DISTINGUISHING BETWEEN CLITICS AND AFFIXES IN DEGEMA, NIGERIA

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ABSTRACT   The distinction between the affix and the clitic is sometimes not easy to make, as clitics also have some characteristics of affixes. This paper demonstrates that the clitic in Degema is distinct from the affix despite many features they have in common. Some of the criteria that are held to apply cross-linguistically do not absolutely distinguish the clitic from the affix in Degema. The paper provides background information as regards the elements that separate into clitics and affixes in Degema, features that are common to both clitics and affixes, and some of the features that are considered as distinguishing clitics from affixes. The definitions of the Degema clitic and affix, respectively, are proposed.

Key Words: Degema; Clitics; Affixes; Morphology; Inflection.

1. INTRODUCTION

Two autonomous communities on the Degema Island speak Degema in the Degema Local Government Area of Rivers State of Nigeria. These communities are Usokun-Degema and Degema Town. Each of these communities speaks a variety of Degema that is highly mutually intelligible with the other. The varieties spoken are Usokun and Degema Town (Atala), corresponding to the names of the communities. The order of the names of these communities or dialects is arbitrary and does not suggest the relative importance of either of the communities or the dialects. This paper is based on the Usokun variety.

The first reference to some of the elements separated into affixes and clitics in Degema is Thomas (1966). Thomas's work on Degema, sketchy as it is, serves as a stepping-stone for a detailed inquiry into the phenomena of cliticization and affixation in Degema. Although she made no reference to clitics or rather lumped together what I call clitics with affixes in her 1966 work, her recognition of these elements has opened up a new area of research in the history of Degema linguistics.

On page 190 of her work, she provides a verb chart in which she makes a distinction between prefixes, roots, and suffixes. She divides the suffixes into 'derivational' and 'inflectional'. The chart provided the basis for a reanalysis of her prefixes and suffixes. The inflectional suffixes were reanalyzed as enclitics (cf. Kari, 1995c), and the prefixes as proclitics (cf. Kari, 1997). The derivational suffixes, or what I call 'verbal extensions', became the only true suffixes

left after the reanalysis (cf. Kari, 1995b).

Elugbe (1976; 1984) discussed some affixes in the language. Elugbe (1976), in particular, focused on noun class prefixes, while Elugbe (1984) discussed the discontinuous morpheme, which Kari (1995a) referred to as the 'circumfix'. There is no mention of the clitic in either Thomas (1966) or Elugbe (1976; 1984).

I shall delay the definitions of the clitic and affix in Degema until I have discussed the similarities and differences between them.

2. FEATURES COMMON TO CLITICS AND AFFIXES

The distinction between the clitic and the affix that seems to have eluded early researchers on Degema can be attributed to the fact that both clitics and affixes, to a large degree, share certain properties. There appear to be four such features that have shrouded the distinction between the clitic and the affix in Degema: The first two of these features are purely phonological, the third is partly phonological and partly morphological, while the fourth is purely morphological. The first two phonological features concern the phenomena of vowel harmony and tone respectively. The third feature pertains to the attachment of these elements to hosts. The fourth concerns inflection. I shall discuss these features under the following headings:
   (i) vowel harmony
   (ii) tone[1]
   (iii) attachment to a host
   (iv) inflection

2.1. Vowel Harmony

The Degema language operates a ten-vowel system in which the vowels are divided symmetrically into two sets of five each, expanded vs. non-expanded—a distinction that is made on the basis of whether the pharynx is expanded or contracted during the production of the vowels. Expanded vowels are produced by advancing the tongue root, accompanied by a simultaneous lowering of the larynx. Whereas non-expanded vowels are produced by retracting the tongue root, accompanied by a simultaneous raising of the larynx. The two sets of vowels are given in Table 1.

Table 1. Expanded vs. Non-expanded Vowels.

Expanded vowels	Non-expanded vowels
i u	ɪ ʊ
e o	ɛ ɔ
ə	a

In this system, vowels in a given simple word are drawn exclusively from one set. In other words, every simple word has vowels drawn from either the expanded or the non-expanded set. Cases where both sets of vowels co-occur are adjudged to be compound words. Simple words containing expanded vowels are given in (1), those containing non-expanded vowels are given in (2), while compound words containing both expanded and non-expanded vowels are given in (3). Cases that show the co-occurrence of both expanded and non-expanded vowels in simple words are ungrammatical, as the starred forms show.

(1)   utóm[2]   'head'
        *utɔ́m
        î⁺ɓɔ́   'oysters'
        *ɨ⁺ɓə́
        îsúɓeɲ   'nose'
        *ɨ̂súɓɛɲ

(2)   ʊtɔndí   'lamp'
        *ʊtondí
        ɪkɔkʊlɪɓá   'propagules' (fruits of the red mangrove)
        *ikokʊlɪɓə
        aɗɛ́m   'tongues'
        *əɗɛ́m

(3)   ɔkɔ́ɗɪ ɔ́tidə[3]   'thunder crab'
        crab ?
        ŋʷín kîjo   'problem'
        body pain
        îbî ákɔ   'nails'
        seed canoe

I have shown the phenomenon of vowel harmony as it operates in simple and compound words. Now consider how this phenomenon applies to both affixes and clitics.[4] It is observed that both affixes and clitics respond to vowel harmony. In other words, they are both influenced by the set to which the vowels of the word to which they attach themselves belong. Thus, for instance, if the word to which they attach contains expanded vowels, then the vowels of the affix or clitic will also be expanded. If, however, the vowels of the word to which they attach belong to the non-expanded set, then those of the affix or clitic will also be non-expanded. Examples that violate this rule are ungrammatical, and therefore starred. The phenomenon of vowel harmony, as it applies to affixes and clitics, is shown in (4) and (5):

(4a)   **u**-koló   'African tulip tree'
        *ʊ-koló

(4b)   **e**-ŋ^wotú   'waist'
       *ɛ-ŋ^wotú

(4c)   ɗɪ-**ɛné**   'eat itself'
       *ɗɪ-**ené**

(4d)   kɛ-**βɛŋɪné**   'write to each other'
       *kɛ-**βeŋiné**

(5a)   **ɔ́**=kpor=**munu**
       2PlPROCL NEG=sing=DE
       'You (pl.) will not sing again'
       *á=kpor=**mʊnʊ**

(5b)   **e**=kótú=**té**   éni
       3PlPROCL=call=PE us
       'They have called us'
       *ɛ=kótú=**té** éni

(5c)   **ɔ́**=ma   kotu wɔ
       3SgPROCL=IMAUX call   you
       'S/he has not called you yet'
       *ó=ma kotu wɔ

(5d)   **mɔ́**=mɔ́n   mɛ́
       3SgPROCL=see me
       'S/he will see me'
       *mó=mɔ́n mɛ́

The data in (4) reveal that the quality of the vowels of affixes is determined by that of the vowels of the stem to which the affixes are attached. Examples (4a) and (4b) show that prefix vowels agree with those of the stem. The prefix vowels are expanded because the vowels of the stem are expanded. In (4c) and (4d), the vowels of the suffixes are non-expanded because those of the stem are non-expanded. Like affixes, clitics also respond to vowel harmony. This is illustrated in (5). In (5a) and (5b), the vowels of proclitics and enclitics are expanded because those of the host are expanded, whereas in (5c) and (5d) the vowels of proclitics are non-expanded because those of the host are non-expanded.

