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Los Angeles

Proto Niger-Congo verb extensions.

A dissertation submitted in partial satisfaction of the requirements for the degree Doctor of Philosophy in Linguistics

by

Erhard Friedrich Karl Voeltz

1977
The dissertation of Erhard Friedrich Karl Voeltz is approved.

Victoria A. Fromkin

Christopher Ehret

Talmy Givón, Committee Chairman

University of California, Los Angeles

1977
For Jennifer Marie, Ralston Ezell, Gia Kaarina and ...
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PUBLICATIONS


ABSTRACT OF THE DISSERTATION

Proto Niger-Congo verb extensions

by

Erhard Friedrich Karl Voeltz
Doctor of Philosophy in Linguistics
University of California, Los Angeles, 1977
Professor Talmy Givon, Chairman

This study is a first attempt to reconstruct verb extensions for Proto Niger-Congo. Evidence both from within Niger-Congo and from outside, i.e. Kordofanian, is presented for the reconstruction of ten different verb extensions thought to be productive in the proto language: *DE APPLIED, *CI CAUSATIVE₁, *TI CAUSATIVE₂, *TA CONTACTIVE, *O PASSIVE, *NA RECIPROCAL, *TO REVERSIVE, *KO REVERSIVE-stative, *KE STATIVE₁, and *MA STATIVE₂. In so doing, the dissertation presents counterevidence to the standard view that verb extensions found in presently spoken languages arose as the result of the morphologization of complementizing verbs. The study is concluded with an examination of some of the factors influencing the loss of verb extensions. Specifically two, unrelated, areal features are identified: The pervasive reduction of polysyllabic words to monosyllables (causing the loss of both verb extensions and noun class prefixes) and the ever increasing use of serialization, replacing the semantic force of verb extensions.
Il n'est sans doute pas une seule langue negro-africaine dans laquelle on ne retrouve point, à un degré plus ou moins apparent, sous une forme ou sous une autre, des traces de classes nominales. Delafosse 1924:469.

If we understand langue negro-africaine to mean any Niger-Congo, or even Niger-Kordofanian, language, this statement, while most powerful, is clearly true. Precisely the same statement can be made about verb extensions, though the statement could be mellowed somewhat by saying:
Il n'est sans doute pas un seul groupe Niger-Kordofanian dans lequel on ne retrouve point, à un degré plus ou moins apparent, sous une forme ou sous une autre, des traces de extensions verbales.

The present study is a first attempt at demonstrating this point. It addresses itself to three specific issues all of which have been raised in the recent literature and all of which are intimately related:

1. The probable existence of verb extensions in Niger-Congo.

2. The levelling off of verb extensions in nearly all Niger-Congo languages.

3. The possible innovation of a number of extensions in Bantu, specifically the eastern branch.

While arguments will be presented to show that at least ten different extensions were operative in Niger-Congo, some of them even in Niger-Kordofanian, it falls short in accounting for the considerable variety of extensions found in the descendent languages in entirety.

The impetus for this study is the work of T. Givon (1971 & 1975). It was conducted with the conviction that Niger-Congo was much more like Bantu than it was like Kwa.
CHAPTER 1

Introduction.

By a relatively regular and highly productive process, Bantu languages permit the formation of new verbs from verb stems by the addition of certain suffixes, here called \textit{extensions}. The number and nature of these extensions varies from language to language, but falls generally into the pattern exemplified by the data from Swahili under (1).

(1)\begin{itemize}
\item a. funga fasten, bind \textit{Passive} fungwa be fastened
\item b. Applied fungia tie for (someone)
\item c. Stative fungika be closed
\item d. Causative fungisha cause to fasten
\item e. Reversive fungua open, untie
\item Reversive active funguka be open
\item g. Reciprocal fungana bind each other
\item h. Neuter fungana be in a fixed position
\end{itemize}

Bantuists differ on whether to consider \textit{Passive} an extension (e.g. Meinhof 1948 does not) or whether the perfect *\textit{le} might not also fit into this category, but they have assumed throughout that the verb extensions were clearly an integral part of Bantu languages in general and of Proto-Bantu in particular. The first Bantuist to treat the verb extensions comparatively was Torrend (1891). A few years later Meinhof reconstructed a series of verb extensions. Quoting from the 1948, 2nd edition of his comparative grammar, and adding the passive, Meinhof's reconstructions are given under (2).
(2)  *aka  hat intransitive Funktion und wechselt mit -eka.

*ala  mit medialer (neutroaktiver) Bedeutung findet nur beschrankte Anwendung.

*ama  bezeichnet das Einnehmen einer Stellung.

*ana  [hat] reziproke Bedeutung.

*afa  ist mehrfach belegt, ohne daß eine bestimmte Funktion allgemein nachgewiesen wäre.

*eka  [ist] als Intransitiv-Endung ganz allgemein.


*fa(ya)  Kausativendung.

*iwa  Passiv.

*ika  ist kausativ.

As with other reconstructions Meinhof proposed, one is not certain whether all of the above are intended as an inventory of Ur-Bantu extension or whether they constitute a typology of extensions that might occur in a Bantu language. This latter view is supported by such forms as *ika for which only data from two languages is given. Meinhof, furthermore, does not include any of the reversive forms in his discussion. This would be understandable if one's starting point were Zulu, where the reversives are fossilized for the most part, but if one considers Sotho, as Meinhof most certainly did¹, and the many other languages Meinhof cites, then this omission is difficult to explain. In fact, Meinhof's relatively brief discussion of the verb and verb extensions is somewhat surprising in view of his awowed interest² in focussing on the verb and verb forms in contrast to Bleek's and Torrend's preoccupation with nouns and noun class systems.

¹, ² cf. Meinhof (1895 & 1896)
Meeussen, like Meinhof, has attempted to reconstruct Proto Bantu. Of concern to our discussion are Meeussen's reconstructions of verbal extensions. Lokking just at the verb-to-verb processes, Meeussen distinguishes between expansions and deverbative suffixes. No clear distinction between the two is drawn, although he defines expansions as having "a structure |V(N)C-, in which V can be any vowel, although "e and "o are rare". (Meeussen 1967:89) Aside from also remarking on the similarity in form of the expansions |id-, |ik- and |am- and the deverbative suffixes {id}, {ik} and {am}, respectively, no further hint is provided for distinguishing the two categories. They are listed in parallel columns below:

(3)  

<table>
<thead>
<tr>
<th>Expansions</th>
<th>Deverbative Suffixes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>y-</td>
</tr>
<tr>
<td></td>
<td>im-</td>
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<tr>
<td></td>
<td>im- and</td>
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<tr>
<td></td>
<td>yn-</td>
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<tr>
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<td>ing-</td>
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<tr>
<td></td>
<td>ang</td>
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<td></td>
<td>ong-</td>
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<tr>
<td></td>
<td>ab-</td>
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<td>ag-</td>
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<td></td>
<td>ut-</td>
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<tr>
<td></td>
<td>ak-</td>
</tr>
<tr>
<td></td>
<td>id-</td>
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<tr>
<td></td>
<td>ik-</td>
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<tr>
<td></td>
<td>im-</td>
</tr>
<tr>
<td></td>
<td>at-</td>
</tr>
<tr>
<td></td>
<td>ud-</td>
</tr>
<tr>
<td></td>
<td>uk-</td>
</tr>
</tbody>
</table>

[abstracted from Meeussen 1967]
A putative difference between expansions and deverbative suffixes may be that the former are fossilized forms occurring in a large number of languages, whereas the latter are productive derivational affixes. In purely synchronic terms (and probably also historically) one might expect Meeussen's expansions to precede in their linear order any of the deverbative suffixes; furthermore, one would not expect to find more than a single expansions with a given stem, a possibility one need certainly recognize for deverbative suffixes.

Expansions and deverbative suffixes do, however, share some properties that may justify considering both of them as extensions. Specifically, both of them appear in second or third syllable position. They behave thereby as additions to the verb stem, which must be considered to have the canonical form -CV((N)C)-. What is of interest, then, is the possibility that the expansions are fossilized extensions (deverbative suffixes in Meeussen's terms). This possibility would justify distinguishing them at the Proto Bantu level, but would not support separating them at some deeper (historical) level. So far no convincing evidence has been found to support this possibility.

Meeussen also provides a tentative statement as to the possible order of cooccurring verb extensions, suggesting the following:

(4) (ad) a† am/ik, ud/uk an id | ü

Items separated by a slash (/) are assumed to be alternative forms occupying the same position. The function of the comma seems unclear. As to the validity of (4), it is easy enough to find counterexamples in present day Bantu languages. Consider, for example, the chart from Masiea (1970) in which the sequence of extensions allowed in Sotho is summarized:
(5) | APP | CAU | REC | NEU | EXT |
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLIED (-el-)</td>
<td>-</td>
<td>S</td>
<td>P</td>
<td>P</td>
<td>P</td>
</tr>
<tr>
<td>CAUSATIVE (-is-)</td>
<td>P</td>
<td>-</td>
<td>P</td>
<td>P</td>
<td>P</td>
</tr>
<tr>
<td>RECIPROCAL (-an-)</td>
<td>S</td>
<td>S</td>
<td>-</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>NEUTER (-eh-)</td>
<td>P</td>
<td>S</td>
<td>S</td>
<td>-</td>
<td>P</td>
</tr>
<tr>
<td>EXTENSIVE (-ak-)</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>-</td>
</tr>
</tbody>
</table>

On the assumption that the Proto Bantu meanings are preserved in the Sotho reflexes, the CAUSATIVE alone goes directly against (4) in that it precedes all other extensions cited, whereas it should follow them. Similarly, the APPLIED precedes the RECIPROCAL and the EXTENSIVE, where, according to (4), one would expect it to succeed all but the CAUSATIVE.

