A 'PROGRESSIVE' DERIVATIONAL VERBID IN KISWAHILI PREDICATE ITEMS?*

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INTRODUCTION

In this paper, we shall revise the structure of the 'applicative' and some of the rules which are currently used to describe it as a derivational affix (d-affix). We shall call the d-affix a verbid. We shall go further to argue that there is, perhaps, no reduplication of the 'applicative' in Kiswahili language. We shall provide six arguments of grammar, namely, 'The Problem of /l/ Insertion/ Deletion', 'The Phonotactic Constraints of Bantu', 'The Allomorph within Allomorph Constraint', 'Allomorphy and Meaning Distinctiveness', 'The Derivational Mirror-Image Constraint' and 'The Sequential Derivational Constraint' which, we hope, will demonstrate, at the very least, that, linguistic empirically, there is, perhaps, no reduplicated form of the 'applicative' in Modern Kiswahili. We argue instead for the recognition of a distinct derivational verbid or suffix called the 'PROGRESSIVE' which has what we shall call a 'theme-homing' role. We propose also that the protoBantu form of the Bantu languages made use of what we call 'full forms' of derivational verbids as well as contracted forms. The distinction [±contracted] verbid or suffix explains the origins and the structures of the verbids we have in the Bantu languages today.

1.0 THE NATURE OF DERIVATIONS AND THE APPLICATIVE IN KISWAHILI

In Amidu (1993a), we discussed the sound changes and harmony rules that affect the 'applicative' derivational affix in Kiswahili, as well as other forms of the d-affixes used in the language. In traditional grammatical descriptions, the 'applicative' is a predicate item suffix morpheme which is often said to be 'prepositional' in meaning and function when it occurs as an extension to the base of a predicate item (p-item). It often has the meaning of doing something for someone. But it also has an emphatic use in which 'benefactive/recipient' cannot occur (c.f. Amidu 1994b).

I wish to borrow the term 'verbid' used in the description of an aspect of serial verb constructions by Ansre (1966) and referred to by Li and Thompson (1974) as 'co-verbs'. Ansre has called verb-like formatives which function like prepositions and follow (or precede) fully inflectional verbs 'verbids'. The function of verbids as prepositions in Chinese is widespread. There are a few verbids in Kiswahili too, such as toka 'from', tangu 'since'. These forms are unbound morphemes. Verbids are not verbs since they function like prepositions, and so would not qualify as aspects of verb serialization in serial verb languages, or in languages such as Kiswahili and Bantu. However, I propose that where the functional roles of verbids are verb-like, or are indistinguishable from verb-like functions, then they would qualify as an aspect of verbs or prepositions in the same languages. This type of dual function, as either X or Y or both X and Y in the same predication-sentence has been referred to in Amidu (1980: 215-218). In this work, therefore, we extend the term verbid to the morphology as the bound counterpart of the unbound forms. The latter may be regarded as verb-like or non-verb-like according only to one's choice of parsing for a string. We assume, as a result, that d-affixes are verbids in the sense of micro-verbal units which are constrained by a base form from being fully inflectional but which can alter the number of internal arguments that may occur in a predication-sentence, over and above the minimum that would normally occur with the base alone. In our view, morphemic verbids determine theta roles in Kiswahili, and so, they are verb-like rather than mere extension affixes of verbs. Examples of a simple p-item and a macro-verb with an applicative verbid are illustrated below:

Basic Formative	Applicative Verbid
{{som} F + {a} M} --> soma (read)	{{som} F + {e} D + {a} M} --> somea (read about, to etc.)

The symbol F = base formative, also called root (rt.). We shall use the two interchangeably. M = modalic affix which shows the mood of the verb as indicative, subjunctive or adhortative, and so on. M is normally a low front vowel, but in the negative present tense, this can alter to a high front vowel [i], and in the subjunctive and adhortative, this inflects to [e]. In words of foreign origin which are not fully bantuised, the modalic is realised as ø, leaving the foreign vowel ending to stay in the final position of the simple derivation Ppo. We shall return to the sequence of derivation in 3.2. D = derivational verbid or affix according to the objective of the description. In a morpho-syntactic description, this simply implies the structure verbid as opposed to verb. It may then be written with a small (v).

In the description of the applicative form in the macro-verb somea, the vocalic [e] is the applicative verbid and this often introduces a (direct)

benefactive/recipient role into the meaning of the base verb som- (c.f. Hellan 1988: 2-4, 22-45 for a general treatment of central, marginal and implicit arguments). For example,

(1) Mwalimu aliwasomea watoto kitabu (the teacher read the book to the pupils)

The datum (1) may be compared with (2) where the base form does not have an applicative verbid and consequently a benefactive/recipient argument. In my view, however, the non-applicative in (2) implies that a benefactive/recipient role is, nevertheless, present either as an indirect argument or a co-occurrent argument.

(2) Mwalimu ali(ki)soma kitabu (the teacher read the book)

In this predication-sentence, the book is the patient or theme and the teacher plays both the agent role and the indirect benefactive/recipient role of the p-item soma 'read'. 'He read the book for himself or to himself' rather than 'for/to someone else'. Scholars of Bantu grammar, such as Ashton (1947: 218-220), have discussed some aspects of the uses and functions of the applicative verbid in Kiswahili, and others have done the same for other Bantu languages (c.f. Hyman 1982; Baker 1988).

1.1 THE TRADITIONAL DESCRIPTIONS OF THE APPLICATIVE I: THE PROBLEM OF /l/ INSERTION OR DELETION - DIACHRONY OR SYNCHRONY?

The applicative verbid is usually represented in traditional descriptions as (a) #I# or #E#, or as (b) #IL# or #EL#. This implies two things. The second formulation (b), #IL#, #EL#, usually inserts a consonant /l/ in front of the morpheme as part of its underlying structure, (U-structure), whence the L, but then deletes the consonant in intervocalic position. Polome (1967: 84), for example, says that "The basic form of this suffix is {EL}, but its /l/ is usually lost in intervocalic position except when a reduplicated form of the suffix is used". Let us note, in passing, the reference to what is called a "reduplicated from of the suffix", which implies that the applicative has a reduplicated form in the language. This reduplicated form is also called 'double applicative' (c.f. Hurskainen 1992: 100). The argument about the /l/ insertion is not very convincing to me. The illustration below represents the traditional view of the applicative, (Rule A), and of the reduplicated applicative, (Rule B).

Rule A. {{let} F + {el} D + {a} M} --> let$\underline{e}$la --> letea (bring for, to etc.)
Rule B. {{fik} F + {ilil} D + {a} M} --> fiki$\underline{li}$la --> fikilia (get right there)

The practice is based on a diachronic rule which says that Bantu phonotactic structure, which includes syllable structure, within the phonological system, is basically derived from a system of alternating consonant and vowels, CV-CV-.[1] For this reason, the liberty is taken to insert an /l/ into the formative structure even when this is not synchronically relevant. E.g. **letela** is taken as the derivation. Then /l/ is deleted to give letea. Next, we are told that this /l/ re-emerges in reduplication as in rule B. We observe, however, that the claim that reduplication is an exception to the loss of /l/ is not supported by rule B. If we look closely, we find that there are two consonants /l/ in intervocalic position of the U-structure of **fikilila**, but only one is lost, instead of all. If the deletion rule were fully operative, we would not get **fikilia** but rather **fikiia** which the rules predict. The above insight is not merely superficial. The problem for the /l/ insertion and deletion theories is that, in Kiswahili, the alveolar lateral approximant /l/ is realised as zero (ø) only before following final modalic vocalics / i, e, a /, which represent the indicative [i, a], and subjunctive [e] forms of the verb in the language. These morphemes have invariable allomorphs /i/, /u/ and /e/ in words of foreign origin. The lateral approximant never disappears before other following vowels which are non-modalic, non-final and which occur mostly in intervocalic positions. Quite apart from letea and fikilia, consider also the following:

(a) pala --> paa 'ascend'
(b) para/pala/paa --> scrape up

but (b.i) palila --> pal$\underline{i}$a 'scrape up'
(b.ii) palilila --> pali$\underline{li}$a 'clean up' a field.