2.2. Tone

The second phonological feature that affixes and clitics appear to have in common is the lack of tone. Clitics and affixes in Degema are inherently tone-

less. The reason is that they do not constitute independent prosodic domains, and so must always become part of the host or stem, as the case may be, for the purpose of tone assignment. Consequently, clitics and affixes are prosodically integrated within the host or stem to constitute a valid utterance. Franks and King (2000) describe clitics as 'prosodically weak' and hence unaccented. Like clitics, affixes too are prosodically weak and therefore unaccented. Whichever tone affixes and clitics eventually bear on the surface derives from the prosodic domain to which their hosts belong. To illustrate the prosodic weakness of affixes and clitics, consider (4), repeated below as (6), and (5), repeated below as (7):

(6a) **u**-koló[5]   'African tulip tree'
      *u-[6]

(6b) **e**-ŋʷotú   'waist'
      *e-

(6c) ɗɪ-**ɛné**   'eat itself'
      *-**ɛné**

(6d) kɛ-**βeŋɪné** 'write to each other'
      *-**βeŋɪné**

The affixes in (6) are ungrammatical, and therefore starred because they are assigned tone outside of the stem.

(7a) **ɔ́**=kpor=**munu**
      2PlPROCL NEG=sing=DE
      'You (pl.) will not sing again'
      *ɔ́=
      *=**munu**

(7b) **e**=kótú=**té**   éni
      3PlPROCL=call=PE us
      'They have called us'
      *e=
      *=**té**

(7c) **ɔ́**=ma   kotu wɔ
      3SgPROCL=IMAUX call   you
      'S/he has not called you yet'
      *ɔ́=

(7d) **mɔ́**=mɔ́n   mɛ́
    3SgPROCL=see   me
    'S/he will see me'
    ***mɔ́**=

Like the starred forms in (6), those in (7) are also ungrammatical because they are assigned tone outside of the host.

A further illustration of the inherent tonelessness of affixes is the fact that the prefixes of some verbal derivatives in Degema, as seen in such words as **ì-mèsìné** 'dream' (noun) and **ɔ̀-gɔ̀dɔ́** 'long' (modifying nominal), acquire a low tone from the verb stem to maintain an overall low-high tone pattern that is associated with verbs when they occur in isolation, as in **mèsìné** 'dream' and **gɔ̀dɔ́** 'be long'. Similarly, suffixes attached to verbs also maintain the low-high tone pattern associated with verb stems, as seen in **sɔ̀hɔ̀β-sɛ́** 'cause to tip-toe' and **gï̀ɗi-ènɛ́** 'search oneself'. In these cases, the high tone on the last syllable of **sɔ̀hɔ́β** 'tip-toe' and **gï̀ɗi** 'search for' when they occur in isolation becomes associated with the last vowel of the suffixes. Thus it is clear that these affixes depend on the verb stem for tone assignment.

2.3. Attachment to a Host

Affixes and clitics alike attach themselves to some element that serves as support. There, however, seems to be different reasons — phonological, morphological, or both — for the attachment of these elements to an adjacent element that provides support. Whether the reasons for attachment is phonological, morphological, or both, the point I am trying to make is that affixes and clitics are not independent, and so attach to or lean on some other element. Examples illustrating these facts have already been given in the preceding sections. I shall take up this point again in Section 3.7.

2.4. Inflectional Properties

Affixes and clitics — closed-class items — have in common the inflectional

Table 2. Affixes and Clitics.

Prefixes		Proclitics		Suffixes		Enclitics	
Singular	Plural	Singular	Plural	-EnE[*1]	'reflexive'	Vn	'factative'
A	A	mE/E, mI/I	mE/E	-EsE	'causative'	tE	'completive'
E	E	mU/U, E	mA/A	βEŋInE	'reciprocal/benefactive-reciprocal/pluriactional-reflexive'	tU	'negative imperative'
I	I	mO/O	mE/E, mI/I	βIrIj	'habitual/iterative'	βIrE	'excessive'
O						AnI	'request'
U						mUnU	'discontinuation'

[*1] Capital letters represent two phonological alternants, as follows: A = ə/a, E = e/ɛ, I = i/ɪ, O = o/ɔ, U = u/ʊ.

properties of number. It appears that this grammatical property is associated only with prefixes and proclitics. Suffixes and enclitics do not display number (although some suffixes have a meaning that suggests plural action, see Kari, 1995b). Like prefixes and proclitics, suffixes and enclitics are similar in not having the inflectional property of number. See Table 2. I shall discuss these properties again in Section 3.8.

Going only by the preceding facts that point to common grounds for affixes and clitics, it is hard to distinguish the clitic from the affix. Phonologically, these elements share amazing characteristics. These characteristics, as I noted, may have been the factors that obscured the proper classification or identification of these elements by earlier researchers on Degema.

A point to note in respect of the properties the clitic shares with the affix is that the clitic appears to have the same diachronic origin as the affix, even though synchronic facts seem to indicate otherwise. I speculate that clitics in Degema developed from affixal morphology at some point in the noun class system of the language (see Kari, 2002a; see also Joseph and Janda, 1988, and Nevis, 1989 for a similar discussion). There is overwhelming evidence — both language internal and language external — in support of this claim. Nevertheless, I shall not pursue this point here, as it lies outside the concern of this paper. Suffice it to say that the affixal origin of clitics in Degema can be taken as the reason for the similarity between affixes and clitics.

3. DISTINGUISHING CLITICS FROM AFFIXES

In the preceding sections, I have examined the features that are shared by both affixes and clitics in Degema. In this section, I shall look at some of the features that appear to set the clitic apart from the affix in Degema. I begin by considering some criteria that have been put forward to distinguish clitics from affixes. These criteria are, particularly, those discussed in Zwicky and Pullum (1983).

