On the Sub-grouping of the
Virginia Siouan Languages

GIULIA R. M. OLIVERIO
Alaska Native Languages Center
and
ROBERT L. RANKIN
University of Kansas

INTRODUCTION

Several languages of the Siouan family were spoken in Virginia and adjacent areas of West Virginia and the Carolinas in the eighteenth century. The best attested of these languages is Tutelo. Saponi, whose vocabulary is nearly indistinguishable from that of Tutelo, is attested in a short word list (Alexander 1971) and a few place names. Moniton is attested by only two words, *mąnį́* 'water' and *itą́* 'big', while Occaneechi was a Siouan-based trade jargon only by reputation (Rankin 1980; Oliverio 1996b).

SUB-GROUPING

The sub-grouping of these Virginia Siouan languages within the rest of Siouan has never been systematically investigated. Most earlier publication on this topic was impressionistic. Voegelin (1941:246-7), the earliest modern sub-grouping of Siouan, reaffirms Swanton's earlier belief that Tutelo and Catawba, although both spoken in the Southeast, were totally distinct and did not belong in the same sub-group.[1] Voegelin placed Tutelo in his Ohio Valley Siouan (OVS) sub-group along with Ofo and Biloxi, two languages closely related to each other, that were spoken in the lower Mississippi valley and on the Gulf Coast, and he went on to call attention to features that provide "evidence for the Ohio Valley Siouans as a group." Most of the features that he lists, however, represent shared retentions and are therefore best not used for sub-grouping (but see 'ghost, spirit', below). Despite Voegelin's work, there have been recent suggestions, mostly expressed orally within the community of Siouanists, that Tutelo may represent a totally distinct Siouan sub-group like Mandan. In this paper the authors reinforce Voegelin's original conclusion with improved evidence from phonology, lexicon, semantics and morphosyntax. Proper sub-grouping of languages within a family requires the discovery of shared innovations, with the additional postulate that, the more idiosyncratic the innovation, the more convincing the evidence.

PHONOLOGICAL INNOVATION[2]

We look first at cases in which OVS languages are characterized by distinct shared phonological innovations, not found in the rest of Siouan. Looking first at regular sound changes, we find that the regular reflex of Proto-Siouan (PS) *š is č in OVS. The change from a fricative to an affricate is uncommon, but if we assume that the Siouan languages have always had the *s/š/x, z/ž/γ* fricative symbolism sets, then *š > č must be the progression here.[3] This change is illustrated by a number of fairly complete cognate sets (1).[4]

The first example, 'dog', is important because it illustrates dual innovations: *š becomes č and the secondary change whereby č becomes aspirated čh before an accented vowel. Ofo has long been known to have had a rule that aspirated obstruents that began accented syllables, but here we see that Tutelo also had the same rule.[5] The rule is only apparent in the few Tutelo words recorded by Edward Sapir (1913) and Marianne Mithun (c.1980, personal communication), as the other field workers neglected to write aspiration.

'Hand' shows the expected change of š to č, but aspiration was not recorded in the Tutelo form because only linguists who did not write aspiration recorded the word.

'Red' again shows affrication of *š, and Ofo correctly shows aspiration but, again, the Tutelo form was transcribed by the linguists who conflated the transcription of C and Ch.

'Scratch, forked, squeeze, sweet' are additional cognate sets containing examples of this sound change. A final example, 'tongue', shows interesting doublets in several sub-groups, but the passage of *š to č is regular.[6]

IDIOSYNCRATIC PHONOLOGICAL CHANGE

Another kind of phonological evidence favoring the sub-grouping of particular languages is shared phonological or morphological idiosyncrasy, i.e. irregular sound changes. Certain phonological innovations in OVS seem to be idiosyncratic, affecting only particular lexemes (2a-e). One of the more interesting is the so-called "intrusive T" that has appeared preceding *k in several words, only one of which has cognates in Tutelo and at least one of the other OVS languages: 'younger brother' (2a). There is no sound change that would have simplified an original -tk- cluster in the more northerly languages such as Dakota; the t simply seems to be intrusive in the Southeast.[7]

In 'bone' (2b), loss of initial #w- in Biloxi and Ofo is regular, but the OVS cognates all have a distinctive root variant with -o instead of the expected -u.[8]

In 'die' and 'give' (2c), it appears that all three OVS languages regularly innovated the loss of glottalization. This analysis is still controversial though, since Biloxi under-dotted consonants in Dorsey and Swanton (1912) may match *CɁ and

