On the Status of Subject Markers in African Languages[*]

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Ethelbert Emmanuel Kari (2017), On the Status of Subject Markers in African Languages. *Studies in Linguistics* 44, 99-134. This paper discusses subject markers in African languages, noting that whereas the grammatical functions of these morphemes are fairly clear; their status as affixes or clitics is not. The unclear status of subject markers has led to their analysis as affixes in some languages or as clitics in others. It has been suggested recently that African subject markers, which have been traditionally regarded as affixes, can be reanalyzed as clitics. The paper highlights the fact that in some African languages, subject markers that were previously analyzed as affixes have now been analyzed as clitics, suggesting that there is an on-going process of grammaticalization of African subject markers. On the basis of a variety of data and characteristic phonological and syntactic behaviour, this paper successfully and consistently shows that subject markers in some African

languages should not be analyzed as affixes but as clitics.
Consequently, the paper recommends that African subject (and/or
object) markers in languages not discussed in this study should
be investigated, based on cross-linguistic and language-internal
evidence, to establish their status as morphological affixes or as
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Key Words: affixes, African languages, clitics, morphosyntax,
subject markers, grammaticalization

1. Introduction

This paper discusses subject markers in African languages. These
linguistic elements are pronominal markers that correspond to noun phrases
(NPs), which function as the subject of the sentence. Studies that discuss
subject markers in African languages abound. These include Eze (1995),
Creissels (2000, 2005), Kari (2005), Zeller (2008), Obiamalu (2011),
Anyanwu (2012) and Baker (2016). Although the present study is similar to
previous studies on the subject, it focuses on the status of subject markers
in African languages as clitics or affixes, highlights the lack of uniformity
in the analysis of these elements, discusses criteria for establishing their status
and recommends the need for further investigation or even a reexamination
of their status in African languages not discussed in this paper in order to
establish such markers as morphological affixes or syntactic clitics.

Although our focus is on subject markers, object markers can also be
examined in the light of the arguments regarding the grammatical behaviour
of subject markers. The approach adopted in this study is eclectic. In other
words, the study does not lean towards any particular theoretical framework
or model. The data in this paper are drawn mainly from existing literature
on the subject and from native speakers of some of the languages discussed
herein.

2. Background

In many African languages, especially noun class languages[1], the subject (or object) of the sentence is usually followed by a subject (or object) marker, which attaches to a verb[2] and encodes such grammatical features as person, gender, number and humanness expressed by the subject (or object). The grammatical distinctions encoded in such element preserve the identity of the subject or object, since participants need to be identified in discourse.

Subject markers have been variously called tense-aspect-person markers (Thomas, 1966), (subject) concord markers (Kari, 1991), pseudo-subjects (Kari, 1997), (subject) agreement markers, non-emphatic pronouns, weak pronouns and personal endings of verbs (Creissels, 2000, 2005), subject markers (Creissels, 2000; Kari, 2005), clitic pronouns (Jenewari, 1977), pronominal prefixes (Thomas and Williamson, 1967), pronominal subject markers (Igwe and Green, 1964; Okonkwo, 1977; Dimmendaal, 2000).

The various terms used in referring to subject markers suggest a relationship between the subject NP and subject markers in terms of shared grammatical properties, which subject markers inherited from the subject NP. What is, however, not clear about subject markers is their status as morphological affixes or syntactic clitics, since they appear to occur mainly in preverbal position. This fixed position of occurrence before a specific

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[1] Noun class systems are attested in Africa's four language phyla (Niger-Congo: Williamson and Blench, 2000; (North) Khoesan: Güldemann and Vossen, 2000; Nilo-Saharan: Creissels, 1981; Afroasiatic: Hayward, 2000). Noun classification, as conceived in this paper, is a system whereby nouns are classified based on semantically determined alternating singular and plural and single class affixes attached to noun stems, as in Swahili and Degema, or a system whereby nouns are classified based on morphemes that indicate the natural sex of entities designated by such nouns, as in Kalabari and Naro.

[2] Subject (and object) markers in most African languages attach to the verb. In some languages, such as Naro (North Khoesan, Botswana), however, subject (and object) markers attach to words other than verbs. Such other non-verbal words that subject markers in Naro attach to include nouns, adjectives, adverbs, quantifiers and postpositions (Kari and Mogara, 2016).

morphosyntactic category makes it difficult, unless other factors are considered, to analyze them as anything else other than morphological affixes.

Although there are completed and on-going studies on some languages of Africa, as well as a general agreement that subject (and object) markers are bound morphemes, their status as affixes or clitics has not yet been established in some of the languages. Whereas bound morphemes encoding the grammatical properties of nouns and free pronouns are analyzed as affixes in some African languages, in others they are analyzed as clitics. In some cases, these morphemes are analyzed as affixes and clitics in the same language. Thus, the status of these bound morphemes as affixes or clitics needs further investigation (cf. Dimmendaal, 2000: 180).

2.1. Definitions of the Affix and Clitic

Affixes and clitics have phonological, morphological, syntactic or semantic properties, or a combination of these properties. Before proceeding to discuss some of the languages in which subject markers have been analyzed as either affixes or clitics, it would be helpful to provide some working definitions of the terms 'affix' and 'clitic'. Such definitions are necessary, as they will serve as a basis for judging whether subject markers in a particular language are affixes or clitics. The definitions of the affix and clitic given in this paper are based on Spencer (1991) and Kari (2002). Let us consider the following definitions.

An affix is any linguistic element that attaches itself to another linguistic unit called stem for the sole purpose of gaining both phonological and morphological identity; it cannot be deleted but can be moved along with its stem to a different location in the sentence; its meaning may be compositionally determined with respect to the stem, and its prosody (tone or stress pattern) is lexically determined (cf. Kari, 2002: 113).

A clitic, on the other hand, is any linguistic element that attaches itself to another linguistic unit called host[3] for the sole purpose of gaining phonological identity; it may be deleted but cannot be moved along with its

host to a different location in the sentence; its meaning is constant irrespective of its form or the kind of host it attaches to, and its prosody (tone or stress pattern) depends largely on context (cf. Kari, 2002: 112f).

Spencer (1991: 350) notes that clitics share certain properties of fully-fledged words but lack the independence usually associated with words. In other words, clitics cannot stand alone unlike independent words but attach themselves phonologically to a host. This phonologically dependent behaviour of clitics makes them look like affixes, especially inflectional affixes.

The definitions of the affix and clitic proposed in this section reveal a feature that is common to these two linguistic units. The similarity lies in the fact that both affix and clitic are phonologically dependent (cf. Spencer, 1991: 350), since they cannot stand on their own and be meaningful, unlike fully-fledged words. There are, however, many differences that exist between the affix and clitic. These differences border on their phonological, morphological, syntactic and semantic behaviours.

One of the differences between the affix and clitic is that unlike the clitic, the affix cannot be deleted but can be moved with its stem to a different location within the sentence, as in the case of noun prefixes in noun class languages. The reason is that the affix constitutes an integral part of the morphology of the stem. This is why the attachment of the affix to its stem is both for phonological and morphological reasons. The reason the clitic attaches only phonologically to its host is that it is not an integral part of the morphology of the host.

