

CADDO VERB STEM LOCATIVES

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1. Introduction. The task of analyzing the Caddo verb stem is made challenging by the combination of three principal factors: (1) pervasive and often unpredictable allomorphy, (2) morpheme homophony, and (3) unproductive morphology stemming from lexicalization. It is particularly the process of lexicalization operating over a vast time-frame that has posed the greatest challenge to verb stem analysis. Lexicalization has functioned to obscure what appears to have been once productive morphology, leaving the identification of individual verb stem morphemes speculative if not impossible Caddo-internally. Thus, often only through comparative Caddoan studies do the identities, meanings and functions of these fossilized of "Pre-Caddo" morphemes become clear.

In this study, several Pre-Caddo locative forms are identified based on both internal evidence (where possible) and their semantic resemblance and similarity in phonological shape and morphological position to corresponding productive elements in other Caddoan languages.¹ The identification of these morphemes not only serves to establish new Caddoan cognates, and thus contribute to our understanding of Caddoan sound correspondences and make possible the reconstruction of Proto-Caddoan forms, it also sheds light on Proto-Caddoan verb morphology. Specifically, based on evidence presented in this study suggesting that the Caddo locative class includes elements referring to locations, positions and directions, a situation paralleled in at least Pawnee and Wichita, a Proto-Caddoan locative class with the same semantic range can be posited. Furthermore, the relative position of this morphological class in the Proto-Caddoan verb stem can be reconstructed to that immediately before the complex verb root.

2. Locatives in Pawnee and Wichita. Before proceeding to Caddo locatives in particular, a brief overview of the locative classes and their relative verb stem positions in Pawnee and Wichita are presented.² Then, shared features between Pawnee and Wichita locatives are specifically noted.

2.1. Pawnee. According to Parks (1976:291-307), the locative class in Pawnee encompasses forms having a semantic range including that of location, position, and direction. He reports 37 primary locatives (that is non-composite forms), 13 of which may occur independently as locative verb roots, in addition to as locative prefixes. The remaining 23 dependent locatives are always prefixes, that is, they never occur independently as

locative verbs roots. Compound locatives, composite forms of two or more locatives, are also well-attested in the language, there being over a hundred recorded. In the verb stem, Pawnee locatives occur immediately before the distributive and verb (consisting of the verb root or lexicalized stem) positions, as illustrated in figure 1.

Figure 1. Pawnee verb stem positions (cf. Parks 1976:327)

...-LOCATIVE-DISTRIBUTIVE-VERB-...

Significant to our discussion of Caddo locatives presented below, Parks (1976:330) also reports that some verb roots are complex, consisting of two or more syllables with the distributive marker *wa:-* (among others) infixes after the first syllable. These syllables are synchronically unidentifiable as separate morphemes, though historically must have been meaningful. Among other notions besides distribution, the distributive affixes are used to express plural subject of the verb (Parks 1976:279).

2.2. Wichita. Like Pawnee, the locative class in Wichita includes elements denoting location, position, and direction. Rood (1976:67) lists 28 'location units', which occur as prefixes in the Wichita verb. He furthermore reports that more than one locative may occur per verb. Simplifying, Wichita locatives occur before the distributive and initial stem positions. The initial stem is equivalent to Parks' verb for Pawnee, including the verb root or lexicalized stem.

Figure 2. Wichita verb stem positions (cf. Rood 1976:17-22)

...-LOCATIVE-VERB-...
 |
 DISTRIBUTIVE

The distributive morpheme in Wichita, (*V*)*wa(:)-* is generally infixes before the last consonant of the verb root and, besides distribution, sometimes implies plurality of the patient of the verb (Rood 1976:21,76).

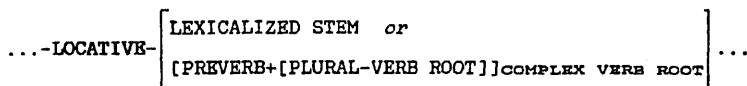
2.3. Shared traits of the locative class in Pawnee and Wichita. This brief description of Pawnee and Wichita locatives acknowledges the following shared traits:

1. semantics. Locatives in both languages include forms denoting location, position, and direction.
2. morphological position. Locatives occur as prefixes in the verb, situated immediately before the distributive and verb positions.
3. multiplicity. More than one locative per verb is possible in both languages.