(1)	'dog'	'hand'	'red'	'scratch'
PS	*wišúke	*i-šá:ke	*ašú:te	*-ške
Crow	bišké	iščí		-sči
Hidatsa	wašúka	ša:kE		-škE
Dakotan	šúka	šaké		-škíška
Chiwere	šúŋe	šá:ge	šú:ǰe	
Winnebago	šú:k	šá:k	šu:č	
Omaha	šáge	šá:ge	ží:de	
Kansa	šóge	šá:ge	žú:ǰe	
Osage	šóke	šá:ke	žú:ce	
Quapaw	šóke	šáke	žítte	
OVS	*ačhúki	*ičá:ki	*ačhú:ti	*-čke
Biloxi	čúki	ča:ki	əču:t-ka	-čke
Ofo	ačhúki	ičáki	əčhúti	
Tutelo	čhúki	ču-ča:ki	aču:ti	-čke
Saponi	"chunkete" 'horse'			
	= čhúki-ithą			

	'forked'	'squeeze, crush'	'sweet'	'tongue'
PS	*šąh-ka	*-škíke ~ -škįke	*šikú:-hE	*i-ré:ši
Crow	sáhka	-sčiči, du-		dé:ši
Hidatsa	šahki			ré:ši
Mandan		-skíkoʔš, pa-	skúhoʔš	dé:sike
Dakotan		-škiča, na-		čheži
Chiwere		škįge		ré:ðe
Winnebago		-šgįk, gi		re:zí
Omaha				ðé:zi
Kansa	-žąkka	-šíge, ga-		lé:ze ~ yé:ze
Osage				ðé:ze
Quapaw				dé:ze
OVS	*čąhk-	*čkįk	*čikú:e	*iré:či
Biloxi	čąxk-ǫni	-čičkí, du-	čiku:yixtí	yeči
Ofo				įlečí
Tutelo	-čąk	-čkįk, lu-	-čikóyǫ	ne:či ~ le:či:

3

thus be a reflex of glottalization, in which case Proto-OVS could have had an ejective series and these sets would not be evidence. The lone initial vowel combined with aspiration in Ofo also may have something to do with earlier glottalization. There are a number of other sets that illustrate OVS loss of glottalization, but they lack Tutelo cognates. In any event, although some phonetic reflex may remain in the three OVS languages, glottalization itself was lost in Ofo, Biloxi and Tutelo.

(2a)	'brother, younger'		(2b)	'bone'
PS	*i-sṹ:ka			*wa-hú:
Crow	iču:k			
Hidatsa	icu:k			
Mandan	košṹka			wahú:
Dakotan	sųkáku			huhú
Chiwere	hiθṹŋe			wa:hú
Winnebago	hisṹk			wa:hú
Omaha	isą́ga			wahí
Kansa	isǫ́ga			wahṹ
Osage	isą́ke			wahṹ
Quapaw	isą́ke			wahí
OVS	*i-sṹtka			*wahó:
Biloxi	sǫtkáka			ahó ~ ahú
Ofo	əkifhṹtku	'saturday'		ho
Tutelo	sṹtka			waho: ~ wahu:

(2c)	'die'		'give'
PS	*tʔé:re		*kʔu:
Crow	čÉE		ku:
Hidatsa	tÉ:		kuʔ
Mandan	té:roʔš		kú
Dakotan	tʔa		kʔu
Chiwere	čʔé		okʔų
Winnebago	tʔé:		hokʔų
Omaha	tʔé		ʔi
Kansa	čʔé		kʔü
Osage	cʔe		kʔü
Quapaw	tʔé		kʔi
OVS	*t é:		*ku:
Biloxi	ṭedi		ku
Ofo	əthé		əkhú:
Tutelo	te:		ku:

4

In 'seven' (2d), OVS languages quite irregularly have reflexes of initial *s-* instead of the expected relexes of *š found in the rest of Siouan. The expected form would have been **č*a:ku̧:mi̧*, with affrication of PS *š.[9]

In 'rain' (2e), the variant with -*o*- is restricted to OVS, but the Mandan term may not even be cognate, in which case the entire set would represent an OVS lexical innovation. The Tutelo form appears to have undergone a metathesis of consonants.

(2d)	'seven'	'rain'
PS	*ša:kú:pa (?)	*xVhe
Crow	sáhpua	
Hidatsa	šáhpua	
Mandan	kú:pa	xéʔh-
Dakotan	šákowi̧	
Chiwere	sáʔhmą	
Winneb	ša:gó:wi̧	
OVS	*sa:ku̧:mi̧	*waxóhi
Biloxi		xohi
Ofo	fákumi	ašóhi
Tutelo	sa:kǫ́:mi̧	xawo:i

LEXICAL INNOVATION

Next we examine a few other instances in which distinct lexical items seem to have developed in the OVS languages (3). Such cases are hard to research, since Siouanists have typically searched for cognates, not synonyms. Additionally, the corpuses for Ofo and Tutelo are very small. The terms could even be loanwords. Other Siouan languages have no forms that closely resemble these.

'Prairie' and 'road' are restricted to OVS. In 'road', Tutelo #*h*- might be a misinterpreted #*n*- due to bad handwriting. 'Road' and 'prairie' appear to share a root, -*kho:hi*, but this is uncertain.[10] The distinctive 'squirrel' term is found only in OVS, but a morphemic breakdown is elusive.[11]

SEMANTIC INNOVATION AND CHANGE

Shared, distinctive semantic change is another factor that can aid sub-grouping. There are a few terms that have undergone distinct semantic changes in OVS. They most often involve contamination between pairs of words that are clearly distinct etymologically, but which are near-homophones and have similar meanings.