If the loss of the /l/ before the modalic vocalic morphemes were morphemically and grammatically motivated, one would expect the same rule to apply when intervocalic / i, e, a / occur as part of the morphemic form of the applicative, or of other verbids. What we do not get is, precisely, forms like *paia, *paiia, *fikiia etc. These anomalies show that diachronic rules cannot be the basis

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[1]   This assumption is, in fact, wrong-footed. Bantuists regularly give the phonotactics of many verbids as VC of VC-VC, and C- in Kiswahili and Bantu instead of CV-, and V-.

upon which synchronic rules can be stated or derived (c.f. de Saussure 1967: 117-140; Robins 1967, 1990: 220-221; Strang 1968: 113).[2]

The second problem with the /l/ insertion/deletion is that the first formulation (a) #I#, #E# has difficulties with base formatives which end in vowels and so inserts a consonant /l/ before the final vowel in the base formative. This means that up to two or three lateral consonants are inserted in the process of applicative derivation. The rules C and D illustrate this process.

Rule C. {{pa (l)} F + {i(l)} D + {a} M} --> palila --> palia (clear away)
            1   2

Rule D. {{pa (l)} F + {i(l)i(l)} D + {a} M} --> palilila --> palilia (gather up)
            1   2 3

To get round the glut of /l/ consonants, Polome, for example, says that in the case of base formatives which end in vowels, the allomorph of the applicative is {li} or {le}. This is not very linguistic empirical. In all these cases, the synchronic form of the base F is pa-. As a result of the 'toyretical' nature of the rules, we find that /l/ insertion occurs sometimes in the applicative verbid, sometimes in the reduplicated form of the applicative verbid, and sometimes in the base F.[3] Other grammarians do not explain the motivation for the presence or absence of the /l/. They simply insert or delete it as it appears convenient. This is what we see in Ashton (1944, 1947: 217ff, 244). For example, Ashton says verb roots which end in consonants have IA or EA as the extension, and those which end in vowels have LIA or LEA. Examples are, som-a --> som<u>e</u>a on the one hand, but twa-a (take) --> twa<u>lia</u> (take for, to), on the other hand. As we shall see below, all these formulations are still unable to account consistently for the occurrence of simple applicative before formatives or roots which end with vowels. It follows that another major problem with the /l/ insertion and deletion rules of Kiswahili and Bantu verbal derivation which needs to be addressed, concerns the relationship between the /l/ of the verb root as a minimal unit, and the lateral /l/ which, it is claimed,

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[2]   Diachrony may guide us in the selection of our synchronic rules, but it does not determine the form and structure of those rules.

[3]   A 'toyry' is any theory or argument or system of reasoning or of knowledge which is specious, or hocus-pocus. The name Mwinyi Kingozi, merely represents the proto-type of a certain kind of Bantu grammarian who cannot appreciate new investigations into or hypotheses about the foundations of Bantu grammar. See Amidu (1994a) for my views about this attitude.

appears in the derivational verbid or suffix, as in #IL#. Examples of these two forms are, PAL- and pal+IL-. The present models cannot explain how the /l/ of the root 'disappears' in the process pal+a --> pa.ø+a --> paa but not in the derived form pal+il+a --> palia. Instead, it is the /l/ in the derivational verbid, and not the one in the root, which is realised as zero in palila. Even a condition to the effect that /l/ disappears only in final syllables is not itself sufficient to support the /l/ deletion or insertion theory, since we do not know what type of /l/ we are dealing with. A Bantuist like Mwinyi Kingozi would deny the assertions we have made. He would insist that what disappears is not the /l/ in the root or minimal unit of the predicate item, but rather the /l/ of the derivation in both *pala and *palila. Our answer to this is simple. If the /l/ in the root is a derivational /l/, then how come it does not become zero (ø) in a process like *pal+il+a --> pa.ø+il+a --> paila or even paia, in the same way as the acceptable derivation pal+a --> pa.ø+a --> paa? It follows that the generous use of the notion 'derivational /l/' is 'toyretical'. Present models, therefore, cannot explain how the /l/ of a root disappears in the same way as the /l/ of the derivational suffix #IL#, and when the one can be retained but not the other in a derivational process. We wish to suggest, therefore, that the disappearing /l/ in the final syllable before the modalic is the same consonant we find in some roots, such as pal+a --> pa.ø+a --> paa, when the modalic {a} is present. We formulate this principle as follows:

Modalic Rule,
/l/---> ø /- [+syll___ ##] iff [+M]

The modalic rule states that a lateral liquid approximant (or its allophones) will be realised as zero in the final syllable of a predicate word, if and only if it is part of the structure of the modalic and not of a root or derivational verbid. By means of this rule, we are proposing that the present forms of the modalics in Kiswahili are derived from the basic structures /li/ 'present tense negative', /le/ 'subjunctive' and /la/ 'indicative ±negative (including present tense, if it is not negative)'. Our proposal implies three things: a) Final syllable /l/ never occurs in verb or predicate minimal roots which have intrinsic vocalic endings; b) The /l/ of a derivational verbid cannot be realised as zero in final syllables of predicate words, because verbids NEVER occur in final syllable positions in U-structure; c) It follows that the base structure of predicate verbs such as *pala (paa) is in fact pa+la and not pal+a, of *tila (tia 'put') is ti-la and not til+a. Since, by our hypothesis, base roots which end in vowels never had an intrinsic final lateral approximant, it is ungrammatical to 'invent' a portmanteau lateral insertion rule for such roots in order to justify an applicative derivation rule (whether simple or reduplicated). It is evident that we have confused derivational /l/ with word roots which end in laterals before the modalic suffix.

The third problem is about the role of analogy. Some Bantuists, such as Mwinyi Kingozi, will object to the claim that the verbs which end in vocalics do not have /l/ as part of their structure since there are numerous words whose roots end in consonants. We do not question any claim which states as a fact that some roots end in consonants. Our position is that even those predicate words whose roots end in consonants do take one of the modalic affixes -li, -la, or -le. When the disappearing /l/ of the modalic becomes zero before a preceding consonant in Kiswahili S-structure, it leaves behind a vocalic as a reflex to mark the modalic morpheme. This Kiswahili process does not always occur in other Bantu languages. We are also aware that certain words like jua 'know' used to have an intermediate labial glide /w/. However, in all such cases, we have evidence of productive forms to support the claim. Thus, {root [ʄuw] + [j] causative} ---> [ʄuvy]; naw 'wash the hands' ---> [naw + j] ---> [navy]; lew 'be drunk' ---> [lew + j] ---> [levy] etc.[4] If we add the modalic /a/, we get juvya 'to inform', navya 'make s.o wash his hands', levya 'make s.o drunk'. For this reason, forms like julisha 'make known' can be explained as causatives derived by different phonological processes. For example, julisha has an intermediate stative. The derivation is {root [ʄu] + stative [lik] + causative [j] + modalic [a]} ---> julisha. [k] + [j] => [ʃ]. The /l/ insertion/deletion problem is not motivated by analogy. For this reason, our objections to the applicative/reduplicated applicative use of /l/ are based on the difficulties which the competence of the speaker today has in processing cases for which there are no analogical motivations in the synchronic grammar, short of inventing rules of grammar which probably never also existed diachronically.