Several Pawnee and Wichita locatives are cognates. Some of these cognates are given below in relation to Caddo locatives, considered next.

3. Caddo Locatives. As in Pawnee and Wichita, Caddo locatives occur as prefixes in the verb stem. In addition, some of these locative elements can occur as locative verb roots. Prior to this study, it was posited that the locative class in Caddo only included forms denoting location, and not position or direction. Indeed, elsewhere I proposed that elements denoting position comprised their own morphological class (Melnar 1993). In that analysis, locatives and positionals occupy two distinct positions or slots in the Caddo verb; when both are present, the locative being directly prefixed to the positional, which is prefixed to the verb. Evidence is provided below, however, that suggests that locatives and positionals in Caddo are best viewed as a single morphological class and that composite locatives of the type [locative+positional]Loc, for example, are possible. In this discussion, then, except where a distinction is necessary for semantic clarity, I will collectively refer to both locative and positional elements in Caddo as 'locatives', imitating Parks and Rood for Pawnee and Wichita respectively. As a result of this investigation, we will see later that directionals are also identified in the Caddo verb stem. Evidence for combining all three of these semantic categories into a single locative class will be examined below. In this view, the locative class is prefixed immediately to the verb, a position which consists of the lexicalized stem or the (complex) verb root. A complex verb root maximally includes a preverb, animate plural, and verb root positions (see below). Figure 3 illustrates the relevant Caddo verb stem positions in detail.

Figure 3. Caddo verb stem positions.



The animate plural marker in Caddo has the shape *wa-* (among others) and is cognate to the Pawnee and Wichita distributive, discussed above.³ As in Pawnee, it is prefixed directly to the

verb root, except when the verb root is complex, in which case it is infixated after the first syllable. In Caddo, a complex verb root is one consisting of a *preverb*, a semantically opaque class of elements typically represented by a CV syllable, and a verb root. Of significance to Proto-Caddoan verb stem reconstruction, there is some evidence that the Caddo preverb was at one time a productive morphological class consisting of incorporated noun roots used instrumentally (see Chafe 1976:45 and Melnar 1993 for a discussion of the Caddo preverb). Synchronically, neither Caddo nor Pawnee has an instrumental category included in the verb stem; the Wichita verb, however, does have an instrumental class which is prefixed to the locative position. As is hypothesized for the Caddo preverb, this class consists of noun roots used instrumentally.

3.1. Previously identified Caddo locatives. Up to now, at least nine locative elements (in the semantically inclusive sense) had been identified by Chafe (1977a).⁴ In general, these locatives are considerably more transparent than the ones that will be introduced below, in that they occur in verb stems whose constituent morphemes are readily identifiable. Indeed, five of them occur alone with either the verb root *7a7* 'be (present)' or *ya7ah* 'be'. These locatives, along with examples of their occurrence in Caddo verb stems are listed in 4.⁵

4. Caddo locative set (1) (cf. Chafe 1977a)⁶

1. *da-1* 'hanging'

- | | |
|--------------------------------|--------------|
| a. <i>da-7a7</i> | 'be hanging' |
| LOC-VR | |
| hanging-be | |
| | |
| b. <i>na-7awi-da</i> | 'swing' |
| ITER-POST-LOC.VR | |
| iterative-sitting.posture-hang | |

2. *daht-* 'attached, joined'

- | | |
|-----------------------|-----------------------|
| a. <i>daht-7a7</i> | 'be attached, joined' |
| LOC-VR | |
| attached-be | |
| | |
| b. <i>daht-wa-7a7</i> | 'be gathered, |
| LOC-PL-VR | assembled' |
| attached-PL-be | |

3. *daka7ah-* 'wedged in, in a crowd'

- | | |
|-----------------------|-----------------|
| a. <i>daka7ah-7a7</i> | 'be in a crowd' |
| LOC-VR | |
| in.a.crowd-be | |