There are two widespread Siouan terms for bears, and the OVS languages have mixed them semantically and phonologically in identical ways (4). In the first term, originally 'grizzly', the western Siouan languages have an aspirated *th*, nasal *ą*, and accented final -*ó*. Ofo and Tutelo, however, both have the accented *ú̧* and final un-

(3)

	'prairie'	'road'	'squirrel'
OVS	*tahkóhi	*-khó:hi	
Biloxi	ta kohǫ́	nətkohí	nasəki
Ofo	a khóhi	nəkhóhi	tóstəki
Tutelo	lata:hkó i	hǫtkó:x	nista:hkai

accented -*i* that we find in the second 'bear' term, but with the aspiration of the first term. The second 'bear' term historically had an unaspirated *t*, however. In OVS, the terms are mixed phonologically; semantically they appear to refer to a single species at least in Biloxi and Ofo.[12]

(4)

	'grizzly bear'	'black bear'
PS	*wąthó	*wihǫ́:te
Crow		bu:ší
Mandan	mątóʔ	
Dakotan	mąthó	húte
Chiwere	mąthó	múǰe
Winnebago	mąčó	hǫ́:č
Omaha	mąčhó	
Kansa	mičhó	
Osage	mįchó	
Quapaw	mąthó	
OVS	*mǫ́:thi	*mǫ́:ti
Biloxi		ǫti ~ ǫdi 'bear'
Ofo		ǫ́thi 'bear'
Tutelo	hamǫ́:thih	mǫ:ti ("mūnti ~ mōndi")

In 'medicine' and 'sacred' (5), we have two semantically similar, but derivationally unrelated roots that by chance differ only in nasalization and accent placement. Their superficial similarities appear to have led to a certain amount of mixing. The 'medicine' column is where the OVS set properly belongs phonologically, but it has undergone semantic specialization, acquiring the meaning 'snake', that is typical of the 'sacred' set in particular geographical areas. 'Sacred' underwent a parallel change in Winnebago, Chiwere and Omaha. Here it should be noted that the concepts 'god, sacred' and 'snake' were related in other parts of the eastern and central U.S.[13] Nevertheless, there was identical semantic specialization in all three OVS languages. And this is the only case in which Saponi provides the Virginia Siouan cognate.[14]

(5)   'medicine'   'sacred'[15]

PSI	*wą́:hka	*wahką́	
Dakotan		wakhą́	'spirit, sacred'
Chiwere	mą́khą	wakhą́	**'snake'**
Winnebago	mą:ką́	waką́	**'snake'**
Omaha	makką́ ~ mąkką́	wakką́da	'sacred, god'
		wakką́dagi	**'water monster'**
Kansa	mokką́	wakką́da	'holy, god'
Osage	mąhką́	wahką́ta	'holy, god'
Quapaw	makką́	wakką́tta	'spirit, god'
OVS	*mųka	**'snake'**	
Biloxi	n-dé:si	**'snake'**	
Ofo	ǫktéfi	**'snake'**	
Saponi	"moka"	**'snake'**	

In 'shoot' (6), Biloxi and Tutelo have seen identical contamination from *kithé 'kill', which has a front vowel, and have irregularly replaced accented *-ú- of 'shoot' with unaccented -i- while retaining the meaning 'shoot'. Vowel fronting in Omaha and Quapaw are independent.[16] This term, then, shows a mixture of phonological and semantic innovations that help define OVS. 'Shoot' is a term whose meaning has clearly undergone several semantic shifts over the centuries with changes in weapons technology. Mandan probably preserves the original meaning, 'throw', with 'shoot' coming as a replacement as atlatl darts and their throwing sticks gave way to the bow and later to guns. It is therefore not surprising to see progressive semantic specialization in the several sub-groups.

(6)	'throw > shoot'	'kill'
PS	*hkú:te	*kité
Mandan	:kųtE 'throw sth.'	kté
Dakotan	khuté 'shoot'	kté
Chiwere	khúje 'shoot'	
Winnebago	g ú:č 'shoot'	kǰé
Omaha	kkí:de 'shoot'	
Kansa	kkų́:ǰe 'shoot'	
Osage	hkų́:ce 'shoot'	
Quapaw	kkítte 'shoot'	
OVS	*kité:	*kithé
Biloxi	kité 'hit, shoot at'	
Ofo		k thé
Tutelo	kité: 'kill, shoot'	kité: 'kill, shoot'

7

DERIVATIONAL INNOVATION

Lastly we look at OVS morphology and syntax. Here we find uses of derivational morphology not encountered in the rest of Siouan (7).

