AFFIXES VS. CLITICS IN FOX

AMY DAHLSTROM

1. Introduction

Two morphemes in Fox—e·h AORIST and wi·h (~ i·h) FUTURE—are difficult to classify morphologically. Each morpheme appears attached at or near the left edge of verbs, but at first glance it is not clear whether they should be considered proclitics or inflectional prefixes. Moreover, a third possible classification is found in early descriptions of Fox (e.g. Michelson 1911), where these forms are grouped with the class of particles known as PREVERBS. I argue in section 2 below, however, that e·h and wi·h are so unlike preverbs that the traditional classification of these morphemes cannot be maintained.

The distribution of the two forms is as follows. e·h is prefixed to nonfuture tense verbs inflected in the following paradigms: aorist conjunct, aorist past conjunct, aorist interrogative, and a subset of conjunct and interrogative participles (those in which an oblique argument expressing stationary location is the head of the relative clause). wi·h is prefixed to verbs in the same set of paradigms allowing the aorist e·h; for these paradigms, e·h and wi·h are in complementary distribution, with wi·h marking future tense (or a modal reading of ‘would; should’) and e·h marking nonfuture tense. In addition, wi·h may be used with a future or modal reading in the independent indicative, negative, iterative, and throughout the conjunct and interrogative participle paradigms. For this set of paradigms, nonfuture tense is indicated simply by the absence of wi·h.

Recent descriptions of Fox (e.g. Goddard 1984, 1991; Dahlstrom 1987) have labelled

---

1 The allomorphs wi·h and i·h have the following distribution. i·h is used after the inflectional prefixes of the independent indicative: n(e)- first person; k(e)- second person. Where no inflectional prefix precedes, either wi·h or i·h may be used. wi·h is more common in the deliberate speech style of Kiyana’s texts (written 1911-1918), while i·h is more common in texts written by authors using casual style, and is nearly always heard in spoken Mesquakie today (cf. Voorhis 1971, Goddard 1988b:197, 203-204).

2 Goddard 1988a and Hotta’s paper in this volume discuss the role of preverbs in word formation in Fox. Descriptions of cognates of e·h and wi·h in other Algonquian languages have also classified the forms as preverbs: see, for example, Wolfart 1973:77-78 on Plains Cree.

3 The aorist conjunct is used in subordinate clauses (both complement clauses and adverbial clauses) as well as in main clauses of narratives. The aorist past conjunct indicates a relative past tense when used in subordinate clauses; in narrative main clauses it indicates a remote past. The aorist interrogative is used for temporal adverbial clauses glossed ‘at whenever time ...’. Participles are used in relative clauses: conjunct participles for regular relative clauses and interrogative participles for relative clauses headed by ‘whoever’, ‘whatever’, etc.

4 The independent indicative is used for non-negated main clause assertions or questions, while the negative paradigm is used for negated main clause assertions or questions. The iterative is used in temporal adverbial clauses glossed ‘whenever...’.
\(e\cdot h\) and \(wi\cdot h\) as proclitics. This classification is based on phonological criteria: as will be seen in section 3, the sandhi phenomena found at the juncture of \(e\cdot h\) or \(wi\cdot h\) and the following morpheme is similar to the sandhi effects seen between a host and an enclitic. In terms of the distribution of \(e\cdot h\) and \(wi\cdot h\), however, these forms resemble affixes more than they resemble true clitics. In particular, the future proclitic may be preceded by an inflectional prefix in the independent indicative paradigm, as illustrated in (1), where the future proclitic—here taking the allomorph \(i\cdot h\)—appears between the inflectional prefix \(n(e)\)- and the verb stem \(n\cdot a\cdot k\cdot w\cdot a\)- 'leave'. The putative proclitic is set off from its host by '―'.

(1) \n\cdot i\cdot h\cdot n\cdot a\cdot k\cdot w\cdot a
1\text{-fut}=\text{leave}
'I will leave'

(Long vowels are shortened in word-final position; see section 3 below.)