As Bleek (1862) and Meinhof (1899) marked milestones in African linguistics, so does the work of Guthrie (1967-71) present a crucial stepping stone in our understanding of Bantu, or Bantoid, or even Niger-Congo. And, as in all other areas, Guthrie's discussion of verb extensions is both far-reaching and conservative. It is far-reaching in presenting data from a vast number of languages and because of the highly detailed discussion that accompanies each reconstruction. It is conservative in that he is (as always) hesitant to posit any of his reconstructions as PB-X forms:

"Since evidence for the existence of complex radicals [i.e. radicals with extensions] is slight, the results of this investigation about extension elements in Proto-Bantu can be shown in reference to PB-X₂ only." (vol. 1:92)
Guthrie brings to bear two types of evidence in reconstructing extensions for Bantu. Firstly, he considers data, such as is cited under (1), from a large number of languages in which a *simplex*, -CV(N)C-, stem occurs which is matched by a form which is enlarged by a -VC- extension. An example of this would be *kỳnd- bury and *kỳndud- disinter. Secondly, he abstracts extensions from complex reconstructions, with the canonical shape -CV(N)CV(N)C-, by suggesting that the underlined segments constitute an extension. An example of this would be *bândam-crouch which does not have a simplex counterpart *bând-. Using a complex and ill-motivated argument, Guthrie concludes that one can deduce four different kinds of extensions from these two types of evidence:

(6) i. Extensions abstracted from a complex radical, where both the simplex and the complex have the same meaning, e.g., *gàb-, *gàbud- divide.

ii.a. Extensions abstracted from complex radicals, e.g., *dùdam- become straight.

ii.b. Extensions abstracted from two or more complex radicals, which share meanings but differ in their extended form e.g., *yìtab-, *yìvik- answer a call.

iii. Extensions abstracted from complex radicals with matching simplex radicals with connected meaning, e.g., *dî+t- tie/ *dî+ud- untie.

iv. Extensions abstracted from several complex radicals with connected meanings, but without a simplex counterpart, e.g., *dîk- clothe, *dûd- undress, *dûd- wear.

In the present discussion the distinctions made in (6) are considered to be largely superfluous. We have considered it important to abstract from Guthrie's reconstructions those complex radicals which had general distributions and could therefore be judged to be Proto-Bantu. These are listed under (7). We also combined all extensions from each of the types under (6). These are given under (8). In all cases, the orthographic conventions used by Guthrie are followed.
(8) BANTU VERB EXTENSIONS (abstracted from Guthrie 1967-71)

<table>
<thead>
<tr>
<th>Comparative series</th>
<th>Regular Extensions Proto-Bantu</th>
<th>Distribution</th>
<th>C.S. #</th>
</tr>
</thead>
<tbody>
<tr>
<td>ab</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ad [act]</td>
<td></td>
<td>PB-B</td>
<td></td>
</tr>
<tr>
<td>ad [neut] neuter</td>
<td></td>
<td>PB-X</td>
<td></td>
</tr>
<tr>
<td>adad</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ag</td>
<td>AG tense marker</td>
<td></td>
<td>[2184]</td>
</tr>
<tr>
<td>am neuter</td>
<td></td>
<td></td>
<td>[2184a]</td>
</tr>
<tr>
<td>am/(ik)</td>
<td>AM/(EK) neuter/(active)</td>
<td>PB-X</td>
<td></td>
</tr>
<tr>
<td>an [act]</td>
<td></td>
<td></td>
<td>[2186]</td>
</tr>
<tr>
<td>an [neut] neuter</td>
<td></td>
<td></td>
<td>[2185]</td>
</tr>
<tr>
<td>an reciprocal</td>
<td>AN reciprocal</td>
<td>PB-X</td>
<td></td>
</tr>
<tr>
<td>ang</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>at [contactive]</td>
<td></td>
<td>PB-X</td>
<td></td>
</tr>
<tr>
<td>i [act]</td>
<td></td>
<td>PB-B</td>
<td></td>
</tr>
<tr>
<td>i causeative</td>
<td>I causeative</td>
<td>PB-B</td>
<td>[2193]</td>
</tr>
<tr>
<td>i [neut]</td>
<td></td>
<td>PB-B</td>
<td></td>
</tr>
<tr>
<td>ic causeative</td>
<td></td>
<td></td>
<td>[2187y]</td>
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<tr>
<td>j</td>
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<td>iing</td>
<td>i causeative</td>
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<tr>
<td>lc causeative</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>id [act]</td>
<td>ED directive</td>
<td>PB-X</td>
<td>[2188]</td>
</tr>
<tr>
<td>id [neut]</td>
<td></td>
<td>PB-B</td>
<td></td>
</tr>
<tr>
<td>idid [act]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>idid [neut]</td>
<td>EDED persistent</td>
<td>PB-B</td>
<td>[2189]</td>
</tr>
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</table>

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(8) contd.

<table>
<thead>
<tr>
<th>Comparative series</th>
<th>Regular Extensions</th>
<th>Distribution</th>
<th>C.S. #</th>
</tr>
</thead>
<tbody>
<tr>
<td>ik [act]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ik causative</td>
<td></td>
<td>[2191]</td>
<td></td>
</tr>
<tr>
<td>ik neuter / potential EK neuter</td>
<td>PB-X₂</td>
<td>[2190]</td>
<td></td>
</tr>
<tr>
<td>ik/(am) active/(neuter)</td>
<td></td>
<td>[2191b]</td>
<td></td>
</tr>
<tr>
<td>ikį causative</td>
<td></td>
<td>[2191a]</td>
<td></td>
</tr>
<tr>
<td>ikį intensive</td>
<td></td>
<td>[2192]</td>
<td></td>
</tr>
<tr>
<td>ikid</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>in</td>
<td></td>
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<tr>
<td>ip</td>
<td>PB-B</td>
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<td></td>
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<tr>
<td>it</td>
<td>PB-X</td>
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<tr>
<td>ły [act]</td>
<td>PB-X</td>
<td></td>
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</tr>
<tr>
<td>u [neut]</td>
<td>PB-X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>u passive</td>
<td>O passive</td>
<td>PB-X₂</td>
<td>[2194]</td>
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<tr>
<td>ub</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ud [act]</td>
<td>PB-X₂</td>
<td></td>
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</tr>
<tr>
<td>ud [neut]</td>
<td>PB-X</td>
<td></td>
<td></td>
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<tr>
<td>ud reversing-active OD reversing-active</td>
<td>[2195]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ud/(ik) reversing-active/(neuter)</td>
<td>[2195b]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>uudud reiterative</td>
<td>[2196]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>uudud reversing-active</td>
<td>[2195a]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>uduk reversing-neuter</td>
<td>[2197a]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>uduk/(udud) neuter/(active)</td>
<td>[2197c]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
By the time of the publication of volume two (1971), Guthrie lists the following as probable PB-X verb extensions:

*AN  reciprocal  
*EC  causative  
*ED  directive  
*EK  neuter  
(\*O  passive)  
*OD/OK  reversive-active/reversive-neuter (p.9)

In the same volume he also draws attention to the parallel occurrence of verb extensions in Temne (West Atlantic), while hesitating to conclude that the forms are cognate: əґ : *ED; ə̆ : *EC; ə : *EK; ən : *AN. That this evidence supports his reconstructions for PB-X is not considered.
The overwhelming view that Guthrie seems to be pushing is a pre-ProtoBantu language with a large number of complex radicals--those listed under (7) being only a small sample--from which in Proto-Bantu a number of extensions developed:

"At this point however, the provisional conclusion can be reached that extension elements were probably present in Proto-Bantu X as an integral part of a certain number of complex radicals, but only incipiently as extensions." (vol. 1:88)

The possibility that the reverse might be true, where in PB-X we already have a large number of fossilized extensions along with admittedly fewer productive ones, is not considered. Nor did Guthrie, anymore than Meinhof or Meeussen, consider data from outside of narrow Bantu. Guthrie simply goes further--perhaps because of his stringent methodology which discounts the possibility of semantic change--in overdifferentiating extensions in several cases. Like Meeussen, Guthrie did not collapse phonological identical extensions with different meanings into a single one with variant meanings. It is clear from synchronic evidence from present day languages that each of the extensions had a number of meanings. The reflex of *-ED- directive, for example, has typically a number of meanings, many of which are determined by the verb to which it is attached and the object(s) with which it occurs. The phrases cited under (9) speak to this point. The data, from Swahili, clearly demonstrates that i-a/e-a (via vowel harmony from *-ED-A) is a singular extension with multiple meanings. We have every reason to believe that the situation in Proto Bantu was not too different from the one here outlined (see the discussion under Dammann & Kühler-Meyer below).
(9) i. **BENEFACTIVE**

wameleta mizigo yetu  *they brought our loads*
wametuletea mizigo yetu  *they brought our loads for us*

ii. **PURPOSE**

ninataki kisu  *I want the knife*
ninakita kikata nguo hii  *I want it to cut this staff*

iii. **LOCATIVE**

mbegu zika anguka  *the seeds fell*
mbegu zika angukia njani  *the seeds fell to the ground*

iv. **OBJECT** the **GOAL**

tazama  *look, look at*
tazamia  *look for*

v. **ACTIVE**

simama  *stand*
simamia  *stand by, watch over*

vi. **REFLEXIVE**

kimejipolea  *it has healed itself*

vii. *etc.*

It seems clear, therefore, that the multiple occurrences of ad, ad, j, id, ik, u, ud, and uk are all reflexes of common historical forms.

