

## LOCATIVE EXPRESSIONS IN SIOUAN AND CADDOAN \*

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The current upsurge of interest in diachronic syntax in linguistics seems to be uncovering three different kinds of phenomena. Most frequent seem to be studies which relate syntactic change to language typologies. These works begin with the hypothesis that certain constellations of syntactic structures are more stable than others--for example, languages which put verbs last in sentences also tend to have noun-modifying clauses precede nouns and to have postpositions rather than prepositions. Given the stability of such constellations, any change in basic transitive sentence order (e.g., from SVO to SOV or vice versa) is supposed to trigger further changes which will re-establish stability. Work along these lines has been done with Proto-Indo-European<sup>1</sup>, Chinese<sup>2</sup>, and African<sup>3</sup> languages, among others, but it also has been severely criticized.<sup>4</sup>

The second most frequently discussed kind of syntactic change occurs when a word or group of words switches classes. Usually we see discussions of verbs becoming prepositions or postpositions; occasionally we find prepositions turning into verbs instead. Descriptions of verbs becoming auxiliaries and, ultimately, stem-forming affixes should probably be in this category as well.

The third and least frequently discussed kind of change involves a re-analysis of the constituency of sentences: a re-bracketing, in transformational terms. This is one explanation given for such things

as the change from middle to passive voice in Indo-European<sup>5</sup> or from impersonal to personal verb constructions in English (e.g. from me likes it to I like it)<sup>6</sup>. In another instance, something similar has been proposed to describe the history of raising and of for...to complements in English<sup>7</sup>. It is another example of this kind of change that I would like to discuss here.

### Siouan

Missouri Valley: Crow, Hidatsa

Mandan

Mississippi Valley: Dakota (Lakota, Nakota, Yankton, Teton, Stoney, Assiniboine, et al.), Chivere-Winnebago (Iowa, Otoe, Missouri, Winnebago), Dhegiha (Omaha-Ponca, Osage, Kansa, Quapaw).

Southeastern: Biloxi, Ofo, Tutelo

### Caddoan

Caddo

North Caddoan: Arikara, Kitsai, Pawnee (Skiri, South Band), Wichita

Figure 1: The languages and subdivisions of the Siouan and Caddoan families.

The Siouan, Iroquoian, and Caddoan language families have often been said to be related. Nevertheless, the traditional evidence in favor of such a relationship, namely regular sound correspondences and a set of cognate morphemes, has not been found and seems to be quite elusive. Instead, judgements are based on the existence of similar grammatical features or morphological peculiarities in the languages of the families. In particular, Chafe has called attention to parallels between Siouan and Caddoan preverbal elements, and also to similarities in the shape

and usage of morphemes for standing, sitting, and lying postures; this evidence is rather slender. Nevertheless, the assumption that these two families and Iroquoian belong together persists anyway--we might note support for this belief in the design of conference sessions such as this one.

One immediate stumbling block to believing the Caddoan-Siouan relationship is the obvious difference in surface structure between the languages. Caddoan languages are strongly polysynthetic: Wichita verbs have at least 34 position classes for inflectional morphemes, and Pawnee verbs have 31. Moreover, it is not uncommon for a dozen or so of these to be filled at one time. In contrast, most Siouan languages have a more isolating structure, with clearly identifiable 'words' making up sentences. There are other structural differences besides this, so that the sum of obvious similarities is very small.

Nevertheless, I would like to discuss here today a 'what if' situation. Let us assume for the sake of argument that at least the Caddoan and Siouan families are related, and explore the possible ways in which some of their surface structure differences may have resulted from a common ancestral form. The criteria for presuming genetic relationship are always that two languages are in some way too similar for their points of agreement to be the result of accident or borrowing, yet not similar in the right ways for the agreement to be fortuitous or due to universal tendencies. Perhaps we can uncover similarities of this sort in these two families.

