

Advances in the study of Siouan languages and linguistics

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Edited by

Catherine Rudin & Bryan J. Gordon

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

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Preface

This volume presents a group of papers representing a range of current work on Siouan¹ 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-Aztec, and Muskogean. Siouan languages are, or were historically, spoken by the members of at least 25 ethnic/political groups. One Siouan language, Lakota, is among the handful of indigenous North American languages with younger speakers today. Siouan languages have occasionally risen to prominence in general linguistics, for instance in the study of reduplication (Shaw 1980); and Omaha and Crow (Apsaalooke) have lent their names to two of the basic categories of kinship systems in anthropology. Nonetheless, the Siouan family has been underrepresented in the descriptive and typological literature, and most of the languages in the family are severely understudied. The majority of work on Siouan languages is unpublished, existing only in the form of conference papers or manuscripts.² This volume is a step toward making information on Siouan languages more broadly available and encouraging deeper investigation of the myriad issues they raise.

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

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

² Many of these unpublished works are collected in the electronic Siouan Archive, maintained by John Boyle at the University of California at Riverside.

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

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

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

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

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

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

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

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

fricatives but not in stops.

Verbs play some typologically unusual, prominent roles in Siouan languages. Diachronically, many grammatical items which rarely grammaticalize from verbs in other languages tend to derive from verbs in Siouan languages. For instance, Rankin (1977) documents the derivation of classifiers and articles from verbs. In some Siouan languages, the source verbs and target grammatical items continue to exist in parallel with substantial semantic overlap. The Omaha positional article *tʰoⁿ* ‘obviative animate specific standing’, for instance, is homophonous with the root of *átʰoⁿ* ‘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, *niášhiⁿga-ama* may mean ‘the [proximate animate plural specific] people’, but also may mean either ‘they are people’ or ‘I am told s/he was a person’. Plurality is a part of the semantics of *-ama* in both the nominal and the first clausal interpretation. To make matters more interesting, these kinds of ambiguity are not always easily resolved by context alone, and may suggest a “simultaneity” (cf. Woolard 1998) at work as part of speakers’ competence.

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

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

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

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

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

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

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

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

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

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

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

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

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Part I

Historical Linguistics and Philology

Chapter 1

Two Siouan languages walk into a Sprachbund

David Kaufman

In this paper, I examine two Siouan languages, Biloxi and Ofo, and how they have been influenced by their participation in the Lower Mississippi Valley (LMV) language area, or Sprachbund, which I previously analyzed in-depth in my dissertation. The LMV Sprachbund shows the convergence of eight languages of different language families, including four isolates: Atakapa, Biloxi, Chitimacha, Choctaw-Chickasaw, the Mobilian Trade Language (MTL), Natchez, Ofo, and Tunica, from ca. 500 CE –1700 CE. This Sprachbund involves moderate levels of copying, not only of lexical items but also of grammatical elements. As members of this Sprachbund, Biloxi and Ofo share several phonetic and phonological, morphological, and lexical features with other LMV languages, which are examined here. KEYWORDS: [Siouan, sprachbund, Biloxi, Ofo, convergence area]

1 Introduction

In this paper, I examine two Siouan languages, Biloxi (ISO 639-3: bll) and Ofo (ISO 639-3: ofo), and how they have been influenced by their participation in the Lower Mississippi Valley (LMV) language area, or SPRACHBUND¹ (Kaufman 2014: 3). As members of this Sprachbund, Biloxi and Ofo share several phonetic and phonological, morphological, and lexical features with other LMV languages, which are Atakapa, Chitimacha, Choctaw-Chickasaw², Mobilian Trade Language (MTL; also called Mobilian Jargon), Natchez, and Tunica. All of these languages, with the exception of Biloxi and Ofo (Siouan), and Choctaw-Chickasaw and MTL (Muskogean), are isolates with no known living linguistic relatives.

I define the Lower Mississippi Valley (LMV) as an area extending from about 260 miles (418 km) west of the Mississippi River eastward to Mobile Bay on the

¹ *Sprachbund* is a German term literally meaning ‘language union’.

² Since Choctaw and Chickasaw are generally mutually comprehensible, I combine them here into one unit.

figures/Kaufman1.jpg

Figure 1: Lower Mississippi Valley

Gulf of Mexico, a total of about 380 miles (612 km), and about 425 miles (684 km) northward from the Gulf of Mexico toward the vicinity of the Tombigbee and Arkansas Rivers, an area encompassing 144,600 square miles (496,600 square km). This area encompasses what is now northern Arkansas, Mississippi, and Alabama, southeastern Oklahoma and eastern Texas over toward central Alabama, and includes all of the modern states of Louisiana and Mississippi; see Figure 1. My examination of the LMV reveals this region to be a language area on par with the Balkans (Eastern Europe), South Asia (India), the Amazon Basin, and other such Sprachbünde around the world.

Biloxi and Ofo, along with Tutelo, form part of the Ohio Valley, or Southeastern³, branch of the Siouan language family. While it is unknown exactly when Biloxis and Ofos reached the LMV, we do have evidence that the Ofos (Mosopeleas) migrated into the LMV in the seventeenth century. Biloxis are harder to pin down, but given the scraps of language data available to us based on toponyms, it is likely that ancestral Biloxis once occupied the southern Appalachian mountain region, probably in the Cumberland Plateau and areas of modern eastern Tennessee near the Tennessee River (see Rankin 2011 and footnote 4) from where they likely migrated southward to the Gulf coast.⁴

³ I use the term *Southeastern* rather than “Ohio Valley” for this branch of Siouan, since habitation for all members, with the exception of Ofos (Mosopeleas), of this branch in the Ohio Valley is uncertain.

