alive'.

human possessors. Part-whole relations with inanimate possessors, on the other hand, are never expressed with this construction. Cf. the summary in Table 5.

Table 5: Alienable vs. inalienable distinction in Hoocąk

inalienable/ inseparable		alienable/ separable
set_1: =híi	set_2: nįįhí	set_3: hanį́
kinship (including close social relations such as friendship)	pet animals (usually domestic animals such as dog, cat, horse, etc.)	animate and inanimate objects such as non-domestic animals, artifacts, and so on including body parts

All three verbs in Table 5 form the same type of nominalized verbal PC with pronominal and lexical human possessors. There is no difference between them with regard to structural markedness or with regard to the iconic relationship observed for the inalienable vs. alienable distinction and the size of the corresponding PCs. The paradigms for all three verbs of possession are given below; cf. Table 6, Table 7, and Table 8. The paradigms contain only constructions with a 3SG possessed noun. If the possessed nouns were plural ('aunts', 'dogs', and 'cars') the verbs of possession would be inflected for the third person plural object (*wa-* OBJ.3PL).

Table 6: Paradigm of the possessive verb *hii* 'to have.kin'

possessor	possessed N *hicųwį́*	
1SG	hicųwį́ haa=rá	'my aunt' (father's sister)
2SG	hicųwį́ raa=ra/=gá	'your aunt'
3SG	hicųwį́ hii=rá	'his aunt'
1I.D	hicųwį́ hįhi=rá /=ga	'my and your aunt'
1I.PL	hicųwį́ hįhiwí=ra	'our aunt'
1E.PL	hicųwį́ haawí=ra	'our aunt'
2PL	hicųwį́ raawí=ra/=ga	'your aunt'
3PL	hicųwį́ hiíre=ra	'their aunt'

The kinship term *hicųwį́* 'aunt (father's sister)' has a variant form that is used for address purposes, *cųwį́* '(my) aunt!'. These address forms of kinship terms — often simply lacking the initial syllable *hi-* — cannot occur in a possessive

Table 7: Paradigm of the possessive verb *nįįhi* 'to have.pet'

possessor	possessed N *šųųk*	
1SG	šųųk nįįháa=ra	'my dog'
2SG	šųųk nįįná=ra/=ga	'your dog'
3SG	šųųk nįįhí=ra	'his dog'
1I.D	šųųk nį́įhi=ra/=ga	'our dog'
1I.PL	šųųk nįįháwi=ra	'our dog'
1E.PL	šųųk nį́įhiwi=ra	'our dog'
2PL	šųųk nįįnáwira/=ga	'your dog'
3PL	šųųk nįįhíre=ra	'their dog'

Table 8: Paradigm of the possessive verb *hanį́* 'to have'

possessor	possessed N *važątíre*	
1SG	važątíre haanį́=ną[a]	'my car'
2SG	važątíre hašįnį́=ną	'your car'
3SG	važątíre hanį́=ną	'his car'
1I.D	važątíre hįįnį́=ną	'our car'
1I.PL	važątíre hįįnį́wį=ną	'our car'
1E.PL	važątíre haanį́wį=ną	'our car'
2PL	važątíre hašįnį́wį=ną	'your car'
3PL	važątíre hanį́įne=ra	'their car'

[a] There are two phonological rules in Hoocąk a) that underlying /r/ becomes [n] after nasal vowels and b) that oral vowels are nasalized after nasal consonants. Sometimes rule a) is indicated orthographically by a haček/caron <ň>.

construction. This seems to be a general rule for obvious reasons. The usage of kinship terms as address terms usually presupposes that such a kinship relation holds between speaker and hearer.

There is another kind of variation in the paradigm of kinship possession that may be rooted in the mutual knowledge of the interlocutors. The common determiner in possessive constructions with a kinship term is the definite article *=ra*. However, in the second person singular and plural the determiner is *=ga*, a deictic element also used for the indication of proper names. Lipkind claims that *=ga* has to be used exclusively in these instances (cf. **Lipkind1945**), but Hoocąk speakers gave me forms that show that there is actually a choice between *=ra* and *=ga* in the second person and in the first person inclusive dual form;[4] *=ga* is ungrammatical in all other person categories. One of my most important language consultants, Phil Mike, indicated to me that this choice has to do with the mutual knowledge of the kinsman by both interlocutors. The definite article is used in the second person if the speaker does not know the kinsman (assuming that the hearer knows his or her kinsmen), but *=ga* is used when both interlocutors know the person talked about (which is more naturally the case if the speaker talks about the kinsman of the hearer). This could also explain why *=ga* is not allowed if the possessed is plural. The deictic suffix *=ga* is also used with the address forms of kinship terms indicating the first person as possessor. **Lipkind1945** says that all kin terms with initial *hi-* take *haará* 'my' in the first person; the few ones without it take solely *=ga* instead; the reason is that the shorter forms are terms of address while the *hi-* forms are terms for reference. For instance, the form *cųwį́* is the address term corresponding to *hicųwį́* 'aunt (father's sister)'. Hence the 1SG possessive form is *cųwį́-gá* which translates literally 'that aunt' implying that everybody knows that she is the aunt of the speaker (EGO). It is a kind of reduced form of speaking. The address term implies that the person so addressed has the kin relation designated by the term toward the speaker. It is an effect of the Animacy Hierarchy. Shared background knowledge of the possessor plays an important role here (cf. also **Heine1997**).[5]

[4] I am particularly grateful to Henning Garvin helping me to collect the relevant forms here.