The structures which have intrigued me particularly are those which express locative adverbial concepts. Typically, in Caddoan languages bound morphemes in the verbal complex express the detailed positional

concept (in, on, under, near, etc.) while the location itself is expressed by means of a noun separated from the verb. (Examples are given below. Sources for each language are given in the references at the end of the paper. Page numbers refer to these sources.)

(2) Wichita: ika:kíyah tikite?ecaki 'he is sitting on the rock'

ika: 'rock', -kiyah 'locative'  
ti 'indicative 3sg.', kita 'on top', ?icaki 'sit'

literally: 'where the rock is, he is sitting on top'

Caddo: hákkidáwsa? kúhyammí:sa? 'he's sitting on the limb'

hák- 'progressive aspect', kidi 'on top', ?awis 'sit', ?a? 'be in  
kúh 'where', yammís 'branch', ?a?, 'be in a position' a position'

Pawnee: tihú:kita:rit wá:hiri 'He's standing on top of the hill'

ti- '3rd sg. indic.'; hu:kita 'on top of'; arik 'to stand'  
∅ 'perfective aspect'  
wa: 'hill'; híri 'locative suffix'

Arikara: tatu:čitákux kaníč 'I'm sitting on top of the rock'

ta- 'indicative mode'; t 'first subject'; hu:čita 'on top of'  
kux 'sit'  
kaníč 'rock'

These languages thus dispense completely with any word class we would want to call preposition or postposition. Siouan languages, in contrast, use postpositional particles or noun suffixes for these concepts:

(3) Lakhota: pahá kī akáɩ 'on the hill'  
hill the on

wígli?o?ínažī isákhīb 'beside the gas station'  
gas station beside

Biloxi: petuxte yehikā xex nax kā 'when she was sitting close  
fire close sit past when to the fire'

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Biloxi: petuxte yehikā xex nāx kā 'when she was sitting close  
fire close sit past when to the fire'

ti itka de 'inside this house'  
house in this

ani ta sahiya hahi 'he brought him on the  
water big beyond take and arrive other side of the  
great water'

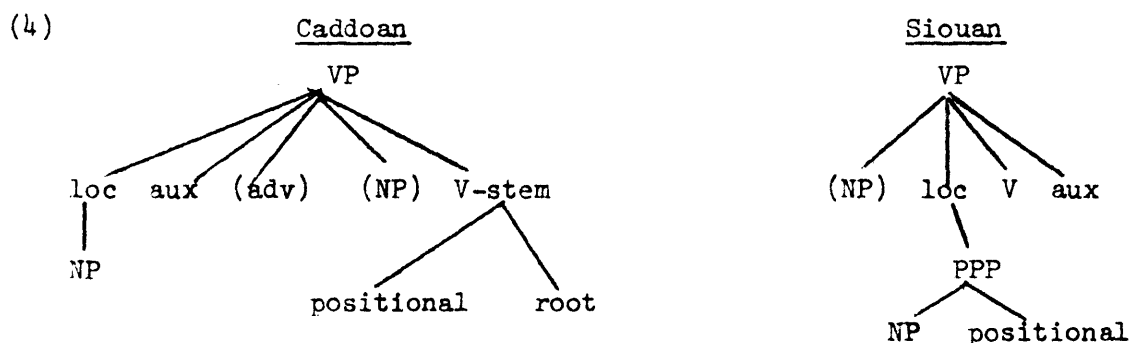
Crow: tséte hé·ren 'among wolves'  
among

its-á·ken 'on his foot'  
on

bitá·raci arítsien 'behind a screen'

Winnebago: ma·xi·wəgregi· 'up in the sky' (-regi 'in') (Susman, p. 139,  
146)  
čie·ja 'at the house' (-eja 'at') (Susman, p. 136)

The surface structure constituency of predicates containing locatives thus seems to be quite different in the two families:



That is, the positional marker (the morpheme which corresponds to the preposition in English) occurs as sister to an NP in Siouan, but as part of the verb stem in Caddoan. In Caddoan, then, there is no single constituent of the sentence which can be referred to as the locative adverbial.