- b. *dakaʔah-yuk* 'get in a crowd'
 LOC-VR
 in.a.crowd-disappear
4. *hawat-* '(in) water'
- a. *hawat-ʔiʔ+nahw* 'set in water'
 LOC-PVB+VR
 in.water-set
- b. *ʔi-chʔah-na-hawat-ʔa+waʔ* 'throw eyes in water'
 PR-IN-NSP-LOC-PVB+VR (cf. Chafe 1977b)
 PR-eye-NSP-in.water-throw
5. *kád-* 'flat against'
- a. *kád-ʔaʔ* 'be flat against
 LOC-VR something'
 flat.against-be
- b. *kád-yuʔ* 'apply flat against
 LOC.VR-CAUS something'
 be.flat.against-CAUS
6. *kah-* '(the) inside (of)'
- a. *kah-waniʔ* 'put in'
 LOC-VR
 inside-put.in
- b. *kah-wan(ih)* 'load'
 LOC-VR
 inside-put.in
7. *kid(i)-* 'elevated thing, platform'
- a. *kidi-[ʔawis-ʔaʔ]* 'sit on something,
 LOC-[POST-VR] ride'
 elevated-[sitting.posture-be]
- b. *kidi-ʔa+waʔ* 'put on a platform'
 LOC-PVB+VR
 platform-put
8. *nukah-* 'under, underneath' (see below)
- a. *hawat-nukah-[yáh-ʔáʔ]* 'be floating under
 LOC-LOC-[MOT-VR] water'
 water-under-[floating-be]
- b. *hawat-nukah-hiy* 'get stuck under water'
 LOC-LOC-VR
 water-under-get.stuck

9. *7ini+ka7ah-* 'under'
- a. *7ini+ka7ah-ya7ah* 'be under'
 LOC+LOC-VR
 under-be
- b. *7ini+ka7ah-yu7* 'put under'
 LOC+LOC.VR-CAUS
 be.under-CAUS

Four salient points regarding locative elements in the Caddo verb stem are observed: 1) the disposition of (composite) locative prefixes immediately before the (complex) verb root or lexicalized stem; 2) the occurrence of locative verb roots, specifically in (1b), (5b), and (9b); 3) the existence of (locative) elements denoting position, as exemplified in (1), (2) and (5); and 4) the appearance of more than one locative element in a verb stem, as in (8a,b) and (9a,b). The first two observations are self-explanatory; the third and fourth, however, deserve some comment.

First, note that the positional elements in (1), (2) and (5) do not occur with other positional or locative elements in the examples. As far as is currently known, this is always the case. In fact, only if *nukah-* 'under', given in (8), is accepted as a positional, is there evidence for a distinct positional morphological class. There is reason, however, to believe that *nukah-* is not an independent form.

As stated, the only evidence presented in this data that (at least) two locative units may be admitted into a single verb stem is given in (8a), (8b), (9a) and (9b). *7ini+ka7ah-* of (9a) and (9b) is recognized as a composite form (*ka7ah-*, in fact, only appears in composition with *7ini-*, while *7ini-* often occurs outside of this compound), but *nukah-* of (8a) and (8b) is listed as an independent form. Yet, in each of these examples, *hawat-* 'in water' is prefixed to this element. In fact, *nukah-* never appears without *hawat-* prefixed directly to it in my corpus of data, perhaps due to the existence of the independent composite form *7ini+ka7ah*, with the same meaning.⁷ *hawat-*, on the other hand, does appear in the verb stem without *nukah-*, as evidenced in both (4a) and (4b), the verb stems for 'set in water' and 'throw eyes in water', respectively. This suggests that like *7ini+ka7ah-*, *hawat-* and *nukah-* comprise a compound locative, *hawat+nukah-*, meaning 'under water'. This analysis rejects the existence of an independent positional morphological class due to lack of evidence and supports a single locative class encompassing both positional and locative elements.

Of these nine Caddo locatives, six are cognate with forms from Northern Caddoan languages. These cognate locatives include the forms meaning 'hanging', 'in a crowd', '(in) water', 'in,

inside', 'under' and 'on top of', as illustrated in figure 5 (Kitsai not included).

