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DEEPER GENETIC RELATIONSHIPS IN NORTH AMERICA: SOME TEMPERED PESSIMISM.

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This paper examines the problem of deeper genetic relationships from the point of view of a particular language family--a kind of microcosmic rather than macrocosmic perspective. The language family is Siouan, or, more inclusively, Siouan and the related Catawban. The author has been engaged in detailed comparison of the fifteen or so Siouan languages since the mid 1970's, and is a member of a team of linguists that is currently completing work on a comparative Siouan phonology, grammatical sketch and dictionary (Carter et al. to appear). It is this comparative project that has provided much of the data that are interpreted in what follows.

Catawban included *Catawba*, *Woccon* and probably numerous other, unattested languages of the protohistoric Carolinas. The Siouan language family comprises four major subgroups and a total of about eighteen languages:

Missouri River Siouan

Crow

Hidatsa

Mandan

Mississippi Valley Siouan

Dakotan: Teton, Santee, Assiniboine, Stoney, etc.

Chiwere/Winnebago: Ioway, Otoe, Missouria; Winnebago Dhegiha: Omaha, Ponca, Kansa, Osage, Quapaw

Ohio Valley Siouan

Biloxi

Ofo

Tutelo, Saponi, Moniton.

Mary Haas (1969) outlined a method for undertaking future reconstruction and distant comparison. "The most challenging way in which new insight into reconstruction can be achieved comes about when one protolanguage is compared with another protolanguage,... This type of comparison can truly be said to be one of the most important new frontiers of historical and comparative linguistics." Her optimism presumably stemmed from the fact that it is easier to discern relationships within Indo-European working from Latin, Sanskrit and Church Slavic than from modern French, Marathi, and Bulgarian.

Haas felt that the same should be true in the Americas, and her proposal was cited in my review of Language in the Americas (Rankin 1992) as an ideal way to discover additional genetic ties among the languages of North America. Since that time our team of linguists has completed most of the substantive work on the Comparative Siouan Dictionary, and it is now my feeling that, at least in the case of Siouan, Haas's proposal may have been a little optimistic—or perhaps, better stated, that it originally left the author feeling more optimistic than he had a right to be.

Reconstruction of Proto-Siouan has clarified subgrouping and internal developments within that family considerably, but it may not elucidate deeper relationships significantly. A survey of some of the reasons for this, based on details of Proto-Siouan phonology, morphology and lexicon follows.

Reconstructed Siouan vocabulary unfortunately does not provide significantly expanded phonological sequences that can be compared with putative proto-sister languages such as Yuchi, Iroquoian and Caddoan. Perhaps it was naive to think that it would, but linguists' experience with Indo-European certainly suggested this outcome: obviously Latin had a good deal more phonological substance, with its now-lost medial vowels, consonant clusters and (especially) endings, than does modern Spanish, not to mention much more innovative languages such as French.

Most of the comparisons between Siouan and other families up to the present have compared modern Dakota with another language or languages. Chafe (1976), for example, compares Dakota and the phonologically less conservative Winnebago, which are Siouan languages, with Seneca, which is Iroquoian. This has seemed to all of us a perfectly legitimate way to proceed: Dakota, especially, is phonologically conservative in many respects, possessing many consonant clusters, most of them apparently found even root-initially, such as pt-, ps- pš-; bl-; mn-; kt-, ks-, kš-; gl-, gm-, gn-; tp-, tk-. The following Dakotan examples are fairly typical: pt/autumn', ps/autumn', ps/autimn', ps/

Tutelo, Biloxi, Ofo, Crow, and Hidatsa cognates, which we have taken great pains to consider in our reconstructions, often for the first time, show that these interesting Dakotan clusters are usually (perhaps always) bimorphemic and that vowels at one time intervened, breaking up the cluster.