Classifying the future morpheme in (1) as a proclitic raises a theoretical problem. Nearly all theoretical treatments of clitics assume that clitics will appear outside of inflectional morphology—that is, proclitics will precede inflectional prefixes and enclitics will follow inflectional suffixes. The various theories differ in the explanations they offer to explain this distribution. Zwicky and Pullum 1983, for example, assume that cliticization is a separate component of the grammar, following syntactic processes such as agreement. Anderson 1992, on the other hand, treats clitics as phrasal affixes, with the result that affixes attached to a phrasal category will be outside any affixes attached to words within the phrase. A clitic appearing inside inflectional morphology—that is, within a word—would obviously be of considerable theoretical interest, but only if it can be clearly demonstrated that the morpheme in question is indeed a clitic.\(^5\) Conversely, for the purposes of describing Fox, the crosslinguistic rarity of clitics appearing inside inflectional morphology demands that we be cautious in claiming that these morphemes are clitics. From the standpoint of both morphological theory and descriptive accuracy, then, a closer examination of the putative proclitics is warranted.

The position taken in this paper is that \(e\cdot h\) and \(wi\cdot h\) are best classified as inflectional affixes, not as clitics or preverbs. \(e\cdot h\) and \(wi\cdot h\) do, however, share a few phonological properties with the class of true clitics. I reach this conclusion by first establishing the morphological and phonological properties for clear cases of preverbs, clitics, and inflectional affixes, and then comparing the two putative proclitics to each morphological class. The following example illustrates all the morphological classes under consideration:

\(^5\) See, for example, Macaulay 1989, who shows that an alleged 'endoclitic' in Karok is in fact an affix.
(2) n-i-h=po·ni=pi mahkate·wi-·pena
1-fut=stop=quot fast-(1)p
'We should stop fasting, it's said.'

inflectional affixes  ne- ·pena  1 plural exclusive, independent indicative
‘proclitic’        i·h=                future; 'should'
preverb           po·ni                'stop, cease'
enclitic          =ipi                quotative ('it is said')
verb stem         mahkate·wi-·       'fast'

The verb in (2) is built upon a compound stem: the preverb po·ni 'stop' plus the simple verb stem mahkate·wi- 'fast'. The future 'proclitic' i·h= precedes the preverb, here contributing a modal sense of 'should'. The inflectional affixes ne- ·pena, expressing first person exclusive plural in the independent indicative, surround the compound verb stem, with the inflectional prefix attaching to the left of the proclitic and preverb and the inflectional suffix following the verb stem. The evidential enclitic =ipi 'it is said' appears to the right of the first phonological word of the clause: here, its host is the preverb po·ni.

2. Preverbs

We begin by considering the class of preverbs. As mentioned above, verb stems in Fox are frequently combined with one or more preverbs, where the preverbs include various modal-like elements, aspect markers (see Appelbaum's paper in this volume), directionals, and manner adverbials. Preverbs have the following properties of interest to the present discussion: they are separate phonological words, they may be the locus of reduplication, and they may be separated from the remainder of the verb, resulting in a syntactically discontinuous compound verb. The two putative proclitics have none of these properties.

2.1. Preverbs as phonological words. There are at least three pieces of evidence for considering a preverb to be a separate phonological word. First, there may be a pause between the preverb and the verb stem, with concomitant devoicing of the final vowel of the preverb. (See Goddard 1991 for devoicing of vowels preceding pause.) Second, the preverb may be the host for an enclitic. An example of this was seen in (2), where the preverb po·ni 'stop' hosts the enclitic =ipi 'it is said'. (See section 3 for clitic sandhi.) Third, the preverb is stressed as a separate word.

The morphemes e·h and wi·h have none of the characteristics of a phonological word. There is never a pause after e·h or wi·h; an enclitic never attaches immediately to the right of e·h or wi·h; for the purposes of stress assignment, e·h and wi·h are considered part of the following phonological word. (The test of final devoicing is not applicable here since neither e·h nor wi·h ends in a vowel.)