⁴ Further language evidence, based on toponyms, indicates that the Biloxi word for ‘salt’, *waasi*, may occur in a couple of place names in this region: Ouasioto (*Waasi-oto?*) and Guasile (*Waasi-le?*). The first is the old name for Cumberland Gap, which was indeed situated near a salt-producing mound town (Meyer 1925). However, I have no good linguistic explanations for the

Linguists have long used the Stammbaum (‘family tree’) model of linguistic ancestral descent, which is usually described with a biological metaphor: the “genetic” origins of languages, which insist on a “single-parent source and its belief that practically all language change resulted from internal causes” (Winford 2003: 7). In this case, Proto-Siouan would be the “single-parent source,” while the modern Siouan languages, including Biloxi and Ofo, would be its descendants. However, language change can also arise from external causes through language contact, where similarities arise not through genetic affiliation but through close cultural and linguistic contact. Language areas arise when languages, which may or may not be “genetically” related, come into close contact through such things as trade, alliance, intermarriage, and intergroup gatherings, thereby encouraging “diffusion of linguistic features across geographically adjacent languages” (Winford 2003: 7). The LMV was a major hub of trade and contact between many different ethnolinguistic groups, enabling contact among speakers of various languages.

2 Internal versus external language developments

While the bulk of this paper will focus on external, or contact-driven, change, I should mention certain internal developments that make the Southeastern branch of the Siouan language family unique from other Siouan branches. Among the shared phonological innovations of Southeastern Siouan are common Siouan *š to Southeastern č (e.g., Biloxi *čɔki*, Ofo *ačɔki*, Tutelo *chɔ:ki* ‘dog’⁵) and the merger of glottalized and non-glottalized stops (Rankin 2011). Shared lexical innovations include innovative terms for ‘road’ (Biloxi *natkhohi*, Ofo *nakhó•hi*, Tutelo *hɔtkóx*; ‘prairie’ (Biloxi *takohɔ*, Ofo *akhó•hi*, Tutelo *lata:hkoi*, *oni:i*); and ‘squirrel’ (Biloxi *qsaki*, Ofo *tó•staki*, Tutelo *hista:xkai*); and fusion of the terms for ‘grizzly’ and ‘black bear’ (Biloxi *ɔti*, Ofo *ɯthi*, Tutelo *hamɔ:thi*, *mɔ:ti*) (Rankin 2011). Shared morphosyntactic innovations include the auxiliization of *yukê* ‘be (PL)’ and ‘durative aspect’, collapse of the ‘here/there,’ or ‘home base / apogee’ (Cumberland2010), distinction in verbs of arrival, collapse of active/stative argument marking, and split negation (Cumberland2010). These innovations are internal developments that likely occurred before the Biloxi and Ofo migrations

suffixes *-oto* and *-le* in these names, which do not immediately appear to be Biloxi based on extant data, so that, though intriguing, a definite correlation cannot be made with Biloxis or their ancestors.

⁵ Biloxi terms are based on Dorsey and Swanton1912 Ofo terms on Rankin’s reanalysis (??) of Swanton2012 and Tutelo terms on Oliverio (1996).

into the LMV and the contact-related developments that happened after that.

External, as opposed to internal, language developments arise through languages coming into contact with each other, usually over an extended period of time. The depth of contact between two or more languages can generally tell us how long those groups were in contact. Lexical and phonetic features, which are easily recognizable surface features in languages, can be borrowed between groups with minimal contact and are thus weighted lower in determining the overall strength of a Sprachbund (Kaufman 2014). Morphological features, which are more deeply embedded in the grammatical structure of languages, are more difficult to borrow and require more intimate contact to develop. Thus, morphological features are weighted more highly (Kaufman 2014).

For this paper, I address only those features I weighted more highly in Kaufman (2014) – those given a score of 2 (the features most indicative of an LMV Sprachbund), and only if they occur in the LMV Siouan languages⁶. Phonetic and phonological features discussed are: (??) nasalized vowels; (??) voiceless labiodental fricative /f/; (??) alternation of /i/ and /u/; and (??) alternation of word initial /h/ ~ /Ø/. Morphological features discussed are: (??) focus and topic (discourse) marking, (??) valence-reducing prefix, (??) positional verb auxiliaries and (??) verb number suppletion.

I will then discuss lexical items that appear to have been shared among LMV languages, particularly those involving Biloxi and Ofo. Although lexical features were scored differently from phonetic/phonological and morphosyntactic features (see Kaufman 2014) and are weighted less overall, it has been long noted that certain lexical items appear broadly diffused in the region.

3 Phonetic and phonological features

3.1 Nasalized vowels

Nasalized vowels are a feature of Siouan and Muskogean languages. All Siouan languages, with the exception of Hidatsa and Crow, have vowel nasalization, including Biloxi and Ofo. Nasal vowels also occur in the LMV languages Atakapa,

⁶ In Kaufman (2014), I weighted features on a tripartite scale of 0, 1, and 2. A score of 0 indicates that the feature in question does not exist in the area I delimited as the LMV. A score of 1 indicates that the feature exists in the area but is so common crosslinguistically that its presence in the LMV is not distinctive and thus not deemed relevant to supporting the LMV as a Sprachbund. A score of 2, the highest weighting, indicates that the feature is either geographically limited to the LMV and its immediate periphery, or is so unusual crosslinguistically as to be especially relevant in supporting the LMV as a Sprachbund (Kaufman 2014).

Choctaw-Chickasaw, MTL, and Natchez. In Natchez, however, nasal vowels occur only in phrase- or sentence-final position and are thought to be based on underlying final /n/, which acts as a type of declarative marker (Kimball2013 p.c.). Vowel nasalization in Atakapa is at times uncertain, perhaps being an allophone of the phoneme /ŋ/. Vowel nasalization in Atakapa and Natchez may be due to contact with LMV Siouan and Muskogean languages, although such nasalization may also be due to internal impetus.