In Degema (Kari, 2005), for instance, it is shown that noun prefixes do not undergo deletion but move along with a noun stem to a different location

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3 The difference between 'stem' and 'host' in the definitions of the affix and clitic in this paper is only in terminology and not in anything inherent in the shape or length of the linguistic unit (e.g. noun, verb, pronoun, etc.) referred to as stem or host. Thus, the term 'stem' is used in the context of affixation whereas the term 'host' is used in the context of cliticization (cf. Zwicky, 1977; Zwicky and Pullum, 1983). An affix, therefore, attaches to a stem, which may be a noun, verb, pronoun, etc., whereas a clitic attaches to a host, which may also be a noun, verb, pronoun, etc.

within the sentence, e.g. *ɛ̀-nám jɔ́ ò=síré=↓té* 'The animal has run' ~ *sìnèsmé ò=síré-sé=té ɛ́-nám jɔ́* 'Sinesme has made the animal to run' (cf. **sìnèsmé ò=síré-sé=té nám jɔ́*). The ungrammatical sentence results from the deletion of the prefix *ɛ-* in *ɛ̀-nám* 'animal'. Conversely, subject clitics in Degema undergo deletion in serial verb constructions (SVCs), as a comparison of the following pair of sentences shows: *tàtàné ó=kòtù ɔ́jì ɔ́=kpérí ínùm* 'Tatane did not call him and tell (him) something' ~ *tàtàné ó=kòtù mè kpɛ̀rì ìnùm* 'Tatane did not call me and tell (me) something'. In the sentence *tàtàné ó=kòtù mè kpɛ̀rì ìnùm* 'Tatane did not call me and tell (me) something', the subject clitic *ɔ=* that attaches to the verb *kpɛ̀rí* 'tell' is deleted when preceded by an object pronoun *mè* that begins with a consonant. This behaviour of the subject clitic *ɔ=* is an indication that it is not an integral part of the morphology of the verbal host, unlike the noun prefix that is an integral part of the noun and so cannot be deleted.

Another difference between the affix and the clitic is that the affix basically attaches to a single morphosyntactic category, say a noun only or a verb only, unlike the clitic that may attach to more than one morphosyntactic category, say a noun, a verb, etc., without discrimination, as long as that morphosyntactic category occurs in the right phonological and syntactic contexts. Again, in Degema, for instance, it is observed that noun prefixes attach to nouns only, e.g. *ɛ̀-nám* 'animal' ~ *ì-nám* 'animals' and *ù-ɓɔ́* 'hand' ~ *à-ɓɔ́* 'hands'. Clitics in Degema, especially non-subject clitics, attach to verbs or object pronouns, which have a consonant-vowel (CV) phonological structure. The perfect enclitic *=tɛ*, for instance, attaches to the verb *sá* 'kick' or the object pronoun *wɔ́* 'you', as seen in the following pairs of sentences: *mì=sá=↓tɛ́* 'I have kicked (it)' ~ *mì=sá wɔ́=↓tɛ́* 'I have kicked you'.

The affix and the clitic also differ in terms of their prosodies. Whereas the prosody of the affix is lexically determined, that of the clitic is contextually determined. By lexical determination of prosody, we mean that the tone or stress pattern of the affix is determined by the tone or stress pattern of the stem while that of the clitic is determined by the syntactic

context in which the host occurs. For example in Degema, the overall tone pattern of a verb stem is low high in isolation. In this regard, the last syllable of the verb bears a high tone while the low tone anchors on the penultimate syllable and spreads to the left if there are other syllable before it, e.g. *pàpáŋ* 'clap' (cf. Kari, 2004: 389). Interestingly, suffixes that attach to the verb stem also conform to the overall low-high tone pattern of the stem, e.g. *pàpàŋ-sέ* 'cause to clap'. In *pàpàŋ-sέ* 'cause to clap', the morpheme −*sε* is a causative suffix. That the prosody of a clitic is determined by syntactic context can be seen in the question and statement pairs of the Degema sentences with a perfect clitic =*tε*: *mì=tá=⁺tέ* 'I have gone' ∼ *mì=tá=tὲ* 'Have I gone?'. In the statement, the tone of the perfect clitic is downstep high (=⁺*tέ*) while in the question, the tone of the perfect clitic is low (=*tὲ*).

A semantic difference between the affix and clitic lies in the fact that the meaning of an affix may vary depending on the context in which its stem occurs but that of the clitic is consistent irrespective of the kind of host that it attaches to. For example, in English, the affix *-ed* indicates past in regular verbs, as in *He calls the boy Jerry* ∼ *He called the boy Jerry*. In the sentence *The called will last in ministry*, *-ed* marks the participle, not past. The meaning of *'ll*, i.e. the reduced or clitic form of the English word *will*, is consistent irrespective of the context or kind of host that the morpheme attaches to. For example, the morpheme *'ll* indicates future in both *Jane'll have a party tonight* and *Jane's proposed party tonight'll be disrupted by the rain*.

Let it be stated that possession of one or more of the characteristics outlined in the definitions may be sufficient to distinguish between the affix and clitic in particular languages. See section 4.1 for further discussion of the distinction between the affix and clitic.

3. Analyses of subject markers as affixes or clitics

Having provided working definitions of the affix and clitic and illustrated their characteristics with data from natural languages in section 2, we shall

now discuss the analyses of subject markers in some African languages by different researchers.

Williamson and Blench (2000: 13) remark that in noun class languages, "other elements in the sentence, typically modifiers of the noun and sometimes the verb of which the noun is the subject, show concordial affixes in full systems". Similarly, Creissels (2000: 235) remarks that "in most cases the morphemes termed 'subject pronouns' in descriptions of West African languages are not really separate words and should be reanalyzed as prefixed to the verb", especially given that in many (West) African languages these subject markers are inseparable from the verb, in most cases.

The remarks by Williamson and Blench and Creissels appear to represent a general view that bound morphemes, which co-reference the subject of the sentence, exist as affixes rather than as clitics. It is probably because co-referential bound morphemes are often considered affixes that their affixal or clitic status is hardly investigated. Thus it is taken for granted that once an element is bound, it is most likely or most certainly a morphological affix.

In sub-sections 3.1 - 3.5, we shall examine the characteristic behaviour of subject markers in Degema, Igbo, Swahili, Naro and Kalabari and argue that an analysis of subject markers as syntactic clitics is more valid than one which establishes them as morphological affixes.

3.1. Analyses of subject markers in Degema

In Degema[4] (West Benue-Congo, Nigeria: Blench, 1989) basic clause structure, the subject noun or free subject pronoun is accompanied by an element that agrees with the subject noun or free pronoun in number, person and humanness. This element also agrees with the verb in advanced tongue root (ATR), a phonological feature whereby vowels separate into two sets (+ATR vowels and ‐ATR vowels) based on the advancement or retraction

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[4] Degema is a vestigial noun class language in which nouns are classified into genders based on alternating, semantically determined singular and plural and single-class prefixes attached to the noun stem (cf. Elugbe, 1976; Kari, 2003).

of the tongue root. Thus Degema vowels [i e ə o u] are designated +ATR while [ɪ ɛ a ɔ ʊ] are designated ‐ATR. The two sets of vowels usually do not co-occur in simple words, as seen in (2).