One final point of agreement between Guthrie and Meeussen should be mentioned. It is perhaps selfevident that Meeussen's expansions are identical with those extensions which Guthrie abstracted from his types 6.i., 6.ii. and 6.iii.. Guthrie simply has a few more. Meinhof, on the other hand, did not make this distinction, nor did his successors Kähler-Meyer or Dammann.

Perhaps the most extensive comparative treatment of the semantics of the extensions is provided by Dammann in a series of articles published in the 50's and 60's (see bibliography). Surveying the Bantu literature,
Dammann and Kahler-Meyer are the first to draw attention to the multiplicity of meaning of individual verb extensions while at the same time delimiting the scope of others to which identical semantic labels had been attached. Of specific interest here is Dammann's distinguishing Meinhof's *ika* and *ta* (cf. 2. above) by considering the former to be a direct causative while the latter is indirect:

Bei den Formen -eka bzw. -ika veranlaßt das Subjekt durch sein eigenes Handeln den gewünschten Zustand oder Vorgang; bei den mit B. *q* gebildeten Kausativa kann dies durch ein Medium erfolgen.

In many languages this distinction is, of course, no longer discernible.

The most extensive and complete discussion and analysis of a single extension is presented by Givon (1972) for the CAUSATIVE in Bemba. The significance of Givon's work lies in his providing a typology of verbs which can take a causative extension and a syntactic and semantic configuration of the resultant sentence. Regrettably only non-extended verbs are included and no mention is made of verbs which can not take the CAUSATIVE.³

In the by now most widely accepted classification of the Bantu languages by Heine (1973) it is suggested that the extensions listed under (11) are restricted to branch 11 (Kongo-Zweig):

![Table]

³Dammann, E. *Studien zum Kwangali*. Hamburg. p. 73.
⁴This gap is filled by a subsequent paper by Givon in which these issues are discussed in detail: T. Givon. 1975. Some constraints on Bantu causativization. *Syntax and semantics*, vol. 6. 325-51.
Evidence such as is cited under (11) if found to be correct would constitute an innovation for branch 11 and, with other considerations, would confirm its validity as a true historical split. Heine, however, rests his observations only on internal Bantu evidence. In fact, he cites Guthrie (1967-71) as the authority for this observation. It appears from the evidence here considered that his observation may hold for those extensions cited under (11.b). Those under (11.a) will be found to be productive extensions throughout Niger-Congo.

Furthermore, if the PASSIVF is separated into the two forms, *u and *ibu, only the latter of the two is restricted to eastern Bantu. *u is a reflex of Niger-Congo *O. *ibu clearly seems to be a Bantu internal development, though the details of its source and reflexes are far from settled.

Only Meeussen has discussed the tone of the Proto Bantu verb extensions (Meeussen 1961). He suggests very clearly that the tone of the extension is predictable from the tone of the verb to which it is attached and from the following environment. There seems to be little doubt about the correctness of this position. Tone is therefore of no consequence to the further discussion at hand; since no information is available on the tonal behavior of extensions outside of Bantu the issue will receive no additional discussion.
CHAPTER 2

The Givon hypothesis.

Among the most popular and most widely discussed theory of word formation is the hypothesis that complex predicates are derived from an abstract series of atomic predicates. This proposal, roughly called the higher verb hypothesis, was first explicited by Lakoff (1965) and has since been developed into a new paradigm, generative semantics.

The notion that morphological affixes are derived either synchronically or diachronically from more abstract autonomous semantic units is, of course, not new to generative grammar. This view can readily be traced to Plato's Cratylus, and even he, no doubt, had his predecessors. In comparative linguistics, however, it is Bopp (1816) who is generally credited with first making the particular proposal that isolating languages become agglutinating ones, and so on. Specifically, Bopp can be credited with two suggestions: i. In the IE proto language atomic semantic (units) were represented by separate morphemes/words. ii. IE verb inflections are derived from pronouns and from forms of the copula. (cf. Kiparsky 1974 for a recent discussion of Bopp's views.)

In the African context, as early as 1876, Karl Endemann suggested that in Sotho

Die Species-Endungen sind sämtlich Verben, deren selbstständiger Gebrauch aber zum grossen Theil erloschen ist. [The verb extensions are wholly verbs whose independent use has, for the most part, disappeared.] (Endemann 1876.61)

He goes on by suggesting that the causative form in Sotho can still be related to the active verb go:

Die Endungen ŋa (=gehen) and iša (=gehen machen, zum gehen veranlassen) sind causativ, und zwar erstere direct, letztere meist indirect. [The ending ŋa (=go) and iša (=make go, have go) are causative, where the former is direct [causation] and the latter is mostly indirect.] (Endemann 1876.62)
This very Boppian suggests it fails to explain the origin of ša in iša, and therefore cannot relate ša and iša. A similar question might be asked Bopp: Where did the inflections of the copula come from?

Independent of Bopp or Endemann, and totally independent of Meinhof, Meeussen or Guthrie, with the likely influence of Lakoff (1965), Givon (1971 & 1975) proposed a possible historical source for the Bantu verb extensions in suggesting that all but the reciprocal suffix are derived from historical verbs.

The Givon hypothesis involves two parts which we have summarized in their relative chronological order as follows:

A. In the pre-Bantu period the precursor language had SOV word order with the complement sentence, as expected, to the left of the verb in the higher sentence. The present Bantu verb extensions developed when the verb in the higher sentence became affixed to the verb of the lower sentence as presented schematically in (11):

\[
(11) \quad [S \, NP_1 \, [NP \, [S \, NP_2 \, (NP) \, V_2 \, S] \, NP] \, V_1 \, S] \quad \text{STAGE 1}
\]

\[
[S \, NP_1 \, NP_2 \, (NP) \, V_2 + \, V_1 \, S] \quad \text{STAGE 2}
\]

\[
[S \, NP_1 \, \mid \, NP_2 \, (NP) \, [V \, V_2 - \text{EXT} \, v] \, S] \quad \text{STAGE 3}
\]

Throughout this period of development SOV order was maintained. In STAGE 1 true complement structure was maintained. In STAGE 2 the structure was very likely a serial one in which a number of verbs were permitted in a given simplex string. By STAGE 3 the former higher verb, V₁, had become fused to the lower verb, where it continues to act, in some cases, as a productive derivational suffix. The extensions for which this particular proposal appears to have been made include the
following: -il-, -ik-, -ul-, -i-, -am-, -al-, -at-, -ip-, -ju-, and -i-e. The reciprocal extension, -an-, was singled out as probably having a different etymology. (For a discussion of the Perfect -i-e see below.)

B. In the Proto-Bantu period (and later) the precursor language had shifted to an SVO word order. It is during this period and probably still at present that the higher verb developed into the Tense-Aspect (TA) system found in the various Bantu languages. This development is sketched in (12):

(12) \[ \begin{array}{l}
\text{STAGE 4} \\
[S \ NP_1 \ V_1 \ [\text{NP} \ [S \ NP_2 \ V_2 \ (NP) \ S] \ NP] \ S] \\
[S \ NP_1 \ V_1 \ ? \ V_2 \ (NP) \ S] \\
[S \ NP_1 \ TA \ + \ V_2 \ (NP) \ S] \\
\end{array} \]

Since \( V_1 \) in (12) must be thought of as a modal, it is likely that STAGE 4 and STAGE 5 represent synchronically identical periods. The conditions that one can typically expect to obtain for modals is that they are governed by the like subject constraint which means that \( NP_1 \) and \( NP_2 \) had to be identical and that \( NP_2 \) ends up being deleted by an Equi-NP rule. The ? in STAGE 5 can be interpreted to represent this process. We have no issue with part B of Givon's hypothesis, though a whole variety of questions need to be answered. Not the least of which involves the loss of the infinitive prefix from \( V_2 \) in some, but not all, environments, and other minor details of this type. We will not consider this part any further.

Part A raises an enormous number of questions. In our discussion we will address ourselves to what we consider to be the three major difficulties:
If one considers the surface details of STAGE 1, as outlined in (13), a number of problems arise the answers to which are not obvious from the discussion presented by Givon.

(13)
\[
[\text{S} \quad \text{NP}_1 \quad [\text{NP} \quad [\text{NP} \quad \text{NP}_2 \quad \text{NP}_3 \quad \text{SC}_2 \quad -V_2 \quad S \quad \text{NP}] \quad \text{SC}_1 \quad -V_1 \quad S]
\]

In (13) we have indicated agreement markings (SC) on each of the verbs. We are assuming, therefore, that the precursor language had both gender and number agreement (only the former being shown here). The higher verb is CAUSE; the lower verb has two arguments.

In all the present day languages agreement obtains between the subject (NP of the above schema) and the main verb (V). The agreement marker always precedes the verb. If (13) does actually reflect the source language situation then one would expect to find at least one language in which the SC appears between the verb (V) and the extension (V). No such data exists. To suggest that the present position of the agreement marker reflects the later stage where SVO order already existed and modals ended up as tense markers, the modals carrying the agreement form, avoids answering the central question under what conditions present morphological positions give clues to what historic word orders for what time.