Figure 5. Cognate set with Caddo locatives (1)⁸

gloss	Ca	Wi	Ar	Pa	PNC	PC
hanging	<i>da</i>	<i>tawa</i> (VR)	<i>ta</i>	<i>ta</i>	<i>ta</i>	<i>*ta</i>
in a crowd (in) water	<i>dakaʔah</i> <i>hawat</i>	<i>tacka</i> <i>ha:</i>		<i>ha</i>		
in, inside	<i>kah</i>	<i>ka:</i>	<i>kaa</i> (VR)	<i>ka:</i>	<i>ka:</i>	<i>*kaC</i>
under	<i>ʔini+kaʔah</i>	<i>keʔerhi:k</i>				
on top of	<i>kid(i)</i>	<i>kita</i>	<i>chita</i> (ADV)	<i>kita</i>	<i>kita</i>	<i>*kita</i>

So, for example, the Caddo prefix meaning 'hanging', *da*, is cognate to the Wichita root *tawa*, and Arikara and Pawnee locatives *ta*. Based on the cognate set from Wichita, Pawnee and Arikara, a Proto-Northern Caddoan form, *ta* is reconstructed. The inclusion of the Caddo cognate allows for a Proto-Caddoan reconstructed form, also **ta*, Caddo *d* being a reflex of Proto-Caddoan **t*.

One unresolved problem in this set is the posited cognate relationship of the forms glossed as 'in, inside'. Wichita contrasts two phonologically similar forms: *ka:* 'in enclosed space, inside' and *ka* 'in topless enclosure' (Rood 1976:67). Pawnee has a similar situation, differentiating *ka:* 'in, within (circumscribed and bounded space)' and *ka* 'on a horizontal (bounded surface); in timber, brush' (Parks 1976:294-5). Caddo also has (at least) two similar meaning forms, *kah*, given above, and *ká*, to be introduced in section 3.2. The semantic distinction between these two elements is presently unclear. While it is reasonable that the *ka:* of Pawnee and Wichita are cognates, it is questionable which of the two Caddo forms belongs in this set.⁹ For a description of known Caddoan sound correspondences, refer to figures 6 and 7 on the next page.¹⁰

3.2. More Caddo locatives. The high percentage of correlation between locatives in Caddo and the Northern Caddoan languages suggested an auspicious direction of inquiry in the identification of other Caddo locatives. Thus, based on similarities to Pawnee, Arikara, and/or Wichita forms, in addition to Caddo internal evidence, the identification of seven more Caddo locatives can be posited. Unlike the locatives given in 4 whose function and meanings in the Caddo verb stem are readily recoverable, the locatives presented below are considerably more opaque, often co-occurring in verb stems with

Figure 6. Reflexes of Proto-Caddoan Consonants (cf. Chafe 1979; see also Taylor 1963)

PC	Pawnee	Arikara	Wichita	Caddo
*p	p	p	w-, kw	b
*t	t	t	t-, -c	d
*k	k	k, ch	k	k
*c	c	s	c	ch
*s	s	sh, x	s	s
*w	p-, w	w	w	p-, w
*n	r	n	n-, r	t-, n
*r	r	n-, r	n-, r	t-, n
*y	r	h	h-, y	d-, y
*ʔ	ʔ	ʔ	ʔ	ʔ
*h	h	h	h	h

Figure 7. Reflexes of Proto-Caddoan vowels (cf. Chafe 1979 see also Taylor 1963)

PC	Pawnee	Arikara	Wichita	Caddo
*a	a	a	a	a
*i	i	i	i	i
*u	u	u	i	u
*a and *i uncertain	e	e	e	
		o		

other synchronically obscure elements or in idiomatic constructions. It is precisely for this reason that comparative evidence from related languages is indispensable. Nonetheless, even with such corroboration from the other Caddoan languages, some of the identifications must be regarded as speculative, pending further research. These posited locatives are listed in 8 along with examples of their occurrence in Caddo verb stems.