Zwicky and Pullum (1983) discussed six criteria that distinguish clitics from affixes. These criteria are: (a) degree of selection between the dependent morpheme and the word to which it is attached, (b) arbitrary lexical gaps, (c) phonological idiosyncrasies, (d) semantic idiosyncrasies, (e) syntactic operations affecting the combination, and (f) restrictions on the combination of clitics with inflectional affixes. On the basis of these criteria, they concluded that the English contracted negative morpheme 'n't' is an (inflectional) affix rather than a clitic.

True as these criteria appear to be, some of them do not seem to apply neatly cross-linguistically as I shall show in the case of Degema. This, in part, can be attributed to the nature of the elements referred to as clitics, as they share some characteristics of affixes (particularly, inflectional affixes (cf. Spencer, 1991: 350)). Criteria that seem to clearly distinguish clitics from affixes in one language may not all do so in other languages. Thus, the distinction

between the clitic and the affix will sometimes have to be made on the basis of language particular facts, in addition to whatever criteria that that have been set up and considered to apply across languages.

The six criteria seem to adequately distinguish clitics from affixes in Degema. Nevertheless, some or all of them do not distinguish them absolutely.

3.1. Degree of Selection

The elements I call clitics in Degema can be said to have a low degree of selection with regard to the words to which they attach themselves, whereas affixes can be said to have a high degree of selection in respect of the words they are attached to. In this regard, it is observed that verbal extensions, for instance, attach themselves only to verbs, as in (8), noun class prefixes attach themselves only to nouns, as in (9), and circumfixes attach themselves only to verbal derivatives, as in (10):

(8a)   rere-**sé**   'cause to walk'

(8b)   su-**βeɲiné**   'push each other'

(8c)   fɪja-**né**   'cut oneself/itself'

(8d)   ta-**βɪríj**   'go always'

(9a)   **e**-sén   'fish'

(9b)   **o**-ɗuɗúwéɲ   'trumpet'

(9c)   **a**-kú   'teeth'

(9d)   **ʋ**-ɓɔ́m�socó bú   'mosquito'

(10a)   **u**-ménᐟé-**m**   'doing' (from **mené** 'do')

(10b)   **ɔ**-ŋʷáɲᐟ-**ám**   'counter' (from **ŋʷáɲ** 'count')

(10c)   **ɔ**-háᐟhírá-**m**   'dried' (from **hahirá** 'be dry')

(10d)   **ɛ**-kíᐟjé-**m**   'givers' (from **kɪjé** 'give')

Clitics attach to main verbs, auxiliaries, and pronouns, and appear to have a low degree of selection with regard to the words to which they attach, as they are not bound to a particular word. Two types of clitics, depending on their position relative to the host, have featured in the literature on clitics in Degema. They are proclitics, and enclitics. Proclitics have been observed to

attach before main verbs and/or auxiliaries, as in (11), while enclitics have been observed to attach after verbs or pronouns, as in (12):

(11a) **mɔ**=tá
       3SgPROCL=go
       'S/he will go'

(11b) **ɛ́**=ɗá   **ꜜmé**=gbé
       3PlPROCL=INIAUX 3PlPROCL=go (home)
       'They are about to go (home)'

(11c) **má**=gá   jî   înînə
       2PlPROCL Q=EAUX come today
       'Are you really going to come today?'

(11d) **ɔ́**=ŋʷáɲki   sɔl   a
       3SgPROCL=UAUX jump CM
       'S/he wanted to jump'

(12a) ɔ=mɛ́sɛ́=**ꜜtɛ́**
       3SgPROCL=sleep=PE
       'S/he has slept'

(12b) e=síré=**ꜜén**
       3PlPROCL=run=FACT
       'They ran'

(12c) mi=kótú   wɔ́=**ꜜɔ́n**
       1SgPROCL=call you=FACT
       'I called you'

(12d) í=gɛn   mɛ=**mʊnʊ**
       3PlPROCL NEG=look me=DE
       'They (inanimate) are not looking at me again'

To some extent clitics, like affixes, may be said to have a high degree of selection with regards to the words to which they attach considering the fact that proclitics attach only to main verbs and/or auxiliaries, and enclitics attach to only verbs or pronouns. Thus, they are restricted to only these classes of words. Nevertheless, clitics are still freer than affixes as far as the selection of host is concerned, as the same clitics with the same meaning can attach to more than one word belonging to different classes, as in (11b). Facts emerging from Degema suggest that 'degree of selection' appears to vary from language to language. Whereas in some languages, like Pashto (cf. Tegey, 1977) and Polish (cf. Spencer, 1991; Franks & King, 2000), clitics have a considerable low

degree of selection of their host, in others the degree of selection is not considerable. Thus it can be said that the degree of selection of host is gradable. Zwicky and Pullum (1983: fn. 2), in fact, conceived of 'degree of selection' as a situation whereby items are ranked with respect to selectivity. Thus, languages like Pashto and Polish are lower on the scale of 'degree of selection' than Degema.

3.2. Arbitrary Lexical Gaps

One of the characteristics of affixes is that arbitrary lexical gaps exist in the set of words they combine with. This feature has been observed to characterize affixes in Degema, especially suffixes (verbal extensions). These suffixes, which are attached to verbs, have been found to be selective in their attachment, i.e. there are instances where verbal extensions do not attach to all verbs, as shown in Table 3.

Table 3 shows that whereas each of the four suffixes can attach to the verb

Table 3. Selectivity in the Attachment of Verbal Extensions.

Verb Root	Reflexive Suffix	Causative Suffix	Reciprocal Suffix	Habitual Suffix
	-EnE[*1]	-EsE	-βEŋInE	-βIrIj
kpéɲ 'wash'	kpe-né 'wash oneself'	—[*2]	—	—
kúw 'close'	kuw-ené 'close itself'	—	—	kuw-íj 'close always'
láβ 'cut'	laβ-ané 'cut oneself'	—	laβ-aɪné 'cut each other'	laβ-áj 'cut always'
kɔ́j 'be heavy'	—	kɔj-sé 'cause to be heavy'	—	—
ɓár 'burn'	—	ɓr-asé 'cause to burn'	—	ɓr-áj[*3] 'burn always'
tɔ́ 'roast/burn'	tɔ-né 'burn oneself'	—	tɔ-βɔŋɪné 'burn each other'	tɔ-βɪríj 'burn always'
wáj 'spread'	wa-né 'spread on oneself'	—	wa-βaŋɪné 'spread on each other'	—
gbé 'go (home)'	—	gbe-sé 'cause to go (home)'	—	gbe-βɪríj 'go (home) always'
gbóm 'bite'	gbom-oné 'bite oneself'	gbom-osé 'cause to bite'	gbom-oŋɪné 'bite each other'	gbom-ój 'bite always'
ɓól 'hold'	bl-oné 'hold oneself'	ɓl-osé 'cause to hold'	bl-oŋɪné 'hold each other'	ɓl-ój 'hold always'

[*1] A detailed discussion on roots, verbal extensions, underlying forms, and the different phonological processes, that apply to suffix-stem combination to realize their surface forms, can be found in Kari (1995b).