[5] This can also be interpreted as an instance where the inherent relationality of kin terms leads to a structural reduction of the expression of possession confirming the prediction of the prototype approach.

4 Constructional splits in the other Siouan languages

In what follows a few other Siouan languages are examined with regard to constructional splits that have to do with the NP type of the possessor and the semantics of the possessed. I will begin with the Northwestern Siouan languages Crow, Hidatsa, and Mandan (§4.1–4.3), then I will continue with Lakota (the Dakotan sub-branch of Mississippi-Valley Siouan; §4.4) and Osage (Dhegiha sub-branch of Mississippi-Valley Siouan; §4.5), and I will close this investigation with Biloxi as a representative of the South-Eastern branch of Siouan (Ohio-Valley Siouan; §4.6).

4.1 Crow

4.1.1 The possessor

Crow has four different NP-internal PCs depending on the semantic/syntactic nature of the possessor; cf. the examples in (11) through (14).

(11) Crow (**Graczyk2007**)
   a. [Poss.Pro — $N_{possessed}$]
   b. *Ø-iilápxe*
      3SG.POSS-father
      'his father'

(12) Crow (**Graczyk2007**)
   a. [$N_{possessor}$(-DET/-Ø) Poss.Pro — $N_{possessed}$]
   b. *Charlie-sh Ø-iilápxe*
      C.-DET 3SG.POSS-father
      'Charlie's father'

(13) Crow (**Graczyk2007**)
   a. [Emphatic PRO-POSS.PRO-$N_{possessed}$]
   b. *bii-w-achuuké*
      1SG.EMPH-1SG.POSS-younger.brother
      'MY younger brother'

(14) Crow (**Graczyk2007**)
   a. [[[$N_{possessor}$] [$N_{possessor}$]] [$N_{possessed}$]]

b. *úuxbishke* *chíis-uua* *iía*
white.tailed.deer tail-PL hair
'hair from the tail of the white-tail deer'

No matter whether the possessed noun is alienable or inalienable, there has to be a possessive pronoun attached to the possessed noun indicating the possessor (cf. example (11)). The same is true if there is a lexical possessor in addition (cf. example (12)). The possessive prefix may be emphasized by means of a bound emphatic pronoun prefixed to the possessive prefix (cf. example (13)). Interestingly, there are also PCs that do not show any possessive marking and hence look like a juxtaposition expressing a whole-part relationship, cf. the example in (14). I did not find more examples like this in Graczyk's grammar, so I cannot say if this is generally an alternative possibility or required for non-human possessors.

4.1.2 The possessed

Crow has different paradigms of proper bound possessive pronouns distinguishing different sets of possessed nouns according to the alienable versus inalienable distinction. The paradigm of possessive pronouns for alienable possession is given in Table 9; the paradigm of inalienable possession is given in Table 10.

Table 9: Alienable possession in Crow (**Graczyk2007**)

	stem *íilaalee*	
1SG	**ba-s**-íilaalee	'my car(s)'
2SG	**dí-s**-iilaalee	'your car(s)'
3SG	**i-s**-íilaalee	'his/her car(s)'
1I.PL	**balee-is**-íilaalee	'our car(s)'
1E.PL	**ba-s**-íilaalee-**o**	'our car(s)'
2PL	**dí-s**-iilaalee-**o**	'your car(s)'
3PL	**i-s**-íilaalee-**o**	'their car(s)'

The possessive pronouns of alienable possession in Table 9 are formally invariable; they have an additional /-*s*/ thus being phonologically more marked than the prefixes of the inalienable paradigm. The 2SG possessive pronoun of the alienable paradigm shows a shift of the primary stress from the stem to the prefix, a pattern which is found also in some of the active verb paradigms. The 1I.PL prefix *balee-* is taken from the B-set pronominal paradigm for stative verbs. This

Table 10: Inalienable possession in Crow (**Graczyk2007**)

	stem *apá*	
1SG	**b**-apé	'my nose'
2SG	**d**-ápe	'your nose'
3SG	**Ø**-apé	'his/her nose'
1I.PL	-	-
1PL	**b**-ap-**úua**	'our noses'
2PL	**d**-áp-**uua**	'your noses'
3PL	**Ø**-ap-**úua**	'their noses'

form is added to the 3SG.POSS *is-* prefix, probably a late innovation introducing a 1PL inclusive-exclusive distinction into the alienable paradigm. This distinction is lacking in the inalienable paradigm of possessive pronouns as well as in the verbal paradigms. The suffixes in both paradigms (*-o* in the alienable possessive paradigm, *-úua* in the inalienable possessive paradigm) indicate the plurality of the possessor.

The paradigm of inalienable possession varies in form depending on the stem-initial sounds. There are three phonologically conditioned allomorphic paradigms, for stems in /d-/, /i+consonant-/, and /vowel-/. As can be seen in Table 10, the stem itself also undergoes some sound changes.