3.2 Voiceless labiodental fricative /f/

Only one Siouan language, Ofo, has this phoneme, although all Muskogean languages, including MTL, have it. Haas postulated Muskogean /f/ as the modern reflex of Proto-Muskogean /xw/ (1969: 36). Biloxi may have had at least a dialectal reflex of /xw/ pronounced as /f/, as evidenced by Mrs. Jackson's pronunciation of *nixuxwi* (*nišofe*⁷) 'ear' (Haas1968), a pronunciation that correlates with the probable change of Proto-Muskogean /xw/ to /f/. (It is unclear whether this was a dialectal feature of Biloxi at the time data were elicited or whether this was an idiosyncratic pronunciation based on possible personal influence of Choctaw-Chickasaw.). This phoneme is also found in Atakapa, though rare and usually in word-final position, and may be due to internal impetus such as through fricativization of word-final labiodental velar /w/.

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tended?

3.3 Alternation of /i/ and /u/

The alternation of /i/ and /u/ occurs in Biloxi, Natchez, and Tunica. This alternation appears to be a feature of Siouan languages, particularly of Biloxi but also of Dhegiha Siouan languages. The transition of /u/ to /i/ in Siouan is most apparent in Kansa (Kaw), wherein /u/ is pronounced like German *ü* (/y/), apparently midway in transition between /u/ and /i/. (Dorsey & Swanton1912 also occasionally note the phoneme /y/ in Biloxi pronunciation, though it was apparently infrequent.) Examples include Biloxi *ci* and *cu* 'put, place, plant'; Natchez *išuš* and *ušuš* 'back'; and Tunica *tahišini* ~ *tahišuni* 'sieve'; *hiši* ~ *hišu* 'sift'.

This feature is crosslinguistically rare and is not likely a genetic or internally developed feature. It is likely that this feature's occurrence in Natchez and Tunica arose through contact with Siouan languages, although it could also be the result of vowel harmony.

3.4 Alternation of word initial /h/ ~ Ø

The alternation of word initial /h/ ~ Ø (zero marking) is a feature of the LMV area that occurs in Biloxi as well as in Atakapa and MTL. Examples include Atakapa *hipa* ~ *ipa* ‘husband’ (Swanton1932), *hikat* ~ *ikat* ‘foot’ (Swanton1932), *himatol* ~ *imatol* ‘four’ (Swanton1932) and *huket* ~ *uket* ‘mother’ (Swanton1932); Biloxi *hane* ~ *ane* ‘find’, *hamihi* ~ *amihi* ‘heat’ and *hasne* ~ *asne* ‘thief’ (Dorsey & Swanton1912); and MTL *hat(t)ak* ~ *atak* ‘man’ (Crawford 1978: 88; Drechsel 1996: 295) and *hoyba* ~ *oyba* ‘rain’ (Drechsel 1996: 306). This feature appears to be a Siouan-language-internal development, since “glottal stop is often inserted before word-initial vowels in Siouan sentences as a Grenzsignal — a boundary marker — so it is possible that the Biloxi initial *h-* that comes and goes in these words is the local reflex of [ʔ]” (Rankin 2011: 3). Regarding MTL, the alternation appears “to be instances of an *h-* that was present etymologically in Western Muskogean that was lost among certain users of Mobilian” (Rankin 2011: 3). Since the change from [ʔ] to *h-* appears to be an internal Siouan development, it is possible that this feature was copied from Siouan (Biloxi) into Atakapa and MTL.

4 Morphological features

The ranking of morphological features is a bit trickier than for phonetic and phonological features, since data on morphological features for languages in and around the LMV are often lacking in specific features. For example, MTL totals very low on the morphological-features scale simply because the language, typical of pidgins, is largely isolating and contains few morphological features. Ofo also scores low, simply because extant data on the language is scanty, not because it did not participate more fully in the LMV language area.

Morphological features that have been determined most relevant in analyzing the LMV as a Sprachbund (Kaufman 2014: 3) are:

1. Focus and topic marking.
2. Valence-reducing prefix.
3. Positional verb auxiliaries.
4. Verbal number suppletion.

These features have been determined most relevant in the analysis of an LMV Sprachbund partly because of their limited overall distribution beyond the LMV

and their relative rarity among the world's languages. Such limited distribution indicates a comparatively confined area probably once having a high volume of ongoing contact.

4.1 Discourse marking

Pragmatic or discursive affixation such as focality and topicality marking is fairly common among Native American languages. I use the term DISCOURSE-MARKING to include speaker-centered emphatic marking, often labeled *focus*, *topic* and *assertion*, as well as evidentiality and reference tracking. These markers, in each language in which they occur, are discussed below.

4.1.1 Focus

I use the term FOCUS to refer to new information (what Prague School linguists call “rheme”) (Payne1997). LMV focus-marking suffixes can occur on both nouns and verbs.

Biloxi, along with Atakapa, Chitimacha, Choctaw-Chickasaw, and Natchez, has focus-marking suffixation. Atakapa and Chitimacha appear to share a focus-marking suffix *-š* while Choctaw-Chickasaw and Natchez appear to share the suffix *-ook*. Unfortunately, focus and topic marking cannot be discerned in Ofo from extant data.

In Biloxi, the marker *-di* is often suffixed to nouns in texts, particularly with nouns newly introduced into the narrative or discourse (Kaufman 2011: 3). The suffix *-di* descends directly from Proto-Siouan **-ri*, a focus marker also found in Hidatsa and Mandan (Boyle 2007: 3, p.c.). This suffix is sometimes used at first mention when objects or characters are first introduced into a story, thus signaling new information.