Early researchers on Degema, such as Thomas (1966) and Thomas and Williamson (1967), called subject markers tense/person prefixes and pronominal prefixes respectively probably due to the phonological association of subject markers with the verb. It was probably for a similar reason that these bound morphemes were also written together with the verb rather than with a nominal in the subject NP.

Let us consider examples (1) and (2), taken from Thomas (1966: 191) and Thomas and Williamson (1967:21) respectively [interlinear glosses in (1) and (2), and International Phonetic Alphabet (IPA) transcription and tone marking in (2), added]:

(1) a. mè̀-ɗɛ́.
       1S.NPST5-buy
       'I will buy/I buy'
  b. ɛ́-⁺ɗɛ́.
       1P-buy
       'We should buy'

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5 The following abbreviations are used in this paper: 1P = first person plural, 1S = first person singular, 1SGSCL = first person singular subject clitic, 2S = second person singular, 3FEM = third person feminine, 3P = third person plural, 3PLSCL = third person plural subject clitic, 3PlX = third person plural so-called subject prefix, 3S = third person singular, 3SGSCL = third person singular subject clitic, 3SgX = third person singular so-called subject prefix, ADVZ = adverbializer, ANT = anterior, ATR = advanced tongue root, AUX = auxiliary, BEN = benefactive, c = class, C = consonant, CL = clitic, COP = copular, CV = consonant-vowel, EPAUX = emphatic past auxiliary, FAC = factative, FE = factative enclitic, FEM = feminine, FOC = focus, FUT = future, GEN = general tense marker, IMP = impersonal, IMPER = imperative, IND = indicative, INF = infinitive, MASC = masculine, NEG = negative, NPST = non-past, NUM = number, OM = object marker, PE = perfect enclitic, PERF = perfect, PGN = person-gender-number, pl = plural, PostP = postposition, PRS = present, PST = past, Q = question, RECIP = reciprocal, SC = subject clitic, SG = singular, SM = subject marker, SVC = serial verb construction, TM = tense marker, V = vowel.

(2) a. eni   mẹta.   [ènì mɛ́tá]
        we   1P.NPST-go
        'We go'

    b. ọyị   ọkị   sire.   [ɔ̀jì ɔ́kɪ́ sírè]
        he   3S.EPAUX   run
        'He ran'

    c. ọyị   mosire.   [ɔ̀jì mósîré]
        he   3S.NPST.run
        'He is running, He will run'

In (1), the subject markers *mè̩-* and *é̩-* are written as prefixes attached
to the verb *dé̩* 'buy'. Likewise in (2), the subject markers *mẹ* and *ọ* are
respectively written together with the main verb *ṭa* 'go' and with the emphatic
past auxiliary verb *kị*. Examples (1) and (2) show that the so-called
tense/person and pronominal prefixes harmonize with the auxiliary or main
verb in ±ATR (see transcription in (2)).

Unlike Thomas (1996) and Thomas and Williamson (1967) who analyze
Degema subject markers as morphological affixes, Kari (1997, 2003, 2004)
analyze these markers as syntactic clitics. He compares the behaviour of subject
markers with that of noun class prefixes in the language and notes that unlike
noun class prefixes, which attach to nouns only and constitute an obligatory
part of the morphology of nouns, subject markers undergo deletion and are
optionally present in SVCs. This behaviour suggests that subject markers "do
not constitute an obligatory part of verbal morphology, even though they are
bound and so require the presence of a host to attach themselves to" (Kari,
2005: 13). Let us consider (3), taken from Kari (2005: 16f):

(3) a. e-ní   jɔ   o=síré=⁺té.
        elephant the   3PlX=run=PE
        'The elephant has run'

    b. tatanɛ   o=gúgú=té   é-ní   jɔ
        Tatane   3SgX=chase away=PE   elephant the
        'Tatane has chased the elephant away'

Example (3) shows that the noun *e-ní* 'elephant' retains its singular-marking prefix *e-* in different positions in the sentence. In (3a), *e-ní* 'elephant' occurs in sentence-initial position as subject along with its prefix whereas in (3b) it occurs in sentence-medial position as object along with its prefix. The reason the noun *e-ní* 'elephant' retains its prefix in different positions in the sentence is attributable to the fact that the prefix is an integral part of the morphology of the noun and so cannot be detached from the noun stem. Let us consider (4):

(4) a. e-ní   jɔ   o=síré=⁺én.
       elephant the   3SgX=run=FE
       'The elephant ran'

   b. e-ní   jɔ   ɔ=jɔ́kʊ́rɔ́=⁺ɔ́n.
       elephant the   3SgX=leave=FE
       'The elephant left'

   c. e-ní   jɔ   o=síré   jɔ́kʊ́rɔ́=⁺ɔ́n.
       elephant the 3SgX=run   leave=FE
       'The elephant ran away'

In (4c), which is an SVC derived from (4a) and (4b), the subject marker *ɔ=* before the verb *jɔkʊrɔ́* 'leave' in (4b) is deleted from the non-initial verb in (4c), unlike the noun prefix *e-* in *e-ní* 'elephant', as we saw in (3). Furthermore, let us consider (5), taken from Kari (2005: 18):

(5) a. tatanɛ   ó=kotu   ɔ́jɪ   ɔ=kpɛ́rɪ́   ínúm.
       Tatane   3SgX.NEG=call him 3SgX=tell   something
       'Tatane did not call him and tell him something'

   b. *tatanɛ   ó=kotu   ɔ́jɪ   kpɛ́rɪ́   ínúm.
       Tatane   3SgX.NEG=call him tell   something

   c. tatanɛ   ó=kotu   me (ɔ)=kpɛrɪ   inum.
       Tatane   3SgX.NEG=call me 3SgX=tell   something
       'Tatane did not call me and tell (me) something'

Example (5a) shows that the subject marker before the non-initial verb is obligatory but optional in (5c). The obligatoriness or optionality of the subject markers in the SVCs in (5) depends on the syllabic structure of the pronominal object. Thus, in (5a), the subject marker is obligatory because the pronominal object is bisyllabic and has a VCV structure. By contrast, the subject marker in (5c) is optional because the pronominal object is monosyllabic and has a CV structure. Example (5b), which is added, is ungrammatical and unacceptable due to the omission of the subject marker attached to the non-initial verb after a bisyllabic VCV pronominal object.

In the light of the behaviour of subject markers in (5) in respect of omission under certain phonological and syntactic conditions, it is argued that these elements in Degema are syntactic subject clitics rather than morphological subject prefixes because their behaviour is not consistent with that of genuine morphological affixes in the language, as in (3). This point of view is supported by Zwicky's (1985: 288) remark that "proper parts of words are not subject to deletion but whole words may undergo deletions".

Although Thomas (1966) and Thomas and Williamson (1967) did not provide any justification for their analysis of Degema subject markers as prefixes, their analysis remains a misanalysis in the light of our definition and discussion of the affix and clitic in 2.1 and in the light of our discussion in 3.1. Thus, an analysis of Degema subject markers as clitics is much more valid than an analysis of these markers as affixes.