Givon has suggested that the position of the object pronoun (OC) before the verb is a reflex of an earlier SOV order. This suggestion is based on the correct observation that OC's do appear immediately before the verb (but after the tense marker) in many Bantu languages, but not all. Since many of the same Bantu languages also display what Doke calls absolute pronouns in the object position (after the verb) this suggestion is most convincing. Given the intermediate stages 2 in its change to stage 3 all objects (and presumably subjects) get moved to the post verb
position. The clitic object pronoun, being phonologically linked/attached to the verb, stays behind:

(14) \[ NP_1 \ NP_2 \ V + EXT > NP_1 \ V + EXT \ NP_2 \text{ but:} \]
\[ NP_1 \ OC+V + EXT > \text{ no change.} \]

When one considers multiple objects (as would result from (13)), however, a number of problems arise in regard to the order of clitic object pronouns which can not be directly explained by the assumption of a former SOV order. Tswana is one of the few Bantu languages which allows two, even three, object pronouns to occur before the verb. The situation in Tswana is somewhat complicated. The typical order for two object concords is exemplified in (15) where the order of the pronouns is a mirror image of the full objects:

(15) a. Mosadi ojesa ngwana dijo. The women feeds the child food.

b. Mosadi o-a-di-mo-jesa. The woman feeds it to him.

_It-feed.

Unless one disallows structures such as (13) by suggesting that only one argument sentences were allowed in the parent language, the word order in the object pronouns in Tswana are the reverse of what one would expect if the word order of the clitics are indeed reflexes of the historical situation:

(16) WOMAN [CHILD FOOD EAT] CAUSE (lexicalization of 13)

> WOMAN HIM IT EAT+CAUSE (or in Tswana:

*mosadi o-a-mo-di-jesa.)

_him-it-feed.

Sentences with three object pronouns are even more problematic:

(17) Ke-tla-lo-po-kwa-mu-le. I shall write it to them for him. _it-them-him-write for to.
Finally, while most sentences containing both a reflexive clitic and an object pronoun follow the expected pattern, OC REFL V, that order is reversed when one of the object pronouns is first person singular:

(18) go-di-i-n-šwarēla. to forgive me them (i.e. sins) to-them-self-me-hold for.

In (18) -i- self and -n- me must be considered to be referentially identical. The order therefore violates the cross-over constraint.

The significance of the Tswana data (cited from Cole 1955) is not that it necessarily violates the putative order expected from Givon's hypothesis but, rather, that one needs to potentially recognize that there are changes in the order of even clitic pronouns. If that is a possibility, then the most likely explanation as to why the clitic pronouns are left overs from an SOV order (they were stuck) no longer applies. In fact, one is tempted to seek alternative explanations for the position of the clitic pronouns. One such explanation might be Wackernagel's law which suggests that clitic pronouns take second position in the sentence/phrase. The multiple clitics are then simply ordered as they were in their true object position with the closest object still being closest to the verb, the second closest having the second position to the left and so forth.

Givon's hypothesis is monadic. This property would be optimal if all verb extensions were of the same type. This is clearly not the case. We can recognize at least three different types. In each case the effect the extension has on the arguments of the verb is different:

(19) a. Extensions which add arguments: | cause, ed applied.

b. Extensions which lose arguments: ek potential, uk reverse-statative, am neuter.

c. Extensions which keep arguments the same: ed ed intensive.
While one can obviously argue that all of the cases outlined under (19) can be shown to have arisen from structures such as (13) (one is reminded of Lakoff's attempts to provide a source for statives and inchoatives, culminating in inchoatives being derived from statives and statives derived from inchoatives) it is seriously questionable whether real language data can be brought forth in support of this hypothesis. Givon recognizes the difficulty presented by the monadicy of his hypothesis in one case by correctly suggesting that the an reciprocal is to be provided a different source.

The second crucial question to be answered involves the chronology of the change from SOV to SVO and the creation of the verb extensions from higher verbs. We are not discussing the relative chronology of the two issues, although that question, too, needs to be answered. We are addressing ourselves to the level (branch) of Niger-Congo to which this hypothesis applies. If it is suggested that Proto-Bantu had SOV order and that the verb extensions arose at that time, that can be shown to be wrong. As will be seen in this study, verb extensions were clearly a property of Proto--Niger-Kordofanian. If this suggestion applies to Proto-Niger-Congc or Proto--Niger-Kordofanian, as might be inferred from Givon's 1975 citing of West Atlantic data and from personal communications then the testability of the claim becomes an issue. Let us assume that Givon's hypothesis does indeed apply to the progenitor of the Niger-Congo languages. Niger-Congo therefore would have verb extensions; even Niger-Kordofanian would have verb extensions. Since our family tree ends there, so does any possible attempt to test the hypothesis. One could not, for example, show that there were indeed earlier languages which had SOV order and which had higher verbs which are cognate to reconstructable extensions.
The only way we could proceed further would be to show that Niger-Congo/Kordofanian is related to Nilo-Saharan—even Khoisan—a suggestion which is entirely feasible, and then show that the reconstruction of those languages provide validation or counterevidence for the claim. In the absence of such a macro-African phylum Givon's hypothesis constitutes a weak, untestable claim.

The third issue raised by the hypothesis involves what we might call the notion of an absolute SOV language. For the claim to be valid, at least inferentially, we must assume that the precursor language was a true SOV language meeting all of Greenberg's condition of what that might entail:

(20) Niger Congo was postpositional. The genitive preceded the governing noun. Only SOV order. Volition and purpose clauses precede main V. Inflected Aux follows the main V. etc. (After Greenberg 1963)

The fact that there are SOV languages that do not adhere to all of the "universals" is evident from Greenberg's own list. The possibility that Niger-Congo was also one of those exceptional languages must not be discounted.

Even if morphology is a tried and true method for inferring former syntax, the choice of what morphology tells us what about the former syntax still remains. We have now, for example, definitive statements about two major languages families, Niger-Congo and Indo-European, that they both had SOV order. If this is accepted as valid then we might raise a whole series of questions about these languages as to why they are typologically so different today where they had such similar beginnings. Several such questions are presented under (21). They are based on surface facts about present day languages:

21
(21) Why does IE have suffix agreement but NC prefix agreement?
Why does IE have infix causatives and NC suffix causatives?
Why do we have prefix reversives in IE but suffixes in NC?
Why does IE have case but NC word order and verb suffixes?
Why does IE have gender suffixes and NC gender prefixes?
Why does IE allow multiple suffixation of nouns but NC does not?
Why does IE have a genitive case whereas NC has periphrastic genitives?

Obviously some of these questions can be answered for IE and some of them can be answered for NC. The observation that we wish to make on the basis of this is that the notion that a language is SOV is too simple to account for language differences in the same sense in which the hypothesis that verb derivations arise from higher verbs does not allow for individual differences among languages. The last point being supported by the fact that in IE verb derivational affixes are, to a large extent derived from preposition not verbs. On could similarly suggest that the NC verb extensions have their origin in prepositions/or postpositions. It is as logical both semantically and syntactically to suggest that ed applied comes from a preposition meaning to/for that has gotten attached to the verb as it is to suggest that it comes from a verb with the meaning give/do for.
CHAPTER 3

Niger-Kordofanian extensions—a typology.

It is entirely possible that our understanding of verb extensions would be more complete and exhaustive had it not been for Koelle's and especially Bleek's preoccupation with noun classification systems. This engrossment with the noun classes of Niger-Congo has had the regrettable consequence that little if any information on any other aspect of Niger-Congo languages is available for comparative work in morphology and syntax. This pertains particularly to verb extensions both within and outside of narrow Bantu. Nevertheless, the picture that will emerge in this section is a Niger-Congo language group with verb extensions widely distributed and productive. In outlining verb extension systems in a number of languages we will show that verb extension must have been a productive aspect of Niger-Kordofanian morphology. In the next chapter specific correspondences for a number of extensions will be considered.

It may be argued that demonstrating the presence of extension for Niger-Kordofanian requires that we demonstrate their presence in each of the branches and subbranches. In principle this is correct. It entails, furthermore, that we have a complete and correct understanding of the classification of the Niger-Kordofanian languages. We do not. The recent advances made by Bennett and Sterk (1977), Stewart (1977) hold much promise, as do the detailed ones presented in Sebeok (1971). In the present discussion, however, we will follow the more traditional classification of Greenberg (1963) with modification where they seem necessary. It is felt here that the ultimate classification of the Niger-Kordofanian languages bears only indirectly on the issues here raised. It is sufficient for us to assume
that the languages discussed are sufficiently diverse to preclude the possibility that all of the languages belong to the same narrow subgroup. This latter possibility is not entertainable by any of the classifications so far proposed.

**The Benue-Congo languages.**

We have already presented the Bantu situation. There are no traces of verb extensions in the Jukunoid subgroup (an observation confirmed by both Welmers and Shimizu in private communication). The discussion will therefore restrict itself to Bantoid, Plateau and Cross-River and in that order.

**Bantoid.** The situation of verb extensions outside of narrow Bantu is poorly understood. For some languages the impression has come across in the literature that verb extensions are not present as for example for Fe'fe' (Bamileke) Givon (1972) concludes that they (the Bamileke languages) "exhibit verb serialization rather than 'cause incorporation'". Quoting correctly from Hyman, Voeltz and Tchokokam (1970), later published as Hyman (1971), the original authors had neglected to report that both a CAUSATIVE and a RECIPROCAL occurred in Fe'fe'.