- (1) *Skakana-di ewite-xti eyqhi yuhi yohi-yq.*
Ancient.of.Opossums-FOC early-INTENS 3SG-arrive 3SG-think pond-top
'The Ancient of Opossums thought he would reach a certain pond very early in the morning.' (Dorsey & Swanton1912)
- (2) *Ayaa-di wax ni yukê*
person-FOC hunt walk MOVE
'Some people were hunting ...' (Dorsey & Swanton1912)

4.1.2 Topic

I use the term TOPIC to refer to old, previously mentioned, or known information (what Prague School linguists call “theme”) (Payne1997). Biloxi and Choctaw-Chickasaw have suffixes that serve as types of definite article, indicating previous mention. Biloxi *-yq* is a form of definite article that tends to occur most frequently when the noun to which it is suffixed has already been introduced into a story, thus marking old or already given information, as the following examples show:

- (3) *Atatka-yq khu-ni qoni e-tu xa.*
child-TOP 3.give-NEG PST 3.say-PL always
'Always she did not give him the child.' ('She never gave him the child?')
(Dorsey & Swanton2012)
- (4) “*Yamq na,*” *e-di qyaa-xohi-yq*
no DECL.M 3sg.say-ASRT person-old-TOP
“‘No,’ the old woman said.’ (Dorsey & Swanton2012)

In the above examples, ‘child’ and ‘old woman’ were previously mentioned in the discourse.⁷

The Choctaw-Chickasaw suffix *-aaš* indicates previous mention, in essence acting as a type of definite article:

- (5) *Hattak-Ø-aaš-at čaaha-h.*
man-COP-PREV-NOM tall-TNS
'The previously mentioned man is tall.' (Broadwell 2006: 89)

4.1.3 Assertive marking

Biloxi, along with Atakapa, Chitimacha, and Natchez, has assertive markers, with which a speaker may choose to add particular emphasis or immediacy to a verb.

We have seen the Biloxi focus marker *-di* attached to nouns, but the suffix *-di* also attaches to verbs. With verbs, *-di* shows more emphasis or immediacy and has been glossed as an “assertive” marker (Kaufman 2011: 3), as the following examples demonstrate:

⁷ In example 1 above, *-yq* appears on *yohi* ‘pond’, though the pond is not previously mentioned in the text. However, since this certain pond is already known to the Ancient of Opossums, it seems to be treated as previous knowledge, or a previously known location that can take the definite article marker.

- (6) *Sq̣onitq̣oni-k q̣ha q̣yaa q̣oni ustax kanê-di*
 tar-ACC with man make stand.up EVID-ASRT
 ‘He made a tar baby [person] and stood it up there.’ (Dorsey & Swanton1912)
- (7) *Kq̣kq̣oni ḍphi tē dē-di ê-tu-xa*
 trap see want go-ASRT they-say-always
 ‘They say that he departed, as he wished to see the trap.’ (Dorsey & Swanton1912)

4.2 Valence-reducing prefix

All languages have operations that adjust the relationship of semantic roles and grammatical relations in languages, using a range of structures for accomplishing this (Payne1997). In the LMV, a preverb or prefix is used as a valence-reducing operation. Atakapa, Biloxi, Chitimacha, Choctaw-Chickasaw, Natchez, and Ofo all have valence-reducing prefixation.

Siouan languages have a prefix *wa-* (reduced to *a-* in Biloxi and Ofo⁸), whose actual translation is murky, though it often can be translated as ‘thing’ or ‘something’ (i.e., an indefinite object prefix) and acts as a type of valence reducer (Rankin2013 p.c.):

- (8) *a-duska*
 thing-bite
 ‘rat’ (Dorsey & Swanton1912)

In Atakapa, the valence-reducing prefix is *šok-*:

- (9) *šok-koi*
 INDF.OBJ-speak
 ‘chief’ (‘speaking things’) (Gatschet & Swanton 1932: 9)

The Chitimacha valence-reducing preverb is *ni*:

- (10) *ni katš hamtši:k*
 thing fortune having
 ‘having (good) luck’ (Hieber2013 p.c.)

⁸ Biloxi and Ofo normally lose word-initial labial resonants, or most reflexes of *w, *m, and *W (Rankin 2002: 19).

The Choctaw valence-reducing prefix is *naa-* or *nqn-*:

- (11) *naa-hóoyo-*
 INDF.OBJ(SUBJ)-hunt-NZR
 ‘hunter’ or ‘prey’ (Broadwell 2006: 53)

Example 11 demonstrates that Choctaw *nan-* or *naa-* can be ambivalent, since the preverb *naa-* can represent either the actor (hunter) or the patient (prey) (Broadwell 2006: 53). The Western Muskogean prefixes *nqn-* and *naa-* likely derive from the word *nqta* ‘what, something, someone.’

The Natchez valence-reducing prefix is *kin-*:

- (12) *nokkinhantawāq*
nok-kin-han-ta-w-aa-n
 PVB-INDF.OBJ-make-1SG-AUX-INC-PHR.TRM
 ‘I can work.’ (Kimball 2005: 405)

4.3 Positional verb auxiliaries

Classificatory verbs of the LMV signal position classification of noun referents: SIT, STAND, LIE, and MOVE, which occur as markers of continuative aspect in most if not all of the Siouan languages (Rankin2004). Positional verbs have been grammaticized in the Siouan languages as continuative aspect markers and proximal demonstrative determiners (Mithun 1999: 116). Biloxi and Ofo, along with Atakapa, Chitimacha, Choctaw, and Tunica, all use positionals in a similar manner, indicating possible borrowing between them.