Finally, a Bantuist like Mwinyi Kingozi will protest that in comparative Bantu studies, forms like pala have meanings which are close enough to Kiswahili -paa to warrant analogical derivations in Kiswahili. Firstly, we have not denied the existence of pala. We have only denied that the root is pal-. But substantially, we find that, in Modern Kiswahili, those verbs which originally had intrinsic lateral approximants as the final consonant of the root have kept them in the language to this day and alternate /l/ with ø. For example, we have pa- / par- or (pal-) 'to scrape up' in Kiswahili. (Note that in Bantu /l/ had two allophones, [l] and [r], which were and are still found in a few words, e.g. lamba/ramba 'to taste'). Words like -para are distinct from words which had intrinsic vocalic ending such as pa- 'ascend', and for which there is no form pal- in the language. Consider also the regular alternations kae / kale 'old' (adj.), ow- / low- 'get wet', gaagaa / garagara or galagala 'toss and turn'. Lastly, we find that the same process has survived in other words with non-lateral consonants. Examples are, words which alternate alveolar nasal /n/

with zero (ø). E.g. fa- / fan- 'be useful', pu- / pun- 'wipe the face with the palm'. In one case, the intervocalic consonant has even become non-allophonic, even though the root is the same, thus creating sharp semantic differences. The example is po- 'cool down' versus pon- 'be healed, be saved'. The point, therefore, is that when a consonant is intrinsic, it tends not do disappear, but alternates with zero (ø), even in present Kiswahili usage. Thus the ability of the speaker-hearer to generate rules based on both forms is not the result of a set of invented rules or purported historical or comparative rules, but innate rules of the synchronic phonology and morphology. These rules can be tested.

To conclude this section, we wish to state that we are not against /l/ insertion or deletion. We merely draw attention to its shortcomings in the system of verbal derivations. One of the linguistic empirical facts of Kiswahili phonetics and phonology today is that, it is vowels which tend to be inserted between consonant clusters and not consonants inserted between vowels. This is clearly evident in the borrowing of clusters into Kiswahili from other languages (c.f. Tucker 1946; Whiteley 1967a). We take this situation, therefore, as the natural rule of sound change. In the same manner, it is the consonants, mostly /l/, /w/, /j/ and /n/ which often alternate with zero in initial or medial positions in modern Kiswahili. This is attested in traditional literatures of the language dating from the 17th century (c.f. Amidu 1990). We again take this pattern as the natural law of epenthetic change. Many of the rules of deletion and insertion of sounds are well-known in Bantu phonology in general (c.f. Tucker and Ashton 1942; Polome 1967; Doke 1954, 1967; Meinhof 1932). On the basis of our analysis, it seems that the applicative is not I or IL (or variants of these) etc. but LI. If, for example, a root is intrinsically pa-, then the only way to derive the applicative, or a so-called 'double form' of it, is via LI- and LILI-.

1.2 THE TRADITIONAL DESCRIPTIONS OF THE APPLICATIVE II: THE REDUPLICATED FORMS OF THE APPLICATIVE

The reduplicated form of the applicative is only discussed in Kiswahili and Bantu by reference to the applicative. We saw in rules A and B the representations of the applicative and its reduplicated form. The reduplicated or double suffix is often given as ILIA/ELEA (Ashton 1944, 1947: 244ff) or as "{ELEL}, realised as -ili- or -ele- before final vowel" (c.f. Polome 1967: 84). Let us examine the forms:

(i) Applicative > #I# (or #IL#).
(ii) Reduplicated Applicative > #ILI# (or #ILIL#).

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[4] ʄ = palatal fricative consonant

The d-affix or verbid is, in its simple form, taken to be an archiphoneme /I/, since the final /L/ of #IL# is lost in any case in intervocalic position. In addition, we are told that this form may be reduplicated or doubled to give the further forms /ILI/ instead of #ILIL#, because the final /L/, it is claimed, gets lost in intervocalic positions. Each of the forms is subject to sound laws which are generated from the base of the verb. If the vowel in the base is a high vowel, then the archiform will be realised as a high front vowel [i], and where the base vocalic is a mid vowel, then the vocalic of the verbid will also be a mid front vowel [e] (c.f. Amidu 1993a for details). We illustrate the existing views as follows:

(3) Simple App./I/ > i, e.   Reduplicated App. /ILI/ > ili, ele.
    fik<u>i</u>+a > fikia (arrive at)   fik<u>ili</u>+a > fikilia (get right there)
    kat<u>i</u>+a > katia (cut for, with)   kat<u>ili</u>+a > katilia (cut off   completely)
    end<u>e</u>+a > endea (go to)   end<u>ele</u>+a > endelea (progress)
    wek<u>e</u>+a > wekea (put down for)   wek<u>ele</u>+a > wekelea (keep away)

For ease of reference, we have underlined the verbids in the macro-verbs. Two predication-sentences of these forms are:[5]

(4) Angaenda juu kipungu hafik<u>i</u>i mbinguni   (Although the eagle may fly high, it does not get to the sky)

(5) Angaenda juu kipungu hafik<u>ili</u>i mbinguni   (Although the eagle may fly high it cannot touch the sky)

1.2.1 The Problem of the Reduplication Hypothesis

What happens if the root ends in a vowel? It has been argued by many Kiswahili scholars, such as Ashton (1944, 1947: 217ff), and Polome (1967: 84), that where the root or formative ends in a vowel, the allomorph of the affix #I# becomes /li, le/ or /ili, ele/ for the simple applicative. This creates a number of problems of description. In the first place, we are not told in the Kiswahili grammatical descriptions, (and Bantu grammars), what the reduplicated form becomes in the environment of a vowel in final position of a p-root or formative. Let us see how this works in practice.

(6) Simple App. (with #li, le# or #ili, ele#)/- V__.
    pa+li+a > p<u>ali</u>a (clear away)   or   *pa+ili+a > pelia (a+i > e)

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[5]   Datum (5) is a proverb. It has been mentioned by Ashton (1944, 1947: 186).