The OVS languages all show a derived stem for 'chert/flint', *mąki*, with the root-extension, *-k*, not occurring elsewhere, and a second stage of derivational compounding with the root *si:* 'kernel' yielding *mąksí* with the meaning 'projectile' (dart or arrow). Saponi "mankey" and Tutelo *mą:ko:* show the uncompounded root with its *-k* extension.[19]

The derivation of 'day' with the prefix *nq-* (meaning unknown) is restricted to OVS.

The word for 'eight' shows three parallel but distinct derivations each characterizing a different sub-group. All incorporate the root for 'three' and form partial quinary counting systems (Rankin 1985). Although similar in form and function, the Dhegiha prefix *hpe:-* and the OVS *pa-* are not obviously cognate, i.e., the sound correspondences do not match for either the consonant or the vowel, and the Ofo and Tutelo forms represent a genuine OVS innovation.[20]

The compound *awą-* 'earth' + 'sweet' yielding the meaning 'salt' also represents an OVS innovation. Crow and Hidatsa compound 'earth' + 'gray', while all the MVS languages (along with several Muskogean languages) compound 'water' + 'sweet' to give the meaning 'salt'.[21]

In 'thin', OVS innovates the prefix *ha-* (meaning unknown).[22]

The numeral 'one' is a two-morpheme compound in OVS (cf. the Quapaw term). There is a possible cognate in Hidatsa (and maybe earlier Crow). If Hidatsa is cognate, we are dealing with a retention, and it would not be evidence for sub-grouping. Biloxi initial *s-* is presumably due to assimilation at a distance, but it is not regular.

Biloxi and Tutelo terms for 'otter/beaver' partially match and clearly show a distinct root, but the term almost certainly represents a diffused form as there are Tunica, Iroquoian and other partial look-alikes. Nevertheless, if it is diffused, the same root somehow got to both Biloxi in Mississippi and Tutelo in Virginia without touching the rest of Siouan.[23]

In 'ghost', OVS alone has a root extension with an alveopalatal fricative grade *č* (from *š*); the rest of Siouan generally shows a reflex of *-xi*. This is one of the terms that Voegelin (1941) identified as a common Ohio Valley Siouan innovation. He also noted the correspondence of OVS *č* to *š* in the rest of Siouan, but felt the reconstructed phoneme should be *č* rather than *š*. Thus for him, the OVS forms represented retentions rather than innovations.

8

(7)	'chert > projectile'	'day'	'eight'	'salt'
PS	*wá̧:he	*wahá̧:pe		
Crow		ba: pí		awaxó:sa
Hidatsa	á	wá: pi		awaxó:ta
Mandan	wá̧:he	há̧pe		
Dakotan	wą	á̧pa		mniskúya
Chiwere	má̧	á̧:we	gre:rá:brį	ñį̄:hkú
Winnebago	má̧:	há̧:p		nį̄:sgú
Omaha[17]	má̧	á̧:ba	ppe:ðá:bðį	niskí:ðe
Kansa	má̧	há̧ba	ppe:yá:blį	nį̄skű:we
Osage	mą	há̧pa	hpe:ðá:bðį	nį̄skű́e
Quapaw	má̧	hó̧pa	ppe:dá:bnį	niskíde
OVS	*mą**ksi:**	*na̧há̧:pi	***para:nį**	***amą̧č**ikúe
Biloxi	ą**ksí**	**ná**pi **ha**	déhi	
Ofo	o̧**fhi**	nó̧pi	**pɔ́təni**	amə**skúwe**
Tutelo	mą**ksi:**	naha̧:pi	**palá:ni**	**ma**č̌ikó̧yo̧
	mą:**ko:**			
Saponi	"man**key**"			

	'thin'	'one'	'otter'	'ghost'
PS	*waré:he			*(wa-)rá̧:xi
Crow		hawáta		ilá:xi
Hidatsa		ruwáca		irá:xi
Mandan				warú̧:xik
Dakotan	blečA			wanáɣi
Chiwere	brekhé		dostá̧ŋe	wanã̧xi
Winnebago	peré		to:šá̧nąk	wanąɣí
Omaha	bðékka		nošná̧	wanáɣe
Kansa	blékka		dohná̧ge	wanáɣe
Osage	bðéhka		htohná̧ke	wanáɣe
Quapaw[18]	pdékka	no̧xtį 'once'	tošná̧ke	wanáɣe
OVS	***ha**bréhe	*no̧:sa	*-nąxka	*wanáč̌i < *š
Biloxi		so̧sa	xanaxka	anač̌i
Ofo		nó̧fha ~ no̧fhá		-náč̌i
Tutelo	**ha**ble:ha:	nó̧:sa ~ no̧sá:	muna:xka 'beaver'	waná̧č̌i:
Saponi			"Mosnukhe"	

9

MORPHOSYNTACTIC EVIDENCE

We turn now to the patterning of several grammatical categories in OVS, examining first motion verbs and then auxiliaries and negation.