- (13) *Nihq ani dēxtowē nē.* (Biloxi)
 cup water full STAND
 ‘The cup is full of water.’ (Dorsey & Swanton1912)
- (14) *b-ashě nqki* (Ofo)
 1-sit SIT
 ‘I am sitting down.’ (Rankin 2002: 20)

Positional verbs are also used for continuative aspect in other LMV languages, as these examples show:

- (15) *keu kam-š-kin-tu* (Atakapa)
 sit protrusion-DEF-LOC-STAND
 ‘I am [seated] paddling.’ (Gatschet & Swanton 1932: 61; Watkins 1976: 27)

- (16) wekt kas tuhji:k? pe?anki (Chitimacha)
 we-t-k kas tuhjte-ik? pe-?e-nk-i
 DEM-REFL-LOC back stoop.down-PRTP be(horizontal)-3SG-LOC-NZR
 ‘when he had stooped down’ (Swadesh, unpublished notes)
- (17) Bill-at ma binili (Choctaw-Chickasaw)
 SUBJ there sit.ANIM
 ‘Bill is (sitting) over there.’ (Watkins 1976: 21)
- (18) ya potkop ka?ašup ka?epe:nakiyakuš⁹ (Natchez)
 ya potkop ka?ašup-Ø ka-?epe-na-ki-ya-kuš
 that mountain blue-ABS PVB-lie-3PL-AUX-ART-ALL
 ‘(where) that blue mountain is (lying)’ (Kimball 2005: 438)
- (19) t-uruna-t?e-ku ?una (Tunica)
 DEF-frog-large-M.SG sit
 ‘There is the (sitting) bullfrog.’ (Watkins 1976: 26)

In many languages of the world the same lexical item can express both actual physical stance and can be used as an auxiliary, as is demonstrated in the Chitimacha, Choctaw-Chickasaw, Natchez, and Tunica examples above. In Biloxi and Ofo, however, physical stance and locative-existential predicates/verbal auxiliaries generally form two different sets of lexemes. The stance verbs used as independent verbs in Biloxi are *toho* ‘lie’, *xêhê* ‘sit’, *šihî* ‘stand’, and *hine* and *ni* ‘move’. In Ofo the independent verbs are *čáftu* ‘lie’, *áshě* ‘sit’, and *askho(le)* ‘stand’ (there is no data for ‘move’ in Ofo). Their grammaticized auxiliary counterparts are *mąki* ‘lie’ and *nąki* ‘sit’ in both Biloxi and Ofo, while *nê* ‘stand’ and *qde* and *hine* ‘move’ occur in Biloxi but are unattested in Ofo. The Biloxi form *hine* is used for both singular and plural while *qde* has a suppletive plural form, *yukê*. *Ade* is used for general movement and running while *hine* is for walking only (Kaufman 2013: 3).

These verbs form a discrete set of auxiliary verbs that often no longer specify actual physical position or movement but, rather, are used to express nuanced aspectual meanings. Biloxi *mąki*, *nąki*, and *nê* are used for both animates and inanimates, while *qde* and *hine* are confined to use only with animates. *Mąki*, *nąki*, and *nê* share a common plural form *(h)amąki*, apparently a form of *mąki* ‘lie’.

4.4 Verbal number suppletion

For this section, the definition of suppletion includes cases that satisfy either of the following criteria: (??) exceptions to very productive derivational patterns, and (??) exceptions to established agreement patterns (Veselinova2013). The verbal suppletion treated here relates to nominal arguments of the verb, where the verb agrees with its arguments. All languages of the LMV, except MTL and Natchez, have verbal number suppletion in relation to nominal arguments. This feature is further limited in the region by being primarily used in relation to the positional auxiliaries STAND, SIT, LIE, MOVE (see above). In Tunica, only these auxiliary verbs show suppletion, while other verbs in the language do not (Haas 1946: 40). While not displaying direct borrowing of the suppletive terms between the languages, the fact that verbal number suppletion occurs primarily or only in positional auxiliaries makes this a distinguishing feature of the LMV. While the suppletive verb forms may be unique to each language, the underlying pattern of such deviating forms across LMV positional auxiliaries would seem to indicate a deeper-level pattern influence among multilingual speakers of this Sprachbund.

Verbal number suppletion in each language is shown below:

Table 1: Biloxi (Dorsey & Swanton1912)

	singular	plural
STAND	nê	
SIT	na̱ki	(h)ama̱ki
LIE	ma̱ki	
MOVING	a̱de	yukê

Table 2: Atakapa (Gatschet & Swanton 1932: 3)

	singular	plural
STAND	to/tu <i>or</i> ta	tsot
SIT	ke	nul
LIE	tixt	yoxt

Chitimacha, like Biloxi, neutralizes the singular auxiliary forms to a single plural form, *na(h)*.

Table 3: Chitimacha (Swadesh 1939: 32)

	singular	plural
STAND	ci(h)	
SIT	hi(h)	na(h)
LIE	pe(h)	

Choctaw-Chickasaw has both animate and inanimate forms for SIT.

Table 4: Choctaw (Broadwell 2006: 3)

	singular	dual	plural
STAND	hikiya ¹⁰	hiili	(hi)yoh-
SIT (ANIM.)	binili	chiiya	binoh-
SIT (INANIM.)	talaya	taloha	taloh-
LIE	ittola	kaha	kah-

In Tunica, suppletion is “a process not used by any other word-class of the language” (Haas 1946: 40). Thus, Tunica suppletion appears to be a borrowed feature from contact with other LMV languages.