8. Caddo locative set (2)

10. *da-2* 'together, next to'

- a. *da-wá7*
LOC-VR
together-put

'put together, mix';
háhdáwáwá7sa7 'they (pl.) are
putting it together'

11. *dah-* 'in a line, straight'

- a. *dah-hak-ʔ7n(i)*
LOC-VR-CAUS
in.a.line-stand-CAUS

'stand upright'; *kakitáákin7*
'for one to stand something
upright'

12. *ka*-`side`
- a. *nisah-ka-ya7ah*
IN-LOC-VR
house-side-be
`wall, ceiling`; *kahnisahký7ah*
`that which is a wall, ceiling`
13. *ká*-`in, inside`
- a. *ká-7húy7*
LOC-VR
inside-stir
`stir`; *káawí7chah* `s/he's
going to stir it`
- b. *ká-7na7*
LOC-VR
inside-do/make
`wear`; *hákkán7isa7* `s/he's
wearing it`
14. *7awi-1* `goal, limit`
- a. *7awi-ddan*
LOC-VR
limit-be.full
`be full`; *7áwiddan* `it's
full`
- b. *7awi-[kát-hákid(i)]*
LOC-[?-VR]
limit-[to.miscarry]
`fall short of a goal`; *há7áwkátáhdisa7* `s/he is
unable to reach it`
15. *7awi-2* `oblique position`
- a. *7awi-[yah-dach`ah]*
LOC-[?-VR]
oblique.position-
[stand.vertically]
`lean`; *há7áwyahdatchah*
`it's leaning`
- b. *7awi-7i+cu+dach`ah*
LOC-[PR+IN]PVA+VR
oblique.position-stand.
on.all.fours
`be stooped over (on all
fours)`; *há7áw7isdatchah*
s/he's stooped over`
16. *7awi-3* `vertical circular motion`
- a. *7awi-[kah-na-bínk(i)]*
LOC-[?-ITER-VR]
vertical.circular.motion-
[turn.repeatedly]
`rotate, turn, spin`; *há7áwnabínkisa7* `s/he's
rotating it`
- b. *7awi-[ká7-wanin(i)]*
LOC-[?-VR]
vertical.circular.motion-
[turn.around]
`turn around`; *7áwkkáwánnichah*
`it's going to turn`

Like the first list of locatives presented in 4, this list includes forms whose semantic range covers both location and position. Unlike the first list, however, is the inclusion of elements denoting direction, as in (11) *dah*- `in a line,

straight' and (16) 7awi-s 'vertical circular motion'. Furthermore, as far as is currently known, these elements, like those listed in 4, never co-occur in the same bracketed stem. In other words, there is no evidence that directionals, positionals and locatives form independent morphological categories in the Caddo verb stem. At the same time, an analysis combining these three semantic fields into one formal class, as is the case in Pawnee and Wichita, remains defensible.

In addition to supporting a single locative morphological class, these data also corroborate the proposition that Caddo locatives are prefixed directly to the (complex) verb root or lexicalized stem, again, as in Pawnee and Wichita. In all cases given above, the locative element is disposed immediately before a verb root (10a, 11a, 12a, 13a, 13b, 14a), preverb (15b), or lexicalized stem (14b, 15a, 16a, 16b). It is also possible for the locative to precede the plural morpheme, as exemplified in (2b).

All of these locatives are posited to have cognates in the other Caddoan languages, as illustrated in figure 9.

Figure 9. Cognate set with Caddo locatives (2)

gloss	Ca	Wi	Ar	Pa	PNC	PC
together, next to	da	7i:cita (close to, beside)		taha:ri tata (close to, beside)		
in a line, straight side	dah		tee	te:		*taCi
in, inside	ka	kata	kata	kata	kata	*kata
goal, limit	ká	ka		ka		*ka
oblique position	7awi	7awi				
	7awi	7i:rika:wi (lean over)	kataaweer (leaning against)	wi:		*7awi
vertical circular motion	7awi		7apitaa	7apita:		*7apita

The Proto-Caddoan and Northern Caddoan reconstructions are my own and are straight-forward, given the Caddoan sound correspondences presented in figures 6 and 7. One reconstruction, however, requires justification. The Proto-Caddoan form given for 'in a line, straight' is *taCi. This reconstruction is posited primarily based on the fact that Pawnee e: comes from the sequences ai and ia (Parks 1976:69). Taking into consideration the Caddo form dah, I suggest that a consonant originally intervened between the ai sequence, and was then lost

in Pawnee and Arikara, yielding the present shapes. In Caddo the final vowel was lost and the consonant was weakened to the laryngeal. (As noted earlier, the *d* in Caddo is a reflex of Proto-Caddoan *t.) This reconstruction is clearly speculative, though perhaps is in the right direction.