2.2. Reduplication. Fox has two productive patterns of reduplication, which may apply to the left edge of simple verb stems, preverbs, or both, expressing aspectual information such as continuative or iterative action (Dahlstrom 1994; see also Appelbaum's paper in this volume). A few examples of the monosyllabic type of reduplication are listed below
to demonstrate that the left edge of a preverb may be the locus of reduplication:

(3) preverb  reduplicated form
   a. ahkwi   a-yahkwi  ‘so far’
   b. kiša-koči ka-kiša-koči  ‘as much as possible’
   c. mawi    ma-mawi   ‘go (in order to ...)’
   d. menwi   me-menwi  ‘good, well’
   e. taši    ta-taši   ‘there’

In contrast, neither e-h nor wi-h may undergo reduplication.

2.3. Separable preverbs. In Dahlstrom 1987, 1995, I have discussed discontinuous constituents in Fox, including the phenomenon of preverbs separating from the remainder of the verb. For example, the perfective preverb kiši may be moved away from its normal position immediately to the left of the verb (4a) to a position at the beginning of the clause (4b).

(4) a. te-pi tasenwi  ne-kiši kano:n-a-wa
   enough so.many.times 1-perf speak.to (1)-3/ind.ind
   ‘I have spoken to him enough times.’

   b. ne-kiši te-pi tasenwi kano:n-a-wa
      1-perf enough so.many.times speak.to (1)-3/ind.ind
      ‘I have spoken to him enough times.’ R70.8

The unified compound verb stem in (4a) is inflected with the affixes ne- -a-wa, underlined in the example, which indicate a first person singular subject acting on a third person singular object. When the perfective preverb is moved leftward in (4b), it takes along the first person inflectional prefix ne-, splitting the inflectional affixes between two syntactic elements.

Neither e-h nor wi-h may be moved on its own to the left edge of a clause:

(5) a. te-pi tasenwi  eh=kano:naki
    enough so.many.times aor=speak.to 1-3/aor
    ‘... that I speak to him enough times.’

    b. *eh  te-pi tasenwi  kano:naki

(6) a. te-pi tasenwi  wih=kano:naki
    enough so.many.times fut=speak.to 1-3/aor
    ‘... that I will speak to him enough times’

    b. *wih  te-pi tasenwi  kano:naki
3. *Enclitics*

3.1. *Phonology of enclitics*. There is a large class of enclitics in Fox, expressing mostly pragmatic notions such as evidentiality, contrast, emphasis, surprise, etc. Special sandhi processes occur when an enclitic is attached to its host. For example, the final vowel of the host may be deleted or altered by a following enclitic. (All Fox words end in a short vowel.) Goddard 1991 provides a discussion of clitic sandhi in Fox; a few examples are provided here.

If the enclitic begins in a long vowel, the final vowel of the host is lengthened and the initial vowel of the enclitic deleted:

(7) \[\text{na·kwa·no·}=nahi\]
    /na·kwa·no + =i·nahi/
    leave 2/imp emph
    'leave!'

If the host ends in \(hi\) and the enclitic is consonant-initial, the final \(i\) of the host drops:

(8) \[\text{ke·ko·h}=meko\]
    /ke·ko·hi + =meko/
    something emph
    'something indeed'

The deletion of the host-final \(i\) can produce consonant clusters not found word-internally in Fox, such as \(h=n\), or \(h=m\) as in (8).

A word with no enclitics, spoken in isolation, usually bears penultimate or preantepenultimate stress. Adding an enclitic to the word affects the stress, generally shifting it to the syllable immediately preceding the clitic boundary. (See Goddard 1991 for more details.)