Thus many formerly lost stem-initial syllables have been recovered that in principle at least might be expected to increase the phonological substance of their respective lexemes and thus to provide increased substance for external comparison. The additional syllables that have been recovered, however, have turned out in retrospect almost invariably to be reflexes of a small number of common derivational prefixes, most of which were already established synchronically. Additionally, these derivations turn out mostly to be restricted to Siouan and generally do not appear even in the distantly but demonstrably related Catawba. Siouan cognate sets with Dakotan labial-initial clusters follow:

Proto-Si: Crow: Hidatsa: Mandan: Lakota: Chiwere:	AUTUMN *wahtá. ba sá. wa tá. p tá p tá thá	BISON *wihté. bi šé. wi té. p tí p té čhé.	WATER *warí bilí wirí w rí? m ní ní	MALE *wi ró·ka ^l bu lá (?) wa·ró·ka w ró k b lo ká dó·ge
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Winneb: Dhegiha: Tutelo: Biloxi: Ofo: Catawba:	AUTUMN č ą·- htą́-	BISON čé· hté· wi dé·	WATER ní. ní. maní. aní aní	MALE -to k Ró·ka nó·- dó ki i tó·ki
Proto-Si: Crow: Hidatsa:	FLYING SQUIRREL *wišį•ka	PUS JUM *was	SMELL *warą́	
Mandan: Lakota: Chiwere: Winneb: Dhegiha: Tutelo: Biloxi:	p šį čá sį́ ge -šį́•k či ká	pš ps was was	-m ná -b rá -pąną b rá	
Ofo:		P	- (==)	nə

The above data are representative, and there are many other parallel cases. In nouns PSI *wa- marks inanimate absolutives, while *wi- marks animal terms. In verbs the prefix *wa- provides an indefinite 3rd person object. These three prefixes alone account for the vast majority of labial-initial clusters pC-, bC-, mC-).³ Siouan languages historically (and in most cases, synchronically) accented the second vowel of the word. This iambic pattern left initial syllable vowels in a weak position. What has happened in all of the central Siouan languages (areally, Mandan and the Mississippi Valley Siouan subgroups) is that initial syllable vowels were consistently lost leaving the often partially assimilated consonant clusters we see in the Dakota language today.

The velar-initial clusters, kC- and gC-, are equally restrictive in their sources. Nearly all can be traced to one of about three earlier prefixes, but in the case of the velar prefixes reconstruction is usually only possible to a node below that of Proto-Siouan in a Siouan *Stammbaum* because the pertinent prefixes are not found in Crow or Hidatsa, the temporally most distant subgroup within Siouan.

The prefix ki-, often labeled 'vertitive' by Siouanists, and meaning back in the sense of returning, fuses to different degrees with different verbs of motion. It is illustrated here with *ré(-he) 'go', where its analysis is transparent. Vertitive is not found throughout Siouan however, nor is it found in the more distant Catawba. This suggests that it is probably best considered an innovation. Vertitive is illustrated here with Proto-Siouan *ré(-he) 'to go':

GO BACK

kidé

Proto-Si: *kiré

Crow:

Hidatsa:

Biloxi:

Mandan: k ré-Lakota: g lá Chiwere: g ré Winneb: keré Dhegiha: k ré Tutelo: kilé

A second very productive prefix that has fused partially with following verbs is dative/possessive ki- and the closely related (probably reduplicated) kik- reflexive possessive (or 'suus'). Compare Lakota $yuž\acute{a}$ 'to wash' with g- $luž\acute{a}$ 'to wash one's own'. Proto-Siouan *ki(k)- is reduced to g- preceding *r (Lakota y alternating with l) throughout Mississippi Valley Siouan.

So many Proto-Siouan roots are actually shorter than data (especially those initial consonant clusters) from individual daughter languages implied.⁴ Most roots are not longer than *CV (CCV roots turn out to be bimorphemic as described in (1), above and *CVC is unexpectedly rare).⁵ This drastically cuts the substance of potential comparanda.

A disturbingly large number of the remaining few Proto-Siouan roots with apparent initial consonant clusters turn out to be phonesthemic or otherwise sound symbolic. Most of these are also wanting in Catawba, but even if we were to find similar forms in other languages, it would prove nothing, since sound symbolism of all sorts is ruled out in the establishment of genetic relationships.

In Siouan languages the root-initial clusters consisting of a fricative and *r (sometimes reconstructed as *l) tend to convey an affective, sound symbolic meaning not unlike that of the closely analogous English phonesthemic words in sl- (rarely šl-) of slime, sludge, slurp, slip, sleaze, slick, slim, slop, slug, slobber; schlemiel, schlep, schlock, schlump, etc.