Table 5: Tunica (Haas 1946: 40)

	singular	dual	plural
STAND	kali ¹¹	?	?
SIT	’una	’unana	’uk’era
LIE	’ura	’urana	na’ara

It should be noted that Dhegiha Siouan languages, such as Kanza (Kaw), also show some suppletion in positional verbs (e.g. Kaw *yǫkhé* ‘sitting animate/inanimate singular object’ and *yǫkhá* ‘sitting animate plural object’). Whether this is due to contact between Dhegiha Siouan and LMV languages is debatable and remains a possibility to be further studied. The Dhegiha Siouan language Quapaw, for example, was on the LMV periphery.

Unfortunately, in Ofo, only the positional forms *mǫki* and *nǫki* are attested, so

determination of verbal number suppletion is not possible.

5 Lexical features

Lexical borrowing, due to the easy surface-level recognition of lexical items, is considered less important for establishing a Sprachbund. Word borrowings operate according to a certain set of probabilities. Languages are more likely to borrow nouns than verbs (Tadmor, Haspelmath & Taylor 2010: 231). Adjectives and adverbs are almost as hard to borrow as verbs, and words with grammatical meanings (function words) are harder to borrow than verbs (Tadmor, Haspelmath & Taylor 2010: 231). Basic vocabulary is borrowed before structure and is indicative of more intense contact, while non-basic vocabulary is easiest to borrow (Thomason 2001: 69) and gets borrowed under conditions of even casual contact (Tadmor, Haspelmath & Taylor 2010: 231). Intensity of contact is, however, “a vague concept, and it cannot be made much more precise because it interacts with speakers’ attitudes as well as with more easily specified factors, such as the level of fluency of the borrowers and the proportion of borrowing-language speakers who are fully bilingual in the source language” (Tadmor, Haspelmath & Taylor 2010: 231).

5.1 Basic vocabulary

The concept of basic vocabulary is important to the analysis of lexical borrowings. Several lists have been created to reflect basic concepts that are considered to be universal and culturally independent, such as basic kinship (e.g., *mother*, *father*), general animal terms (e.g., *fish*, *bird*), and basic verbs (e.g., *make*, *go*). The stability of the resulting list of “universal” vocabulary has been brought into question, however, and multiple lists of basic vocabulary have been published. The first was the Swadesh list of 100 basic words.

The Swadesh list was assembled by the linguist Morris Swadesh (1971). Swadesh “determined a priori what constituted basic vocabulary based on his intuitions, and then proceeded to refine his list by trial and error” (Tadmor2010). A newer list, which I used in analyzing LMV lexical items, is the Leipzig-Jakarta (L-J) 100-word list (??). This list (see Table 6) is based on systematic empirical data from 40 different languages. An advantage of the Leipzig-Jakarta list is that it “has a strong empirical foundation and is thus a more reliable tool for scientific purposes” (Tadmor2010). However, as with acceptance of any word list, things are not always perfect and certain questions remain unaddressed, such as why *black*

is considered a basic color but not *white*.

Table 6: Leipzig-Jakarta2009 100 basic word list

ant	eye	leg/foot	small
arm/hand	to fall	liver	smoke
ash	far	long	soil
back	fire	louse	to stand
big	fish	mouth	star
bird	flesh/meat	name	stone/rock
to bite	fly	navel	to suck
bitter	to give	neck	sweet
black	to go	new	tail
blood	good	night	to take
to blow	hair	nose	thick
bone	hard	not	thigh
breast	he/she/it/him	old	this
to burn (intrans)	to hear	one	to tie
to carry	heavy	rain	tongue
child (recip of parent)	to hide	red	tooth
to come	to hit/to beat	root	water
to crush/to grind	horn	rope	what?
to cry/to weep	house	to run	who?
to do/to make	I/me	salt	wide
dog	in	sand	wind
drink	knee	to say	wing
ear	to know	to see	wood
to eat	to laugh	shade/shadow	yesterday
egg	leaf	skin/hide	you (sg)

5.2 Semantic classes of borrowings

The number of borrowings between LMV languages can tell us something about the prior location and migration patterns of LMV groups. For example, the sheer volume of borrowings between Atakapa and Biloxi suggests that these languages were heavily in contact at one time. This seems extraordinary given the post-contact geographic locations of these groups, being on opposite sides of the

Mississippi River. It is also notable that there are fewer borrowings between Chitimacha and Biloxi than between Atakapa and Biloxi, even though the Chitimachas, at least given their post-contact location, were in between. This could indicate, however, that Atakapas and Biloxis were geographically much closer to each other at one time. Biloxis may once have been located west of the Mississippi River before migrating eastward to the Pascagoula River region along the Gulf of Mexico where they encountered the French in 1699.

Table 7 is a list of LMV borrowings by semantic category (L-J basic vocabulary in **bold**):

Table 7: LMV borrowings by semantic category

Agricultural	(??)	seed, turn (soil?)
Body parts	(??)	anus/back, arm/hand , belly, breast , elbow, face, knee , mouth , tooth
Botanical	(??)	berry, cedar, corn, cotton, cypress, oak, peach, pepper, pumpkin/turnip
Color	(??)	black, white
Drink	(??)	water
Food	(??)	tortilla, bread
Kin	(??)	brother
Transport	(??)	canoe
Weapon	(??)	bow
Zoological	(??)	bee, bird , bison / buffalo, blackbird, bullfrog, buzzard, cow/calf, crane, deer, dog , duck, fish , flying squirrel, raccoon, robin, skunk, snake, wildcat, woodpecker

Several basic words appear to have been shared between Biloxi, Ofo, and other LMV languages; see Table 8:

5.3 Widespread lexical borrowings in the LMV and Southeast

Certain nouns, and at least three verbs, are fairly widespread throughout the LMV and Southeast in their diffusion: those for ‘bison/buffalo’, ‘bullfrog’, ‘cut’, ‘deer’, ‘goose’, ‘metal’, ‘robin’, ‘split’, ‘town’, ‘turn’, ‘water’, and ‘woodpecker’.