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    ti+li+a > tilia (put into)   or   *ti+ili+a > tilia (i+i > i)
    li+li+a > lilia (cry for)   or   *li+ili+a > lilia (i+i > i)

(7) Redup. App. (#ili, ele#)/- V__.
    *pa+ili+a > p<u>ail</u>ia (gather together)
    *ti+ili+a > t<u>ii</u>lia (push through)
    *li+ili+a > l<u>ii</u>lia (cry desperately)

The problem with a description like this is that, on the one hand, we are forced to the conclusion that a p-base, such as PA or TI, which ends in a vowel has no reduplicated applicative form at all, even when the reduplicated applicative is a mere allomorphic formation which should not be distinctive of meaning. On the other hand, we are forced to resort to 'ad hoc' rules in order to explain the similarities between simple applicative (including its allomorphs) as one rule, and reduplicated applicatives which look like simple applicative forms, as another rule of grammar. This can lead to unacceptable forms or to indistinctness or indeterminacy of both lexical forms and morphemic forms. Thus, firstly, a rule of assimilation, such as i + i --> i, would produce 'tilia' in (7). Even though the product of the assimilation is an acceptable item, it turns out not to be the so-called reduplicated form of TI. Secondly, the result can lead to indistinctness between the so-called reduplicated form and the simple form, such that we cannot tell them apart. Compare tilia in (6) and (7). Other cases are:

(8) Simple App. (with #li, le# or #ili, ele)/- V__.
    ondo+<u>le</u>+a > <u>ondolea</u> (take away)   or   *ondo+<u>ele</u>(/o/+/e/>/o/) > ondole+a
                                                              > <u>ondolea</u>
    pote+<u>le</u>+a > <u>potelea</u> (wander off) or   *pote+<u>ele</u> (/e/+/e/>/e/) > potele+a
                                                              > <u>potelea</u>

(9) Redup. App. (#ili, ele#)/- V__.
    *ondo+<u>ele</u> (lo/+/le/>/o/) > ondole+a > <u>ondolea</u> (strip off)
    *pote+<u>ele</u> (/e/+/e/>/e/) > potele+a > <u>potelea</u> (be damned)

There is a phonological problem here. There is no sound law in Kiswahili, for example, which assimilates /e/ to /o/ and vice-versa. The form in (9) is, therefore, an impossibility. There is also no alternative formation, such as we find in (8). Thirdly, the form *tiilia in (7) is not grammatical in Kiswahili. The correct form which should have been predicted by reduplication is 'tililia'. We notice, at once, that even a sound assimilation attempt fails to yield the correct form. If we turn to PA in (6) and (7), we get an even less grammatical result. In Kiswahili, when a low vowel [a] precedes a high front vowel [i], quite often,

a reciprocal assimilation takes place. The result is a mid front vowel [e]. An assimilation of [a] to [i] according to sound law will, therefore, produce *pelia. There is no lexical macro-verb 'pelia' in Kiswahili. The hypothetical assimilation should have yielded 'palia'. But this word would not also be the so-called reduplicated form. What the reduplicated rule sort to derive is 'palilia'.

The above illustrations show that the so-called reduplicated form never occurs before simple roots which end in vowels. The solution then would be to invent an auxiliary morpheme which can save the reduplication hypothesis or the simple allomorph form #ili, ele# from imminent disrepute. In the examples given above in (3), 'fika'(arrive) is the stem of a predicate item. It consists of the root or formative {fik} and the modalic indicative {a}. The 'applicative' is 'fikia' (arrive at) and the so-called reduplicated 'applicative' is 'fikilia' (arrive there), (c.f. Polome 1967: 84). However, the difference between say 'tilia' and 'tililia'(see infra) cannot be a simple case of doubling of the applicative morpheme #I#, since the reduplicated form does not occur before its vocalic final base. A simple question is this: What is the derivational morpheme or verbid for which the derived suffixes in 'tilia' and 'tililia' are the allomorphs? We have already drawn attention to the problems of epenthetic consonant insertion, and the fact that the alveolar /l/ belongs to the indicative modalic (c.f. 1.1.1). It is for these reasons that, an analysis along the lines of the present theory of reduplication is not satisfactory or convincing.

1.2.2 Reduplication as an Analogical Process

Another way to deal with the traditional form called the reduplicated applicative {ili, ele} after vowels is by analogy with the description given for the applicative #I# by Polome referred to earlier.[6] The analogy can be formalised in the following manner:

Rule ==> If #I# --> i, e/- C__ or li, le/- V__ then {ili} --> ili, ele/- C__
          or lili, lele/- V__.

The rule says, insert a lateral approximant /l/ in the so-called reduplicated in the same way that the non-reduplicated is given lateral /l/ consonant (See 1.1 above). This is illustrated by (10-11) below:

(10)   Simple App. {i, e} /- V__. Insert /l/ before d-affix
        pa+i+a > pa+(l)+i+a > palia (clear away)
        ti+i+a > ti+(l)+i+a > tilia (put into)
        li+i+a > li+(l)+i+a > lilia (cry for)
        ondo+e+a > ondo+(l)+e+a > ondolea (take away)
        pote+e+a > pote+(l)+e+a > potelea (wander off)

(11)   Redup.App. {ili,ele} /- V__. Insert /l/ before d-affix.
        pa+ili+a > pa+(l)+ili+a > palilia (gather together)
        ti+ili+a > ti+(l)+ili+a > tililia (push through)
        *li+ili+a > li+(l)+ili+a > lililia (cry desperately)
        *ondo+ele+a > ondo+(l)+ele+a > ondolelea (strip off)
        *pote+ele+a > pote+(l)+ele+a > potelelea (be damned)

This method of derivation gives us the grammatically correct results, in some cases but not in others. The only problem here is that the epenthesis has no motivation in the phonology.

1.2.3 The General Problem of Allomorphy

The analogical assumption in 1.2.1 raises a serious problem of allomorphy in the grammatical description of the language and in morphology.

Theoretically, the reduplicated applicative claim of current grammars runs into a blind alley. Firstly, if the reduplicated applicative {ili, ele} is derived from #I#, as a matter of fact and by analogical description, then, it should not itself display, morphologically, features of allomorphy. Secondly, if, on the other hand, {ili, ele) is not an allomorph of the 'applicative' #I#, then, it is difficult to explain in which way it is a reduplication and not a distinct morpheme 'in esse'. If we look at examples (6-11) closely, it seems rather evident that any modification of the derivational options only makes the form of a simple 'applicative' verbid to look like a reduplicated one, and vice-versa, in several instances. It seems, perhaps, unusual for a morpheme to bar its allomorph from occurring in the system of oppositions as if they were mutually exclusive. It could of course be argued that *lililia, *ondolelea, *potelelea are the allomorphic manifestations of the applicative, except that they are not used in the modern grammars of the speakers.

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[6]   We do not claim that present descriptions make use of our type of analogy of derivation.

2.0 ON RECOGNIZING A PROGRESSIVE VERBID: THE THEORETICAL BASIS

2.0.1 The Structure of the Progressive Verbid

Following from the discussions in the preceding sections, we propose that rather than maintain a claim that there is a reduplicated form of the applicative in Kiswahili (and Bantu), we should, linguistic empirically, recognize that we are, in fact, dealing with two derivational verbids which are distinct and unrelated. The first d-verbid is well established and it is called the APPLICATIVE verbid. The other is, what I wish to call, the PROGRESSIVE verbid. Basing ourselves on the grammatical macro-verbs paLIa (clear away), tiLIa (put into) as cases of the applicative, on the one hand, and the grammatical contrasting forms paLILIa (gather together), and tiLILIa (push through) as cases of the 'progressive', on the other, together with our claims in 1.1.1 to the effect that the alveolar lateral approximant /l/ in the roots pa- and ti- are not part of the basic structure of the root but rather of the modalic morpheme {a}, we get -li- and -lili- as possible morphemic representations of applicative and progressive verbids in Kiswahili. We, therefore, propose the following as representations of the forms of the derivational verbid for applicative and progressive respectively:

Rule E.　　Applicative =>　　#LI# ---> i, e /- C__

　　　　　　　　　　　　---> li,le /- V__

Rule F.　　Progressive =>　　#LILI# ---> ili, ile /- C__

　　　　　　　　　　　　---> lili, lele /- V__

2.0.2 The Phonotactic Constraints of Bantu: A Justification for CV- Structure for Verbids

The choice of the forms #LI# and #LILI# are based on an even more linguistic empirical principle of higher phonology. In my view, there is, in U-structure, no morphemic or phonological structure VC in the entire system of the phonology of Bantu and Kiswahili. The current exceptions in Kiswahili appear to be derived exclusively from the predicate or verbal derivational framework. However, the representations IL (IR), or EL (ER), or IL-I (IR-I), or EL-E (ER-E), are all non-Bantu in their underlying structure, in my view. It is, furthermore, our view that the morphological and phonological representations

of certain derivational forms of the verb or predicate item as VC is a major anomaly of description in the phonological system of the grammar, unless, perhaps, we allow for some type or version of the harmonic phonology proposed by Goldsmith (1993: 21-60). Even so, the tactic must precede the harmonic system which would neutralise or insert initial C or final V of the basic CV structure.