3.2. Analyses of subject markers in Igbo

Like in Degema, early Igbo (West Benue-Congo, Nigeria) researchers, such as and Igwe and Green, identified and analyzed subject markers as morphological affixes. Igwe and Green (1964) distinguish two forms of pronouns in Igbo - the separable pronouns: *m*, *mụ* 'I', *gi* 'you', *ya* 'he, she, it' (singular) and *anyì* 'we', *unù* 'you' and *ha* 'they' (plural), and the inseparable pronouns: *m* 'I', *i (į)* 'you', *o (ọ)* 'he, she, it' and *e (a)* 'one, they'. According to them, the separable pronouns are not restricted in their

distribution, since they can serve as subject or object of the verb or follow a noun in a genitival relationship (Igwe and Green, 1964: 14), as in (6):

(6) a. Mụ   nyèrè   gị   ākwụkwọ.[6]
       I   give.PST   you   book
       'I gave you a book'

   b. Gị   hụ̀rụ̀   ya.
       you see.PST   him
       'You saw him'

   c. Ya   kpọ̀rọ̀   ha.
       he   call.PST   them
       'He called them'

They note that the inseparable pronouns can only occur as the immediate subject of a verb and are phonologically bound to the verb in a subject-verb-(*m* or *ha*[7]) relationship, as in (7), taken from Igwe and Green (1964: 14 & 30):

(7) a. Ùgò   ò   sìrì   anụ?
       Ugo   3S.Q   cook.PST   meat
       'Did Ugo cook meat'

   b. I   sīele   anū̧.
       2S   cook.PERF   meat
       'You have cooked some meat'

   c. E   sīele   anū̧.
       IMP   cook.PERF   meat
       'Some meat has been cooked'

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[6] I thank Professor N. O. Ama, University of Botswana, for the Igbo data in (6) [interlinear glosses in (6) and in all example sentences, taken from Igwe and Green (1964), added].

[7] The forms *m* 'I' and *ha* 'they' are the only forms of pronouns that can sometimes, especially in transitive sentences, occur in post-verbal position and serve as subject.

Furthermore, Igwe and Green remark that "the first person singular and the third person plural pronouns (i.e. *m* 'I' and *ha* 'they') have a second form as subject of the verb, in which a pronominal prefix precedes the verb and the pronoun follows it. The prefix is the vowel *e-* or *a-*, which harmonizes with the stem vowel of the verb" (Igwe and Green, 1964: 14) (parentheses, added). Examples (8) and (9), taken from Igwe and Green (1964:14), illustrate the idiosyncratic behaviour of Igbo first and third person pronouns:

    (8) a. Azàrà   m̀   èzi.
          1S.sweep.PST I   compound
          'I swept the compound'
      b. Esìrì   m̀   ji.
          1S.cook.PST I   yam
          'I cooked yam'

    (9) a. Azàrà   hà   èzi.
          3P.sweep.PST they   compound
          'They swept the compound'
      b. Esìrì   hà   ji.
          3P.cook.PST they yam
          'They cooked yam'

One of the interesting observations regarding Igwe and Green's (1964) analysis of Igbo pronouns is that *e-* and *a-* are treated as affixes and are thus written together with the verb whereas inseparable pronominal forms as *i (i)* and *o (ọ)* are written in isolation of the verb even though *e-* and *a-* and *i (i)* and *o (ọ)* behave in a similar way in respect of their phonological relationship with the verb (cf. Emenanjo, 2015: 305). The two forms of subject pronouns under consideration harmonize with the verb in ±ATR (cf. Anyanwu, 2012: 378f). A comparison of (8) and (10), taken from Igwe and Green (1964: 14, 16 & 22) shows that the pronominal forms *a-* and *i-* are often used when the verb stem has ‐ATR vowels, while the forms *e-* and

o- are used when the verb stem has +ATR vowels:

(10) a. Ì   hừrừ   mbè   òle?
         2S   see.PST tortoise how many
         'How many tortoises did you see'
     b. Ò   sighī   anụ.
         3S   cook.NEG   meat
         'She did not cook meat'

Even though Igwe and Green (1964) did not make any distinction between these bound pronominal forms and clitics, we can deduce from their remarks in respect of the phonology and syntax of these inseparable pronominal forms that they favoured a prefixal rather than a clitic analysis (cf. Igwe and Green, 1964: 14).

In relatively recent times, subject markers in Igbo have been analyzed as clitics. Emenanjo (2015: 315) cites Eze (1995), Nwigwe (2004) and Obiamalu (2011) as studies on Igbo that favour a clitic analysis of dependent Igbo pronouns.

Emenanjo (2015: 270f), following Amayo's (1975) work on Edo (Bini) and Kari's (2005) work on Degema, analyzes the harmonizing *Ò* and *È*, among what he calls 'polar question marker', as subject concord markers, especially clitics, in Igbo on the basis of their phonological and syntactic behaviour. Interestingly, these harmonizing polar question marking morphemes *Ò* and *È* are similar to the inseparable pronouns in respect of phonological dependency (cf. example (11a) taken from Igwe and Green, 1964: 16 and (11b&c) taken from Emenanjo, 2015:269):

(11) a. Ì   hừrừ   mbè   òle?
         2S   see.PST   tortoise   how many
         'How many tortoises did you see'
     b. Ụkà,   ò   jèrè   ahịa?
         Uka   3S.Q go.PST   market
         'Uka did she go to the market?'

c. Ụkà,   à   zàrà   úlọ?
   Uka   3S.Q   sweep.PST   house
   'Uka did she go to the market?'

In a similar vein, Anyanwu (2012) analyzes Igbo dependent pronouns as clitics on the bases of phonological and syntactic considerations and in comparison to elements with similar behavioural pattern in other languages, such as Degema, Italian and Spanish. He notes the behavioural differences between separable or independent pronouns and (inseparable or dependent) impersonal pronouns and provides an insightful analysis of the syntactic behaviour of the *e-* 'first person' and *a-* 'third person' forms of pronouns in Igbo that makes an affixal analysis of these forms of pronouns invalid. Of particular interest, as far as the behaviour of the *e-* / *a-* forms of pronouns is concerned, is his remark that "the syntactic behaviour of the '*e/a*'…is not different from those of the person specific ones (*i/ị, o/ọ*). They are all subject to the [same] syntactic conditions and even much more…hence our reanalysis of them as clitics" Anyanwu (2012: 379) [brackets, added].

Other pieces of evidence that Anyanwu (2012) provides in favour of a clitic analysis of subject markers in Igbo include the fact that, unlike the separable pronouns, inseparable pronouns must be adjacent to a lexical or auxiliary verb (12a), always occur on their own without modification (12b), cannot be topicalized (12c), and cannot be conjoined with a lexical NP (12d):

(12) a[i]. Ézè/Únù (náánị) gàrà   áhịá.
          Eze/2P   only   go.PST   market
          'Only Eze/You went to market'
     a[ii]. Ọ́   (*náánị) gàrà   áhịá.
          3S.CL   only   go.PST   market
     b[i]. Yá   (àtọ́)   kà   há   chọ̀rọ̀.
          3S.CL   NUM   FOC   3P   want.self benefactive
          'It is the three (of them) that they want'

b[ii]. Ọ́   *àtọ́   kà   há   chọ̀rọ̀.

    3S.CL NUM   FOC   3P   want.self benefactive

c[i]. Yá/Há/Únù/Ézè, kà   Àdá nyèrè-t   égō.