(a)	"slippery" symbolism:	(b)	noises:
*sra *kisra *srá-	smooth, bald grease leech, snail stick in		growl grunt growl hollow
*srí	dribble ooze out	(c) rip	ping symbolism:
*srí- *srú-	slurp, lick slide, masturbate	*sré- *šré-	split, shred
*šrą	dirty; scar	*xré-	rip, tear

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*šrį glimmer
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*xra- scratch

*šró- slip off

*šrú- slip, masturbate, wet

*xrá- slim

*xri slimy, pus, mud

*xri- ooze, sticky

*xri slime, mucus, semen

*xrį glimmer

*xró- slide, slip off.

So we have seen that, in the phonology of Proto-Siouan roots, what had appeared to be extensive initial consonant clusters turn out to be either the fused reflexes of a very small number of common prefixes or a form of sound symbolism. And in neither case are we provided with roots containing significantly greater phonological substance that we started with in modern Lakota. In fact we often end up with less.

Let us now turn our attention to morphology proper. The existence of a complex morphological template with fixed positions for particular categories and their inflecting affixes is one factor that might help the linguist see distant ties. In Algonquian, for example, such a template in the verb morphology is a defining characteristic of the language family and, importantly, the proto-language. The author's impression is that much of this template has even helped cement the distant relationship with Wiyot and Yurok.⁶

The rather long and involved prefix template that can be constructed synchronically for most Siouan languages disintegrates diachronically, and for the most part is not available for use in distant comparisons. The Dakotan prefix order is rather typical of what is found in the rest of Siouan and is in some respects actually more elaborate than what is found in the other languages. It will be used here for illustrative purposes, and, although there is not space to discuss every aspect of it, it will convey a general understanding of Siouan verb prefix ordering. (See Patterson 1990:8ff.):8

	3PL			1st	&	2ND	DAT	İ	
ABSO- LUTIVE wa-	ENT	INCL	TIVES	& P	ATI	ENT	VERT REFLX RECIP	INSTRU- MENTALS	VERB ROOT

Let us examine several of these categories in more detail and from a diachronic perspective. In Siouan, as opposed to, say, Algonquian:

- (a) The third plural animate patient prefix, wičhá-, is innovated in Dakotan alone from wičháša or wičhášta 'man' and was not Proto-Siouan (Rankin 1996). This eliminates one prefix position.
- (b) The dual inclusive agent/patient prefix, qk-, (from earlier *wqk-) is a late grammaticalization in two of the four Siouan subgroups of *wqke the Proto-

Siouan noun meaning 'person' (Rankin 1996). This eliminates a second prefix position.

- (c) There is fairly good evidence that the three so-called *locative* prefixes, a-'on, at', o- 'in', i- 'toward', as well as the prefix of *instrument*, i-, were in fact accented long vowels in Proto-Siouan and so probably distinct roots or proclitics, not prefixes, but there is little else that can be said about them at the moment.
- (d) The first and second person agent and patient prefixes have their own internal ordering conventions (as is often the case with pronominals), but in the proto-language the 1st and 2nd person patient markers preceded agent marking, were syntactically distinct, and probably proclitics, as they did not participate in contemporary accentual phenomena, including concomitant vowel lengthening (when accented). Nor did these patient markers ever undergo the initial syllable vowel syncope when not accented that, as we saw above, affected real Proto-Siouan prefixes. The agent prefixes did undergo vowel syncope, as we shall see momentarily. This appears to eliminate the patient prefix position in the verb complex.
- (e) Also proclitics or, more likely, distinct verbs in Proto-Siouan were the well known instrumental prefixes (by pulling, by pushing, by foot, by striking, etc.), that seem virtually to characterize the Siouan verb. 10

Like the patient person markers, the instrumentals also fail to undergo the expected phonological processes associated with prefixes (including contextual aspiration, syncope or lengthening, etc.). In fact, the instrumentals behave as if they were distinct verb roots. And this analysis of the instrumental prefixes as verbs in serial construction is historically confirmed in Catawban, where the Siouan instrumental prefixes are found as distinct, conjugated verb roots, only sometimes used instrumentally (Siebert 1945; v. also Shea 1984 and Voorhis 1984, 1992).