Other Bantoid languages are richer in extensions. In (22-24) verb extension systems are outlined for three different Bantoid languages. In all cases the extension cited is known to be productive; yet for none of them is syntactic evidence available and no definitive statement as to the distribution and behavior of the derived verb and its none derived counterpart can be made:
(22) Nyang (data from Ittmann 1935-36)

<table>
<thead>
<tr>
<th>Tense</th>
<th>Stem</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAUSATIVE</td>
<td>/-ti/ ~ /-si/</td>
<td>scharf sein/zuspitzen</td>
</tr>
<tr>
<td></td>
<td>cab/cabant</td>
<td>sich fürchten/erschrecken</td>
</tr>
<tr>
<td>ITERATIVE</td>
<td>/-ti/ ~ /-si/</td>
<td>nehmen/aufpicken</td>
</tr>
<tr>
<td></td>
<td>búob/búopto</td>
<td>riechen/schnuppern</td>
</tr>
<tr>
<td>STATIVE</td>
<td>/-e/</td>
<td>spalten/gespaltet sein</td>
</tr>
<tr>
<td></td>
<td>gád/gáde</td>
<td>zerbrechen (tr.)/zerbrechen (intr.)</td>
</tr>
<tr>
<td>EXTENSIVE</td>
<td>/-ka/</td>
<td>trinken/saufen, viel trinken</td>
</tr>
<tr>
<td></td>
<td>nyú/nyúka</td>
<td>essen/eat often</td>
</tr>
</tbody>
</table>

(23) Nkom (data from Bruens 1942-45)

<table>
<thead>
<tr>
<th>Tense</th>
<th>Stem</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRANSITIVE/</td>
<td>/-a/</td>
<td>yem/yema awake/wake up</td>
</tr>
<tr>
<td>PASSIVE</td>
<td></td>
<td>ko lá/ko láa break/be broken</td>
</tr>
<tr>
<td></td>
<td>yén/yena</td>
<td>turn/be turned</td>
</tr>
<tr>
<td>INTRANSITIVE</td>
<td>/-l/</td>
<td>fal/fali make narrow/be narrow</td>
</tr>
<tr>
<td></td>
<td>kum/kümi yun</td>
<td>strike/be sorry (lit. strike the body)</td>
</tr>
<tr>
<td>DIRECTIVE</td>
<td>/-lv/</td>
<td>džel/džellü walk/walk on, trample</td>
</tr>
<tr>
<td></td>
<td>ban/banlüü</td>
<td>make afraid/shrink from</td>
</tr>
<tr>
<td></td>
<td>bün/bünlüü</td>
<td>roll something/roll oneself</td>
</tr>
<tr>
<td>CONTACTIVE</td>
<td>/-tü/</td>
<td>yu'/yu'ütü hear/listen to</td>
</tr>
<tr>
<td></td>
<td>yun/yuntü</td>
<td>close/close a little</td>
</tr>
<tr>
<td>REVERSIVE</td>
<td>/-lv/</td>
<td>ko'/kali climb/go down</td>
</tr>
<tr>
<td></td>
<td>fu/fill</td>
<td>go outside/stay in</td>
</tr>
<tr>
<td></td>
<td>ba/ba'ülüü</td>
<td>pull down/build</td>
</tr>
<tr>
<td></td>
<td>la'/lali</td>
<td>settle/rise</td>
</tr>
<tr>
<td>CAUSATIVE</td>
<td>/-sv/</td>
<td>du/dusü be plenty/increase</td>
</tr>
<tr>
<td></td>
<td>be'e/bössü</td>
<td>carry loads/help carry loads</td>
</tr>
<tr>
<td>RECIPROCAL</td>
<td>/-nv/</td>
<td>kumnü knock together</td>
</tr>
<tr>
<td></td>
<td>künnü</td>
<td>be opposite</td>
</tr>
<tr>
<td></td>
<td>kümnü</td>
<td>contradict</td>
</tr>
</tbody>
</table>

(24) Lamnsok (data from Grebe & Grebe 1975)

<table>
<thead>
<tr>
<th>Tense</th>
<th>Stem</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAUSATIVE</td>
<td>/-vi/-</td>
<td>főer/főevfr be white/whiten</td>
</tr>
<tr>
<td></td>
<td>/-si/</td>
<td>lüm/lümsl hot/heat</td>
</tr>
<tr>
<td>STATIVE</td>
<td>/-Vn/</td>
<td>shók/shókóm pull out/come off</td>
</tr>
<tr>
<td></td>
<td>móęk/móéköm</td>
<td>open (tr.)/open (intr.)</td>
</tr>
<tr>
<td></td>
<td>/-Vn/</td>
<td>?itn/?tnf ?/be out</td>
</tr>
<tr>
<td></td>
<td>?kük/?kükün</td>
<td>?/be big</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Data cited under Lammsok (24) and Nyang (22) is typical for non-narrow-Bantu languages in that a number of extensions seem to have fallen together under one meaning. Thus in Lammsok we have both /-si/, which we attribute to the original CAUSATIVE and /-vi-r/, which can be assigned no historical value at this time. Similarly, there are two forms for STATIVE, viz. /-Vm/ and /-Vn/. It is probable that /-Vm/ is cognate with Bantu *-am (C.S.2184). No immediate cognate for /-Vn/ is available, although the likelihood for cognition with *-an (C.S.2185) is high. Consider especially the series (C.S.2186) with the form *-an and the meaning neuter, which Guthrie separates from the series (2185) without much reason. Similarly in Nyang there are a number of extensions which appear under a single meaning, i.e. /-ti/ and /-si/. The Nyang case is interesting, furthermore, from a different point of view. Note that the STATIVE, like in Duala and several other Bantu languages, appears as /-e/. Moreover, note the occurrence of /-ti/ and /-si/ as both CAUSATIVE and INTENSIVE (cf. our discussion under Heine, chapter 1). This same phenomena will be observed repeatedly.

The number of productive extensions in Nkom is truely significant and bears most crucially on any attempt to use verb extensions as a criteria for subgrouping narrow-Bantu. Of specific interest for our purposes here are the forms for the REVERSIVE and the DIRECTIVE which are listed as being identical (under 23). Insufficient evidence exists at present to disambiguate the two. There can be little question, however, that a front-back vowel harmony system governs the surface forms. Allowing us to speculate, we will abstract DIRECTIVE AS -LI- and REVERSIVE AS -LU-. Likewise, we will assume that CAUSATIVE is -SI- for the purpose of future citations.
Cross-River. There is only one well documented Cross-River language, Efik. Efik is also the most widely spoken one. Little is known about the rest of the Cross-River languages and no evidence exists on them regarding verb extensions. The data for Efik is taken from Welmers (1968):

(25) Efik

<table>
<thead>
<tr>
<th>INCHOATIVE/STATIVE</th>
<th>/-ǐ/</th>
<th>ōp/ōbo</th>
<th>bake, burn/be burnt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>byāt/byārā</td>
<td>destroy, ruin/become spoiled</td>
</tr>
<tr>
<td></td>
<td></td>
<td>nwāk/nwāga</td>
<td>crush/get crushed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>bōk/bōgo</td>
<td>gather up/assemble (intr.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>APPLIED?</th>
<th>/-ǐ/</th>
<th>kpēp/kpēbe</th>
<th>teach, learn/imitate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>kōt/kōrō</td>
<td>grow (intr.)/add to, supplement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>kēm/kēmē</td>
<td>be equal to, fit/be able</td>
</tr>
<tr>
<td></td>
<td></td>
<td>yēt/yēre</td>
<td>wash (things)/wash (body parts)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REVERSIVE</th>
<th>/-ër/</th>
<th>kēn/kēnēre</th>
<th>hang out (clothes)/take down</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>dyān/dyānare</td>
<td>add/subtract, deduct</td>
</tr>
<tr>
<td></td>
<td></td>
<td>fīk/fīgere</td>
<td>press down/loosen up</td>
</tr>
<tr>
<td></td>
<td></td>
<td>kōp, kōbi/kōbōre</td>
<td>h-ok, hang up/unhook, take down</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dē/dēmēre</td>
<td>go to sleep/wake up</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PLURALITY</th>
<th>/-k/, /-y/</th>
<th>wāk/wāy</th>
<th>tear of one thing)/tear (many things)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>dwāk/dwāy</td>
<td>sprinkle (single plant)/sprinkle</td>
</tr>
<tr>
<td></td>
<td></td>
<td>tswāk/tswāy</td>
<td>jab, set/hammer (repeatedly)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>syāk/syāy</td>
<td>split in two/split in two (of many objects)</td>
</tr>
</tbody>
</table>

Welmers does not discuss the productivity of the various extensions just cited. He does, however, make the following statement which is well worth quoting in its entirety:

"There are also a number of cases of verbs derived from verbs, by suffixation. Although these formations account for a number of two-syllable and three-syllable verb stems as derivations from monosyllables, it by no means follows that all verbs of more than one syllable are derived. In fact, the most obvious derivational patterns are strangely restricted." p.159

Which patterns those are Welmers doesn't tell us. In the hypothesis put forth in this study, polysyllabic verb forms in Efik are assumed to be derived (historically) from other verbs, either by suffixation of extensions or by reduplication. The specific case of Efik is not considered, further,
eaving proof for either assertion to the future.

Plateau. Verb extensions, both as productive verb building elements and as traces, have been reported for a number of Plateau languages. Our discussion will be limited to two languages, Duka and Birom, as well as the comparative remarks of Mukarovsky and Gernardt.

In Duka, Bendor-Samuel (1973) recognizes specifically four different extensions, viz. BENEFACTIVE /-ε/, TIME BEFORE /-s/, CAUSATIVE /-t/, and FREQUENTATIVE /-r/ ~ /-m/. Based on Bendor-Samuel's data we can add, also, STATIVE /-ɛ/ and RECIPROCAL /-nɛ/. The extension system for Duka is outlined under (26). Sentential examples are given where available. All extensions are underlined.