[*2] A dash in a given column indicates that the suffix in question fails to attach to the verb root.

[*3] A low tone is actually heard in the pronunciation of some words in which a vowel is deleted before **n**, **l**, **r**. The low tone is, therefore, marked to reflect this fact.

Table 4. Absence of Lexical Gaps in Proclitic-host Combination.

Verb Host	Proclitic	Auxiliary Host	Proclitic
	1SgPROCL		1SgPROCL
kpéɲ 'wash'	**mí**=kpeɲ 1SgPROCL NEG=wash 'I did not wash'	ɓʊka (ma) (IIAUX)	**mí**=ɓʊ́ká ta 1SgPROCL Q=IIAUX go 'Should I start going?'
kúw 'close'	**mí**=kuw 1SgPROCL NEG=close 'I did not close'	ɗa (INIAUX)	**mɪ**=ɗǎ ꜛmí=ɗɛ̌ 1SgPROCL=INIAUX 1SgPROCL=buy 'Have I started to buy?'
láβ 'cut'	**mí**=laβ 1SgPROCL NEG=cut 'I did not cut'	maɲkɪ (INIAUX)	**mí**=máɲkɪ ji 1SgPROCL=INIAUX come 'Should I not come?'
kɔ́j 'be heavy'	**mí**=kɔj 1SgPROCL NEG=heavy 'I am not heavy'	ŋʷaɲkɪ (UAUX)	**mí**=ŋʷáɲkɪ mene 1SgPROCL=UAUX do 'I intended to do (it)'
ɓár 'burn'	**mí**=ɓar 1SgPROCL NEG=burn 'I did not get burnt (in the fire)'	ma (IMAUX)	**mí**=ma sire 1SgPROCL NEG=IMAUX run 'I have not run yet'
tɔ́ 'roast/burn'	**mí**=tɔ 1SgPROCL NEG=roast 'I did not roast/burn'	ga (EAUX)	**mí**=ga ɗeri 1SgPROCL=EAUX know 'I don't really know'
wáj 'spread'	**mí**=waj 1SgPROCL NEG=spread 'I did not spread'	kʊ (EPAUX)	**mí**=kú mɔ́n ɔ́jɪ 1SgPROCL=EPAUX see him/her 'I did see him/her'
gbé 'go (home)'	**mí**=gbe 1SgPROCL NEG=go home 'I did not go home'	ɗa (TLAUX)	**mɪ**=ɗǎ gbédɛ́=n ʊ́βáj jɔ 1SgPROCL=TLAUX sweep=FACT house DEF 'I then swept the house'
gbóm 'bite'	**mí**=gbom 1SgPROCL NEG=bite 'I did not bite'	ma (AAUX)	**mɪ**=má ꜛkótú wɔ́ 1SgPROCL=AAUX call you 'I would have called you (but on second thought I didn't)'

roots **gbóm** 'bite' and **ɓól** 'hold', the causative, reciprocal, and habitual suffixes, for instance, do not attach to the verb root **kpéɲ** 'wash'. Given this selectivity in attachment, one finds gaps where there should not be gaps. The reason for the selectivity in the attachment of suffixes to verbs is not very clear. However, I suspect that some semantic factors are at play to preclude a particular verbal extension from attaching itself to all verbs.

It is claimed that arbitrary lexical gaps are not usually associated with clitic-host combination. Whether this claim holds for all clitics in Degema, I shall test the same verbs, as in Tables 3 and 4.

Although I have used only the 1st person singular proclitic with its main verb and auxiliary verb hosts for consistency, proclitics referring to other persons can as well occur in the clitic position regardless of which main verb or auxiliary that follows them. The clitics in Table 3 seem to be distinguished from affixes by this criterion, as proclitics have no choice as to which main

Table 5. Presence of Lexical Gaps in Enclitic-host Combination.

Verb Host	Enclitic	Pronoun Host	Enclitic
	Perfect Enclitic	(object pronouns)	Perfect Enclitic
kpéɲ 'wash'	o=kpéɲ='dé 3SgPROCL=wash=PE 'S/he has washed'	mEE 'me'	ɔ=kú mɛ́='té 3SgPROCL=give me=PE 'S/he has given me'
kúw 'close'	o=kúw='té 3SgPROCL=close=PE 'S/he has closed'	wɔɔ 'you'	o=kótú wɔ́='té 3SgPROCL=call you=PE 'S/he has held you'
láβ 'cut'	ɔ=láβ='té 3SgPROCL=cut=PE 'S/he has cut'	ɔji 'him/her'	
kɔ́j 'be heavy'	ɔ=kɔ́j='té 3SgPROCL=be heavy=PE 'S/he has become heavy'	eni 'us'	
ɓár 'burn'	ɔ=ɓá='ré 3SgPROCL=burn=PE 'S/he has got burnt'	mAAɲ 'you' (pl.)	o=ɓól mɔ́ɲ='dé 3SgPROCL=hold you=PE 'S/he has called you'
tɔ́ 'roast/burn'	ɔ=tɔ́='té 3SgPROCL=roast=PE 'S/he has roasted/burnt'	ɓAAw 'them'	ɔ=tɔ́ ɓáw='té 3SgPROCL= roast/burn them=PE 'S/he has roasted/burnt them'
wáj 'spread'	ɔ=wáj='té 3SgPROCL=spread=PE 'S/he has spread (clothes)'		
gbé 'go (home)'	o=gbé='té 3SgPROCL=go home=PE 'S/he has gone home'		
gbóm 'bite'	o=gbóm='dé 3SgPROCL=bite=PE 'S/he has bitten'		
ɓól 'hold'	o=ɓó='lé 3SgPROCL=hold=PE 'S/he has held'		

verb or auxiliary they select as host.

How the 'arbitrary gaps' criterion applies to the enclitic-host combination data is shown in Table 5.