Siouan		Catawba		
*ru	'by hand'	du	'by hand' and 'to take' (Siebert)	
*ka	'by striking'	kar	'to strike, hit' (Siebert)	
*rą	'by foot'	da	'by foot'; also da? 'go' (Siebert) ¹¹	
*Wo	'by blowing/shoot'	ри	'by blowing' (Siebert)	
*ra	'by mouth'	ną sg.	, wira pl. 'to eat' (Voorhis) ¹²	
*aRá	'by heat'	wirą	'to burn' or de 'blaze' (Shea)	

Even in present-day Siouan these instrumentals, when they are present, remain the conjugated elements: the agent prefixes precede and fuse with the instrumental rather than the verb root in these cases. ¹³

Take for instance the Kansa verb basé 'to cut by pushing or thrusting'. Ba- is the instrumental 'by pushing', and -se is the verb root 'cut'. The personal agent prefixes, which are underlying wa- '1st person' and ya- 'second person', undergo initial syllable syncope and obstruentize, fusing with the in-

strumental prefix:

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*wa+ba+se > p-p\acute{a}-se I cut (it).
*ya+ba+se > \check{s}-p\acute{a}-se you cut (it).
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So we must eliminate yet another prefix position, that of the instrumentals.

The conjugational details of this small number of Catawba serial verb constructions that have been morphologized as instrumentals in Siouan were perhaps the strongest proof of the Siouan/Catawban relationship adduced by Siebert (1945), but the fact that they were clearly separate roots in serial constructions further decreases the shrinking number of actual verb prefixes that we might compare outside of Siouan/Catawban.

(f) Lastly, Koontz (1996) shows that even the reflexive and reciprocal prefixal morphology of most Siouan languages was apparently deverbal (from a comitative verb 'to be with', found at least in Dakotan and perhaps more generally). And if this is confirmed we must eliminate one last prefix position.

As we see, moving backward in time, the Proto-Siouan verb morphology template has so shrunk that apparently the only set of present day verb prefixes that is reconstructible as such (i.e., as real prefixes) is the pronominal set: first and second person agent and dative-possessive. Compared with language families having analogous time depth such as Algonquian, this prehistoric increase in typological analyticity would appear to be detrimental to more distant comparison. In other words, it would have been nice to have been able to have compared words containing long strings of morphemes in a rigid order with potential cognates outside of Siouan and Catawban. But this is evidently not possible.

Morphological typology in and of itself can play an important role in genetic comparisons. One of the traits that makes Indo-European so cohesive and convincing as a language family is syncretism of categories in what Nichols (1996) has called *multidimensional paradigmaticity*.

In typical Indo-European languages such as Spanish, for example, the accented suffix -é in habl-é 'I spoke' fuses several inflectional categories in a single morpheme. Here, -é marks not only first person and singular number but also past tense (the present tense is habl-o), perfective aspect (imperfective is habla-ba), and indicative mode (a subjunctive would be habla-se). There are analogous portmanteau suffixes for the other persons, numbers, etc. and these are all arranged in paradigms. Because of the very low probability of just these categories becoming fused into single morphemes, the very presence of a paradigm of such phonologically corresponding portmanteaux in two or more languages virtually guarantees genetic relationship according to Nichols.

Such correspondences are in fact what enabled Sir William Jones and others to identify Indo-European languages from the beginning. Siouan, like many American languages, is typologically agglutinating with vanishingly few

of the *portmanteaux* that are such convincing proof of relationship in Indo-European. "One morpheme=one meaning" greatly increases the danger of chance resemblance in distant comparison: "one morpheme=many (syncretized) meanings" greatly decreases that danger in the case of Indo-European. Comparativists have been more than a little spoiled by Indo-European.

Syntax and case alignment are not helpful. Both Siouan and Catawban remain solidly SOV, head-marking and active/stative, but these things can be seen synchronically and are not diagnostic of genetic relationship in any event.