(9) a. \[\text{pé·hki}\]
    'really'

b. \[\text{pe·hki}=meko\]
    really=emph
    'really indeed'

A word with no enclitics is subject to two phonological processes applying to its final vowel: long vowels are shortened in word-final position, and the final vowel is optionally devoiced. If an enclitic is attached to the word in question, the presence of the clitic will block final devoicing from applying to the host, but it will not block final shortening. In other words, the rule shortening a final vowel applies at the level of the word; the devoicing rule applies to the clitic group (host plus enclitic(s)).

The following set of examples shows that long vowels are shortened in word-final position, regardless of the presence of a clitic:
(10) a. ne-naːkwaː-pena
     1-leave-(1)p 'we left'

b. ne-naːkwa
     1-leave 'I left'

c. ne-naːkwa=meko
     1-leave=emph 'I left indeed'

The form of the verb stem is naːkwaː-, as seen in (10a) where the stem is followed by an inflectional suffix. In (10b), on the other hand, the first person singular form does not bear an inflectional suffix. Consequently, the stem-final long vowel is in word-final position and must be shortened. (10c) shows that an enclitic attached to the first person singular form does not block the rule shortening a word-final long vowel.

In contrast, the devoicing of a final vowel can only apply to the end of a clitic group:

(11) a. ne-naːkwɔ
     1-leave 'I left.'

b. ne-naːkwa=mekɔ
     1-leave=emph 'I left indeed.'

Let us now look at the phonological behavior of the two putative proclitics, as described in Goddard 1991, and see how they compare to the enclitics. First of all, note that both eːh and wiːh are consonant-final so the special sandhi rules applying to vowel clusters are not applicable here. However, the combination of proclitic plus host may produce consonant clusters of h=m and h=n, identical to those arising from the sandhi rule of (8):

(12) a. eːh=mahkate-wiːči
     aor=fast 3/aor 'that he fasted'

b. eːh=naːkwaːči
     aor=leave 3/aor 'that he left'

If a verb bears one of the putative proclitics, a shift in stress seems to be optional. That is, the verb may be stressed as if it were a simple word, or the stress may be shifted to the vowel of the proclitic:

(13) a. eːh=áːči
     aor=go.[there] 3/aor 'that he went [there]'

b. éːh=aːči
     aor=go.[there] 3/aor 'that he went [there]'

(13a) is stressed as if it were a regular trisyllabic word, while (13b) has the stress shifted
to the vowel of the proclitic. (Note that since the proclitics end in \( h \) the putative clitic boundary does not correspond to a syllable boundary: the final \( h \) of the proclitic is the onset of the first syllable of the host. If the optional stress shift in (13) is the same sandhi process seen with the enclitics, the rule must be stated in terms of the first complete syllable preceding the clitic boundary.)

In the discussion above we used the rule of word-final shortening to support the distinction between inflectional suffixes and enclitics: an inflectional suffix blocks shortening of a stem-final long vowel but an enclitic does not. The question then arises whether there is a phonological process affecting the left edge of words which is blocked by an inflectional prefix but not by \( e^h \) or \( wi^h \). The answer is yes: a word-initial /e/ becomes \( i \) in Fox. This is illustrated below with the stem /en-/ ‘say [thus] to’, used following direct quotes. In each example the stem is underlined.

(14) a. nete\-n\-wa  
say.[thus].to 1-3/ind.ind  
‘I said [thus] to him.’

b. ine\-wa  
say.[thus].to 3-obv/ind.ind  
‘He said [thus] to him.’

After a preverb, /e/ is always realized as \( i \), as expected since there is a phonological word boundary between a preverb and the verb:

(15) a. nek\-i\-si\-ina\-wa  
perf-say.[thus].to 1-3/ind.ind  
‘I already said [thus] to him.’

b. ki\-si\-ine\-wa  
perf-say.[thus].to 3-obv/ind.ind  
‘He already said [thus] to him.’

In (15), the perfective preverb \( ki\-si \) has been compounded with the verb.

The behavior of /e/ after the two putative proclitics may be the strongest argument for classifying these morphemes as proclitics. /e/ is always realized as \( i \) after either \( e^h \) or \( wi^h \).