All seems to go well in Table 5 with regards to the 'arbitrary gaps' criterion, as far as enclitic-verb host combination is concerned. There are no gaps in enclitic-verb host combination. However, enclitic-pronoun host combination in Table 5 reveals gaps, as the perfect enclitic fails to attach to the 3rd person singular and 1st person plural object pronouns. In fact, all enclitics in Degema fail to attach to these pronouns (cf. Kari, 1995c; 2001). The interesting point is that unlike the gaps in suffix-stem sequence in Table 3 for which there is no ready explanation yet, the gaps in Table 5 can be easily explained. The reason that is offered to explain the failure of enclitics to attach to 3rd person singular and 1st person plural object pronouns is that enclitics are prohibited by the

phonological structure of these pronouns. The condition for enclitic attachment to pronouns, which occur as objects of transitive verbs, is that such pronouns must not have a **VCV** structure, as this structure blocks encliticization.

Facts from Degema reveal that gaps in clitic-host combination are rare but do occur.

3.3. Phonological Idiosyncrasies

Morphophonological idiosyncrasies are usually considered to occur within affix-stem sequences than within clitic groups. Applying this criterion to Degema, I note that verbal extensions attached to some root morphemes cause the phonological shape of such roots as well as the suffix attached to them to be altered in some cases. Consider the data in Table 6.

The data in Table 6 show that the attachment of the reflexive suffix to the verb root **wáj** 'spread', for instance, changes the structure of the root from **CVC** to **CV**. Again, the attachment of the habitual suffix to the verb root **kúw** 'close' causes the shape of the suffix to change from **CVCVC** to **CV**. The factors responsible for stem mutation are largely phonological (see Kari, 1995b).

Although phonological idiosyncrasies are thought of as characterizing affix-stem sequences, these idiosyncrasies are also observed in clitic-host combination in Degema. Consider the following data in Table 7.

The table reveals that the phonological structure of the verb host to which enclitics attach is altered by certain enclitics, especially the perfect and negative imperative enclitics. Kari (2001) noted that the perfect and negative imperative enclitics in Degema trigger certain changes both in the enclitics themselves and in the host to which they attach. In this regard, after a host that ends with

Table 6. Stem Mutation Occasioned by Suffix Attachment.

Verb Root	Reflexive Suffix	Causative Suffix	Reciprocal Suffix	Habitual Suffix
	-EnE	-EsE	-βEŋInE	-βIrIj
kúw 'close'	kuw-ené 'close itself'			kuw-îj 'close always'
láβ 'cut'	laβ-ané 'cut oneself'		laβ-aŋɪné 'cut each other'	laβ-áj 'cut always'
kɔ́j 'be heavy'		kɔj-sé 'cause to be heavy'		
wáj 'spread'	wa-né 'spread on oneself'		wa-βaŋɪné 'spread on each other'	
gbé 'go (home)'		gbe-sé 'cause to go (home)'		gbe-βiríj 'go (home) always'
gbóm 'bite'	gbom-oné 'bite oneself'	gbom-osé 'cause to bite'	gbom-oŋiné 'bite each other'	gbom-ój 'bite always'
ɓól 'hold'	bl-oné 'hold oneself'	ɓl-osé 'cause to hold'	bl-oŋiné 'hold each other'	ɓ l-ój 'hold always'

Table 7. Host Mutation Occasioned by Enclitic Attachment.

Verb Host	Enclitics	
	Perfect Enclitic	Negative Imperative Enclitic
fár 'tie'	ɛ=fá=ꜜré 3PlPROCL=tie=PE 'They have tied (sth.)'	ɛ́=fa=rʊ 2SgPROCL=tie=NIE 'Don't tie (sth.)!'
ɓól 'hold'	e=ɓó=ꜜlé 3PlPROCL=hold=PE 'They have held'	ɛ́=ɓo=lu 2SgPROCL=hold=NIE 'Don't hold!'
láβ 'cut'	mɪ=láβ=ꜜté 1SgPROCL=cut=PE 'I have cut'	ɛ́=laβ=tʊ 2SgPROCL=cut=NIE 'Don't cut!'
tɔ́ 'roast/burn'	ɔ=tɔ́=ꜜté 3SgPROCL=roast=PE 'S/he has roasted/burnt'	ɛ́=tɔ=tʊ 2SgPROCL=roast=NIE 'Don't roast/burn!'

an **r** or **l**, the consonant of the enclitics becomes **r** or **l**. Again, the **r** and **l** alternants of the enclitics and those of the host are also noted as being pronounced as single short consonants instead of two successive consonants. To account for the single consonant in the pronunciation, it is thought that the final **r** or **l** of the host is deleted when the perfect and negative imperative enclitics attach to the host. This deletion is considered as taking place after the consonants of the enclitics have copied the feature of the **r** or **l** of the host. The point to note is that 'phonological idiosyncrasies', as a criterion, does not absolutely distinguish clitics from affixes in Degema, since both clitics and affixes trigger changes in the elements to which they attach.

3.4. Semantic Idiosyncrasies

Inflectional formations are thought of, by Zwicky and Pullum (1983: 505), as occasionally showing idiosyncratic semantics, whereby '... the meaning of the whole word is not always composed regularly from the meanings of its parts' — a feature that is thought of as not characteristic of clitic groups (containing English *'s* and *'ve*). Investigating this claim, I note in Degema that full and reduced forms of clitics have the same meaning in the sentences in which they occur. For example, **mɔ** and **ɔ** in:

(13a) **mɔ́**=tá
       3SgPROCL=go
       'S/he will go'

(13b) **ɔ́**=ɗɛ
       3SgPROCL NEG=buy
       'S/he did not buy (sth.)'

have a 3rd person singular meaning, irrespective of their forms, the verbs

they attach to, and the syntactic contexts in which they occur. The noun class prefix shows idiosyncratic semantics. Consider (14a) and (14b):

(14a)   ɪ-ɗɪꜜjɔ́m 'food' (mass noun)

(14b)   ɪ-papá 'armpit' (part of the body)

In (14a) and (14b), the same single class prefix is attached to different noun stems belonging to the same gender but instead of having the same or similar meanings, the compositional meaning of (14a) relates to mass nouns and that of (14b) relates to parts of the body'. Thus, this criterion seems to distinguish the affix from the clitic in Degema.

3.5. Syntactic Operations

This criterion holds that syntactic rules treat affix-word combination as a unit but not clitic-host combination. To test this claim, consider the data in (15) and (16):

(15a)   mɛ=fɪjá   ú-ꜜtáɲ
        1SgPROCL=cut tree
        'I am cutting a tree'

(15b)   ú-táɲ nú   mɛ́=fɪjá
        tree   FOC 1SgPROCL=cut
        'It is a tree that I am cutting'

(15c)   *táɲ nú   mɛ́=fɪjá   ú-
        ?   FOC 1SgPROCL=cut ?

(15d)   *ú- nú   mɛ́=fɪja   táɲ
        ?   FOC 1SgPROCL=cut ?