There are, however, three additional paradigms of inalienable possession: a) one that marks possession with the undergoer series of pronominal prefixes (called B-set of pronominal prefixes in Graczyk's grammar), b) one with an irregular paradigm, and c) one residual paradigm that shows stem suppletion. **Graczyk2007** finds the following classification of nouns associated with these three different inalienable paradigms.

a) Inalienable possession with the B-set prefixes is used with nouns referring to internal body parts such as 'gland', 'joint', 'limb', 'hip', 'bone', 'lung', 'stomach', etc. (cf. **Graczyk2007**).

b) There are not enough nouns requiring the irregular paradigm for a semantic classification, but they all seem to belong to the inalienable class of nouns.

c) The nouns that require suppletive stems refer to kinship relations, clothing, and some culturally important possessions, cf. the examples in Table 11.

The first column shows the nouns in citation form, the second column in a possessive construction. The corresponding stems are clearly suppletive.

Table 11: Suppletive stems in Crow (**Graczyk2007**)

ihkáa	'mother'	is-ahká	'his mother
huupá	'shoe'	is-ahpá	'his shoe'
alúuta	'arrow'	is-aá	'his arrow'
buú	'song'	is-huú	'his song'

There is also a prefix *bale-* that is used if inalienable nouns are used without indicating a possessor. This form is called depossessivizer in **Graczyk2007** and it is obligatorily used with unpossessed body-part nouns. This form is not used with kinship terms.

Table 12 summarizes the findings with regard to the alienable/inalienable distinction. Inalienable nouns are a closed class of nouns in Crow. It is clear that the semantic classification of the nouns with regard to the different PCs is not sharp. There are even body-part nouns that belong to the alienable class (set_5). Gross modo, however, the nouns in set_1 - set_4 could be subsumed under a class of inalienable nouns semantically.

4.2 Hidatsa

4.2.1 The possessor

Hidatsa and Crow are closely related and constitute the Missouri Valley subbranch of Siouan. Although they belong to the same sub-branch of Siouan, there are differences in the expression of possession. Hidatsa has different PCs depending on the syntactic/semantic type of the possessor. As in Crow, there is an obligatory marking of the possessor on the possessed noun no matter whether the possessed noun is alienable or inalienable; cf. the alienable PC in (15b). If there is an additional lexical possessor, the structure of the PC in Hidatsa is analogous to the one in Crow, cf. the alienable PC in (15a).

(15) Hidatsa (**Boyle2007**)

Table 12: Alienable vs. inalienable distinction in Crow

inalienable				alienable
set_1	set_2	set_3	set_4	set_5
phonologically conditioned inalienable paradigm	B-set prefixes	irregular paradigm	suppletive possessed forms	alienable paradigm
body parts, kinship	closed class of nouns referring to internal body parts	'chest', 'tail', 'husband'	closed class of nouns referring to objects closely associated to a person (e.g. clothing, a few kin terms, culturally important possessions)	open class of nouns not inherently possessed; exceptions are: *huli* 'bone', *íili* 'blood', *kahkahká* 'forearm' and a few others.

a. *macée idawashúga*
wacée ita=wašúka
man 3SG.POSS=dog
'man's dog'

b. *idawashúga*
ita=wašúka
3SG.POSS=dog
'his dog'

Boyle2007 does not mention in his grammar of Hidatsa whether there exists a juxtaposition of possessor-possessed as another possible PC in Hidatsa. One of the peculiarities of PCs in Hidatsa is that they can freely be modified by a defi-

nite article and/or a demonstrative pronoun. Since there are a lot of similarities between Crow and Hidatsa, the discussion of the properties of the possessed will be brief.

4.2.2 The possessed

As in Crow, there are two paradigms of possessive pronouns in Hidatsa, one indicating inalienable possession, the other alienable possession; cf. Table 13.

Table 13: Alienable and inalienable possessive pronouns (**Boyle2007** 80)

	inalienable possessive pronouns		alienable possessive pronouns	
1	ma- /wa-/	'my'	mada= /wa-ta=/	'my'
2	ni- /ri-/	'your	nida= /ri-ta=/	'your
3	i- /i-/	'his, her'	ida= /i-ta=/	'his, her'

The paradigm for inalienable possession shows — as with Crow set_1 nouns — phonologically conditioned allomorphy (stem-initial vowel vs. stem-initial consonant, and /r/-initial stems). It seems that there is no semantic sub-classification associated with the allomorphy in the inalienable prefixes and the corresponding irregularities. Therefore, I lumped these different formal properties of inalienable nouns together in one set_1 class of nouns in Table 14.

However, there are also differences. For instance, the 2.POSS forms do not trigger a shift in stress assignment as in Crow, and the inalienable possessive prefixes are true prefixes, whereas the corresponding alienable forms are analyzed as clitics. The alienable forms are identical to the ones for inalienable possession plus /*ta*-/ which can be found in other Siouan languages as well (cf. e.g. in Lakota alienable PCs of set_4 nouns which have a *-t^ha* prefix added to the undergoer pronominal prefix; cf. Table 16 below). There is no mention of a depossessivizer in Boyle's grammar of Hidatsa.

4.3 Mandan

Mandan is considered a proper sub-branch of Siouan neither belonging to the Missouri Valley nor the Mississippi Valley group of Siouan.