Let us return to the applicative and progressive distinctions once more. We maintain that, on the strength of overall tactics of the morphonology and phonemicity of Bantu sounds, our proposal takes account of the intrinsic underlying structure of the syllables in the phonological structure prior to the description and generation of the specific rules and verbids. Thus, the following formatives can be generated by the rules grammatically: pika (cook), omba (beg), chukua (carry), ondoa (take away), oga (bath), paa (clean).

(12)　　Applicative #LI#:　　(a). initial /L/ --> ø/- C__ of F;
　　　　　　　　　　　　(b). /I/ --> i /- [+high] or [+low] of F
　　　　　　　　　　　　　　--> e /- [+mid] of F.

　　　　pik+LI+a > pikia　　　　　(i. F-vocalic [i], ii. F-cons [k])
　　　　let+LI+a > letea　　　　　(i. F-voc [e], ii. F-cons [t])
　　　　chuku+LI+a > chukulia　　(i. F-voc [u])
　　　　ondo+LI+a > ondolea　　　(i. F-voc [o])
　　　　og+LI+a > ogea　　　　　(i. F-voc [o], ii. F-cons [g])
　　　　pa+LI+a > palia　　　　　(i. F-voc [a])

(13)　　Progressive #LILI#:　　(a). initial /L/ --> ø/- C__ of F;
　　　　　　　　　　　　(b). /I/ --> i/- [+high] or [+low] of F
　　　　　　　　　　　　　　--> e/- [+mid] of F.

　　　　*pik+LILI+a > *pikilia　　　(i. F-vocalic [i], ii. F-cons [k])
　　　　*let+LILI+a > *letelea　　　(i. F-voc [e], ii. F-cons [t])
　　　　*chuku+LILI+a > *chukulilia　(i. F-voc [u])
　　　　*ondo+LILI+a > *ondolelea　(i. F-voc [o])
　　　　og+LILI+a > ogelea　　　　(i. F-voc [o], ii. F-cons [g])
　　　　pa+LILI+a > palilia　　　　(i. F-voc [a])

In the above statement of the applicative and the progressive, we have used bold type to indicate the vocalic in the root, or the formative which triggers sound harmony with the vocalics in the verbid. We have also underlined the consonants in the verbid which are deleted when the formative ends with a consonant to achieve harmony of system, since consonant clusters are not allowed in Kiswahili phonology unless the first of them is syllabic, or

homorganic, or both. This means that [k, t, g,] in the examples above are not syllabic consonants. The above rules have eliminated the need for a rule which explicitly specifies a vocalic environment, since this is implied by the first step in the rules. In this way, we have achieved some simplicity in our overall generalisations of the derivational rules. These rules also preserve our claim that the modalic morpheme #LA# has become permanently {a} in modern Kiswahili. If we are right, it will occur as /la/, with its allomorphs, in other Bantu languages.

A further motivation for recognizing #LI# and #LILI#, is based on the theory of morphemic simplicity called **contraction**. We hypothetize that the protoBantu form of the applicative had a full or complete form. The full form was -LILI-. As the language developed, morphemically simpler forms of this developed. Such a simplified form is -LI-. We may now conclude that the full and contracted forms have become grammaticalized as distinct morphemes in some languages such as Kiswahili. The only problem with this hypothesis is that we have no clear idea in what specific environments the one was preferred to the other. This caveat does not, however, eliminate the hypothesis as a significant generalization.

On theoretical grounds, therefore, there is no reduplicated applicative in Kiswahili. What we have is a progressive, however, closely it may be related to a double applicative, or a full applicative form in protoBantu. Strong theoretical evidence for this stand is given below.

2.1 THE ALLOMORPH WITHIN ALLOMORPH CONSTRAINT

One of the strong motivations for recognizing the 'progressive' can be seen in the fact that the traditional distinction if maintained leads to a generalization that does not fit the data. Some repetition of already stated positions is inevitable here. Consider the rules below:

Rule G.   Traditional Applicative morpheme:
            #I# =/=> V__## final of F, unless with /l/ insertion.

Rule H.   Traditional Reduplicated Applicative allomorph:
            [ili, ele] =/=> V__## final of F.

The rules G and H imply that even though the so-called reduplicated form of the applicative may occur after consonants, it cannot, as we have already shown, occur after vowels except by analogy. We have also seen that in traditional grammar, the allomorphs of #I# or #E# (or IL/EL) are {i, e} before the final consonants of the formative, and {li, le} before final vocalic of the

formative or root. Since the reduplicated applicative is based on the applicative, as an allomorph of it, we shall get the further forms {ili, ele} (or ilil/elel) as well as {lili, lele} before vocalics. The reduplicated form is, as a result, in competition with #I# as morphemes for the same morphological structures on the one hand, and on the other hand, it has allomorphs of its own which are lili-, lele- versus ili-, ele-. Evidently, in a system which believes in economy of description, the allomorphs of the applicative are simply large viz: [i, e], [ili, ele,] after consonants and [li, le], [lili, lele] after vowels. There seems to be no simple way by which we can account for and predict the reduplicated applicative by rule from the basic applicative verbid without redundancy. For example, are ondolea (remove from) and potelea (be lost for, at) cases of simple or reduplicated applicative? Allomorphy per se is not the problem because it is common in some languages. For example, the plural morpheme in English has a number of different forms. The problem of the reduplicated applicative is simply the implied claim that it is an allomorph of the applicative, and yet, somehow, manages to have allomorphs of its own, i.e. [ili, ile, lili, lele] in parallel with the applicative. We, therefore, wish to claim that morphemes do not allow for 'allomorph within allomorph' (a-within-a) in their structures. We have to assume that it is barred by all grammars. We could of course specify morpho-lexically that the morpheme is simply APPLICATIVE and that its allomorphic distributions are [i, e, li, le, ili, ele, lili, lele] in the grammar. But, in that case, it will no longer make sense to speak of reduplicated applicatives, since the same applicative rule will derive all the allomorphic forms. Therefore, [ili, ele, lili, lele] are not allomorphs of #I# (c.f. Bauer 1983: 62-100).