(26) CAUSATIVE /-t/

a.  åஎ hante a weʌet ɛ am rɛww
   it F1 brought one hindered them INF-sleep

   That is why they were hindered from sleep.

TIME BEFORE /-s/

FREQUENTATIVE /-r/ ~ /-m/

BENEFACTIVE /-ε/

b.  hante me kâ rî t yo
   bring for me that thing

   Bring me that thing.

c.  hîgê hûnde ka ma to
    kill for people that word

    Put a stop to that matter for the people.

d.  ça gəwɛ hîn dɛnɛ tɔm
    they will hoe for self  hoeing

    They will do their own hoeing.

28
STATIVE /-ɛ/

e.  mê roɛ ə-hur  
    I am at home.

f.  tɛɛ ɛ̃ɛ kɛnɛ  
    we F used to be here

g.  kê cɔɔ o hɛɛ  
    what area you go
    Where are you going?

RECIPROCAL /-nɛ/

h.  gɔōnɛ  meet  
    (p. 59)

j.  tɛ gɔönɛtɛ tɛ ən wɔ nɛ  
    we met we with him
    We met him

k.  àn baks ən wɛ nɛ  
    we will remember with him
    We will remember him.

l.  wɔ yəddɛtɛ ən wɔ nɛ  
    he agrees with you
    He agrees with you.

Of the sentences under (26) the one example of CAUSATIVE, (26.a) is
of particular interest. hantɛ brought, a complex verbal consisting of ha
come + en towards speaker + tɛ causative (cf. Bendor-Samuel p. 10), is only
one of several higher verbs that can occur in periphrastic causatives. The
others are ro put, cause and nɔm make happen to (a person). All three have
the semantic force CAUSE as higher verbs as one of the possible interpretations.
The significance of hantɛ and (26.a) is the incorporation of the affixial
CAUSE on the higher verb and not on wenet hindered as one might expect
under the cause-incorporation hypothesis proposed by Givon (1972). The
importance of this fact will be further evaluated in chapter 5.
FREQUENTATIVE /-r/ or /-m/ is not attested in the data. It is suspected that the two suffixes constitute remnants of different extensions historically that have fallen together under one meaning.

BENEFACTIVE /-e/ has the morphological variant /-a/ or it takes the same value of the preceding vowel. Syntactically, the object of BENEFACTIVE appears immediately after the verb and preceding any other NP. This includes object pronouns. The latter trigger the reduction of the -e → a, indicating that that object pronouns get cliticized to the verb. Similar clitisization occurs throughout the Bamileke area, raising interesting, though not conclusive, objections to the use of clitic pronoun position in determining earlier subject, verb, object order.

The STATIVE appears as /-e/ as well. Its use appears to be limited to intransitives, only ro be and he go being cited in the literature.

One rather marginal example of RECIPROCAL is given, (26.h). It is conjectured here that nɛ occurring with the verb meet, often reciprocal in other languages and certainly so semantically, must be the historical RECIPROCAL suffix, cf. Bantu *an. Of equal interest is the occurrence of a spurious nɛ following the objects in the sentences (26.j, k & l). Since the nɛ appears to be restricted to environments which are symmetric in nature, it is possible that is constitutes a reflex of the RECIPROCAL suffix surfacing as a marker on the object. While this latter hypothesis remains unconfirmed for the present, it appears sufficient to propose that nɛ is a fossilized reflex of RECIPROCAL. In-so-far as we have recognized RECIPROCAL elsewhere, outside of Plateau, we can safely posit it as a Proto Plateau suffix.
(27) Birom (data from Bouquiaux 1970)

FREQUENTATIVE /-s ~ -sVφ ~ -sa ~ -Vφs ~ -s-/  
-vos/vos prendre
-ru/rusu frapper
-suk/suksa secouer
-tik/tikis laisser, quitter
-raŋal/raŋsal demander, questioner

In discussing the FREQUENTATIVE, the only extension that appears in Birom, Bouquiaux makes this characterisation:

Ce type de dérivation peut affecter la majorité des verbes (82% des verbaux relevés) auxquels il donne une valeur fréquentative (l'action s'accomplit continuellement), habituelle, répétitive (l'action se répète un certain nombre de fois) ou plurative (l'action est faite par plusieurs sujets ou s'exerce par l'intermédiaire d'une seule personnes sur plusieurs objets). p. 206.

What the verbaux relevés are we are not told. Nevertheless, Bouquiaux has captured most succinctly the essence of the meaning of the FREQUENTATIVE that one encounters again and again.

Forms such as raŋal/raŋsal require a brief comment. The extension appears to be infixed before the last syllable. If there were a restricted set of possible syllables in this position one might suggest that they were at one time extensions which in the sequence of forms appear after the FREQUENTATIVE. There is no such restricted set, nor is the infixation restricted to disyllabic verbs so that the possibility of the second syllable being a fossilized suffix must be discarded.

Mukarovsky (1963) seems to be the first author to have attempted to relate verb extensions of a Plateau language to those reconstructed for Bantu. Providing supporting evidence for his conclusions on some occasions, Mukarovsky lists the following possible correspondences:
(27) Afusare (Jarawa) Ur-Bantu correspondences (abstracted from pp. 80-83)

<table>
<thead>
<tr>
<th>Afusare</th>
<th>Ur-Bantu</th>
</tr>
</thead>
<tbody>
<tr>
<td>-k</td>
<td>*(e)ka</td>
</tr>
<tr>
<td></td>
<td>intransitive, stative</td>
</tr>
<tr>
<td>-s</td>
<td>*(e)kya</td>
</tr>
<tr>
<td></td>
<td>cuasative</td>
</tr>
<tr>
<td>-η</td>
<td>*nga</td>
</tr>
<tr>
<td></td>
<td>?</td>
</tr>
<tr>
<td>-r</td>
<td>*(e)la</td>
</tr>
<tr>
<td></td>
<td>applied</td>
</tr>
<tr>
<td>-né, -êné with</td>
<td>*na, *ana with, reciprocal</td>
</tr>
<tr>
<td>-p, -b</td>
<td>*pa, *mba</td>
</tr>
<tr>
<td></td>
<td>denominative</td>
</tr>
<tr>
<td>-m</td>
<td>*(a)ma</td>
</tr>
<tr>
<td></td>
<td>stative</td>
</tr>
</tbody>
</table>

While Mukarovsky's suggestion may have been viewed as speculations, supporting evidence from Duka and other Plateau languages and from the thorough research of Gerhardt tend to support his contentions at least in part.

Gerhardt (1971 & forthcoming) takes a highly conservative, strict correspondence approach to Plateau, with the result that he only recognizes four extensions, namely: -s- plurality of action (Bouquiaux's FREQUENTATIVE), (V)k, η and l, assigning no definite meaning to the latter three. Like other comparativists in the African context, Gerhardt hesitates to go outside of Plateau to determine what is Plateau. Within the mass comparison approach taken here, we would want to add minimally the RECIPROCAL nê, found in Duka and also recognized by Mukarovsky for Afusare, as a likely candidate for Proto-Plateau. Outside evidence strictly supports this.

Jukunoid. No evidence for verb extensions or traces thereof have been found for this group. Both Welmers and Shimizu (both in private communication) concur with this observation. It is most likely that as more information becomes available on this group, verb extensions will be found if only in fossilized form.

32
Kwa. Recent discussions speak not of Kwa or Benue-Congo but rather of Benue-Kwa. Even more recently, Stewart (1976) has posited a super group, Volta-Congo, consisting of Benue-Congo, Kwa and Gur. But he also admits (in private) that there are no criteria for delimiting Volta-Congo from the rest of Niger-Congo rather, he suggests, Volta-Congo is a reasonable goal for reconstruction based on the information we now have available and the general failure of comparativists to define Benue-Congo, Kwa or Gur. Whether Kwa is, or what continues, therefore, to be debatable. To discuss the issues involved would constitute writing a history beginning with Krause. We will forego any such attempt here. It will be useful, nevertheless, to begin our discussion with two very least likely Kwa languages, Grebo and Ijo.

Grebo is spoken in the far western region of the traditional Kwa domain. Wlemers has proposed to take it out of Kwa and place it in a separate group with Gur. A similar suggestion is made by Bennett and Sterk, who, additionally, assign the Adamawa-Eastern languages to a new Krugur branch on the level parallel to Benue-Kwa (Bennett & Sterk 1977).


DATIVE /-e/

(1960.170)

a. neduïədə Dò bla dua pound
I pounded rice for Do

b. swëedə ne Dò ne wa break
he broke it for Do

CAUSATIVE /-e/

(1960.171)

c. luïg Dò lu swim
make Do swim

d. ne duïədə Dò bla
I caused rice to be pounded for Do.

e. punu/purulers boil (intr.)/boil (tr.)
PASSIVE /-e/ (1960.171)

f. swęda ne/swęda ne it was broken/it was broken by someone

INSTRUMENTAL /-de/ ~ /-ne/ {ne}

g. nedųđa bā sū (1960.171)
I pounded rice with a pestle the day before yesterday.

h. ne nene poč konč ne be (1966.57)
I live by (i.e. be with) hunting.