The semantic/syntactic properties of the possessor and their possible effects on the choice of the PC are not discussed and described in Mixco's grammatical sketch (**Mixco1997a**). However, looking into the appended Mandan text, it seems

Table 14: Alienable vs. inalienable distinction in Hidatsa

inalienable set_1	alienable set_2
inalienable paradigm (including phonologically conditioned allomorphy and some irregular forms)	alienable paradigm (no allomorphy)
closed class of nouns: body parts, many kinship terms, some clothing items	open class of nouns not inherently possessed

that juxtapositions are possible in case the possessor is a lexical noun. There is at least one clear example of this construction (cf. (16)) that shows that association may be expressed by this PC.

(16) Mandan (**Mixco1997a**)
ʾwį=ti rųʾwąʔk=ši-s
village man=good-DEF
'the village chief'

If the possessor is a speech act participant or a third person, one of the following distinct PCs has to be used. In one construction the possessive pronominal affixes, which are in principle identical to the undergoer series of pronominal affixes (called 'stative' in **Mixco1997a**) are attached directly to the noun stem that designates the possessed $[\text{POSS-N}_{\text{stem}}]_{\text{inalienable possession}}$. This construction is used for inalienable possession; see the relevant forms in Table 15.

The second PC inserts a prefix *ta-* between the stem and the possessive prefix $[\text{POSS-}ta\text{-N}_{\text{stem}}]_{\text{alienable possession}}$. This construction is used for alienable possession. The form *ta-* as an alienable marker is cognate to Lakota *t^{h}á-*, see below. The possessive prefixes are the same as in the inalienable PC, see Table 15.

There are some peculiarities with PC for inalienable possession. First, there are some kinship terms that require a prefix *ko-* for third person possessor. I suppose this form is related historically to *ku-/tku-* in Lakota. Secondly, there are kinship terms and a few other alienable terms (old nominalized verb forms) that take the actor series of pronominal prefixes in order to express the possessor. For instance,

Table 15: Possessor affixes in Mandan (**Mixco1997a**)

	SG	PL
1	wį-[a]	ro:-
2	rį-	rį-stem-rįt
3	i-	-kræ[b]

[a] Note that this form of the 1SG.POSS differs from the corresponding form of the undergoer series, which is wą-. Mixco speculates that the wį- form is a contraction of wą- + i- for the third person, but provides no evidence for this idea.

[b] Mixco does not give the full paradigm, neither for the stative or undergoer affixes nor for the possessive affixes. This is the reason for the question mark. In addition I did not find a single example in Mixco's sketch of Mandan that corresponds to 'their Y'. Note, however, that **Kennard1936** gives the form *-kɛrɛ* for the 3PL possessive affix. The forms are identical, but the transcription is different.

the kinship term for 'mother' takes the usual undergoer series of prefixes for inalienable possession, but requires *ko-* for the third person possessor; cf. (17).

(17) Mandan (**Mixco1997a**)

a. *wį-hų:-s*
1SG.POSS-mother-DEF
'my mother'

b. *rų-hų:-s*
2SG.POSS-mother-DEF
'your mother'

c. *ko-hų:-s*
3SG.POSS-mother-DEF
'his mother'

The term for 'father', on the other hand, requires the actor series of pronominal affixes in Mandan in order to express the possessor, cf. the examples in (18).

(18) Mandan (**Mixco1997a**)

a. *wa-aʔt-s*
1SG.A-father-DEF
'my father'

b. *a-aʔt-s*
2SG.A-father-DEF
'your father'

c. *ko-aʔt-s*
3SG.A-father-DEF
'his father'

Interestingly, no mention is made of the way body parts are possessed in Mandan. A quick look into the Mandan text (cf. **Mixco1997a**) reveals that body-part nouns never occur in one of the above described PCs with possessive affixes. They appear always without the *ta-* form and never carry any possessive affixes. The possessor always has to be inferred from the text.

4.4 Lakota

4.4.1 The possessor

Lakota is a language of the Mississippi Valley Siouan group, more specifically of the Dakotan sub-branch of this group. Lakota does employ possessive pronouns, which are almost entirely identical to the set of undergoer pronominal prefixes in stative/inactive verbs. If the possessor is a SAP/pronoun and the possessed noun belongs to the class of alienable nouns, the following constructions may be used. Note that the 1SG.POSS *mi-* is a special form that does not correspond to the regular 1SG form of the pronominal undergoer prefixes (*ma-*).[6]

a) Ownership
[$N_{possessed\text{-}inanim}$ PRO.POSS-HAVE DET]

(19) Lakota (**Buechel1939**)
thípi mi-tȟáwa kiŋ
house 1SG-have DEF
'my house'

b) Ownership, attribution of property
[PRO-*tȟa*-$N_{possessed\text{-}inanim/abstr}$ DEF]

[6] Data in this section has been re-spelled in the current Lakota orthography.