Bauer (1983) has discussed most of the problems of productivity of derivational forms in Indo-European languages and the restrictions that occur. He demonstrates with evidence from Ettinger that phonologically, "two synonym suffixes" may be "in partial complementary distribution, depending on the segments in the base" (p. 89). This suggests that one way to view the applicative is that it has two suffixes which are partially synonymous and are in partial complementary distribution in Kiswahili. However, the condition which says that the base segment would condition the distribution of the suffixes does not arise in Kiswahili. For example, we do get fikia and fikilia in the language. *But, then, according to present grammatical theory in Kiswahili, (and Bantu), fikilia is derived from fiki-a and not from the base fik-a. We cannot, therefore, recognize even a partial allomorphy to justify a reduplicated applicative.* Another problem referred to by Bauer and attributed to Hasselrot (1972) is that of the shape of the base. He notes that "... the segmental phonological shape of the base may be used as the input to a rule of word formation" (p. 88). He goes on to state on the next page that according to Hasselrot, the diminutive suffix -ette in French is not added to a base which

ends in /t/ or /d/. He also refers to how "it feels very clumsy to add the adverbial suffix -ly to adjectives which end in -ly", (p. 89), in English., e.g. *elderlily, *miserablily etc. In Kiswahili, the only base requirements are those of sound harmony. It is, therefore, difficult to understand how, if the so-called reduplicated applicative is not in full complementary distribution, it should be restricted from occurring in verbs by the final vocalics in the base formative, as in *ondoelea, *pokeelea, or *ondolelea, *pokelelea. It does not also occur with most base forms with final consonant, e.g. *pikilia, letelea etc. It would seem that since the phonological conditions are the same for the occurrence of the applicative and the so-called reduplicated applicative, that the wide difference in occurrence lies in the fact that the morpheme suffixes are distinct and have different meanings. Our assumption is, therefore, that morphemes of the same meaning would normally be capable of reduplication but morphemes of distinct semantic meanings cannot be reduplicated. Lastly, the 'clumsiness' referred to by Bauer would seem to imply that reduplication is, in principle, possible for suffixes, but they rarely occur in grammars. We shall examine this topic in relation to Kiswahili in 3.2.

2.2 ALLOMORPHY AND MEANING DISTINCTIVENESS I

A strong constraint on reduplicated suffixes in the a-within-a' is stated in rule I:

Rule I.   An allomorph which is independently distinctive of meaning is no longer an allomorph but an independent morpheme. It has a unique context of reference.

Examples of distinctive contrasts of form and meaning are:

(14)   <u>Simple Predicate Item</u>   <u>P-item with Applicate Verbid</u>

Base F + Modalic affix [a]   Base F + #LI# + Modalic affix [a]

Consonant Ending in Base Formative

fik+a --> fika (arrive)   fik+LI+a --> fikia (arrive at/with)
pamb+a --> pamba (decorate)   pamb+LI+a --> pambia (decorate with)
lip+a --> lipa (pay)   lip+LI+a --> lipia (pay for)
pig+a --> piga (beat)   pig+LI+a --> pigia (beat at/for)
shind+a --> shinda (press)   shind+LI+a --> shindia (press on/at)
on+a --> ona (see/feel)   on+LI+a --> onea (see for/ feel for)

og+a--> oga (bathe)   og+LI+a --> ogea (bathe with)
let+a --> leta (bring)   let+LI+a --> letea (bring to/for)
wek+a --> weka (place)   wek+LI+a -->wekea (place at)
end+a --> enda (go)   end+LI+a --> endea (go to/by)

Vowel Ending in Base Formative

pa+a --> paa (clean, scrape)   pa+LI+a --> palia (clean for/ scrape up)
ti+a --> tia (put)   ti+LI+a -->tilia (put into/onto)
li+a --> lia (cry)   li+LI+a --> lilia (cry for)
pote+a --> potea (be lost)   pote+LI+a --> potelea (be lost at/for)
ondo+a --> ondoa (remove)   ondo+LI+a --> ondolea (remove from)
poke+a --> pokea (receive)   poke+LI+a --> pokelea (receive from)

(15)   <u>Simple Predicate Item</u>   <u>P-item with Progressive Verbid</u>

Basic F. + Modalic affix [a]   Basic F. + #LILI# + Modalic affix [a]

Consonant Ending in Base Formative

fik+a --> fika (arrive)   fik+LILI+a --> fikilia (attain, reach)
shind+a --> shinda (press)   shind+LILI+a --> shindilia (ram)
pig+a --> piga (beat)   pig+LILI+a --> pigilia (pound)
on+a --> ona (see)   on+LILI+a --> onelea (scorn, despise)
og+a --> oga (bathe)   og+LILI+a --> ogelea (swim)
wek+a --> weka (place)   wek+LILI+a --> wekelea (preserve)
end+a --> enda (go)   end+LILI+a --> endelea (progress)

Vowel Ending in Base Formative

pa+a --> paa (clean/scrape)   pa+LILI+a --> palilia (pile/heap)
ti+a -->tia (put)   ti+LILI+a --> tililia (poke)

The semantic uses of the two verbids are distinct and often without any correspondence. This leads us to postulate a rule such as the following:

Rule J.   Derivational formatives which are distinct in meaning cannot undergo reduplication. Only formatives of the same meaning may reduplicate.

This implies that, for example, pig- (strike), -li- (cry) etc., may reduplicate, as in piga.piga (strike gently), lia.lia (cry gently) etc. It also means that if a form cannot reduplicate, it is either barred by the grammar from doing so, or else the resulting meaning would be distinct from its base and so the reduplication is barred. From the point of view of meaning, the data (15) has meanings which are at variance with those in (14). As a result, semantic reduplication is barred and, so too the reduplication of morphemic suffixes. We assume also that when a base formative (stem) of a word reduplicates, this means that it is treated like prefix reduplication rather than suffix reduplication. We shall address these morpho-syntactic constraints in 3.0.

The semantic criterion suggests that the progressive form is a morpheme in its own right. This view is implicitly supported by Hurskainen (1992: 100). The writer suggests that,

"It is clear, however, that it is not useful to handle all verb forms as derivations from the basic verb root, so that only the basic roots are included in the sub-lexicon of the verb roots. Some roots are so productive that verb stems with quite specific meanings are derived from them, e.g.

(18)   enda 'go' > endelea 'proceed' (double applicative)
       ona 'see' > onea 'bully' (applicative)

These are cases where the derived verb stem should be entered as such in the sub-lexicon of verb roots, although in other cases the applicative is handled as a separate suffix (c.f. Khamisi 1988: 63-68; Mukama 1978: 26-34)."

Further on, in reference to the conversive or reversive, Hurskainen suggests that "predictable meanings" should be treated as derived from the base formative while, as with the applicative, "specific meanings should be entered with the conversive stem" (p. 100). Meaning by itself is not always the most empirical guide as to how forms should be entered into the lexicon, especially in the face of phonological and syntactic constraints, in our view. However, our own work in this section corroborates the general recognition that some verbids have meanings which are distinct from those of the suffixes they are supposed to be derived form. We also argued in 2.1 for the direct entry of micro-verbs into the lexicon.