    3S/3P/2P/Eze   FOC Ada give.PST   money

    'It is him/they/you (pl.)/Eze that Ada gave money'

c[ii]. *Ọ́,   kà   Àdá nyèrè-t   égō.

    3S.CL FOC Ada give.PST   money

d[i]. Yá nà   únù   bị̀àrà.

    3S   and 2P   come.PST

    'S/he and you came'

d[ii]. *Ọ́   nà   Àdá bị̀àrà.

    3S.CL and Ada come.PST

Furthermore, subject markers associated with the second and third person singular, as well as the non-specific personal pronouns, are noted as not being able to co-occur with their respective personal pronouns. In other words, the subject markers associated with these personal pronouns delete when the personal pronouns are present in a clause (cf. Anyanwu, 2012: 382f). This is illustrated with the third person pronoun with its associated subject marker in example (13), taken from Anyanwu (2012: 381):

(13) a. Yá   nà-àsú   French.

    S/he AUX PRS-speak French

    'S/he speaks French'

  b. Ọ́   nà-àsú   French.

    3S.CL AUX PRS-speak   French

    'S/he speaks French'

  c. *Yá Ọ́   nà-àsú   French.

    S/he 3S.CL AUX PRS-speak French

Example (13a) shows that the subject marker Ọ́ is absent, deleted or omitted in the context of the personal pronoun Yá 's/he'. That example (13c)

is ungrammatical is because the subject marker occurs in the context of the free personal pronoun. Among other characteristic behaviour, the possibility of the subject marker deleting in the context of a free personal pronoun indicates that the subject marker is a syntactic clitic rather than a morphological affix because it is not an integral part of the morphology of the verb. Thus, an analysis of Igbo subject markers as clitics is more valid than an analysis of these markers as affixes. Igwe and Green's (1964) analysis of Igbo inseparable pronouns as prefixes is invalidated by our definition of the affix and clitic in 2.1, which is corroborated by the behaviour of these subject markers, as there exist instances like (13a) where a subject marker (inseparable pronoun) is deleted or omitted in the context of a free subject personal pronoun.

3.3. Analyses of subject markers in Swahili

Swahili (Niger-Congo: East and Central Africa) is a Bantu language with elaborate affixal morphology. In Swahili, subject markers along with other bound morphemes that attach to the verb have been called prefixes. Consider the Swahili data in (14), taken from Mutaka and Tamanji (2000: 152):

(14) m-tu   a-me-potea   'a person got lost'
      cl-stem   v1-TM-stem
      wa-tu   wa-me-potea   'people got lost'
      c2-stem   v2-TM-stem
      m-zigo   u-me-potea   'a packet got lost'
      c3-stem   v3-TM-stem
      mi-zigo   i-me-potea   'packets got lost'
      c4-stem   v4-TM-stem
      n-dizi   i-me-potea   'a banana got lost'
      c9-stem   v5-TM-stem
      n-dizi   zi-me-potea   'bananas got lost'
      c10-stem   v2-TM-stem

In (14), the subject markers occur to the left of the verb before a tense marker (TM) and are marked v1, v2, etc., meaning "verbal prefixes of class 1, 2 respectively". Like we saw in other languages, such as Degema and Igbo, subject markers in Swahili agree with the subject of the sentence in person and number, and in the class of the noun. The data in (14) show that in some instances, the so-called verbal prefixes have a similar shape as the noun class prefixes that attach to the noun stems.

It is probably because of the similarity in shape between subject markers and noun class prefixes and the bound nature of subject markers, like noun class prefixes, that researchers like Mutaka and Tamanji (2000) analyze subject markers in Swahili and other Bantu languages as morphological subject prefixes. Incidentally, Mutaka and Tamanji (2000) do not provide any justification for their prefixal analysis of subject markers in Swahili or in any of the African languages they discussed. This may have been due to the fact that their concern was on writing an introductory book highlighting the main features of Sub-Saharan African languages, and particularly of Bantu languages, without going into a critical analysis of the linguistic elements found in those languages.

Subject markers in Swahili have also been analyzed as subject clitics (SC) that attach as 'prefixes' to the verb, making both subject reference and direct object reference (Deen, 2012: 237). A significant observation, among others, that Deen makes with respect to subject markers in Nairobi Swahili is that "native speaker adults omit SC in approximately 5% of verbal utterances". He notes that "such omission only occurs when the referent of the subject is clear from discourse" (Deen, 2012: 239). Consider the indicative clauses in (15), taken from Deen (2005: 78):

(15) a. Ø   ta-ku-chapa-a.
            FUT-2S-slap-IND
         '(I) will slap you'
      b. Ø   na-ju-a   ku-wach-a   kelele?
            PRS-know-IND   INF-leave-IND noise
         '(Do you) know how to stop making noise?'

    c. n-dege   Ø   na-ruk-a.
      9-bird   PRS-fly up-IND
      'The bird is flying up'

In (15a) and (15b), the subject markers *Ni-* and *U-* are respectively omitted along with their corresponding lexical NPs but in (15c), which contains a lexical NP, the corresponding subject marker *A-* is omitted. These omissions are more characteristic of clitics than affixes, since clitics are not an integral part of the morphology of their hosts and therefore can delete.

Comparing subject markers in Swahili with those in European languages, Deen notes that subject markers in Swahili "cannot be stressed nor topicalized, nor occur as the answer to a question" (Deen, 2012: 239). Although Deen (2012) does not provide examples to illustrate the inability of subject markers to be stressed, topicalized or used as an answer to a question, some of these properties, such as topicalization and emphasis, are clearly demonstrated by subject markers in Igbo, as shown in example (12).

The observed omission of subject markers in Nairobi Swahili in (15) and their inability to be topicalized or emphasized in Igbo in (12) make subject markers more clitic-like than affix-like. To this end, Zeller's (2008) proposes that the subject marker in Bantu languages is a case of clitic (doubling) rather than a morphological reflex. For a similar discussion of Zeller's proposal, see Baker (2016).

Given our definition and discussion of the affix and clitic in 2.1 and the behaviour of subject markers in Swahili, we can say that subject markers in Swahili are misanalyzed as prefixes, regardless of the fact that Mutaka and Tamanji (2000) do not provide any justification for their prefixal analysis of subject markers in Swahili or in any of the African languages they discussed. The possibility of omitting the subject marker in indicative sentences, as we see in (15), is not a feature that is commonly associated with affixes. For this reason, an analysis of Swahili subject markers as clitics rather than affixes is a more viable one.

3.4. Analyses of subject markers in Naro

In some Khoesan languages, person-gender-number markers (PGN), which obligatorily co-occur with nouns and pronouns (in subject and object NPs), have been analyzed as affixes. Güldemann and Vossen (2000) and Letsholo and Saul (2015) whose main foci are on a survey of Khoesan languages and on a comparison of interaction of pronominals and word order in Naro and Gǁana respectively, analyze PGN markers as morphological affixes. In particular, Güldemann and Vossen (2000:113) analyze them as suffixes. Letsholo and Saul (2015: 225 & 240) analyze them, especially the first person singular masculine/feminine (1S.MASC/FEM), third person singular masculine (3S.MASC) and third person singular feminine (3S.FEM) PGN markers, as suffixes in some instances and as prefixes in others. Incidentally, these scholars did not provide any justification for the affixal analysis of PGN markers in Naro. Let us consider example (16), taken from Letsholo and Saul (2015: 228 & 238):

> (16) a. Néò **s**-ko   hìi sá   ǂχ'ão   koe   síí.
>   Neo 3FEM.SG-PRS tree 3FEM.SG cut   PostP   go
>   'Go to where Neo is cutting a tree'
>   b. Thuua-**s**   thuu Néò hìi sá   ǁχ'áò.
>   recently-3FEM.SG PST   Neo   tree 3FEM.SG cut
>   'Neo cut a tree'

In (16a), Letsholo and Saul (2015) analyze the 3S.FEM PGN marker in Naro as a prefix whereas in (16b), the same PGN marker is analyzed as a suffix.