(16) a. wi\-h=ine\-wa  
fut=say.[thus].to 3-obv/ind.ind  
‘He will say [thus] to him.’

b. e\-h=ina\-či  
aor=say.[thus].to 3-obv/aor  
‘...that he said [thus] to him.’

Another context, however, in which /e/ is realized as \( i \) is after the bisyllabic
reduplicative prefix. (See Dahlstrom 1994 for the details of reduplication in Fox.)

(17) a. netenahina-wa
    redup.say.[thus].to 1-3/ind.ind
    'I said [thus] over and over to him.'

b. inehine-wa
    redup.say.[thus].to 3-obv/ind.ind
    'He said [thus] over and over to him.'

The conclusion to be drawn from the /e/ to i rule is not clear. (14) through (16) suggest that /e/ appears as e inside words and as i on the left edge of words. If we analyze e·h and wi·h as proclitics then we can say that there is a word boundary between the proclitic and the host, which triggers the /e/ to i rule. However, the reduplicated forms in (17) are problematic, suggesting that the /e/ to i rule may apply following other morpheme boundaries as well.

3.2. Distribution of enclitics. The enclitic particles of Fox have distributional properties typical of clitics crosslinguistically. Most strikingly, the enclitics may attach to hosts of any lexical category (cf. Zwicky and Pullum 1983, inter alia). This is shown below with the emphatic enclitic =meko.

(18) a. aškači=meko
    later=emph
    'much later'

b. ke·ko:h=meko
    something=emph
    'really something'

c. a·kwi=meko
    not=emph
    'not at all'

d. mi·škawa·niwi=meko
    be.strong inan/ind.ind=emph
    'it is very strong'

In (18a) the emphatic enclitic attaches to an adverb, in (18b) to an indefinite pronoun, in (18c) to a negative particle, and in (18d) to a verb.

Many of the Fox enclitics are second-position enclitics. That is, whatever word occupies the initial position within the clause serves as the host for one or more enclitics. Examples are given below:

(19) osekwiwiwa=pi
    i:nini metemo·he·hani i:na neniwa
    have.as.aunt 3/ind.ind=quot that.obv old.woman.obv that man
    'That old woman was that man's aunt, it's said.' W16H
AFFIXES VS. CLITICS IN FOX

(20) a·kwi=yo·ke·h=meko=pi ke·ko·hi mi·čiwa·čini
not=of.course=and=emph=quot something eat 3p/neg
‘And, of course, they didn’t eat anything at all, it’s said.’ W252K

In (19) the quotative enclitic -ipi ‘it is said’ attaches to the verb, which is the first word of the clause. In (20) the first word of the clause serves as the host for a string of four enclitics.

Turning now to our two problematic forms, we find that the distribution of e·h and wi·h is quite different from that of the enclitics. Both e·h and wi·h attach only to verbs; neither exhibits the range of possible hosts that we saw in (18) with the emphatic =meko. Furthermore, the verb to which e·h or wi·h attaches may appear in any position within the clause—it need not be in clause-initial position, unlike the hosts of the enclitics in (19) and (20). The following sentences show that a verb bearing one of the putative proclitics may be, for example, the final element of the clause.

(21) na·hka=meko wi·sahke·ha e·h=osı·me·hiči
also=emph W. aor=have.a.younger.sibling 3/aor
‘And also Wisahkeha had a little brother.’ W3E

(22) ma·maya=meko me·h-kiši-wi·seniwa·kwe
early=emph before-perf-eat 3p/priorititive

e·h=natomeči wi·h=mawı-wi·seniwa·či
aor=call X-3/aor fut=go-eat 3p/aor

‘Very early in the morning before they had finished eating
they were called to go eat.’ L161,162

3.3. Semantics. A final point to notice in contrasting e·h and wi·h with the class of enclitics concerns the semantic or pragmatic function of these forms. As mentioned above, the majority of Fox enclitics express pragmatic notions. For example, we have seen many examples of the emphatic enclitic =meko; in examples (2), (19), and (20) we have seen one of the evidential enclitics, =ipi ‘it is said’. (20) also contains the enclitic conjunction =ke·hi ‘but; and’ and =iyo (glossed ‘of course’), which indicates that the information is assumed to be well-known to the addressee. The scope of many enclitics in Fox extends over an entire sentence or group of sentences.