2.2.1 Allomorphy and Meaning Distinctiveness II

The morphological distinctions made in 2.2 can be tested with predication-sentences. Consider, therefore, the syntax of the following predication sentences:

(16) Mtoto alipiga sakafu (the child beat the floor)
(17) Mtoto alimpigia sakafu mwalimu (the child beat the floor for the teacher)
(18) Mtoto alipigilia sakafu (the child pounded (threshed) the floor)
(19) Mtoto alimpigilia sakafu mwalimu (the child pounded/threshed the floor on behalf of the teacher)

In the first place, we may observe that the distinction between applicative pigia (strike at) and the progressive pigilia (pound), for example, involves not just a movement in a direction towards or away from a target or theme, but it implies, for the progressive, curiously a process I wish to call 'Theme/Patient Homing' by the agent of the p-item. This involves homing in on the theme or patient or target or object or victim. The concept underlying this homing activity may be called 'Agent's goal of action'. This may also be viewed as agent-malefactive. The applicative also invariably implies 'Agent's goal of action' plus or minus a beneficiary/recipient. Agent's goal is quite self-evident in locative structures such as data (4) and (5) above.[7] The datum (16) contains the simple predicate item 'piga' (beat, hit etc.) with A1 --> mtoto, A2 --> sakafu. In the datum (17), the p-verb is 'pigia'. It has the applicative d-affix /li/ which implies the beneficiary of the action, on the one hand, and the 'agent's goal of the action', which means to do a service for someone, on the other hand. The theme or patient or target of the action is sakafu (floor). The relational matrix is A1 --> mtoto, A2 --> sakafu, A3 --> mwalimu, where A3 is the benefactive. Agent's goal is encoded in pigia itself, so that we may recognize a role, PURPOSE, as underlying the verbid [li]. The datum (18) has the d-affix /lili/ with A1 --> mtoto, A2 --> sakafu. In (16), sakafu is the theme or patient. In (18), sakafu is still the theme, but there is no beneficiary. 'Agent's goal of the action' is directed at the theme, and so only theme-homing takes place. For this reason the progressive also implies "intensive and decisive action". There is, therefore, an implied obsessive desire 'to flog a dead horse' which, it seems, is the proper function of the progressive. This is what is implied by the datum (19), where agent's goal is directed at the theme and not the beneficiary/recipient.

The obsessive goal of the progressive is evident in 'onea' cited by Hurskainen (c.f. supra). I suggest that, one of the underlying senses should be rendered as something like "to feel against", with an S-structure contextual specialization called Fixed Formula by Whiteley (1974), in which 'feel' has a

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[7]   The explanation has been taken from data gathered between 1976-1978 with Bw. A.A.M. Shareef and Bw. U.A.H. Turuka. This has been confirmed recently by Bw. A.Y. Lodhi. When non-animates are subject of the verb, the forms present difficulties of interpretation.

specialized sub-sense of 'ill-will' (c.f. Johnson 1939: 353). Consider, therefore, the example from Johnson (1939), "Wale ndugu wakamwonea ndugu yao, and those brothers bullied their younger brother". Wale ndugu is the agent, ndugu yao is both the theme and the indirect benefactive. It is as an indirect beneficiary of the ill-feeling implied by onea which results in bullying, persecution, etc. There is no agent's goal, and hence no deliberate theme-homing or bashing. Now consider the role of onelea in "Wale ndugu wakamwonelea ndugu yao, those brothers manhandled their younger brother". The landing ground of the manhandling is the younger brother because the progressive macro-verb onelea, implies that agent's goal is directed at the theme/patient rather than the benefactive (overt or implicit). It seems evident that (18) and (19) come directly from piga in (16) and not from pigia (17). In the same way, onelea comes directly form ona in (15) and not from onea. Others examples are the data (4-5), repeated below.

(4) Angaenda juu kipungu hafik<u>i</u>i mbinguni (Although the eagle may fly high, <u>it does not get to</u> the sky)

(5) Angaenda juu kipungu hafik<u>i</u>lii mbinguni (Although the eagle may fly high it <u>cannot touch</u> the sky)

In the datum (4), the applicative phrase fikia mbinguni (to get to the sky) implies that the agent's goal of flying is solely and exclusively to get near the target, or theme, but not to touch it. The agent is the indirect benefactive. In the datum (5), the progressive phrase, fikilia mbinguni (touch the sky, reach the sky) implies 'theme homing'. Bw. Shareef explains that if one conceives of the sky as a type of roof against which he can knock, 'ng'o! ng'o!' ng'o!, then the predication-sentence (5) would make sense. This is perhaps the reason why (5) has become an aphorism in the language.

Another set of data is the following:
(20)   Mtoto ali(pa)kwenda mjini (the child went to town)
(21)   Mtoto ali(i)endea njia hii (the child went by this road)
(22)   Mtoto alimwendea mwalimu (the child went up to the teacher)
?(23)   Mtoto ali(i)endelea njia hii (the child went on/along this road)
*(24)   Mtoto alimwendelea mwalimu (the child went on/along the teacher)
(25)   Mtoto aliendelea na masomo yake (the child went on with his studies)

The data (20-22) are structurally alike, with 'mtoto' at A1 and 'mjini, njia hii, and mwalimu' all at A2. The idea of movement varies. In (20), there is no specific purpose for going home. In (21-22), no implicit beneficiary is implied but purpose of agent occurs. That is, the child could have taken a different road to wherever he was going but chose a particular path for a particular purpose;

and the child went to the teacher not for the sake of it but for a specific purpose, such as to discuss his homework, or he had done something wrong and went to apologize, or the teacher summoned him to his presence, etc. In (23), and (25), theme-homing is possible with the progressive either with or without na-support. Further evidence of the source of endelea as deriving form (20) can be seen in the occurrence of na-support with the base in parallel with the verbid in (26-27) but not (28):

(26)   Mtoto alikwenda na mwalimu wake (the child went with his teacher)
(27)   Mtoto aliendelea na mwalimu wake (the child went on/proceeded with his teacher)
*28)   Mtoto aliendea na njia hii/mwalimu wake (the child went by this road/with his teacher)

The structural constraints of the syntax go hand in hand with the differentiation in meaning between applicative and progressive. This suggests a rule K.

Rule K.   A reduplicated morpheme will be subject to exactly the same syntactic constraints as its parent form, unless it is, otherwise, lexicalised as a distinct morpheme.

The above rule allows for meaning differentiation between a parent form and a reduplicated form, if the latter is not barred by the grammar; but the grammar bars variations in syntactic function between the parent and the reduplicated in such cases.

The syntactic constraints suggested require further study. The caveat does not, however, destroy the hypothesis of this section or our claims.

3.0 PHONOLOGICAL AND MORPHO-SYNTACTIC BARRIERS TO REDUPLICATION

There are, in linguistic theory two key derivational arguments against the recognition of reduplicated applicative suffixes in Kiswahili and in favour of a progressive verbid in the grammar. The first of these, we shall call the 'Derivational Mirror-Image Constraint' and the second, we shall call the 'Sequential Derivational Constraint'.

3.1 THE DERIVATIONAL MIRROR-IMAGE CONSTRAINT

Let us take [t] as the phonological realisation of some morphemes A, B, etc. If we apply this to Kiswahili d-affixes we get a rule L,

Rule L.   If A --> [t_i] and B --> [t_j], then [t_i] and [t_j] are mirror images of [t]. But A -/-> B and vice versa.

The rule L states that any two or more morpheme suffixes may be realised by the same phoneme or allophones of a phoneme but the morphemes remain, nevertheless, distinct and non-interchangeable. We find in Kiswahili the following forms of predicate items (verbs):

A ==> #w# passive d-affix or verbid
(29)   pig+w+a 'be beaten'   (> passive of piga 'beat')
(30)   pik+w+a 'be cooked'   (> passive of pika 'cook').