Let us turn now from the examination of adverbial constituency to a look at surface structure sequences. First, note that Siouan sentence

- (5) (Lakhota) Wičháša ki wíya ki wayáke 'the man saw the woman'  
 man the woman the 3-see-3  
 S O V

The standard positions for adverbials in Lakhota are either sentence-initial, or immediately pre-verbal. The expanded slot structure is thus:

- (6) (adv) S O (adv) V

and the overwhelming preference for locational phrases is the preverbal slot:

- (7) S O loc V

This kind of construction is also typical of Biloxi: Einaudi identifies the syntactic slots of that language as SOAV, where A 'adverbial' may be a single word or a postpositional phrase.

For Crow, I have neither statistical data nor a descriptive statement, but a casual search of Lowie's texts indicates that the sequence NP-loc-verb occurs often; examples are:

- (8) a. í·ctsi·kyā·te awé í·kyurū·k dú·use  
 the young rabbit the ground on it place  
 'place the young rabbit on the ground' (p. 108)
- b. awaxá·we kuc dá·wara 'Go toward the mountain!' (p. 141)  
 the mountain to/toward go!

Susman analyzes Winnebago as having suffixes which make adverbs from nouns; the suffixes have the kinds of meaning expressed by postpositions in the other languages. She says of the word order: 'adverbs precede the verb they modify, but may also follow. The former is frequent in the texts.' (p. 117) This suggests that here, too, the morpheme expressing the locative concept is frequently found immediately before the verb.

The point, then, of my discussion so far is this: in a majority of Siouan sentences with locatives, the word which most immediately precedes

the verb is the postposition. A typical sentence is thus parsed:

(9)  $S^{[NP_{VP} [NP_{loc} [NP \text{ postposition}]_{loc} V]_{VP}]_S}$

Lakhota: John Mary wačhípi ektá áye 'John took Mary to the dance'

Crow: isà·réc citsé arítsia ó·p<sup>c</sup>iðkeù·c tseruk

'her older brothers were smoking on the other  
side of the hill' (p. 105)

Now, jumping back to Caddoan, the crucial observation is that the positional morpheme slot in Caddoan verbs is the slot just before the verb stem. We have, then, a parallel in the surface structures of the two language families where the sequence positional-verb has high frequency in one family, and is the only permissible sequence in the other. The main difference lies in the bracketing:

(10) Siouan: [[NP positional]verb]  
          12                  3 4  
Caddoan: [X[positional verb]]  
          1 2                  34

To relate these structures, we must posit the shift of bracket 3 across one word, and the absorption or elimination of the NP to the right of bracket 2.

Positing such shifts merely defines the problem, however. To solve it, we need answers to other questions. First, by what mechanism could such boundary shifts occur? Obviously mere juxtaposition of elements from two different constituents is not adequate by itself, for the two families have different solutions for the same juxtaposition. Secondly, is this kind of development compatible with the rest of the evolution of these languages? And finally, if these plausibility problems are



are resolved, can we tell which structure came first, or, in other words, can we reconstruct the situation in the ancestor language?

I think I can identify a structural situation which could mediate the kind of change I am proposing. Observe the following Lakota data:

(I would like to thank Mr. Eli James for supplying these examples.)