(16a)   ɔ=kpér   wɔ́=n   imo
        3SgPROCL=tell you=FACT what
        'What did s/he tell you?'

(16b)   wɔ́ nú   ɔ=kpɛ́rí=n   imo
        you FOC 3SgPROCL=tell=FACT what
        'It is you that he told what?'

(16c)   *wɔ́=n   nú   ɔ=kpér   imo
        you=FACT FOC 3SgPROCL=tell what

Evidence that supports this claim comes from focus constructions in Degema.

Example (15b) shows that the noun and its prefix constitute a morphological unit, and so movement rules in focus constructions cannot extract part of the unit to the front of the focus maker while leaving the other part in its original position. The prefix-stem combination must be moved as a unit by syntactic rules. Constructions in which part of the combination is moved independently of the other are ungrammatical, as shown in (15c) and (15d). In (15c), the stem is moved without the prefix, while in (15d), the prefix is moved without the stem. For these reasons, (15c) and (15d) are ungrammatical.

Now consider (16) and see how syntactic rules treat host-clitic combination. In (16b), the pronoun, that hosts the factative enclitic in (16a), is moved to occur before the focus marker, leaving the enclitic in its original position. In (16c), however, the pronoun is moved along with the enclitic. The consequence of this movement, in (16c), is ungrammaticality. The implication of (16c) is that the enclitic does not form a unit with its host and therefore cannot be moved along with its host by syntactic rules, unlike (15b) whose constituent parts cannot be separated. Because the enclitic cannot be stranded by movement rules explains why the enclitic is attached to the verb host in (16b).

So far, I have not found a case involving movement of a verb-suffix combination, as seen in (15b) where a stem is moved along with its prefix, neither have I found a case where a proclitic moves along with its host.

3.6. Morphotactics

One criterion that appears to clearly distinguish clitics from affixes is that which holds that clitics attach outside affixes (See also Nevis, 1989). Sometimes clitics are thought of as constituting an external layer of affixation. I shall examine this criterion under the heading 'morphotactics'. In Degema, where clitics and affixes occur relative to the verb, affixes are found to be closer to the verb than clitics, i.e., clitics come after all suffixes that are attached to the verb. Consider the data in (17):

(17a)   gbom-osé
         bite-CAS
         'cause to bite'

(17b)   o=gbóm-ósé=⁺én
         3SgPROCL=bite-CAS=FACT
         'S/he caused (sb./sth.) to bite (sb./sth.)'

(17b)'   *o=gbóm=⁺én-ósé
         3SgPROCL=bite=FACT -CAS

(17c)   gbom-oŋiné
         bite-RPS
         'bite each other'

(17d)   e=gbóm-óɲíné=ꜜén
         3PlPROCL=bite-RPS=FACT
         'They bit each other'

(17d)'   *e=gbóm=ꜜén-óɲíné
         3PlPROCL=bite=FACT -RPS

(17e)   gbom-oɲine-sé
         'cause to bite each other'

(17f)   o=gbóm-óɲíné-sé=ꜜén
         3SgPROCL=bite-RPS-CAS=FACT
         'S/he caused people/things to bite each other'

(17f)'   *o=gbóm-óɲíné=ꜜén-sé
         3SgPROCL=bite-RPS=FACT-CAS

(17f)'' *o=gbóm=ꜜén-óɲíné-sé
         3SgPROCL=bite=FACT-RPS-CAS

Although it is obvious in Degema that whereas enclitics can attach to a verb host that does not already have suffixes attached to it, when a suffix or suffixes are attached to the verb stem clitics occur after the suffix, as in (17b) and (17d) or suffixes, as in (17f). As the data reveal, cases where an enclitic occurs before a suffix, as in (17b)' and (17d)', before suffixes, as in (17f)'', or between suffixes, as in (17f)' are ungrammatical. These facts demonstrate that the morphological unity existing between affix-stem combination is stronger than that existing between clitic-host combination. Put more strongly, the clitic does not form a morphological unit with its host, unlike the affix.

Promising as the morphotactic criterion appears to be, it is weakened by (18), which shows the presence of a clitic between two suffixes:

(18)   o=gbóm-ós-né=ꜜé-j
        3SgPROCL=bite-CAS-RES=FACT-HAB
        'S/he caused herself/himself to be bitten many times'

In (18), the factative enclitic is sandwiched between the reflexive and habitual suffixes, yet the construction remains grammatical (see Kari, 2002b for a detailed account of the behaviour of the factative enclitic). This casts serious doubts on the utility of this criterion in distinguishing the clitic from the affix in Degema. Like other criteria examined, the morphotactic criterion, too, is limited in some way in distinguishing the elements in question.

3.7. Reasons for Attachment

I noted in Section 2.3 that affixes and clitics attach to some other element that serves as support, and that this happens for either phonological or morphological reasons, or both. In this section, I specify which elements attach to the support for what reason or reasons. Basically, affixes attach to a stem for two reasons — phonological and morphological. Phonologically, affixes attach to a stem in order to constitute a prosodically valid utterance. In other words, they attach to a prosodically independent element for the purpose of receiving tone, since they are inherently toneless, and to have the quality of their vowels determined by those of the elements to which they attach. This is a feature common to both affixes and clitics. The distinguishing feature is morphological. Morphologically, affixes attach to stems for the sake of gaining morphological identity that is impossible if they stand in isolation. Clitics, however, attach to a host not for the sake of gaining morphological identity, as they have a somewhat low degree of selection with regards to their host, but for the sake of gaining phonological identity. Like affixes, this phonological identity is in respect of tone assignment and for the determination of the quality of their vowels by the host (see Sections 2.1 and 2.2).

3.8. Inflection

In Section 2.4, I pointed out that affixes and clitics have the inflectional property of number in common. In this regard, I noted that this property is common to only prefixes and proclitics, as suffixes and enclitics do not have this property. In spite of this similarity between prefixes and proclitics, and suffixes and enclitics, prefixes and proclitics differ in terms of inflectional properties to the extent that proclitics, in addition to number, also have the properties of person and case — features that are absent in prefixes. Suffixes and enclitics differ to the extent that suffixes are uniform with respect to their function. All the suffixes that have been identified in Degema function as modifiers of the meaning of the verb. In other words, they do not change the grammatical category of the verb but merely extend the meaning of the verb. Enclitics, however, are not uniform in their function. Whereas the factative and perfect enclitics have functions characteristic of tense and aspect respectively, the other enclitics have functions and meanings that are not associated with tense and aspect, and completely unrelated to each other (see Tables 2, 3, 4 and 5, and other examples in the preceding sections. See also Kari, 1995b; 1995c; 1997; 2001 for further discussion).