Motion Verbs

The system of motion verbs provides another piece of evidence for a distinct Ohio Valley Siouan sub-group. Taylor (1976) reconstructed the Proto-Siouan system of motion verbs with four stems that distinguished (a) type of motion: 'arriving motion' or 'motion prior to arrival', and (b) destination: 'here' or 'there' (8).

(8) Proto-Siouan basic motion verb stems (from Taylor 1976)

	Arriving motion	Motion prior to arrival
Destination		
	Stem 1	Stem 2
Here	*rhí*	*hú*
	Stem 3	Stem 4
There	*hí*	*rÁ*

Oliverio (1996) demonstrated that Tutelo inherited the Proto-Siouan system of motion verbs with the distinctions of type of motion and destination. The Tutelo basic motion verb stems are the reflexes of the abovementioned Proto-Siouan stems (9).

(9) Tutelo basic motion verb stems (Oliverio 1996:table 3)

	Arriving motion	Motion prior to arrival
Destination		
	Stem 1	Stem 2
Here	*lí*	*hú*
	Stem 3	Stem 4
There	*hí*	*lÉ*

The sub-grouping criteria among these stems involves a special stem called the *vertitive*. A vertitive form is, after Hollow (1965) and Taylor (1976), a form that "relate[s] the motion to one's home or to an earlier location" (Taylor 1976:288). A collapse occurred in the Tutelo vertitive system for 'arriving motion' (10). In Tutelo, the common Siouan vertitive prefix takes the form *ki-*, often reduced to *k-*, phonetically [g]. Stem 3, *hí,* is used in the non-vertitive form only, while stem 1, *lí,* is used for the vertitive form of the verb. This collapse of stems 1 and 3 in the vertitive is also shared by Biloxi and Ofo (11-12). Most importantly, the Biloxi forms show the same pattern of collapse from the Proto-Siouan system where the

10

(10) Tutelo motion verbs and vertitive forms (Oliverio 1996:table 4)

	Arriving motion	Motion prior to arrival
Destination		
Here		*hú/kihú*
	hí/klí	
There	(no distinction between	*lÉ/kilÉ*
	here and there)	

simplex verb, *hi*, is based on stem 3 and the corresponding vertitive form, *kidí*, on stem 1. The Ofo verb system is much less well attested, but appears to parallel the Biloxi and Tutelo systems.

(11) Biloxi motion verb stems with vertitive forms (from Taylor 1976:table 12, with modifications)

	Arriving motion	Motion prior to arrival
Destination		
Here		*hu/ku*
	hi/kidí	
There	(no distinction between	*dÉ/kidÉ*
	here and there)	

(12) Ofo motion verb stems (Taylor 1976:table 12, with modifications)

	Arriving motion	Motion prior to arrival
Destination		
Here		*kiú* (vertitive)
	ofthahi	
There	(no distinction between	*tÉ*
	here and there)	

Auxiliary Verbs

Our OVS sub-grouping is also supported by certain aspects of the system of auxiliation. The Biloxi verb *yuke*, meaning 'be' or 'stay' in the plural as an independent verb, is also used as an auxiliary to denote duration (Einaudi 1976: 152) (13a-b). A cognate morpheme is found only in Tutelo and the Tutelo cognate *yuke* is also an auxiliary, although its exact function is hard to determine from the available examples (14a-b).[24]

(13) a. Biloxi *iduti ya-yuke* (eat 2SUBJ-DURATIVE) 'You (pl) are eating' (Einaudi 1976:152)

   b. Biloxi *dǫhi yuke* (look DURATIVE) 'They were looking at it' (Einaudi 1976:152)

(14) a. Tutelo *í-ne **yuḳé-wa*** (3SUBJ-see AUX-REALIS) 'He found it some time ago' (Dorsey 1882)

    b. Tutelo *íma ó-la-kpe **yúḳa*** (3EMPH LOC-BY.MOUTH-drink AUX) 'He did drink' (Dorsey 1882)

Independent Pronouns

The morpheme *ịti* is found only in OVS languages. Its function is pronominal in all three languages, but its exact morphosyntactic usage differs from language to language (15). It is used in Biloxi to form independent pronouns (Einaudi 1976:55 and 68-9). In Ofo, it is used both for independent pronouns and in a reflexive. And in Tutelo it is a reflexive verbal prefix (16).

(15)		Independent pronouns	Reflexive '-self'
Biloxi		*ịti*	
		(inflected for person/ number)	
Ofo	1s	m*ịti*	mihịsa
	2s	č*ịti*	
	3s	*ịti*	
	1p		mihịsa eč*ịti*
Tutelo			*ịti*

(16) Tutelo ***ịti**-kte-yi:-se* (REFL-kill-2PAT-ASSERT) 'You (sg) kill yourself' (Hale 1879)

Negation

Negation in Ohio Valley Siouan is achieved with a pan-Siouan suffix *-ni/-nE* and a prefix. The latter is the apparently optional *ku-* in Biloxi, which derives from one of the Proto-Siouan negators (17). In Ofo and Tutelo (18-19), however, the prefix is *ki-*, seemingly not phonologically cognate with Biloxi or other Siouan languages because of its vowel. It is optional in Ofo as it is only found in one example, but almost always present in Tutelo with only one instance in a motion verb where it is not used. Whatever the source of these formations, the circumfixal nature of negation in OVS is an innovation within the sub-group.