- (11) A.1. Wičháša kī pahá kī akáŕl wəwíčhayáka pi. 'The men were seen on  
man the hill the on they-see-them the hill'
2. Pahá kī wičháša kī akáŕl wəwíčhayáka pi. 'It was on the hill that  
hill the man the on they-see-them the men were seen'
- B.1. Thaló kī phéta kī ehás̄ íkhiyela ayúštą, 'she left the meat too  
meat fire too close leave close to the fire'
2. Phéta kī ehás̄ íkhiyela thaló kī ayúštą 'it was the fire that  
fire the too close meat the leave she left the meat too  
close to'
3. Phéta kī thaló kī ehás̄ íkhiyela ayúštą  
fire meat too close leave  
'It was too close to the fire that she left the meat'
- C.1. Zičá wə čhə'ákáŕl anáhla íyáke. 'a squirrel ran up the tree'  
squirrel tree on using ran claws
2. Čhə kī zičá wə { akáŕl anáhla íyáke 'It was up the tree that...'  
anáhla akáŕl íyáke 'It was across [the top] of  
the tree...'
- D. Tókša owáyawa hená wašícuya kī ektá ʔspéwíčhakhiya pi.  
later school they English at they-teach-them  
'later they can be taught English at school'
- E. Waléħatu kī tuktél owáyawa Lakhóta wakháyeža él yá pi kī  
nowadays where school Indian their-children to go the/that  
Lakhótuyapi kī hé tháka kī ʔspéwíčhakhiya pi hé  
Lakhota language the that elders they-teach-them that  
Wašícula líla patíta pi.  
Whites very they-encourage-it  
'Nowadays the Whites strongly encourage that the elders  
teach the Lakhóta language to the Indian children wherever  
they go to school.'

In the sentences in A, 1 is the neutral rendition, with the locative postpositional phrase immediately before the verb. In A2, however, which results from a transformation which makes the postposition emphatic, the object of the postposition has been moved away from the particle which governs it. A bracketing of this surface structure would thus have to be:

(12) VP<sub>NP</sub> [pahá kɪ] NP NP [wičháša kɪ] NP PP [akál] PP V [wawíčhayaka pi] V VP

The contrast between B1 and B3 is exactly parallel: to emphasize the postposition, one moves its object from the neutral position (in 1) to the front of the sentence (in 3). Example B2 is included to show that one can, instead, maintain the integrity of the postpositional phrase and move the whole construction, but with a different meaning. In C1 we see that the postpositional phrase in the neutral sentence is phonologically a single word; this might argue for a very strong boundary between object and particle. Yet this construction, too, can be split, as we see in C2. Finally, in D and E we have sentences taken directly from an oration by Mr. James about language education policy among the Lakhotas, illustrating the spontaneous splitting of a postpositional object, 'school,' in both cases, from its postposition, while the latter remains in place before the verb.

These data suggest to me that despite phonological evidence such as čha?ákál in C1, the bond between the NP and the postposition is quite weak in this language. How can this happen?

For an answer, we should notice that the constructions I have just illustrated do not seem to occur in the older Lakhota texts I have examined. Instead, there are abundant examples of a postposition whose object is in a preceding clause or sentence. These should probably be

analyzed as having a zero third person pronominal object. Here is a conversational example where the "pronoun" in the second clause refers to something in the preceding speaker's sentence:

(13) A: "Wiyóhpeyata oyáte wíchóthi yelo," eyá yúkhá  
           in west people they-live decl. he said, and then

B: "Ithó ektá ícimani mní kte," eyé.  
       well to (them) journey I go fut. he-said.

Similar examples can be found for Biloxi and Crow:

Biloxi: sahiyá de síx ká 'when this one stood on the other side'  
           beyond this stand when

Crow: á·ke bí·wiciky 'on it there was snow' (p. 137)  
        on-it

á·ken awá·tsi 'sit on it'

I think this is the structure which enables us to explain the whole development. These 'stranded' postpositions with zero objects can gradually be perceived as independent adverbs rather than postpositions: ektá in the Lakota example just above would then be better translated 'there' than 'to them'. This is precisely the kind of subtle reanalysis which can occur between generations, for no surface structure change is required, and the meanings are so close as to be indistinguishable: if ektá in this example means 'to them' to the speaker but 'there' to the hearer, that is nevertheless irrelevant to either the meaning or the grammaticality of the sentences. However, once it comes to mean 'there' for one generation of speakers, then its object can easily be moved around in the sentence, and sentences such as the postpositional emphatics I gave you above become possible. From here, the fact of pre-verbal position for the particle could lead to the development of a new dependency, but now between particle and verb, rather than between NP and particle. The development of

particle-verb bonds is thus mediated by the prior breaking of the NP-particle bonds. Schematically:

- (14) [NP particle] [verb] (found in all Siouan languages)
- I. and
- [<sup>pron</sup><sub>(∅)</sub> particle] [verb] (found at least in Lakhota,  
Crow and Biloxi, if not others)
- II. ([NP]) [particle][verb] (found in Lakhota today)
- III. ([NP]) [particle verb] (found in Caddoan and maybe  
some Siouan, too)

This, then could be the detailed description of the re-bracketing posited as necessary to relate the Siouan and Caddoan constructions.