RECIPIROCAL /-de/ ~ /-ne/ {ne}

i. a bibidene bi beat (1966.57)
we have beaten each other

j. a nyenyenene nye hate (1962.90)
we have hated each other

LOCATIVE here /-dë/

k. omedë they are here (1966.57)

LOCATIVE there /-de/ ~ /-dë/

l. omudë they have gone there mu go (1966.57)

LOCATIVE there /-o/ ~ /-ô/

m. omuô they have gone there (1966.58)

The Greko verb derivational system is structurally most similar to the one found in Bantu languages. The verb extensions (CAUSATIVE, INSTRUMENTAL and RECIPIROCAL) appear immediately after the verb stem and before any tense markers; the LOCATIVE suffixes all appear after any tense sign, with -dë being able to be suffixed to any of the previous mentioned ones. In both the DATIVE and the CAUSATIVE, the object of the extension is the NP immediately following the verb, preceding all other arguments. It appears to be possible for both of them to occur of the same stem (cf. 28.d), but no example with both the object of CAUSE and the object of DATIVE could be found.
The INSTRUMENTAL and RECIPROCAL appear in a number alternate forms, Innes listing -d¹, -de, -ni & ne (1966.57). While the specific nature of the underlying vowel is of marginal nature (cf. Innes 1966.22 for further discussion) the consonant underlying these variants is most crucial. Nothing can be determined from the distribution, it is purely phonological: -ni & -ne occur after nasal stems, -di & -de after oral ones. One could derive the former from the latter via a variation of Meinhof law; conversely, the latter could be derived from the former by a denasalisation rule, opperant in the environment of oral consonant stems. This last possibility appears to be correct and for the following reasons we posited the nasal variant as the underlying forms in (28). Compare

ne nene poe kono and
o nede.

If the rule paralleling Meinhof law applied, the second of the two forms should have appeared with a nasal in second syllable position as well, as in:

*o nene.

Arriving at an underlying form for the INSTRUMENTAL and RECIPROCAL with a nasal makes a good comparison for other RECIPROCAL forms found elsewhere.

In the INSTRUMENTAL, the object of the suffix appears as the last NP in all the cases cited (28.g & h). It differs thereby from the putative more abstract form for the RECIPROCAL which would have the object immediately following the verb. Nevertheless we want to consider INSTRUMENTAL and RECIPROCAL to be identical suffixes. Their behavior parallels completely the use of na and and ana reciprocal, respectively, found in many Bantu languages. The Grebo data further confirms that Bantu *na and *an(a) must share a derivational history to a single source, though the direction of the change, whether from na to an, or an(a) to na, is not clear.

35
Ijo. Ijo has the distinction of being the only SOV language in a sea of SVO languages. Situated on the Niger delta it is interesting and perhaps even meritorious to speculate that Ijo is historically a Mande language which in its expansion along the Niger was pushed down to its present position by further expansions. Aside from word order similarity and a few lexical items Ijo shares exclusively with Mande the substantive portion of Ijo vocabulary is relatable to Kwa and Benue-Congo directly, placing it between the two in some classifications (cf. Williamson 1971).

Ijo has a highly productive CAUSATIVE suffix mọ, as well as a higher verb CAUSE, mịẹ make. A number of examples are given under (29):

(29) Ijo (data from Williamson 1965.55)

a. wọnî, ụ-mịẹ-nị, ịndị dịẹ-mị
   we him make fish share SPa
   We made him share out fish.

b. eri, bịdẹ mịẹ, fụmụmọ-mị
   he cloth make be-dirty cs SPa
   He made the cloth dirty.

c. ạrụg, ọbụọ mịẹ, bụnụmọ-mị
   she child make sleep cs SPa
   She soothed the child to sleep.

Comparatively, Ijo presents two interesting facts. Firstly, it is very likely that the form mịẹ is a complex verbal consisting of a verb stem and a CAUSATIVE suffix (cf. Nembe CAUSATIVE /-i/). Whether mịẹ is a composite form consisting mw+i, is, of course, no longer determinable.

Secondly, while Givon (1975) does mention that the Ijo causative construction violates the putative order of verb complement constructions in an SOV language, he does not go beyond Williamson's first example (op.cit.) to discuss that Ijo also has a productive causative suffix that is added
to the lower verb. Given is right in asserting that the causative "follows the logical time-order with the 'complement' verb being the result of 'cause'" (pp. 79-80). But such a time-order reanalysis does not account for the occurrence of mọ as a causative marker on the lower verb. The possibility that mọ is the remnant of the earlier higher verb CAUSE must be rejected here since the use of mọ as the new CAUSE could not be explained and since mọ appears not as the last element in the verb but before any tense-person markers. It is suggested here instead that the original Ijo causative construction marked the verb, i.e. the causative was incorporated. The periphrastic causatives are an innovation modeled after the surrounding serializing languages having SVO syntax and S CAUSE Comp order.

Igbo. Welmers (1970) cites a number of suffixes for Igbo of which we will concern ourselves with only one, the applicative:

(30) Igbo (data from Welmers 1970.52)

a. ọ́ 'zụ́lákwa ọ́kwá he has also bought cloth
    ọ́ 'zụ́lará ń ọ́kwá he has bought cloth for me
    ọ́ 'zụ́lákwań ń ọ́kwá he has also bought cloth for me

About the /-rụ/ APPLICATIVE extensions Welmers states:

To be sure, in Bantu, unlike Igbo, verbal extensions do constitute part of the verb base. A striking similarity, on the other hand, is found in the usage and even the form of the Igbo and Bantu applicative extensions. (p.53)

There can little doubt that the Igbo APPLICATIVE and the Bantu *ED should be considered cognates, cf. Igbo -ŕ eat Bantu *DE, Igbo íre tongue Bantu *DEMI; Igbo áru bite Bantu *DOM-, etc.
Gur. The Gur languages have been subject to a number of comparative studies beginning with Westermann (1913, 1914 & 1927), Manessy (1966), Swadesh et al. (1966) and Bendor-Samuel (1971). Nevertheless, aside from mention made of verb extensions by Westermann and Manessy's reconstructions for the Senufo group, our understanding of verb extensions is restricted to discussions of specific languages. In the present section, as well, we will for the most part present data on a few individual languages, making only brief mention of Manessy towards the end.

Dagara. Along with periphrastic cuasatives of the type exemplified in (31), Dagara appears to have a productive derivational suffix CAUSATIVE which is variously realized as i ~ ri ~ l ~ r. Both stative (32.a) and non-stative (32.b) verbs can be so extended. Some pertinent examples are cited under (32).

(31) Dagara (data from Girault 1963)

'[i k'o tibrè fais qu'il soit lourd, alourdis-le
'[i k'o woymè fais qu'il soit long, allonges-le
'[i ke ti kyeén fais en sorte que nous partions
'[i k'a bye kpe fais entrer l'enfant, fait que l'enfant entre

(32) a. gmā/gmal ëtre frais/rafraîchir
scy/seyɾ être suffisant/rendre suffisant
gbö/gböyl ëtre en tas/mettre en tas
kyu/kyuɾ ëtre en déses/faire tomber en cascades

b. mɔy/mɔyɾ sucuer/faire sucuer
tu/tuɾ suivre/faire suivre, mettre en coincidence
nyu/nyuɾ boire/faire boire
sTY/siYɾ descendre/faire descendre

The alternants cited above have two further meanings, viz. INTENSIVE-FREQUENTATIVE-PLURAL and EXPERTIVE ("verbes exprimant un travail artisanal" Girault, p. 179):

(33) INTENSIVES

kpa/kpəɾl frapper un coup/frapper plusieurs coups, heurter
ya/yəɾl enlever un objet/enlever plusieurs objets
zeɾ/zeɾɬ soulever/soulever plusieurs objets
ko/kəɾ tuer/massacre
(33 continued)

EXPERTIVES

kpa/kpäi  clouer/forgé
bü/bului  être mouillé/préparer de la bouillie
yï/yïli  sortir/sortir des pierres des grains, trier
sai/sëli  être lisse/aiguiser

The three categories, CAUSE, FREQUENTATIVE and EXPERTIVE, have a logical connection semantically. CAUSATIVE and FREQUENTATIVE have been consistently tied together in language after language. The EXPERTIVE meaning appears as a clear and obvious extension of the FREQUENTATIVE: Things frequently done become activities done 'expertly'. Not so clear are several other verbs and their associated extended forms which display the same suffix, or what appears to be the same suffix, but which are different in their meaning. The most productive class of these are listed under (34). Their meaning is consistently REVERSIVE:

(34) REVERSIVES

dɔy/dɔyi  enlever de dessus/mettre dessus
’mɔ/’mɔr  réunir/séparer, refendre du bois
yay/yayi  décrocher/suspendre, accrocher
vo/vobi  enlever un couvercle/mettre un couvercle

Several additional pairs of verbs also occur with the meaning REVERSIVE, but with no obvious trace of the same suffix:

(35) tuo/töy  charger/décharger
kpa/kpä  clouer/démacheter
wɔŋ [—]/wɔŋ [—]  entendre/être sourd

The relationship between the set under (34) and under (35) may be inferred, in part, by the lengthening of the vowel in the derived cases that the two of them share. Tonal evidence, other than for the last example of (35), is not available. Consequently, it is reasonable to assume that the REVERSIVE and the CAUSATIVE were historically distinct.
Superficially, the morphs ri, li, r & l, have a random distribution. There are, however, a number of cases which suggest that l and r must be distinguished, that li and ri are composites consisting of l or r and i, and that along with l, r & i, a suffix n and γ, perhaps also b, must be recognized, at least they are discernible as fossilized forms, their meaning not being clear. The data to support this position consists of a number of cases in which more than one of the above mentioned suffixes can occur, rendering derived verbs with different, yet related meanings. A few examples are cited under (36):