- (20) ‘Bison / buffalo’: Similar terms for ‘bison / buffalo’ are of particularly widespread diffusion, ranging from Caddoan in the western Plains to

Table 8: Shared basic vocabulary

	Atakapa	Biloxi	Chitimacha	Natchez	Ofo	Tunica
hear	nak	naxe				
laugh	hayu	xahaye				
blow	pun	po	puuh(te)	puuh-hoo'is̥		
cord/ rope		ika				yúnka
cry		wahe				wáha
knee	timak	cinaki				cina(hki)
mouth		ihi	i 'tooth'	ihi	ihi	
wind		xux(we)	howi			húri

Catawba near the eastern seaboard, including in the LMV: Bi. *yinisa*, *yanasa*, Choc.-Chic. *yanaš*, MTL. *yanaš*, Nat. *yanašah*, and Tun. *yanši*, *yanškaši*. The Ofo term *naf* 'cow' is likely also derived from this widespread 'bison' term. While the source of the borrowing is unknown, **Taylor1976** suggested the possibility of its origin in an Athabaskan language. I concur with him that the Apache *iyaná ła*' (with loss of the initial *i* and the second element being the enclitic for indefinite determiner) could indeed be the source of copying. Apaches were a Plains group who may have been in contact on a regular basis with buffalo hunting parties of other groups from the LMV and Southeast and were probably also involved in the buffalo fur trade. Totonac has the word *tiyaná* for 'ox,' raising the possibility of borrowing between this Mexican Gulf coastal language and the LMV for this similar bovine perhaps through Mobile Bay.

- (21) 'Bullfrog': Similar terms for 'bullfrog' occur in At. *anenui*, Bi. *kəninuhi*, MTL. *hanono*, Nat. *hánanai*, and Tun. *uruna(te)*. The source language of this borrowing is unknown.
- (22) 'Cut': Similar terms for 'cut' occur in At. *kets* or *kuts*, Bi. *kutsi*, Nat. *keš*, and Tun. *kušu*. The Plains languages Comanche, Tonkawa, and possibly Caddoan have terms similar to the LMV form. The source language of the borrowing is unknown.
- (23) 'Deer': Similar terms for 'deer' appear to have been borrowed in the LMV

as well as in the Plains periphery. The Proto-Siouan form is **wi-htáa*, indicating possible borrowing from Siouan (possibly Biloxi [*i]tha*) into Natchez *ša*. Similar terms also appear in Pawnee (Caddoan) and Kiowa (Kiowa-Tanoan), possibly borrowed from Biloxi.

- (24) ‘Metal’: Similar words beginning with *nasal* + /a/ + *fricative* / *lateral* occur in Bi. *maasa* or *maasi*, Choc.-Chic. *maaʔa* ‘kettle’ and Nat. *naLkw*. Intriguingly, forms of this word also occur on the other side of the Gulf in Mayan (e.g., Proto-Yukatekan **mahskab* ‘metal,’ Yukatek *maHskab* ‘machete’ and Mopan *maʔaskaʔ* ‘metal’ (KaufmanJusteson2002)).

KaufmanJusteson
is 2002
or 2003?

- (25) ‘Robin’: Similar terms for ‘robin’ occur in the LMV (e.g. Bi. *ʃikuki*, Choc.-Chic. *biškoko*, MTL *beškoko*, Nat. *miškokw*, and Tun. *wiškʔohku*. The term also extends into Eastern Muskogean (e.g. Ala. *čiskokko*).
- (26) ‘Split’: Similar terms for ‘split’ occur in At. *čal*, Bi. *ča*, Chit. *čap*, Choc.-Chic. *čuʔalli*, MTL *čolale*, and Tun. *čal*. It may be significant that the semantically similar verb ‘cut’ also has a fairly widespread distribution in the LMV.
- (27) ‘Town’: Similar terms for ‘town’ occur in Western Muskogean – but not in Eastern Muskogean – and are widespread across Siouan languages. It is possible that the term was borrowed between the two families, though the direction of borrowing is uncertain. It is possible that the term was borrowed into Siouan from Algonquian, since the Lakota word for town *oṭhúŋwahe* is strikingly similar to, for example, Ojibwe (Algonquian) *oodena* (Nichols & Nyholm1995). Even if the Siouan term was borrowed from Algonquian, the Choctaw-Chickasaw term may have its source in a Mexican Gulf coastal language: Totonac. The Totonacan term *tamawan* (*tamāhuan*) means ‘s/he buys’ while *liitamaw* (*litamáu*) and *puutamawan* (*putamahúan*) means ‘plaza’ or ‘place to buy’ (Aschmann1973). (The Totonac prefix *lii-* is an instrumental prefix while *puu-* is a locative prefix (MacKay1999 388).) Assuming that there may have been circum-Gulf navigation and trade, it is possible that this term entered Choctaw-Chickasaw and MTL as *tamaha* from Totonacan *tamawan* as a means of referring to a center for buying, selling, and trading (i.e., a plaza or town center).
- (28) ‘Turn’: Similar terms for ‘turn’ occur in At. *miš*, Bi. *mixi*, Chit. *tamix*, and Tun. *maxsi*.

- (29) ‘Woodpecker’: Similar terms for ‘woodpecker’ occur in Bi. *pakpakhayi*, Choc.-Chic. *bakbak*, Nat. *pukpúku* and Tun. *páhpahkana*, and extend into Eastern Muskogean.