(17) Biloxi (ku-)…-ni
    ku**-ya-ki-yohą-**ni (NEG-2SUBJ-DAT-wish-NEG) 'You do not wish for him' (Einaudi 1976:87)

(18) Ofo (ki-)…-ni

    a. *a-ba-txá-abe* (LOC-1SUBJ-run-POT) 'I am going to run' (Swanton 908:card 170, Dorsey and Swanton 1912:322)

    c. *a-ba-txá **ki-**bá:fpe**-ni*** (LOC-1SUBJ-run NEG-1SUBJ-know-NEG) 'I cannot run'

(19) Tutelo ki-…-nE

    a. ***ki-**wą-ki:-tǫ**-na*** (NEG-1PL-DAT-belong-NEG) 'It is not ours' (Hale 1879)

    b. ***k-o-**wa-pʰe:-pi**-na*** (NEG-LOC-1SUBJ-go-DESID-NEG) 'I do not wish to go' (Hale 1883)

    c. ***k-**o-pʰe:-pi**-ni***:-se (NEG-LOC-go-DESID-NEG-ASSERT) 'He does not wish to go' (Hale 1883)

CONCLUSION

The shared innovations detailed in this paper allow us to confirm and elaborate upon the Siouan sub-grouping first established by Voegelin (1941). The more than fifteen separate Siouan and Catawban languages fall into several well-defined sub-groups. Individual language names are italicized, and a dagger marks languages and dialects that are now extinct.

A. †Catawban[25]

             †Catawba (†Esaw, †Saraw)
             †Woccon

B. Siouan

  I.   Missouri River Siouan

             Crow
             Hidatsa

  II. *Mandan*[26]

  III. Mississippi Valley Siouan

      Dakotan

             Santee-Sisseton, Teton (Lakota), Yankton-
                Yanktonai
             Assiniboine
             Stoney

      Chiwere-Winnebago

             Ioway, Otoe, †Missouria
             Winnebago

      Dhegiha

             Omaha, Ponca
             †Kansa, †Osage
             †Quapaw

IV. Ohio Valley Siouan
  Virginia Siouan
    †Tutelo, †Saponi, †Moniton, †Occaneechi
  Southeastern Siouan
   †Biloxi
   †Ofo

NOTES

Rankin is primarily responsible for the lexical portion of this study and Oliverio for the grammatical portion beginning with the treatment of the motion verbs. Both authors participated in writing and editing.

1. Earlier researchers underestimated the degree of divergence between Catawba and the Siouan languages, in large part as a result of the paucity of reliable Catawba data available for comparison. It is not technically correct to refer to the Catawban languages as a branch of the Siouan language family. In light of the invaluable data on Catawban collected by Frank T. Siebert, it is probably better to consider that both the Catawban languages and the Siouan languages are branches of a greater Siouan-Catawban family.

2. Upper case –*E* or –*A* in Siouan transcriptions represents an alternating vowel. In most instances—perhaps always—it can be reconstructed as unaccented, short *-*e*. Phonemic transcriptions for Biloxi, Ofo and Tutelo are based on careful philological analysis of the normalized phonetic transcription of Dorsey, Swanton, Hale and others; Saponi words are cited in angled brackets in the existing orthography. Readers interested in the original orthographies are referred to the published sources.

3. Hans Wolff (1950:116) reconstructed *kʸ for our *š-set however, and Voegelin (1941) reconstructed *č. Their reconstructions assumed that the Proto-Siouan fricative symbolism was **s/č/x* rather than the more plausible **s/š/x*. Fricative distribution within Siouan is such that, one way or the other, some fricative to affricate changes are necessary in order to account for the data.

4. The lexical data for this study come from a number of sources. Some cognate sets are from Carter, Jones and Rankin (in preparation); other sources are, for Mandan, Hollow (1971); for Crow, Gordon and Graczyk (1985); for Lakota, Buechel (1970); for Chiwere, Good Tracks (1992); for Winnebago, Miner (1984), for Kansa, Rankin (1987), for Quapaw, Rankin (1991); for Osage, La Flesche (1932); for Ofo, Swanton (1908) and Dorsey and Swanton (1912); for Biloxi, Dorsey and Swanton (1912). Most Tutelo data are from Oliverio (1996b), which includes data from a variety of additional sources.

5. This rule, often called "Carter's Law," was pointed out for Ofo by Richard T. Carter in 1984 at a workshop held at the University of Colorado. The rule apparently affected all Siouan languages at one time, but remained productive only in Ofo and Tutelo. Aspirated syllables in other Siouan languages have been frozen in place by analogical change.

6. Some of the irregularities can be explained if we assume 'tongue' was compounded in some instances with *ʔih-* 'mouth'.