(20) Lakota (**Buechel1939**)

a. *mi-tȟá-makȟočhe kiŋ*
1SG.POSS-POSS-land DEF
'my land'

b. *nitȟóksape kiŋ*
ni-tȟá-wóksape kiŋ
2SG-POSS-wisdom DEF
'thy wisdom'

There is no information about the conditions or the differences between the two constructions; it is clear that the one in (19) contains a stative verb of possession *tȟáwa-* 'have' that is nominalized in this context inflecting for the person and number of the possessor and the number of the possessed. In **RoodTaylor1996** it is said that the stative verb of possession *itȟáwa* 'have' depends only on the category of the possessor in this PC and not on the number of the possessed. It seems that this stative verb of possession has been grammaticalized towards a marker of possession quite recently in Lakota.

The PCs in (20) contain a marker for possession *tȟá-* 'POSS' which is attached to the possessed noun and preceded by the pronominal affix of the possessor. This marker is common Siouan (cf. **RankinEtAl2015AccessMay**). If there are lexical nouns expressing the possessor, the following PCs are used.

c) Ownership
[$N_{possessed\text{-}anim}$ $N_{possessor\text{-}PROP}$ PRO.POSS-HAVE DEF]

(21) Lakota (**Buechel1939**)
šúŋka wakȟáŋ David Ø-tȟáwa kiŋ
horse D. 3SG-have DEF
'David's horse'

[$N_{possessed\text{-}anim}$ $N_{possessor\text{-}PROP}$ PRO.POSS-HAVE DEF]

(22) Lakota (**Buechel1939**)
šúŋka wakȟáŋ Peter na Paul Ø-tȟáwa-pi kiŋ
horse P. and P. 3SG-have-PL DEF
'Peter and Paul's horses (or horse)'

d) Association
[$N_{possessor\text{-}PROP}$ PRO.POSS-*tȟa*-$N_{possessed\text{-}hum}$ DEF]

(23) Lakota (**Buechel1939**)
Itȟáŋčhaŋ Ø-tȟa-wóilake kiŋ
Lord 3SG-POSS-servant DEF
'the Lord's servant'

[$N_{possessor\text{-}PROP}$ PRO.POSS-*tȟa*-$N_{possessed\text{-}hum}$ DEF]

(24) Lakota (**Buechel1939**)
Abraham Ø-tȟa-wámakȟaškaŋ-pi kiŋ
A. 3SG-POSS-animal-PL DEF
'Abraham's animals'

Again we have two different PCs in the examples (21)-(24) with a lexical possessor, one with a verb of possession that is nominalized, and the other exhibiting a morphological possessor marking on the possessed noun. These examples represent alienable possessions. It can be concluded that the syntactic status of the possessor does not play a role for the choice of the PCs.

If the relation between the possessor and the possessed is a whole-part relation, or a partitive relation, or the possessor noun is an abstract noun or a nominalization, the following constructions are used.

e) Whole-part relationships
[$N_{possessor\text{-}inanim}$ $N_{possessed\text{-}anim}$ DEF] (juxtaposition)

(25) Lakota (**Buechel1939**)
maȟpíya zitkála-pi kiŋ
cloud bird-PL DEF
'the birds of the air'

[$N_{possessor\text{-}inanim}$ $N_{possessed\text{-}inanim}$ INDEF]

(26) Lakota (**Buechel1939**)
čheȟ íkȟaŋ waŋ
bucket rope INDEF
'a bucket handle, rope of a bucket'

f) Partitive

(27) Lakota (**Buechel1939**)

itȟáŋčhaŋpi kį óta
chiefs DEF many
'many of the chiefs'

Example (27) is not really a PC, but a regular quantified NP. The same holds for (28). It can hardly be considered a PC. It is rather a juxtaposition expressing a NP ('good works') modifying another NP ('man').

g) With an abstract possessor N

(28) Lakota (**Buechel1939**)
wičháša oȟ'aŋ wašté kiŋ héčha
man in.actions good DEF such
'a man of good works'

4.4.2 The possessed

There are different PCs according to the semantic type of the possessed noun; body-part terms are simply affixed by the pronominal series of undergoer prefixes. Among the body-part terms, there is a split between body parts that are "conceived as particularly subject to willpower" (**BoasDeloria1941**), and the others. **Buechel1939** describes this difference as "possession of one's incorporeal constituents" versus "possession of one's body and its physical parts"; compare the examples in (29) and (30).

(29) Lakota (**Buechel1939**)
mi-náǧi kiŋ 'my souls'
mi-čháže kiŋ 'my name'
mi-óȟ'aŋ kiŋ 'my occupation'
etc.

(30) Lakota (**Buechel1939**)
ma-čhéži kiŋ 'my tongue'
ma-íšta kiŋ 'my eye'
ma-sí kiŋ 'my foot'
etc.

Note that this distinction has become partially obsolete in contemporary Lakota. **RoodTaylor1996** note that this distinction is semantically maintained only in the

Oglala variety of Lakota. There *ma-* (1SG.POSS) is used for "concrete visible possessions", and *mi-* (1SG.POSS) for "intangibles" (cf. **RoodTaylor1996**). Otherwise, both forms are in free variation.

Kinship relations with a possessor of the first and second person are expressed solely by the possessive prefixes. A possessor of the third person requires an additional marker *-ku, -tku, -ču* which is suffixed to the possessed kinship term; cf. (31).