B ==> #w# (<#U#) reversive d-affix or verbid
(31)   ch+w+a 'set' of sun   (> reversive of cha 'rise')
(32)   ny+w+a 'drink'   (> reversive of nya 'drop' like rain)

In the data above, both the passive and the reversive can be realised in certain (but by no means all) environments as a bilabial glide approximant [w]. Whereas labialization is the result of sound change in the reversive d-morpheme verbid, it is only accidental in the passive d-morpheme verbid. The labial realisations are mirror images of passive and reversive morpheme suffixes, but passive morpheme verbid is not the same as the reversive morpheme verbid. Furthermore, the two are not interchangeable, and their meanings are distinct. Significantly, however, it would be patently absurd to argue that the 'passive' verbid is **a labialised form** of the 'reversive' affix verbid, or vice-versa, the reversive is a labialised form of the passive affix verbid. At all events, even if, historically, the two originate from a common source, they are distinct today in meaning and function in the synchronic grammar. This is what we have argued in favour of in 2.2 with reference to the applicative and the so-called reduplicated applicative. It follows that even though the applicative #LI# and progressive #LILI# may realise similar phonological forms, they are, in such cases, only exhibiting mirror image characteristics due to sound change but are not the same morpheme, the same verbid, or even extensions of the same morphemes and verbids.

3.2 THE SEQUENTIAL DERIVATIONAL CONSTRAINT

Our arguments against the reduplication hypothesis supposes that the same derivational suffix could not follow one on the heels of the other in Kiswahili grammar. We call this 'The Sequential Derivational Constraint'. The constraints we have found in Kiswahili may be stated by rule as M.

Rule M.
(i)   P --> P+p...o --> Ppo
         E.g. PIG --> pig+a --> piga 'hit'
(ii)   P --> P+p..(1, 2, 3, ..n)..o --> Pp1o, Pp2o, Pp12o etc.
         E.g. PIG --> pig+LI+a --> pigia, pig+w+a --> pigwa, pig+LI+w+a --> pigiwa, etc.
(iii)   *P --> P+pn..(n1, n2, n3, ..)..o --> Ppnn1o, etc.
         E.g. *PIG --> pig+w+w+a --> ?, pig+an+an+a --> ?, pig+LI+LI+a -->?

The rule (M.i) states that a predicate formative *P* becomes a predicate item by the addition of a predicate suffix *p* which, in the indicative form of the modalic, is an affix *o*. (M.ii) states that derived forms of *Ppo* can be formed by the addition of other *p-affixes* labelled 1, 2, etc. Combinations of these are permitted by the rules. (M.iii), however, states that no two consecutive *p* can be the same or have the same value. For this reason, *Ppnn1o* is barred. This means that no d-affix verbid can repeat itself or modify itself. An affix may only modify another form distinct from itself. This rule corroborates the findings of Bauer (1983: 67-71). Bauer has observed that recursiveness is a major feature of derivation and word-formation (c.f. also Lyons 1977, vol. 1). But more significantly for our claim, Bauer (1983: 70, 92), has observed that suffixes cannot be reduplicated, (probably because of their clumsiness?), in the same way that some prefixes are reduplicated in some languages. Most of the examples he gives of this principle come from English. In this language, Bauer is emphatic: ".... in English no suffix can be added to a base that already ends in the same suffix; " (p. 92). Examples of these from Bauer are *joy.ful.ful, *helpless.ness.ness, *duke.dom.dom. In Kiswahili, we have also claimed (c.f. Amidu 1993b) and still claim that derivational suffixes never reduplicate, but prefixes commonly reduplicate. Examples of reduplicated prefixes are numerous in the pronoun and demonstrative systems, such as class 8, VI-, vi.vi (these ones), class 17 -NI, pa.pa (right here), class 5 JI- li.li (this one), class 6 MA-ya.ya (these ones), etc. We add to these, formatives used like prefixes, e.g. lia.lia (whimper), piga.piga (hit lightly).

    If we look at the rule M once more, we discover that the entire Kiswahili predicate item or verbal derivational system bars suffix reduplication. It holds

true of all p-item derivational verbids, including the process of predicatization referred to in Amidu (1993a: 2-6). The reduplicated verbids, especially reduplicated applicatives in Kiswahili, therefore, violate an important linguistic empirical rule of the derivational phonology, morphology, and semantics, which is barred in other languages of the world also. Recursivity of any affix, if it does take place, occurs alternately and not consecutively. Theoretically, this means that a derivation Pp1+2+1+2+1 or Pp1+2+1+3+1 is possible (even though none has been attested in Kiswahili antecedent usage yet), in addition to the more usual forms found in antecedent usage such as (M.ii) Pp1+2+3+4+o. The data (33) and (34) illustrate the usual pattern of recursiveness.[8] The predicate stems involved are {piganishia}, and {piganishiwa}. They are analyzed below.

(33)   Mpishi alimpiganishia watoto mfalme
        (the cook made the children fight each other for the king)

Structure of Derivation of {piganishia}:
({ F {pig} + associative {an} + causative {sh} + applicative {li} + indicative {a}})
              1   2   3   o

(34)   Mfalme alipiganishiwa watoto na mpishi
        (the children were made to fight each other for the king by the cook)

Structure of Derivation of {piganishiwa}:
({ F {pig} + associative {an} + causative {sh} + applicative {li} + passive {w} + indicative {a}})
              1   2   3   4   o

The reduplicated applicative or prepositional claim has no 'locus standi'. All forms of #LILI#, or old #ILI#, refer to a PROGRESSIVE verbid in Kiswahili, and perhaps, in Bantu grammars.

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[8] Datum (20) is an example of the problems faced by the central/core argument structure claims of modern grammars. Put a noun of the same class as watoto, such as wafalme (kings), in place of mfalme (a king). We get, 'Mpishi aliwapiganishia watoto wafalme' (the cook made the children/the kings to fight each other for the kings/the children). It is ambiguous. All that can be said is that if one argument is the benefactive/recipient/experiencer, then the other will be the theme and direct object, and vice-versa. One cannot be definitive about NP positions, or about central/core versus marginal/indirect arguments on the strength of the applicative marker or predicate type. We see why a surface structure semantics of theta and argument structure is not always attractive. I presented a paper on this question at the International Seminar held in Trondheim in August, this year, 1994.

4.0 CONCLUSION

There may well have been a full form of the applicative in the form of #LILI# in protoBantu which has developed several allomorphs in the language. But this cannot of itself serve as proof of the existence of a double applicative in Bantu. In much the same way, other so-called double forms may not really be cases of doubling, but may be full forms of the morphemic verbid with several allomorphs occurring in various environments. We also know that many of the so-called double causatives are in fact really the result of an intermediate stative and not the result of reduplication (cf. Amidu 1993a). In this paper, we have hypothesized that one of the allomorphs of the full applicative in protoBantu, has become a distinctive morphemic verbid in the synchronic system. We have named it the **'PROGRESSIVE VERBID'**. Even though a common historical genesis of the applicative and progressive is probable, we maintain that, synchronically, there are several underlying grammatical constraints such as the 'a-within-a' constraint, and others, which taken together support our hypothesis that, within our framework of linguistic empirical grammar, Kiswahili distinguishes between an applicative verbid derivational suffix, and a progressive verbid derivational suffix in its grammar. Finally, we think that, as a general rule, verbids should be stated as having a CV-structure, in both underlying and surface forms, because we believe that non-phonemic tactic systems are not admitted randomly in a grammar. We, therefore, assume that the use of VC structures to represent derivational morphemes is an omission. It is not a problem in the grammar of Kiswahili and Bantu.

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