7. The Ofo term for 'Saturday' refers to 'its (Sunday's own) little brother', as confirmed by the Biloxi terms for Saturday and Sunday. Parallel terms for 'Saturday' are found in other North American languages.

8. This appears to be an example of a systematic allophonic lowering of word-final high vowels to close mid-vowels in OVS. Haas and Swadesh recorded clear examples of it (Haas 1968). This process lowers /i/ to [e] and /u/ to [o]. Phonemic identity is maintained as the

variants of /e/ and /o/ found in final position appear to be phonetically more open mid vowels.

9. Note that Crow and Chiwere *s-* here are regular reflexes of Proto-Siouan *š*, not of *s*. Biloxi, along with Dhegiha, innovates completely distinct quinary terms for 'seven' and 'eight'.

10. Shawnee *laata'w'škote* 'prairie' is pointed out by C.F. Voegelin in a handwritten note (Siouan Archives library, University of Colorado, Boulder) as a possible Shawnee to Tutelo loan. The first ' written here may represent accent; Voegelin's writing is unclear on this point. David Costa (personal communication) points out that this is an adverbial form meaning roughly 'on/in the prairie'.

11. Cf. also degraded Biloxi *inckeʔ* 'squirrel' (Haas 1968). This term may be another case of intrusive *-t-* in both Ofo and Tutelo or loss of medial *-t-* in Biloxi. The various irregularities in this term plus its geographical distribution make this a possible diffused form.

12. Gerald Red Elk, Fort Peck, Poplar, Montana, provided the Dakotan form, which is not attested in standard Dakotan dictionaries. The mixing of these terms may be due in part to the fact that the grizzly was not common in the Southeast, at least in recent centuries. For the second 'bear' term, compare Uto-Aztecan look-alikes: Northern Tepehua *vóxi*, Mayo *hoóso*, Cora *huúceʔe*, Huichol *húuce*, and others. The Uto-Aztecan reconstruction is apparently **hun-* (Jane Hill, personal communication). The Siouan terms are not phonologically uniform, and the word is probably either borrowed from Uto-Axtecan or borrowed by both Siouan and Uto-Aztecan from some unidentified source.

13. This form is found only in the Mississippi Valley Siouan subgroup today and may not have an overall Proto-Siouan reconstruction.

14. We thank Paul Voorhis for his communication on the areal nature of this phenomenon. Voorhis points to similar parallel conflation of 'snake' and 'deity' in Kickapoo. Shawnee *maneto* is similarly 'snake' (David Costa, personal communication).

15. Here, as usual, Biloxi and Ofo lose initial labial resonants, while Virginia Siouan keeps them. The *-(k)desi* portion of the Biloxi and Ofo cognates means 'striped' or 'spotted' and has good cognates throughout Siouan.

16. This form is found only in the Mississippi Valley Siouan sub-group today and may not have an overall Proto-Siouan reconstruction.

17. The Quapaw and Omaha [i] in 'salt' result from unrounding of common Dhegiha **ü*, something which did not occur in the Southeast. In other words, the Dhegiha forms are all evolved regularly from **u*, but the Tutelo and Biloxi forms are not. Ofo innovates a non-cognate term for 'shoot' so its status here is indeterminate.

18. Quapaw *nǫxtį* 'once' contains **rų-*, the archaic root for 'one', with a frequently occurring intensifier.

19. Dhegiha and Winnebago have slightly different compounds of *mą́hį* 'blade' and *si* 'kernel' for 'arrowhead'. Ofo *fh < *hs < *ks* recurs in other cognate sets. The meaning extends to 'bullet' in modern times.

20. Some Tutelo field workers recorded *b-* here, which cannot correspond regularly to Dhegiha *hp-/pp-*. A look-alike has diffused into Illinois Algonquian, cf. Miami *pala:ni*, probably from Tutelo (Rankin 1985). The Chiwere pattern is most likely borrowed from Dhegiha, as the basis for this numeral is 'three', which in Chiwere has undergone normal development to *dá: ñį*, not **ra:brį*, which clearly reflects the Dhegiha development for 'three'.

21. The difference in the treatment of the sibilant here is evidently due to its participation in a cluster. Even if the 'sweet' portion represents a borrowing from Mississippi Valley Siouan

(MVS), the specialization of 'earth+sweet' is an OVS innovation. And if Muskogean languages have 'water+sweet' and so does MVS, then this innovation is all the more striking. Biloxi has unrelated *wasí*.

22. The treatment of the *wr-* cluster differs in initial/medial position in OVS. In MVS we see the frequent root extension *-ka* here. Note also that Dhegiha gemination and Chiwere aspiration are being produced across a morpheme boundary. Lakota aspiration is expected here but is not found.

23. Ofo *onfnatka* 'mouse' shares some features here, but not enough to be interesting. The *nahk/nuhk* root turns up via diffusion for various species of *Mustelidae* all over eastern North America (Carter, Jones and Rankin, in preparation). Whatever its ultimate origin, it clearly represents a widely diffused genus name.