Recently, Kari and Mogara (2016) analyze PGN markers in Naro as syntactic clitics based on two significant observations: (i) the 1S.MASC/FEM, 3S.MASC and 3S.FEM PGN markers have two forms, full forms and reduced forms, and (ii) the reduced forms of PGN markers attach after a variety of morphosyntactic categories and form a phonological unit with such categories,

having lost their vocalic element. Let us consider (17), taken from Kari and Mogara (2016:137ff):

(17) a. Kg'òó ra   ko   tsãàgù
     Meat   1S.MASC+FEM PRS   cook
     'I cook meat'

    b. Kg'òó=r   ko   tsãàgù
     meat=1S.MASC+FEM PRS   cook
     'I cook meat'

    c. Johane me   e   ẽe   ko   kaisá-se
     John   3S.MASC COP REL PRS loud-ADVZ
     qgonò ba
     snore   3S.MASC
     'It is John who snores loudly'

    d. Kaisá-se=m   ko   qgonò
     loud-ADVZ=3S.MASC PRS   snore
     'He snores loudly'

    e. Ncoa=m   cóá=m   qáò ba
     red=3S.MASC child=3S.MASC tall 3S.MASC
     'The red tall boy'

    f. Mary sa   ko   kaisá-se   qgonò
     Mary 3S.FEM PRS loud-ADVZ snore
     'Mary snores loudly'

    g. Kaisá-se=s   ko   qgonò
     loud-ADVZ=3S.FEM PRS   snore
     'She snores loudly'

Examples (17a) - (17g) illustrate the use of the full and reduced forms of the PGN markers under consideration. The use of full forms is shown in (17a), (17c) and (17f), while the use of reduced forms is shown in (17b), (17d) and (17g). Examples (17d) and (17e) illustrate the freedom of attachment of the 3S.MASC PGN marker to an adverb and adjective

respectively.

In the light of our definition and discussion of the affix and clitic in 2.1 and the promiscuous behaviour of PGN markers in Naro, it is clear that Güldemann and Vossen (2000) and Letsholo and Saul (2015) misanalyzed these markers as morphological affixes. The behaviour of PGN markers in Naro is more consistent with that of clitics than with that of affixes, as promiscuity in attachment is not a defining feature of morphological affixes. This makes an analysis of Naro subject markers as clitics more desirable than an analysis of these markers as affixes.

3.5. Analysis of subject markers in Kalabari

In Kalabari (Eastern Ijo, Nigeria), subject markers were analyzed as clitics rather than as affixes. The language has an interesting pronominal system characterized by sex gender, reflected in the forms of some third person pronouns as masculine, feminine and neuter. Jenewari (1977) distinguishes three subclasses of pronouns: independent, clitic and replacive pronouns. He analyzes subject (and non-subject) markers in Kalabari as clitic pronouns. His reasons for a clitic analysis of these pronouns are that this subclass of pronouns "comprise members that show case contrast" and that the members "encliticize to a following word" (Jenewari, 1977: 227). Another very significant reason he gives for labeling subject (and non-subject) markers clitics is that this subclass of pronouns is the only one in Kalabari in which the final vowels of most members of the subclass always assimilate to the initial vowels of the following words (p. 254), as the sample data in (18), taken from Jenewari (1977: 254), show:

(18) a. arị : /arị + ę́ríḅa/   →[àrɛ́ɛ́ríɓa]   →[àrɛ́ríɓa]
         I   see.FUT   'I shall see it'
    b. wá: /wá + ę́ríḅa/   →[wɛ́ɛ́ríɓa]   →[wɛ́ríɓa]
         we   see.FUT   'We shall see (it)'

Furthermore, Jenewari (1977: 258f) notes that all the clitic pronouns in Kalabari, except a few, are subject to a type of morphophonemic variation that involves shortening the structure of the basic allomorph such that they are reduced to a single syllable when they occur before a word that begins with a consonant. The clitic pronouns that undergo reduction are: *arị* → *a* 'I', *ori* ´→ *o* 'he', *árị* ´→ *á* 'she', *ọ́mịnị* → *ọ́* 'you' (pl), *ini* ´→ *n* 'they', as the data in (19), taken from Jenewari (1977:259f), illustrate:

(19) a. arị : /arị + ḅóḅa/   → a ḅóḅa.
               I   come.FUT   'I shall come'

   b. ori ´: /ori ´+ ḅóḅa/   → o ḅóḅa.[8]
               he   come.FUT   'He will come'

   c. árị ´: /árị ´+ wárī/   → á wárī.
               her   house   'her house'

   d. ọ́mịnị : /ọ́mịnị + lẹgíị/   → ọ́ lẹgíị.
               you (pl.)   sit.IMPER   'You (people) sit down'

   e. ini ´: /ini ´+ ḅóḅa/   → n ḅóḅa.
               they   come.FUT   'They will come'

It is noteworthy to add that these morphophonemically reduced vocalic forms of the clitic pronouns harmonize with the vowels of the following word in ±ATR, except the neutral vowel *a*, which can occur before words that have +ATR or -ATR (cf. 19a and 19c).

Further evidence that justify the analysis of subject markers in Kalabari as clitics comes from the data in (20), gleaned from Jenewari (1977: 119f):

(20) a. gogó   wárī   námáárị.
         Gogo   house   build.GEN
         'Gogo is building a house'

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[8] Examples (19b) was generated by the present researcher from the Kalabari data in Jenewari (1977).

    b. gogó   ḅóm̄.
       Gogo   come.FAC
       'Gogo came'

(21) a. ọ wárị̄   námáárị.[9]
      he house   build.GEN
      'He is building a house'
    b. o ḅóm̄.
      he   come.FAC
      'He came'

A comparison of (20a) and (20b) and (21a) and (21b) shows that the subject marker is omitted in (20a) and (20b) but present in (21a) and (21b). The reason for the absence of the subject marker in (21) lies in the fact that a non-topicalized NP in a sentence prohibits the occurrence of the subject marker.

From our discussion, it is clear that the behaviour of these linguistic elements in Kalabari accords more with our definition of the clitic than with that of the affix (see 2.1). It is interesting to highlight the fact that the possibility of omitting a subject marker that attaches to the verb is more characteristic of clitics than of affixes. Thus, subject markers in Kalabari do not to constitute an obligatory or integral part of the morphology of the verb. We therefore agree with Jenewari (1977) that subject markers in Kalabari are indeed clitics.