(31) Lakota (**Buechel1939**)

mi-tȟúŋkašila	'my grandfather'
ni-tȟúŋkašila kiŋ	'thy grandfather'
*Ø-tȟúŋkaši**tku** kiŋ*	'his/her grandfather'

Table 16 summarizes the findings. As was mentioned above, the set_1 and set_2 possessed nouns are no longer separated formally in Lakota (except for Oglala).

Table 16: Alienable vs. inalienable distinction in Lakota (**BoasDeloria1941**)

inseparable/inalienable		separable/alienable	
set_1	set_2	set_3	set_4
body-part terms [+control] [incorporeal constituents] mouth, lips, facial expression, eye, arm, voice, hand, spirit, etc.	body-part terms [-control] [physical parts] kidney, knee, liver, lungs, blood, etc.	kinship relations ownership	distal affinal kinship terms prototypical
PC	PC	PC	PC
[PRO.POSS-noun] with a special form in the 1SG.POSS (*mi-*)	[PRO.POSS-noun]	[1./2.POSS-noun] [3.POSS-noun-*ku*] *-tku*] *-cu*]	[PRO.POSS -t^ha-noun] [noun PRO.POSS-$t^ha'wa$]

As in Hoocąk, the causative verb is used for the clause-level predicative expression of possession of a kinship term, cf. (32).

(32) Lakota (**Buechel1939**)

a. *tȟuŋkášila-wa-ya*
grandfather-1SG.A-have.kin
'I have (him) as grandfather.'
b. *tȟuŋkášila-uŋ-yaŋ-pi*
grandfather-1I.A-have.kin-PL
'We have (him) as grandfather.'

I found no example showing that this verb of possession could be used like the alienable verb of possession *tȟáwa* illustrated in (19) above. If this were the case, we would have a quite similar opposition of verbs of possession in Lakota as we found in Hoocąk.

In addition, it should be mentioned that Lakota allows the non-modifying auto-referential usage of the possessive pronouns, however only the expressions based on the verb of possession *tȟáwa* plus the definite article. This could be interpreted as a nominalized possessive predication; cf. (33).[7]

(33) Lakota (**Buechel1939**)
mitȟáwa kiŋ hé ahí ičú
mine DEF she came take
'She came and took mine'

Interestingly, this is a PC in which there is no possessed noun. All other PCs discussed so far require a possessed lexical noun.

4.5 Osage

Osage is taken as a representative of the Dhegiha sub-branch of Mississippi Valley Siouan. It was chosen because there is a recent extensive grammatical description of this language (**Quintero2004**). Unfortunately, it is difficult to find the relevant data in Quintero's grammar of Osage. There is no specific chapter on possession, and there is no index in the grammar. Quintero uses the terms alienable and inalienable, but it is not made explicit which nouns are alienable and which are inalienable. However, some conclusions about this question can be drawn from the numerous examples provided by the grammar. There is a special construction for PCs with possessed kinship nouns. Kinship nouns are inflected with a series of inalienable pronominal prefixes, cf. Table 17.

[7] One of the reviewers mentioned that *mitȟáwa kį he* could be analyzed as a null head relative clause. This is probably the best way to treat it. It does not, however, change the argument here. The example only demonstrates that a nominal expression for the possessed is not required in this possessive construction.

Table 17: Inalienable possessive prefixes for kinship terms in Osage (**Quintero2004**f)

Possessor	inalienable prefix paradigm	example	translation
1SG	wi-	wi-sǫ́ka	'my (male's) younger brother'
2SG	ðin-	ðin-sǫ́ka	'your (male's) younger brother'
3SG	i-	i-sǫ́ka	'his (male's) younger brother'
1PL	does not exist	-	-
2PL	?	?	
3PL	?	?	

The question marks in Table 17 indicate that Quintero did not provide the expected forms. In addition, PCs with possessed body-part nouns are not provided either.

Alienable nouns require another construction, which has the following properties. There is a pronominally inflected (bound) stem *-hta*, which marks possession.[8] The pronominal prefixes resemble the ones used for the PCs with possessed kinship terms, with one exception. There is a dual and plural form for the first person, which does not exist in the PCs with possessed kinship terms. The inflected possessive form follows the possessed noun; cf. the examples in (34) and (35). The full paradigm is given in Table 18.

(34) Osage (**Quintero2004**)
*ówe che **hcí** **ąkóhta-api** aðį́-ahi-a*
groceries those **house** **1PL.POSS-PL** have-arrive.there-IMP
'Bring those groceries to our house!'

(35) Osage (**Quintero2004**)
*Máry Ɉóhn-a **hcí** **íhta-api***
M. J.-SYL **house** **3SG.POSS-PL**
'Mary and John's house'

Quintero analyzes the possessive form *-hta* as a noun or nominal element for two reasons: first, this stem is inflected by the same prefixes as the inalienable

[8] Again, this is the Common Siouan marker for alienable possession (cf. **RankinEtAl2015AccessMay**).