24. The following abbreviations are used for morphemes: 1 = first person, 2 = second person, 3 = third person, ASSERT = assertive, AUX = auxiliary, DAT = dative, DESID = desiderative, EMPH = emphatic, LOC = locative, NEG = negative, PAT = patient, REFL = reflexive, SUBJ = subject.

25. Catawban languages were spoken mainly in the Carolinas in proto-historic times. Because of their geographical proximity to the Ohio Valley Siouan languages, it has sometimes been assumed that there was a closer relationship between OVS and Catawban than between Catawban and the other Siouan languages, which is not the case however. As mentioned earlier (note 1), the Catawban languages are only distantly related to Siouan as a whole as shown in Siebert (1945).

26. Grammatically and phonologically Mandan is rather different from the rest of Siouan. It shares a great deal of vocabulary with nearby Hidatsa, and all the speakers also know Hidatsa. It is difficult to prove that it shares innovations with any other sub-group. These facts have traditionally made it the most difficult of the languages to classify.

REFERENCES

Alexander, Edward P. 1971. An Indian Vocabulary from Fort Christanna, 1716. *Virginia Magazine of History and Biography*, 79:3.303-13.

Buechel, Eugene, S. J. 1970. *A Dictionary of the Teton Dakota Sioux Language*. Ed. by Paul Manhart, S. J. Pine Ridge, S. D.: Red Cloud Indian School.

Carter, Richard T., A. Wesley Jones, and Robert L. Rankin (eds.). In preparation. Siouan Comparative Dictionary. Ms.

Dorsey, James Owen. 1882. Tutelo Vocabulary. Ms. 4800:336, National Anthropological Archives, Smithsonian Institution.

— and John R. Swanton. 1912. *A Dictionary of the Biloxi and Ofo Languages*. Bureau of American Ethnology Bulletin 47. Washington: Government Printing Office.

Einaudi, Paula Ferris. 1976. *A Grammar of Biloxi*. New York: Garland Publishing.

Good Tracks, Jimm G. 1992. *Ioway-Otoe-Missouria Language Dictionary*. Duplicated by the Center for the Study of the Languages of the Plains and Southwest, Boulder, CO.

Gordon, Ray and Randolph Graczyk. 1985. *Crow Dictionary, Crow-English, English-Crow*. MS.

Haas, Mary R. 1968. The Last Words of Biloxi. *International Journal of American Linguistics* 34: 77-84.

Hale, Horatio. 1879. Tutelo vocabulary. Ms. 4800:334, National Anthropological Archives, Smithsonian Institution.

—. 1883. The Tutelo Tribe and Language. *Proceedings of the American Philosophical Society* 21:1-45.

Hollow, Robert Charles Jr. 1971. A Mandan Dictionary. Ph.D. Dissertation, University of California, Berkeley.

La Flesche, Francis. 1932. *A Dictionary of the Osage Language*. Bureau of American Ethnology Bulletin 109. Washington: Government Printing Office.

Miner, Kenneth, L. 1984. Winnebago Field Lexicon. Ms.

Oliverio, Giulia R.M. 1996a. Tutelo Verbs of Motion. *Proceedings of the 1994 Mid-America Linguistics Conference*. Lawrence: University of Kansas.

—. 1996b. *A Grammar and Dictionary of Tutelo*. Ph.D. dissertation, University of Kansas.

Rankin, Robert L. 1980. More on The Siouan Languages of The East. Paper presented at the Annual Meeting of the American Anthropological Association, Washington, DC.

—. 1985. On Some Ohio Valley Siouan and Illinois Algonquian Words for EIGHT. *International Journal of American Linguistics* 51:544-47.

—. 1987. *Kansa dictionary*. Ms.

—. 1991. *Quapaw dictionary*. Ms.

Sapir, Edward. 1913. A Tutelo Vocabulary. *American Anthropologist* 15:295-97.

Siebert, Frank T. 1945. Linguistic Classification of Catawba. *International Journal of American Linguistics* 11:100-04, 211-18.

Swanton, John R. 1908. Ofo-English Dictionary with an English Index to the Ofo Dictionary. Ms. 2455 (card file), National Anthropological Archives, Smithsonian Institution.

Taylor, Allan R. 1976. On Verbs of Motion in Siouan Languages. *International Journal of American Linguistics* 42:287-96.

Voegelin, Carl F. 1941. Internal Relationships of Siouan Languages. *American Anthropologist* 43:246-9.

Wolff, Hans. 1950-1951. Comparative Siouan. *International Journal of American Linguistics* 16:61-66;113-121;168-178, 17:197-204.

Published as: On the Subgrouping of Tutelo within Siouan. Coauthored with Giulia R.M. Oliverio. In David Costa and Blair Rudes, eds., *Festschrift in Memory of Frank Siebert,* 2003. Winnipeg: University of Manitoba.