Following from our discussion in 3.1 - 3.5, we argue that subject markers in the African languages discussed in this paper are more clitic-like than affix-like. The reason for this claim is hinged on the fact that subject markers in these languages exhibit one or more of the distinguishing characteristics

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[9] I am grateful to Mrs. Akonte Ohoso Kari, a native speaker of Kalabari who resides in Port Harcourt, Nigeria, for confirming the grammaticality of example (21) in which the present researcher replaced the non-topicalized subject NP, *Gogo*, with a corresponding subject clitic.

of clitics highlighted in the working definitions of clitics provided in this paper. This is corroborated by the behaviour of subject markers as discussed by various scholars who analyzed these markers as clitics in the African languages considered herein.

In Naro, for instance, PGN markers are found to attach to more than one morphosyntactic category. In Degema, subject markers undergo deletion or are optional in SVCs. Subject markers in Nairobi Swahili are found to be omitted in certain clauses, such as the indicative. In Igbo, subject markers are optionally present in clauses, depending on whether a free personal pronoun is present or not. Subject markers in Kalabari, like those in Degema and Igbo, can be omitted in the relevant syntactic contexts. Thus, the behaviour exhibited by subject markers in these languages is more consistent with the behaviour of clitics than with that of affixes.

In the light of the behaviour of subject markers noted above, this paper essentially aligns itself with the view espoused by Jenewari (1977), Kari (1997, 2003, 2004), Zeller (2008), Anyanwu (2012), Deen (2012) and Kari and Mogara (2016) that subject markers in the languages investigated are clitics rather than affixes.

4. The need for further investigation of the status of subject markers

As we have seen from our discussion, subject markers that were analyzed as morphological affixes in a variety of African languages have all been reanalyzed as clitics in relatively recent times. The reanalysis of these markers in the languages considered herein shows that the status of these bound morphemes needs further investigation in African languages not discussed in this paper, especially in the face of inconsistent and/or conflicting analysis demonstrated by inconsistency in word division, as evident in Igbo (cf. Okwonkwo, 1977) and Naro (Letsholo and Saul, 2015), for instance.

In this regard, Dimmendaal's (2000: 180) and Kari's (2005: 19) remarks on the need for further investigation of the status of subject markers in

African languages should be considered a sensitization or wake-up call to carefully examine subject (and object) markers in African languages to establish their status, as this may provide some insight into the definition of word hood as far as linguistic units in African languages are concerned. Undertaking this task may not be a very easy one, especially given the similarities that exist between genuine morphological affixes and clitics, and given that many African languages do not have a long tradition of writing to reveal how bound morphemes have been written by different researchers in such languages.

For an analysis or a reanalysis of subject markers in African languages not discussed in this paper, it is worthwhile to consider criteria that have been proposed in the literature to distinguish affixes and clitics. A seminal work that discusses the distinction between inflectional affixes and clitics - two types of morphemes with a syntactic role - is Zwicky and Pullum (1983). See also Zwicky (1977). Kari (2002, 2003) also discusses the distinction between affixes and clitics in Degema in the light of the general criteria proposed by Zwicky and Pullum (1983), combined with some language-internal pieces of evidence. In the following section, we shall discuss criteria that distinguish (inflectional) affixes and clitics.

4.1. Criteria for distinguishing inflectional affixes and clitics

Although affixes and clitics share some common features, such as lack of independence and integration into the phonology of the host (as we saw in Degema, Igbo, Kalabari and Naro), there are many respects in which they are different (cf. section 2.1). Phonological integration could be in terms of vowel harmony between stem and affixes and clitics or in terms of phonological features, such as stress or tone assignment. Zwicky and Pullum (1983) propose six criteria for distinguishing inflectional affixes and clitics, as follows:

(a) Clitics can exhibit a low degree of selection with respect to their

　　　hosts, while affixes exhibit a high degree of selection with respect
　　　to their stems.

(b) Arbitrary gaps in the set of combinations are more characteristic
　　　of affixed words than of clitic groups.

(c) Morphological idiosyncrasies are more characteristic of affixed
　　　words than of clitic groups.

(d) Semantic idiosyncrasies are more characteristic of affixed words
　　　than of clitic groups.

(e) Syntactic rules can affect affixed words, but cannot affect clitic
　　　groups.

(f) Clitics can attach to material already containing clitics, but affixes
　　　cannot.

　　We shall consider the above six criteria mainly in respect of Degema, which has a very rich clitic system though not very elaborate affixal morphology, to see how they apply to an African language. Although in some instances, the discussion is illustrated with data on non-subject clitics, the illustration should be seen as a guide in the investigation of the behaviour of (subject) clitics and (inflectional) affixes.

　　In respect of criterion (a), clitics can attach to any word irrespective of word class as long as that word is in the right position and meets the relevant phonological and syntactic requirements, unlike affixes that attach to a particular morphosyntactic category, say nouns only or verbs only. We have seen how this criterion applies to Naro, where the 3S.MASC PGN marker, for instance, freely attaches to an adverb and an adjective respectively. It is somewhat impracticable to apply this criterion to languages like Degema and Igbo where subject markers tend to occur mainly in preverbal position. Nevertheless, the impracticability in the application of criterion (a) to these languages does not make subject markers affixes in these languages, as has been demonstrated in this paper.

　　According to criterion (b), instances where a host fails to combine with a particular clitic are not common or do not exist at all as long as the host

meets the phonological and syntactic requirements for clitic attachment whereas there are cases where, for some inexplicable reasons, an affix fails to attach to a stem (Kari, 2015: 73). As we saw in the case of Degema, Igbo and Kalabari, there are no instances where the verbal host fails to combine with subject markers, given the right phonological and syntactic conditions. Kari (2015: 73) notes that the reciprocal suffix, while attaching to the dynamic verbs *sú* 'push' and *gbóm* 'bite' to become *su-ɓeŋiné* 'push each other' and *gbom-oŋiné* 'bite each other', inexplicably fails to attach to a dynamic verb such as *ɓəβ* 'smoke (cigarette/pipe)' to yield *ɓəβ-əŋiné.

Criterion (c) states that there are no instances where a given combination of host and clitic shows an unexpected phonological form but such unexpected forms are found in stem and affix combination. In Degema (Kari, 2015: 74), for instance, the attachment of an enclitic (factative) *=en* to a host, e.g. *ò=síré=⁺én* 'He ran' and *ò=ɓíné mé=⁺én* 'He begged me' does not result in host (*siré* 'run' or *me* 'me') mutation whereas the attachment of a plural marking prefix *i-/ɪ-* can cause the stem to change its form, as the singular-plural forms of the words *ɔ-mɔβɪtàm* 'woman' ~ *í-míβɪtàm* 'women' (cf. *ò-kpòkí* 'money' ~ *ì-kpòkí* 'monies' and *ɔ-⁺mɔ* 'child' ~ *i-⁺mó* 'children') show.

According to criterion (d), the combination of a host and a clitic does not result in any change in the meaning that the combination has but such is not the case with the combination of stem and an inflectional affix. In Degema, the +ATR *=o* and -ATR *=ɔ* forms of the 3S subject marker, for instance, have the same meaning irrespective of whether the subject marker attaches to a stative verb *ò=bí=⁺té* 'he has become black' or to a dynamic verb *ɔ=kpéné=⁺té* 'He has waited'. Some inflectional affixes in Degema, however, have different meanings when they attach to different noun stems. For instance, "a single class prefix, such as *ɪ-*, attaches to noun stems belonging to the same gender (noun class) but instead of having the same or similar meaning, or belonging to the same semantic class, the compositional meanings of stems and class prefix in the words *ì-dɪ⁺jɔm* 'food' and *ì-pàpá* 'armpit' relate to mass nouns and parts of the body respectively"

(Kari, 2015: 74f).