4. Conclusions and implications. This study demonstrates that the locative class in Caddo includes locative, positional, and directional elements and is positioned in the verb stem immediately before the complex verb or lexicalized stem. This situation parallels that of Pawnee and Wichita, two related languages with which Caddo shares several locative cognates. Thus, the similarities among the locative classes in the discussed Caddoan languages include (at least) phonological shape, semantic identity, and morphological position in the verb stem. This convergence of like features suggests that the Proto-Caddoan verb stem also had a locative class that subsumed positional, directional and locative elements. Furthermore, this morphological category was prefixed directly to the verb root or to a class of derivational elements which synchronically is represented by the first syllable of complex verb roots in Caddo and Pawnee. For the most part, these syllables are unanalyzable, though they were certainly meaningful elements historically. Caddo evidence proposes that this class consisted of incorporated noun roots used instrumentally, though more comparative work is required to substantiate this proposition.

NOTES

¹The Caddoan languages include Caddo, Wichita, Kitsai, Pawnee and Arikara, with all the languages except Caddo comprising a Northern Caddoan branch. Caddo, the single southern offshoot, is the most divergent of the Caddoan languages, being only distantly related (Chafe 1983:243; 1979:214). Of the Northern Caddoan languages, Pawnee and Arikara are structurally very similar, though mutually unintelligible (Chafe 1979:213; Parks 1976:v,1-2). Kitsai is no longer spoken and descriptive information on this language is currently unavailable. For comparative purposes, this study principally relies on evidence from Pawnee and Wichita, though Arikara cognates are given where warranted.

²In this study, *verb stem* is used generally to refer to verb roots and their associated derivational morphology, whether productive or lexicalized. In describing Pawnee and Wichita, Parks (1976:143) and Rood (1976:21), respectively, restrict this term to include only roots and lexicalized stems. Parks (1976:326-330) uses the term *verb base* to refer to the verb root or lexicalized stem plus productive derivational morphology. The Pre-Caddo locatives treated in this study are synchronically unproductive and are identified in part on their similarity to productive (and thus transparent) Pawnee and Wichita locatives.

³This form also seems to mark distribution in some cases.

⁴Chafe refers to these as positionals.

⁵The constituents of complex verb roots and composite locatives are separated by the plus sign, +, and identified semantically as a unit. Lexicalized stems inside of the outermost locative prefix are bracketed for clarification; where individual elements in the lexicalized stem are unidentifiable, a single, combined meaning is given.

⁶The following abbreviations are used in this study: ADV = adverb; Ar = Arikara; BEN = benefactive; Ca = Caddo; CAUS = causative; CLASS = classifier; ITER = iterative; LOC = locative; MID = middle voice; NR = noun root; NSP = non-singular patient; Pa = Pawnee; PC = Proto-Caddoan; PL = plural animate; PNC = Proto-Northern Caddoan; PORT = portative; POST = postural; PR = preroot; PVB = preverb; VR = verb root; Wi = Wichita. Some Caddo locatives are listed with subscripts to differentiate them from homophonous forms.

⁷*nukah-*, in fact, may be a phonologically reduced form of *7ini+ka7ah-*.

⁸Wichita forms come from Rood 1976, Pawnee from Parks 1976, and Arikara from Parks 1986. Except where indicated, Proto-Northern Caddoan and Proto-Caddoan forms were reconstructed collaboratively by Chafe, Parks and Rood and all Wichita, Arikara, and Pawnee forms occur as locative prefixes in their respective language.

⁹One series of problems that needs to be worked out is the correspondence relationship of vowel length, pitch, and laryngeals among the Caddoan languages.

¹⁰In figure 6, the word-initial forms in Caddo hold for verbs only. In figure 7, *e* of Pawnee, Arikara, and Wichita come from **a* and **i* in various sequences. Chafe (1979:217) also suggests that the sequence **a7a* might have become *e7e* in Wichita, a proposal supported by the Caddo and Wichita cognates *7ini+ka7ah* and *ka7erhi:k*, respectively.

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