Table 18: Alienable possession in Osage (**Quintero2004**f)

	possessed	possessor	translation
1SG	hcí 'house'	wihta ? (<wi-hta)	'my house'
2SG	hcí 'house'	ðíhta (<ðí-hta)	'your house'
3SG	hcí 'house'	ihta (<i-hta)	'his/her house'
1DU	hcí 'house'	ąkóhta (< ąkó-hta)	'our house'
1PL	hcí 'house'	ąkóhtapi (<ąkó-hta-api)	'our house'
2PL	hcí 'house'	ðíhtaapi (<ðí-hta-api)	'your house'
3PL	hcí 'house'	ihta-api (<i-hta-api)	'their house'

nouns (kinship terms), and secondly, if it were analyzed as a verbal stem, the possessive inflection would be quite irregular (cf. **Quintero2004**f).

One problem with this reasoning is that one would have to expect that the nominal stem *-hta* belongs to the group of inalienable nouns because it requires the inalienable series of prefixes. There is, however, no evidence for that. Secondly, the order of elements suggests that the *-hta* stem is of verbal origin. If it were nominal, it should precede the possessed noun. Attributive nouns always precede the head nouns; all other modifying elements follow the head noun. That the pronominal prefixes are different from the ones for stative/inactive verbs is not necessarily an argument for the non-verbal character of the stem – there are often deviations in possessive paradigms. Furthermore, this possessive form may be used autonomously without a possessed noun, cf. the example in (36). This construction is not possible in Hoocąk. The utterance in (36) would require the reflexive possessive prefix *k-/kara-* in Hoocąk.

(36) Osage (**Quintero2004**)
ąkóhta akxa Ø-xǫ́-api-ðe
1PL.POSS SBJ 3SG.SBJ-break-PL-DECL
'Ours is broken'

Part-whole relationships - at least with regard to inanimate parts - seem to be expressed by means of a simple juxtaposition. However, I found only one example illustrating this in Quintero's grammar, cf. example (37).

(37) Osage (**Quintero2004**)

oðíhtą hci hcíže áðiitą-a
car house door close-IMP
'Close the garage door!'

To summarize: there is an alienable/inalienable distinction in Osage and it seems that kinship terms belong to the inalienable set of nouns (set_1), while all other nouns belong to the alienable set of noun (set_2); cf. Table 19.

Table 19: Alienable vs. inalienable distinction in Osage

inalienable	alienable
set_1	set_2
kinship terms	all other nouns ?
PC	PC
PRO-$N_{possessed}$	($N_{possessor}$) $N_{possessed}$ PRO.POSS-*hta*

4.6 Biloxi

Biloxi was chosen as a representative of the Ohio Valley sub-branch of Siouan. The standard reference work with respect to a grammatical description is **Einaudi1976** She mentions two NP internal PC types in her grammar of Biloxi, a) a juxtaposition of two nominals to be used for all kinds of possessed nouns, and b) pronominally inflected nouns designating body parts and kinship relations (cf. **Einaudi1976**). Concerning a) the order of nouns in the juxtaposition PC is possessor precedes possessed. Concerning b) if body parts and kinship terms are possessed, the possessed nouns have to be inflected obligatorily with pronominal prefixes that are identical to the ones in verbs. This holds also for some intimate personal possessions such as 'house', 'clothing', etc. See two examples for the juxtaposed PC construction in (38) and two examples of the inflected PC construction in (39).

(38) Biloxi (**Einaudi1976**f)

a. *qya ti-k*
man house-DET
'the man's house'

b. *ama tupe kạ*
ground hole DET
'the ground's hole'

(39) Biloxi (**Einaudi1976**f)

a. *tuhe Ø-tukạni yandi*
T. 3SG-uncle DET
'Tuhe's uncle (mother's brother)'

b. *ạya Ø-anahį kạ*
man 3SG-hair DET
'people's hair'

Full paradigms of inalienable possession are given in Table 20.

Table 20: Paradigm of inalienable possession in Biloxi (**Einaudi1976**f/62f)

possessor	kinship term adi 'father'	body-part term cake 'hand'
1SG	nk-adi	nk-cake
2SG	iy-adi	i-cake
3SG	Ø-adi	Ø-cake
1PL	nk-ax-tu	nk-cak-tu
2PL	iy-adi-tu	i-cak-tu
3PL	ax-tu	cak-tu

I did not find any examples that illustrate how alienable nouns are possessed by SAP possessors, something like 'my horse', 'your car', etc.

5 Conclusions

There is an alienable-inalienable distinction in one way or other in all Siouan languages, even in Biloxi, as seen in Table 21, but there, the inalienable nouns (kinship, body parts) are inflected by means of the subject prefixes. As the examination of PCs in the various Siouan languages shows, there are at least four kinds of constructions that are used to express possession on the NP level. The simplest construction is juxtaposition, which is used in all sample languages except for Hidatsa, for which no data were available. Inalienable possession is expressed in

Table 21: Alienable vs. inalienable distinction in Biloxi

inalienable	alienable
set_1	set_2
kinship terms body-part terms intimate personal possessions such as 'house', clothing'	all other nouns
PC	PC
PRO-$N_{possessed}$ DET	$N_{possessor}$-$N_{possessed}$ DET

all sample languages with a series of possessive affixes directly attached to the possessed. The sole exception is Hoocąk, which has no possessive affixes. There are two principal constructions that express alienable possession in the sample Siouan languages. There is a construction that has a possessive marker attached to the stem indicating alienable possession. The same set of possessive affixes appears with these constructions. This construction is not available in Hoocąk and Biloxi. The second construction utilizes a verb of possession that is nominalized by a determiner and inflected by the same paradigm of possessive affixes. It follows the possessed noun. This construction is missing in Missouri Valley Siouan and in Biloxi. I have no clear data for Osage. The principle types of constructions that are used in Siouan languages to express possession are summarized in Table 22 together with the semantic kinds of possessed nouns.