3.9. Tone Pattern of Simple and Complex Verb Stems

There is one last criterion that I shall consider in making the affix-clitic distinction. It is a language-internal piece of evidence that has to do with the tone pattern of simple and complex verb stems. It is shown in Kari (1997)

that verb stems have an underlying low-high tone pattern, and that the low tone spreads leftwards if there are other syllables before it. In (189) on p. 41, I claim that a monosyllabic simple verb stem such as **ɗí** 'eat' has an underlying low-high tone pattern, where the high tone is linked to the vowel, and the low tone is floating. In other examples on the same page that involve complex stems, it is shown that the high tone is linked to the final syllable of the verb stem, while the low tone is linked to the penultimate syllable. In (186-188), I claim that the low tone on the penultimate syllable spreads leftwards to affect the other syllables before it.

In this section, I will reanalyze the distribution of the low-high tone pattern. Although I still maintain that verb stems have an underlying low-high tone pattern, and that the low tone spreads leftwards if there are other syllables before it, I claim here that this tone pattern is only underlying for simple stems, i.e. verb stems without suffixes, as in (19).

(19)   `fir 'press'[7]

In complex stems, i.e. simple verb stems+suffix(es), where the tone pattern found in simple verb stems is carried over, I wish to claim that the underlying low-high tone pattern shifts from the verb stem onto the suffix so that the last syllable of the suffix bears the high tone, while the penultimate syllable of the suffix bears the low tone, as in (20).

(20)   fir-èné
       'press oneself'

This low tone transferred onto the penultimate syllable of the suffix then spreads leftwards to the preceding syllable(s). Where a complex verb contains more that one suffix, the low-high tone pattern of the stem shifts to the last suffix, provided that the suffix has two syllables to bear the low-high tone pattern. If a complex verb has more than one suffix, but the last suffix does not have the required syllable structure to bear the low-high tone pattern, as in (21), then the low-high tone pattern remains on the suffix preceding the last, or the tone pattern is shared by two suffixes, such that the last two syllables of the stem bears the tone pattern, as in (22).

(21)   gbom-òsé-j
       bite-CAS-HAB
       'cause to bite always'

(22)   gbom-òs-né-j
       bite-CAS-RES-HAB
       'cause oneself to be bitten always'

In some cases a syllable in the suffix, and a syllable in the stem, as in (23),

share the low-high tone pattern.

(23)   gbòm-ój
       bite-CAS-RES-HAB
       'bite always'

The fact is that whether the low-high tone pattern falls on the last suffix, the suffix preceding the last, shared by two suffixes, or even shared by a suffix and the stem, the verb stem maintains an overall low-high tone pattern. This discussion reveals, again, that the suffix (an affix) is closely linked to the verb both morphologically and prosodically.

The situation is different when a clitic occurs after the verb stem. The tone pattern observed above does not hold for clitic-host-clitic combination.[8] Different tone patterns show up in the clitic-host-clitic combination — a fact that distinguishes the suffix (an affix), a morphological element, from the enclitic (clitic) — a syntactic element.

Although the verb-affix combination looks like an imperative sentence, I deny that it is in the imperative. What I regard as imperatives are verb roots without suffixes. That the verb-suffix combination is a word and not a clause is evident from the fact that the low-high tone pattern of the verb-suffix combination is only maintained when the combination has the status of a word, as in (21), (22), and (23). Once the verb-suffix combination features in syntactic contexts, such as in question or statements, the low-high tone pattern is destroyed. That is to say that the tone pattern ceases to be low-high or that it is replaced by tone patterns characteristic of syntactic constructions, as in (24) and (25).

(24)   o=fir-éné-ꜜén
       3SgPROCL=press-RES-FACT
       'S/he pressed herself/himself'

(25)   o=gbóm-ós-né-ꜜté
       3SgPROCL=bite-CAS-RES-PE
       'S/he has caused herself/himself to be bitten'

So far, I have only considered the tone pattern of stem-suffix combination, and have discovered that it sets the suffix apart from the enclitic. The questions then will be what about the tone pattern of clitic-host, and that of prefix-stem? Are they similar or different? With regards to clitic-host and prefix-stem tone patterns, the tone pattern of some deverbal nouns and modifying derived nominals is the same as that of stem-suffix combination (cf. (26) and (27), and (28) and (29)). Noun class prefix-stem combinations do not have any uniform tone pattern (cf. (30) and (31)), while the tone pattern of deverbal nouns derived by circumfixation is consistently low-downstep, as (32) and (33) show.

(26)   o-godó 'long' (from **godó** 'be long')

(27)   ɪ-mɛsɪné 'dream' (n.) (from **mɛsɪné** 'dream' (v.))

(28)   o-ɗéꜜgínɔ́ 'old' (from **ɗeginɔ́** 'be old')

(29)   ú- ꜜdér 'length' (from **dér** 'be long')

(30)   ɛ-nám 'animal'

(31)   ú-ꜜsɔ́w 'ear'

(32)   ɪ-sɔ́lꜜ-á 'jump' (n.) (from **sɔ́l** 'jump' (v.))

(33)   ɔ-génꜜ-ám 'looker' (from **gén** 'look')

The clitic=host combination has no specific tone pattern. Whatever tone pat-tern it has depends on the syntactic context in which it occurs. Judging only from the tone pattern of the 1st person singular proclitic+a verb host, in posi-tive constructions expressing the future, one would think that this combination has an identical tone pattern to that of stem-suffix combination. However, a complete listing of the whole paradigm will quickly reveal that the tone pattern of 1st person singular proclitic+a verb host in such constructions is not charac-teristic of the entire paradigm, as shown in Table 8.

Table 8 shows that the paradigm reveals a high-high tone pattern in clitic-host combination, except in that involving the 1st person singular. The tone pat-

Table 8. Tone Pattern of Clitic-verb Host in a Positive Construction Expressing Future.

mè=tá		(eni) mɛ́=tá
1SgPROCL=go		we 1PlPROCL=go
'I will go'		'We will go'
mú=tá		má=tá
2SgPROCL=go		2PlPROCL=go
'You (sg.) will go'		'You (pl.) will go'
mɔ́=tá		mɛ́=tá
3SgPROCL=go		3PlPROCL=go
'S/he will go'		'They will go'

Table 9. Overall Tone Pattern of Stem-suffix.

gbom-osé	'cause to bite'
bite-CAS	
gbom-oné	'bite oneself'
bite-RES	
gbom-oŋiné	'bite each other'
bite-RPS	
gbom-ój	'bite always'
bite-HAB	

tern of the paradigm in Table 8 demonstrates that clitic-host tone pattern is not lexically determined but contextually or grammatically determined. There is no instance where a suffix attached to the stem displays a tone pattern that is different from the overall tone pattern of stem-suffix combination, as Table 9 shows.