The two putative proclitics seem to be very different in this regard. First of all, e·h does not have any identifiable semantic or pragmatic function: it is simply required by certain paradigms of verb inflection. wi·h, on the other hand, functions to indicate future tense (or a modal reading). Tense, however, is a grammatical category often expressed by inflectional affixes on verbs and seems quite different from the pragmatic functions associated with Fox enclitics.

4. Inflectional affixes

Fox inflectional affixes are organized in a template containing one prefix position and seven suffix positions. Each position may be filled with at most one member of the set
of affixes associated with that position. The prefix position may be filled with either ne-
FIRST PERSON or ke-
SECOND PERSON (or be left unfilled). Ne- and ke- have an extremely
restricted distribution, being found only on the independent indicative and dubitative
paradigms. The inflectional prefixes are thus clear examples of affixes, not clitics,
according to the criteria proposed by Zwicky and Pullum 1983.

Let us now recall the distribution of e·h and wi·h. Like the inflectional prefixes, the
putative proclitics are found only on a subset of the verbal paradigms of Fox. e·h may
appear with the aorist conjunct, aorist past conjunct, aorist interrogative, and a subset of
conjunct and interrogative participles. wi·h is less restricted than e·h: it may be used with
verb paradigms which allow a future tense semantically. (The paradigms allowing wi·h
are the independent indicative, negative, iterative, aorist conjunct, aorist past conjunct,
aorist interrogative, and the conjunct and interrogative participles.) In this regard, these
forms (and especially e·h) exhibit a property typical of inflectional affixes.

It is also important to consider the paradigmatic relationship holding between e·h and
wi·h. A given verb may bear at most one of the two putative proclitics. This is
reminiscent of the paradigmatic relationship between the inflectional prefixes ne- and ke-
but stands in contrast to the enclitics, many of which may attach to a single host as seen
in (20) above. Note that the two proclitics of Fox indicate separate functions—e·h marking
aorist inflection and wi·h marking future tense—which are not incompatible. Verbs
inflected in the aorist conjunct paradigm, for example, may take future tense. In such
contexts, however, the aorist proclitic is dropped and only the future proclitic appears.
Such complementary distribution is typical of affixes competing for a single ‘slot’ in an
inflectional template, and it is not typical of the behavior of clitics.

5. Conclusion

This paper has reviewed salient properties of three morphological classes in Fox,
comparing each class to the two problematic forms. The putative proclitics are clearly
unlike the class of preverbs, since they are not separate phonological words, cannot
undergo reduplication, and may not be separated from the verb on their own. e·h and wi·h
do share some phonological properties with the class of enclitics: the stress shift rule
which is obligatory for enclitics may optionally apply with e·h and wi·h, and the rule
changing /e/ to /i/ seems to treat the boundary between e·h or wi·h and the following verb
as if it were a word boundary. With regard to the distribution and function of these forms,
however, e·h and wi·h pattern together with the class of inflectional affixes. I conclude
that e·h and wi·h fit most closely into the category of inflectional affixes, rather than
being proclitics or preverbs. It then follows that the phenomenon illustrated in (1), in
which an inflectional prefix precedes the future morpheme, is simply a case of a sequence
of two inflectional prefixes, rather than the theoretically challenging situation of a clitic
appearing inside a word.

---

6 ne- and ke- are also found on nouns, marking first person and second person possessors,
respectively. (A third person prefix, o-, is also found on possessed nouns, but is not used in verb
inflection in Fox.)
Affixes vs. Clitics in Fox

REFERENCES