The nominalized verbs of possession appear only in Mississippi Valley Siouan, most prominently in Hoocąk. Hoocąk is particular also with regard to the lack of the two middle construction types in Table 20; one could perhaps say that Hoocąk has not really grammaticalized a NP-internal possessive construction: juxtaposition is semantically the most abstract means, hence able to subsume all kinds of binary relations (among them also real ownership) and the verbal expression of possession is semantically the most concrete one, hence excluding many binary relations that are often expressed by means of possessive constructions (there is no possibility to express association, whole-part, attribution of property relations with these PCs).

Another interesting observation is that there is no neat classification of nouns with respect to the alienable/inalienable distinction. Alienable and inalienable

Table 22: Distribution of NP-internal possessive constructions among Siouan languages

	juxtaposition $N_{poss'or}$ $N_{poss'ed}$	less marked → POSS.PRO-$N_{poss'ed}$	POSS.PRO-POSS-$N_{poss'ed}$	more marked $N_{poss'ed}$ POSS.PRO-verb.poss-DET
Crow	1) part-whole 2) others?	1) body parts, kinship terms 2) internal body parts 3) 'chest', 'tail', 'husband' 4) closely associated with possessor, e.g. clothing items, kin terms, cultural possession	rest, plus some exceptions	Ø
Hidatsa	?	1) many kinship terms 2) body parts 3) some clothing items	rest	Ø
Mandan	1) association 2) body parts	1) kinship terms 2) ?	1) kinship terms 2) ?	?
Lakota	1) ownership 2) part-whole	1) body parts 2) internal body parts 3) kinship terms	1) kinship terms 2) ownership 3) attribution of property 4) association	1) ownership 2) kinship
Hoocąk	1) part-whole 2) body parts 3) kinship 4) local nouns	Ø	Ø	1) kinship 2) domestic/ pet animals 3) rest
Osage	part-whole	kinship terms	ownership?	
Biloxi	1) part-whole 2) ownership 3) rest	1) kinship 2) body parts 3) intimate personal belongings ('house', 'clothing')	Ø	Ø

nouns are distributed over all kinds of PCs and it seems that the often observed markedness relations between alienable and inalienable PCs do not really hold in Siouan. For instance, juxtapositions as the least marked PCs comprise real ownership (Lakota, Biloxi) as well as body parts (Mandan, Hoocąk) and kinship terms (Hoocąk). On the other hand, nominalized predicative PCs, which are the most complex PCs in this study, include not only real ownership (Lakota, Hoocąk) but also kinship terms which are inalienable nouns. The two construction types in the middle columns in Table 20 show a markedness relation between inalienable and alienable nouns that is much clearer. The PC with the possessive pronouns attached to the possessed nouns (second column from left) are chosen primarily for inalienable possession (all languages except Hoocąk) and the PC with the added possession marker (POSS) are used overwhelmingly for alienable possession such as real ownership or as a kind of rest category that always includes alienable nouns (all languages except Hoocąk). In Lakota and Mandan, however, kinship terms as possessed nouns are included, which blurs this distinction to some degree.

Abbreviations

1, 2, 3, = first, second, third person; A = actor; AH = Animacy Hierarchy; APPL.BEN = benefactive applicative; APPL.SUPESS = locative applicative superessive; DAT = dative; DECL = declarative; DEF = definite article; E = exclusive; EMPH = emphatic; GEN = genitive; I = inclusive; INDEF = indefinite article; OBJ = object; PC = possessive construction; PL = plural; POSS PRO = possessive pronoun; PREP = preposition; PROP = proper name; REFL.POSS = reflexive possession; SAP = speech act participant; SBJ = subject; SG = singular; U = undergoer.

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The Siouan family comprises some twenty languages, historically spoken across a broad swath of the central North American plains and woodlands, as well as in parts of the southeastern United States. In spite of its geographical extent and diversity, and the size and importance of several Siouan-speaking tribes, this family has received relatively little attention in the linguistic literature and many of the individual Siouan languages are severely understudied. This volume aims to make work on Siouan languages more broadly available and to encourage deeper investigation of the myriad typological, theoretical, descriptive, and pedagogical issues they raise.

The 17 chapters in this volume present a broad range of current Siouan research, focusing on various Siouan languages, from a variety of linguistic perspectives: historical-genetic, philological, applied, descriptive, formal/generative, and comparative/typological. The editors' preface summarizes characteristic features of the Siouan family, including head-final and "verb-centered" syntax, a complex system of verbal affixes including applicatives and subject-possessives, head-internal relative clauses, gendered speech markers, stop-systems including ejectives, and a preference for certain prosodic and phonotactic patterns.

The volume is dedicated to the memory of Professor Robert L. Rankin, a towering figure in Siouan linguistics throughout his long career, who passed away in February of 2014.