Certain of the above terms (e.g., ‘goose’, ‘woodpecker’) may be due to onomatopoeia, or words mimicking the sounds of nature. Yet “some resemblances are remarkably precise even if one allows for onomatopoeia” (Haas 1969: 82), as in the above examples. It might also be noted that certain widespread terms may be cultural in nature. For example, the Redheaded Woodpecker has a particular association with the ball game in Chickasaw (Galvan2012); the cultural iconicity of this bird associated with this sport and its nomenclature could easily have been copied by other groups through the ritual of intergroup ball play. The significance of the diffusion of certain terms such as ‘cut’, ‘split’, and ‘turn’ is unknown, although ‘cut’ and ‘split’ may be related to such activities as communal hunting and feasting and the sharing of meat. ‘Turn’ may be related either to the turning of soil involved in agriculture or perhaps to communal dancing, though this currently can only be speculation on my part.

Calques are loan translations (word-for-word semantic translations) shared among languages. Rather than an individual term being copied, as in lexical borrowing, calques involve the copying of a semantic phrase, the concept behind the phrase being copied rather than just the individual words.

Table 9 lists calques that are found among LMV languages (some of which are found beyond the LMV in peripheral languages):

Some of the most widespread calques – ‘butter’, ‘donkey’, ‘jail’, ‘sugar’ – were likely diffused through the MTL pidgin, which also contains the calques. Since extant data is limited for MTL, it is now impossible to know if other borrowings and calques were diffused through this medium, though it seems likely.

6 Summary and conclusion

In my dissertation (Kaufman 2014: 3), I concluded that the LMV was a Sprachbund on par with other well-known language areas, such as the Balkans of Eastern Europe, South Asia (India), and the Amazon basin. The strength of the LMV as a language area lies in the phonetic, phonological, morphological, and lexical features delineated above. Two Siouan languages – Biloxi and Ofo, members of the Southeastern, or Ohio Valley, branch of the Siouan language family – participated in the LMV Sprachbund after their migrations into the region. In this paper, we have seen that several features typical of the LMV language area, and

Table 9: Calques

idiomatic gloss	calque gloss	languages sharing calque
‘bedbug’	‘flat bug’	Biloxi, Caddoan
‘butter’	‘cow / milk grease’	Atakapa, Biloxi, MTL, Natchez
‘cologne’	‘smell good water’	Biloxi, Natchez
‘corn crib’	‘corn house’	Atakapa, Biloxi, Natchez, Tunica
‘donkey / mule’	‘long ear’	Atakapa, Biloxi, Caddoan, Choctaw, MTL, Natchez
‘jail’	‘strong house’	Atakapa, Biloxi, Choctaw, Creek, MTL
nostril	‘nose hole’	Atakapa, Biloxi, Caddoan, Comanche, Kiowa, Natchez, Nahuatl
‘ocean’	‘big water’	Biloxi, Comanche, Nahuatl, Natchez
‘rattlesnake’ 1	‘big snake’	Biloxi, Tonkawa, Tunica
‘rattlesnake’ 2	‘chief / king snake’	Biloxi, Natchez, Tunica, Yukatek (Mayan)
‘stable [horse]’	‘horse house’	Atakapa, Biloxi, Comanche, Nahuatl
‘sugar’	‘sweet salt’	Atakapa, Biloxi, Choctaw, MTL, Natchez
‘thumb’	‘big / old hand’	Atakapa, Biloxi, Comanche, Natchez, Tunica
‘vein’	‘blood house’	Atakapa, Biloxi

largely absent from other Siouan languages, are present in Biloxi and Ofo. Data on the latter language are admittedly sparse, leaving many aspects of the language inconclusive, though Ofo still seems to have participated to a great degree in the LMV Sprachbund.

I have discussed the following LMV phonetic, phonological and morphological features, which received the highest weighting in Kaufman (2014): nasalized vowels, voiceless labiodental fricative /f/, alternation of /i/ and /u/, alternation of word initial /h/ and Ø, focus and topic marking, valence-reducing prefixes, positional verb auxiliaries, and suppletive verbal number agreement. We have also seen that several lexical items appear to have been shared in the LMV, including among Biloxi and Ofo. While the direction of borrowing is often unclear, it appears that borrowing involving Biloxi and Ofo went in both directions.

Dhegiha Siouan languages may have participated to some degree in, and been influenced by, the LMV Sprachbund as well, especially in the area of positional verbal auxiliaries and verbal auxiliary suppletion. The extent of Dhegiha Siouan participation in the LMV Sprachbund remains to be further studied.

Language contact has been less studied than “genetic,” or family tree, linguistics, especially in regards to Native North American languages. The LMV is another of several Sprachbünde that have arisen around the world in response to the mingling of two or more languages and cultures. As we have seen, Biloxi and Ofo, though genetically Siouan, have been moderately influenced by contact with other LMV languages. These two Siouan languages were essentially subsumed into a broader cultural area that was centuries, if not millennia, in the making.

Abbreviations

1, 2, 3 = first, second, third person; ABS = absolutive; ALL = allative; ANIM = animate; ART = article; ASRT = assertive; At. = Atakapa; AUX = auxiliary; Bi. = Biloxi; Chit. = Chitimacha; Choc.-Chic. = Choctaw-Chickasaw; DECL = declarative; DEM = demonstrative; EVID = evidential; FOC = focus; INC = incomplete; INDF = indefinite; INTENS = intensifier; INSTRANS = intransitive; M = masculine; MTL = Mobilian Trade Language (Mobilian Jargon); Nat. = Natchez; NEG = negative; NOM = nominal; NZR = nominalizer; OBJ = object; PHR.TRM = phrase terminal; PL = plural; PREV = previous (mention); PVB = preverb; RECIP = reciprocal; REFL = reflexive; SG = singular; SUBJ = subject; TNS = tense; TOP = topic; Tu. = Tunica.

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