While the reconstruction of Proto-Siouan has strengthened the already demonstrated relationship of Siouan with Catawban (probably at a time depth of 4000+ yrs. B.P.), it has, as we have seen, also revealed an actually decreased lexical cohesion in verbs and decreased phonological substance in the proto-language roots thus making the success of more distant comparisons perhaps somewhat less, rather than more, likely. One may only hope that the Siouan-Catawban trend is not entirely pervasive and that Haas's suggested methodology will prove fruitful even when structural changes such as those found in the history of Siouan are present. ¹⁴

NOTES

- (1) Although Hidatsa and Ofo disagree, the initial syllable vowel was almost certainly *-i-, i.e., *wiróka 'male of a species', as the prefix wi- can be seen to have marked a great variety of animal terms. So here where the prefix phonology of the reflexes disagrees, semantics plays the pivotal role. Whether or not *wi- marked all such terms is still open to some question.
- (2) The Winnebago and Dhegiha forms have analogically restored wa- in 'push/jump' and 'shake'. The prefix wa- marks indefinite third person objects throughout Mississippi Valley Siouan and is very productive. The Dakotan, Mandan and Biloxi form(s) show p-, an earlier, fossilized reflex of the PSi prefix. In fact, the simplex sibilants present here in the Chiwere, Winnebago and Dhegiha cognates have to be analyzed as reflexes of earlier *ps- clusters. Intervocalic simplex *-s- would have voiced in Mississippi Valley Siouan to -z-. Obviously several of the cognates here have undergone reduplication also.
- (3) In inflectional morphology the first singular actor prefix, *wa-, underwent the same processes of syncope and assimilation. Take for example the following "irregular" 1st sg. forms from the Kansa language (a Dhegiha dialect) in which the prefix is italicized in each instance: b-lé 'I go', m- $\frac{1}{2}$ khé 'I sit', p-hú 'I come', p-pá γ e 'I make', t-t $\frac{1}{2}$ be 'I see', t-k $\frac{1}{2}$ b-la 'I want'.
- (4) In many cases roots may be shorter than is apparent even here. It is the general rule historically in Siouan that prefixal vowel sequences be broken up by a glide. In most instances this glide is -r- (with rounded vowels, sometimes -w-). Note that in the case of words like Proto-Siouan *wiróka 'male of a species' the prefix, as we have seen, is *wi- and there is a derivational suffix (absent in a few of the daughter languages) -ka, which is very common on nouns. This leaves $r\acute{o}$ the root. But note also that the vowel was probably

lengthened by a second syllable (iambic) lengthening rule, if not in Proto-Siouan then in pre-Proto-Siouan, and finally, that the root-initial r- here may be epenthetic, by the constraint on vowel sequences just mentioned. In other words the actual Proto-Siouan root for 'male' may actually have been just *o, with neither initial r- nor vowel length. There are many Siouan words with initial r-, and the possibility of epenthesis exists for all of them. And while this particular example may be a kind of tour de force, the processes described here are quite general across Siouan. This can leave very little to compare with roots in other language families.