  Criterion (e) states that no syntactic rules can treat the combination of host and clitic as a unit but such rules can affect the combination of stem and affix, treating it as a unit. One such syntactic operation that cannot treat the combination of a host and clitic as a unit but which can affect the combination of a stem and an affix is a permutation or movement rule, as example (22) and (23), taken from Kari (2015: 76f), show:

  (22) a. ɔ̀=kpɛ́rí   wɔ́=n   ìmò.
        3SGSCL=tell   you=FE   what
        'What did he tell you?'

      b. wɔ́   nʊ́   ɔ̀=kpɛ́rí=n   ìmò.
        you   FOC   3SGSCL=tell=FE   what
        'It is you that he told what?'

      c. *wɔ́=n nʊ́   ɔ̀=kpɛ́rí   ìmò.
        you=FE FOC 3SGSCL=tell   what

  (23) a. mɛ̀=fíjá   ʊ́-⁺táɲ.
        1SGSCL=cut   tree
        'I am cutting a tree'

      b. ʊ́-táɲ   nʊ́   mɛ́=fìjá.
        tree   FOC   1SGSCL=cut
        'It is a tree that I am cutting'

      c. *táɲ   nʊ́   mɛ́=fìjá   ʊ́-.
         STEM   FOC 1SGSCL=cut   PREFIX

  Example (22b) shows that the pronominal host *wɔ́* 'you' is moved to sentential-initial position without the clitic *=n*, which immediately attaches to the preceding verb. Example (22c) is ungrammatical because the host-clitic combination *wɔ́=n* is treated as a unit and moved to sentence-initial position. In (23b), the stem-affix combination *ʊ́-táɲ* 'tree' is moved to sentence-initial position without loss of grammaticality. Unlike (23b), example (23c) is

ungrammatical because the stem -*táɲ* is moved to sentence-initial position without the prefix *ʊ́-*. The Degema data in (22) and (23) show that syntactic rules cannot treat a combination of host and clitic as a unit because the clitic is not an integral part of the morphology of the host, unlike the stem-affix combination where syntactic rules treat the combination as a unit because the affix is an integral part of the morphology of the stem (Kari, 2015: 77).

Finally according to criterion (f), an inflectional affix cannot attach to any material that is already containing a clitic whereas a clitic can attach to any material that is already containing a clitic. Unlike extensional affixes in Degema, enclitics can attach to a verbal host that does not contain or already contains suffixes, as (24), taken from Kari (2015: 78), illustrates:

(24) a. ɛ̀=kíjɛ́=⁺*ɛ́n*.
      3PLSCL=give=FE
      'They gave (something to somebody/something)'

   b. ɛ̀=kíjɛ́-βɛ́ɲínɛ́=⁺ɛn.
      3PLSCL=give-RECIP=FE
      'They gave each other (something)'

   c. *ɛ̀=kíjɛ́-⁺ɛn-βɛ́ɲínɛ́.
      3PLSCL=give=FE-RECIP

   d. ɛ̀=kíjɛ́-βírɛ́=⁺ɛn.
      3PLSCL=give-EE=FE
      'They gave too much'

Example (24a) shows that the factative enclitic =*ɛn* attaches to the verbal host *kɪjɛ́* 'give' but in (24b) it attaches after the reciprocal suffix -*βɛɲɪnɛ*. Example (24c) is ungrammatical because the reciprocal suffix attaches to a material that already contains a clitic. Example (24d) shows that the factative enclitic =*ɛn* can attach to a material that is already containing the excessive clitic =*βɪrɛ* unlike the reciprocal suffix in (24c) that fails to attach to a material that is already containing a factative clitic (Kari, 2015: 78).

The criteria discussed and illustrated above serve as general guidelines

for distinguishing between clitics and (inflectional) affixes. Let it be noted that it is sometimes difficult to find data in a particular language that exemplify all these guidelines. Let it also be noted that it may not always be necessary to apply all six criteria in establishing whether a particular linguistic unit is an affix or a clitic. Sometimes, one or more of these criteria will suffice to make the distinction.

In the light of the above, it would be necessary, while trying to apply Zwicky and Pullum's (1983) proposed criteria, to also look at language-internal pieces of evidence from the phonology, morphology, syntax and semantics of the language under investigation to see the unique behaviour of clitics and affixes. Whereas criterion (a) shows clearly that PGN markers in Naro are clitics, applying the same criterion to Degema and Igbo, for instance, will not show that subject markers are affixes or clitics because subject markers in these languages, like affixes, exhibit a high degree of selection, attaching only to verbs.

Given the less utilitarian value of criterion (a) in establishing the status of subject markers as affixes or clitics in Degema and Igbo, Kari (2005) and Anyanwu (2012) have established the status of these morphemes as clitics rather than as affixes by looking at their behaviour in certain constructions in these languages. Kari (2005) establishes the status of subject markers as clitics by looking at their behaviour in SVCs, noting that subject markers may be optional and that they may undergo deletion in SVCs (see 3.1 above). Similarly, Anyanwu (2012) establishes the status of subject markers in Igbo as clitics by looking at their behaviour in syntactic constructions noting, among other things, that subject markers in Igbo cannot be modified, cannot be topicalized and cannot be conjoined with a lexical NP (see 3.2). It is also demonstrated that subject markers in Igbo and Kalabari do not co-occur with nouns or full pronouns in certain syntactic contexts.

Going by the analysis of subject markers as clitics discussed in this paper, based on certain behavioural patterns that border on their attachment to more than one morphosyntactic category and their deletion or omission in certain syntactic structures, we argue that subject markers (and object) markers in

African languages are more of syntactic clitics than morphological affixes. This claim is supported by Zeller's (2008) proposal that the subject marker in Bantu languages is a case of clitic (doubling) rather than a morphological reflex. In this regard, Creissels's (2005: 44ff) makes an interesting observation that pronominal or subject markers in African languages are evolving from free pronouns to clitic forms, suggesting that African subject markers are going through a process of grammaticalization.

5. Conclusion

We have discussed subject markers in African languages. The paper notes that the misanalysis of subject markers as morphological affixes in many African languages is due partly to the similarities that affixes and clitics have. It further notes that in some languages, what used to be analyzed as morphological affixes have relatively recently been analyzed as syntactic clitics based on certain characteristic behaviour, such as attachment to more than one morphosyntactic category and deletion or omission in certain syntactic structures. In the light of the behaviour of subject markers, this paper essentially aligns itself with the view espoused by various researchers who analyzed these markers as clitics in the African languages considered herein, and posits that subject markers in other African languages, by extension, are clitics rather than affixes. Consequently, the paper recommends that bound morphemes associated with the subject (and/or object) of the sentence in African languages not discussed in this paper be investigated based on cross-linguistic and language-internal evidence to establish their status as morphological affixes or as syntactic clitics.

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