What facts from tone pattern show is that clitics and affixes are governed by different tone rules, and that the clitic is unquestionably different from the affix in Degema.

4. THE DEFINITION OF THE CLITIC AND AFFIX IN DEGEMA

There are problems in defining certain linguistic elements. As with the definition of linguistic units, such as 'word' 'language' 'sentence' the definition of the affix and clitic may not be foolproof. However, I shall propose a working definition for the clitic and affix in Degema, having examined and seen the extent to which they look alike, and differ. The definitions, I shall propose, are based on a combination of criteria — cross-linguistic and language specific — that, to a large degree, set the clitic apart from the affix. They are, (i) degree of selection, (ii) attachment to a host, (iii) semantic idiosyncrasies, (iv) syntactic operations, and (v) tone pattern. Before the definitions, I briefly summarize how these criteria distinguish the affix from the clitic in Degema.

With respect to degree of selection, affixes tend to be more highly selective of their host than clitics. Noun class prefixes and suffixes, for instance, are attached only to noun and verb stems respectively, whereas proclitics are attached to main verbs and/or auxiliaries, and enclitics to verbs or pronouns. Affixes and clitics appear to have different reasons for attachment to some other element. Affixes attach to stems for the sake of gaining both morphological and phonological identity, while clitics attach to their hosts for the sake of gaining only phonological identity. The meaning of full and reduced forms of clitics is the same regardless of the type of sentence in which the clitics occurs. Noun prefixes, for instance, tend to have different meanings in stems belonging to the same gender. It is impossible for syntactic rules to move a host together with the clitic to sentence initial position, although the same rules can move a stem together with its prefix to sentence initial position. Affixes and clitics tend to be governed by different tone rules. One piece of evidence comes from the tone pattern of stem-suffix combination. The overall tone pattern of stem-suffix, in isolation, is predictably low-high, whereas clitics-host or clitic-host-clitic has varying tone patterns, determined by (syntactic) contexts.

4.1. The Definition of the Clitic

The clitic, in Degema, is any linguistic element that attaches itself usually before a main verb and/or auxiliary (proclitic), or after a verb or pronoun (enclitic), for the sole purpose of gaining phonological identity, which cannot be

moved along with its host to a different location in the sentence, whose meaning is constant, irrespective of its form or the host it attaches to, and whose tone pattern depends largely on context.

4.2. The Definition of the Affix

The affix, in Degema, is any linguistic element that attaches itself before a noun, nominal modifier or verb (prefix), after a verb (suffix), or surrounds the verb (circumfix), for the sole purpose of gaining both morphological and phonological identity, which can be moved along with its host to a different location in the sentence, whose meaning may be compositionally determined with respect to the element it attaches to, and whose tone pattern is lexically determined.

In this paper, I have only considered features that distinguish the clitic from the affix in Degema, as the title of the paper suggests. I have not considered the distinction between 'clitic' and 'word'. The distinction between clitic and word lies outside the limits of this paper, and should not be considered a weakness of the paper. The clitic-word distinction, itself, constitutes another interesting object of inquiry.

5. CONCLUSION

Given that clitics and affixes have much in common, and common features that sometimes tend to obscure their statuses, it has been my aim to identify those features that clearly distinguish the clitic from the affix in Degema. In pursuing this goal, I examined a number of criteria, some of which are considered to hold cross-linguistically, and some that appear to be language specific. Of the many criteria I considered, five seem to set the clitic apart from the affix. Again, of the five, three — degree of selection, attachment to a host, and tone pattern — seem to distinguish the clitic from the affix in substantial ways. In spite of the observed similarities between the clitic and the affix in Degema, which I speculate derive from the common origin of both elements, this paper shows that the clitic is not to be confused with the affix. In other words, the clitic is not an affix (if it is, it is what some authors call 'phrasal affixes' (see Klavans, 1995: 94)), and the affix is, uncontroversially, not a clitic. One of the conclusions I draw in this paper is that the distinction between the clitic and the affix may, sometimes, have to be made on the basis of language-internal facts combined with cross-linguistic criteria, and that any definition of these elements, in a given language, based only on some cross-linguistic criteria may fail to distinguish them adequately. The case of Degema supports this.

NOTES

(1) Degema has two tones — high and low, plus a downstepped high. As usual, only the
high tone and the downstepped high will be marked in this work, unless stated other-
wise.
(2) The data presented in this paper are transcribed using phonetic symbols that have Inter-
national Phonetic Alphabet values.
(3) The meaning of the second part of the compound is uncertain.
(4) Clitic and host are separated with '=', whereas affix and stem are separated with '-'.
(5) It should be pointed out that most underived stems, to which prefixes are attached, are
bound. In other words, such stems have no independent meaning without the prefixes.
For example, **koló** is meaningless without the (noun class) prefix. Since the paper con-
cerns tone rather than meaning, the issue of meaning need not detain us.
(6) Here I assume that a low tone is assigned to the starred prefixes in (6), outside the stem.
Similarly, I assume that the proclitic **e**= and the enclitic =**munu** in (7) are assigned a
low tone, outside of the host.
(7) For the purpose of this discussion, I mark the low tone in these examples.
(8) I would like to mention that whereas proclitics can co-occur with their hosts without
enclitics, enclitics cannot co-occur with their hosts, one of which is the verb, without
a proclitic, except the request enclitic. This informs our giving the sequence as 'clitic-
host-clitic'. Whatever tone pattern the 'host-request enclitic' combination bears is de-
termined by the syntactic context in which it occurs.

ABBREVIATIONS

1SgPROCL= 1st person singular proclitic
1PlPROCL= 1st person plural proclitic
2SgPROCL= 2nd person singular proclitic
2PlPROCL= 2nd person plural proclitic
3SgPROCL= 3rd person singular proclitic
3PlPROCL= 3rd person plural proclitic
AAUX= afterthought auxiliary
CAS= causative suffix
CM= compensatory morpheme
DE= discontinuation enclitic
DEF= definite article
EAUX= emphatic auxiliary
EPAUX= emphatic past auxiliary
FACT= factative enclitic
HAB= habitual suffix
IIAUX= inceptive imperative auxiliary
IMAUX= imperfective auxiliary
INIAUX= inceptive non-imperative auxiliary
NEG= negative
NIE= negative imperative enclitic
PE= perfect enclitic

RPS= reciprocal suffix
Q= question morpheme
RES= reflexive suffix
TLAUX= time lag auxiliary
UAUX= unfulfilled auxiliary

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