- (5) There are several derivational suffixes that may be used to extend Siouan verb roots producing stems with second syllables and secondary meanings. It has for the most part never been possible to isolate any particular meaning for these affixes, and their use is often restricted to particular Siouan subgroups. They include -ka, a frequent stative verb formative (*ihtā 'large', htāka 'be large'), also -pe, -te, -se (and to a lesser extent -še, -xe). *-he is a frequent but semantically unidentified Proto-Siouan verb suffix, and *-re is probably related to the Catawba suffix of the same shape which marks declaratives. With the exception of the last of these, cognacy with anything in Catawba is problematic. It is precisely these empty morphs (what Siouanists call root extensions) that provide the CVC- stems of Dakota.
- (6) I am grateful to David Costa, Ives Goddard and Richard Rhodes for their guidance at various times in matters Algonquian. The views expressed here are my own and may or may not be shared by them.
- (7) I am not proposing that the existence of parallel templates in languages can by itself serve as evidence of distant relationship. A considerable amount of the actual content of the template would have to be cognate in order for it to play such a role. The vast majority of morphology that is postposed to the Siouan verb is enclitic. Only a few such enclitics seem to be pan-Siouan, e.g., *(i)kte 'future, potential'.
- (8) The ordering presented here is typical and basic for Dakotan dialects. For greater detail--and there are a great many such details, including an outer instrumental prefix set--see any of the comprehensive grammatical treatments of the language. Patterson (1990) is the most recent and therefore incorporates much previous scholarship. No consultation on the facts of Dakota would be complete however without reference to Boas and Deloria (1941).
- (9) In addition to the nominal prefixes, wa- and wi- described above, the agent prefixes *wa- '1st person' (note 3, above) and *ya- '2nd person' also underwent systematic truncation in most if not all of Siouan. The same is true of *ki- 'dative/possessive'. The resultant consonantal allomorphs of the pronominal prefixes include 1st sg. b-, m-, p- and 2nd sg. \breve{s} -, \breve{z} and are described in Rankin 1988. Siouanists still have much work to do if we are to understand all of the effects of initial syllable syncope and subsequent analogical restoration of "regular" pronominal allomorphs (the latter especially in Dakotan).
- (10) Some examples from the Quapaw language: pá-baye 'to cut in two

with a blade'; $ba-b\acute{a}\gamma e$ 'to break by thrusting'; $p\acute{o}-ba\gamma e$ 'to shoot (a rope or cord) in two'; $da-b\acute{a}\gamma e$ 'to bite in two'; $na-b\acute{a}\gamma e$ 'to break with the feet'; $di-b\acute{a}\gamma e$ 'to break by pulling'; $ka-b\acute{a}\gamma e$ 'to cut in two by striking'.

- (11) 'By foot' and 'go', though doublets, conjugate differently in Catawba.
- (12) The first four sets were noted by Siebert (1945); the last two are possible additions based on two recent essays into Catawba lexicography. Shea (1984) is a compilation of Catawba vocabulary from published and unpublished sources but mostly excluding the texts collected by Frank Speck. Voorhis (1992) is a compilation from Speck's texts.
- (13) The phonological fusion of the pronominals with the instrumentals is important here, as it shows that the relationship of the two elements is old.

I have mostly ignored for the purposes of this paper the innovated set of so-called outer instrumentals that are found in the Mississippi Valley Siouan subgroup. These include the 'by bladed instrument, by shooting' and perhaps 'by extreme of temperature (heat, cold)' prefixes. These are most often (but not in every language) ordered just before the dual inclusive marker in the template, exactly where one would expect them to be, given that the inclusive represents an innovation that took place one node higher in the Siouan Stammbaum.

(14) Since writing this paper the author has had the interesting and instructive experience of encountering new data which both strengthen our understanding of the Siouan-Catawban relationship, long ago demonstrated by Siebert (1945), and at the same time suggest some sort of historical connection between this family and Yuchi, an isolate originally spoken in what is now eastern Tennessee. Proto-Siouan-Catawban and Yuchi apparently share a system which classified nouns into [+animate, -human] (marked by wi-/we-), [+animate, +human, -personal] (marked with ko-/go-) and perhaps other categories. Additional matches are possible, and, of course, Siouan and Yuchi have been considered candidates for genetic relationship at least since Sapir's time. At the moment it is unclear whether this shared system implies such a relationship or whether it is the result of borrowing or perhaps even chance.

A point worth emphasizing is the fact that this discovery came as a direct result of taking the comparative method and sound change regularity seriously. Most Proto-Siouan nouns can be reconstructed with an absolutive prefix whose form is *wa-; only a few had *wi-, and the tendency among those of us doing comparative Siouan reconstruction was to look upon these cases as instances of "sporadic" vowel harmony (of vowels that some even considered epenthetic to start with). The author had come to accept some of these explanations, and it was only a minor, transitory annoyance with the sporadic nature of the changes that led him to search a little farther for a grammatical or semantic correlation for PSi *wi- while producing the handout that accompanied this paper. This abruptly led to a fairly extensive list of animal names which required the prefix and a search of available Catawba data. The remainder of the system began to emerge quickly thereafter. The Yuchi analogs came to

mind because of discussion of that language with students. A voyage to Serendip can come when we least expect it.

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