The biggest problem left, of course, is accounting for the fact that in the Caddoan languages today there are some 30-odd elements which intervene between the NP and the particle, and some of those, namely the pronominal affixes, also sometimes intervene in the Siouan languages.

To expound on this problem would go well beyond the scope of this paper, but to show that I think there is an answer, let me mention two facts.

First of all, the first part of the Caddoan verb revolves around an element called a preverb, which just may have been some kind of auxiliary in an earlier period of the language. If this is so, then the verb phrase at that earlier stage contained a structure such as:

- (15) VP → aux (adv<sub>1</sub>) (NP) (adv<sub>2</sub>) V

where adv<sub>1</sub> includes mostly markers of manner and speaker attitude, while adv<sub>2</sub> includes instrumental and locative elements.

The second important fact is the observation that third person affixes are often zero in Siouan, so that even if no aux developed earlier in the sentence to attract personal affixes away from the verb, the locative

morpheme would nevertheless have been preposed immediately to the verb stem in many instances.

Suppose a language with a VP structure such as (15) sketched above evolved the 'independent particle' syntax for postpositions which we have just observed in Lakota, so that the object of the postposition was moved to the front of the sentence. In such a case, we would have the Caddoan structure observed today as soon as the elements in the VP collapsed into one polysynthetic word. The bracketing given for Lakota in example (12) need only have an aux between the first two constituents to match this reconstructed bracketing.

Implicitly, then, I have given you what my reconstruction for the syntax of these elements in Proto-Siouan-Caddoan would have been, if indeed there ever was such a language: the reconstructed structure could have been either stage I or stage II of (14) above. If it was stage I, its evolution into Siouan generally involved no changes, and its evolution into Caddoan was that sketched in that diagram. If the ancestor structure was stage II, then the evolution went in different directions, generally attaching the particle to the NP in Siouan but to the V. in Caddoan. I think the former of these two options is the more probable.

I have not yet examined the behavior of locationals in verb-last languages in general, but unless there is a universal tendency for them to be immediately preverbal, and for the postpositions to permit 'stranding' of the sort we have just described, it seems to me that the existence of the sequence locational-verb in these two families is one of those similarities which is difficult to explain as accident or borrowing. Perhaps this provides us with one more tiny bit of evidence that the two families

are indeed distantly related. Certainly the explanation of a development such as this one is a necessary, though clearly not a sufficient, part of the proof that there is a Siouan-Caddoan historical relationship.

#### FOOTNOTES

\* This is a very slightly revised version of a paper read at the Conference on American Indian Languages, American Anthropological Association annual meeting, Houston, 1977. I would like to express special thanks to Jean Charney and Marjorie Kurtz for help in finding the Crow and Winnebago examples. Data sources are: Biloxi, Einaudi (1976); Caddo, Wallace Chafe (personal communication); Crow, Lowie (1960); Lakota, Deloria (1932), Eli James (personal Communication); Pawnee and Arikara, Douglas Parks (personal communication); Wichita, Bertha Provost (personal communication); Winnebago, Susman (1943), Lipkind (1945), Radin (1923).

<sup>2</sup> See for example Lehmann (1974), Friedrich (1975).

<sup>3</sup> See for example Li and Thompson 1975, Tai 1976.

<sup>4</sup> Cf. especially Watkins 1976 and to some extent McCawley 1976, too.

<sup>5</sup> See Parker 1976.

<sup>6</sup> See McCawley 1976.

<sup>7</sup> See Ard 1976.

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