(36) kpā frapper
   kpāl forger
   kpāγl devenirs resistant
   kpāγr égaliser des pailles en les tapotant
   kpāll frapper plusieurs coups
   kpā demancher

γ γi sortir
   γTroublier
   γγγl faire sortir des pierres de grains, trier
   γγγi glaner

While further synchronic analysis is not possible, though we are to agree with Girault that we are dealing here with "une famille de verbes pour laquelle nous pouvons redire qu'il n'y pas de regles qui en regissent la derivation" (p.181), diachronically, the following possible verb derivations emerge:

(37)
   \[
   \begin{array}{c}
   l \\
   r \\
   γ [l \sim r] \\
   n [i] \\
   b \\
   l \sim r
   \end{array}
   \]
   CAUSATIVE

   STATIVE/INCHOATIVE

   REVERSIVE

The summary under (37) is somewhat more conservative than Girault's who lists ten possible extensions (p.179). The difference lies mostly in our abstraction of l from li, rl & ni, and l from γ.
Dagbani. Dagbani is reported by Wilson (1963) to have the following productive verb extensions:

(38)  -si, -hi {si} CAUSATIVE

labi/labsi rentree/faire rentrer, remettre
yi/yihi sortir/faire sortir
kabi/kabsi cassar/casser en morceaux
ọwa/ọwahi couper, briser/brisser en morceaux

REVERSIVE -gi, -i {gi}

kpali/kargi fermer a clef/ouvrir
yo/yōi fermer/ouvrir

INCHOATIVE -gi, -i {gi}

sabgi devenir noir cf. sabla être noir
mooi rougir cf. moha être rouge

STATIVE i. -ha, -sa {sa}

saabsa être sombre cf. sabgi devenir sombre
mohaa être rouge cf. mooi rougir

ii. -la

sabla être noir cf. sabgi noircir, devenir noir

As is obvious the CAUSATIVE has both causative and intensive meaning.

Manessy (1966) recognizes seven verb extensions in his comparative work of the Senufo group of Gur languages. Of these only the first two are provided a explicit semantic content:

(39)  -dV DUHATIVE

-gV INCHOATIVE

-nV

-IV

Of the many studies of Gur languages which mention verb extensions, including many not considered here, none of them provide extensive information on the syntactic behavior of extended verbs. We are assuming, here therefore, that previous observations regarding the syntax of other languages with verb extensions hold here.
**Adamawa-Eastern.** Of all the Niger-Congo languages, the Adamawa-Eastern
is clearly a step child. Neither Welmers (1963) nor Givon (1975) con-
sider these languages, although data from these languages would have
been relevant to both; nor did Hyman (1975) in his review of Givon
bring to bear any Adamawa-Eastern data although he, too, would have
been aided by such data to support his position. Like for Westermann
(1927) Niger-Congo continues to mean West Africa plus Bantu.

Most recently, Bennett & Sterk have included Adamawa-Eastern
as one of two major branches of their Krugur branch. Typologically,
this grouping is supported by the fact that both Gur and Adamawa-Eastern
exhibit noun class suffixes, allowing us to argue that the change from
prefix to suffix (or suffix to prefix) occurred only once in the Niger-
Congo languages.

We will present here data on two languages, Zande and Yakoma,
which seem to be totally typical of Adamawa-Eastern languages with verb
extensions: In both cases a number of extensions can be recognized, but
only in isolated cases is it possible to assign a meaning to the indi-
vidual extension. We would surmise from that that the extensions are
being rapidly lost in these language.

(40). Zande (data from Tucker 1959)

<table>
<thead>
<tr>
<th>English</th>
<th>Zande</th>
<th>English</th>
<th>Zande</th>
</tr>
</thead>
<tbody>
<tr>
<td>nourish</td>
<td>rîga</td>
<td>faire nourir</td>
<td>rîga</td>
</tr>
<tr>
<td></td>
<td>rî(gi)s</td>
<td>sa faire nourir</td>
<td>rîta</td>
</tr>
<tr>
<td>devour</td>
<td>rîka</td>
<td>manger (d'un grand nombre de personnes)</td>
<td>rîka</td>
</tr>
<tr>
<td>percute</td>
<td>sôpa</td>
<td>percer (de plusieurs gens)</td>
<td>sôpa</td>
</tr>
<tr>
<td>deracine</td>
<td>mófa</td>
<td>arracher, enlever avec les racines</td>
<td>mófa</td>
</tr>
</tbody>
</table>

If we can abstract from these few examples we might conclude that
Zande has the following verb extensions, about the productivity of which
nothing can be said:
(41) -ga CUASATIVE i.  -(gl)sa CUASATIVE ii.
-\text{ta} INTENSIVE  -\text{ka} PLURALITY

etc.

However, such conclusions are not supported by other verbs. Paradigms such as those cited under (40) remain, therefore, isolated instances of a once productive verb derivational system.

The situation in Yakoma is somewhat different. Here one finds supportive evidence for a large number of extensions from a considerable number of verbs and verb pairs. Only some of these extensions can a specific meaning be assigned:

(42) Yakoma (data from Boyeldieu 1975)

a. ITERATIVE  \text{`r\textbackslash'\textbackslash' \& `r\textbackslash'\textbackslash'}

\text{`f\textbackslash'o/`f\textbackslash'o\textbackslash'r} se promener/se promener
\text{t\textbackslash'\textbackslash'e/t\textbackslash'\textbackslash'e\textbackslash'r} manger, mordre/mordre
\text{kp\textbackslash'a/kp\textbackslash'a\textbackslash'r} gratter/gratter
etc.

b. RESULTATIVE  \text{%ng\textbackslash'b\textbackslash'i}

\text{b\textbackslash'o/b\textbackslash'o\textbackslash'b\textbackslash'i} entasser/rassembler
\text{f\textbackslash'a/f\textbackslash'a\textbackslash'b\textbackslash'i} couper/sendre morceaux
\text{t\textbackslash'o/t\textbackslash'o\textbackslash'b\textbackslash'i} attacher, nouer/souder, reunir
etc.

c. ??? \text{%ng\textbackslash'a \& `%ng\textbackslash'a}

\text{d\textbackslash'e/d\textbackslash'e\textbackslash'\textbackslash'a} vomir/vomir
\text{s\textbackslash'u/s\textbackslash'u\textbackslash'\textbackslash'a} fuir/abandonner, cesser
\text{kp\textbackslash'é/kp\textbackslash'é\textbackslash'\textbackslash'a} poser/poser, garder
etc.

d. ITERATIVE  \text{%k\textbackslash'a \& `%k\textbackslash'a \& `%k\textbackslash'e \& `%k\textbackslash'o}

\text{t\textbackslash'\textbackslash'r\textbackslash'l/t\textbackslash'\textbackslash'r\textbackslash'l\textbackslash'a} se battre/se frotter, se debattre
\text{t\textbackslash'e/t\textbackslash'e\textbackslash'\textbackslash'a} mordre/mordre
\text{d\textbackslash'e/d\textbackslash'e\textbackslash'\textbackslash'a} couper en morceaux/couper en morceaux
etc.
(42) continued

e. "une idée d'éloignement ou de rejet"  讵-sà

sà/sàsà  chasser; siffler/faire taire, faire chut
sù/sùsà  dechirer/rejeter, faire sortir en secouant
kpà/kpàsà  gratter/gratter
etc.

f. RESULTATIVE 讵-ndà ∼ 讵-ndà

lû/lûndà  entrer, penetrer/plonger, s'enforcer
zû/zûndà  descendre/descendre, retomber
gû/gûndà  cogner/cogner, frapper
etc.

?? 讵-ngì

mô/môngì  battre, frapper/(s')appuyer
hì/hìngì  pousser, mouvoir/remuer, secouer, rincer

h. ?? 讵-kò

dì/dìkò  nommer, declarer/compter, lire
hì/hìkò  pousser, mouvoir/s'eloigner
vû/vûkò  noircir/etre noir

i. ?? 讵-ngò

mì/mìngò  etre ferme/former (yeux)
zì/zìngò  delier, ouvrir/s'evetiller

j. ?? 讵-ndò

pèè/pèèndò  serrer, tordre/ajouter
sè/bèndò  */rassembler

k. ?? 讵-nzì

•ho/hônzì  */finir, etre fini
gba/bgânzì  */refuser

l. ?? 讵-slà

huu/hûslà  tasser, bourrer/bourrer, gaver
kpu/kpuslà  */(sens non releve)

m. ?? 讵-ndì

bô/bôndì  entasser/rassembler
The extensions for Yakoma have been cited in their entirety to indicate their multiplicity. To be sure, the evidence for the latter set (42g-m) is sparse at best, the extensions being represented by only one or two examples in some cases. Nevertheless, extensions are productive in Yakoma.

It is likely that in view of the fact that so many languages show only traces of verb extensions any definitive statement about them will have to await a comparative study of Adamawa-Eastern itself as well as an indication of what extensions to expect from the outside. Within the present evidence we feel reasonably sure in identifying minimally an INTENSIVE, a DIRECTIVE/APPLIED and a CAUSATIVE extension in Adamawa-Eastern which bears cognates outside. For further discussion the reader is referred to the relevant sections in chapter four.

West-Atlantic. Outside of Bantu itself, West Atlantic is the only branch of Niger-Kordofanian for which verb extensions and their meanings have actually been reconstructed. Doneux (1975) reconstructs the five extensions listed under (43).

(43) West Atlantic (reconstructions from Doneux 1975)

*u† REVERSIVE (reconstruction proposed by Voelts)
*an CAUSATIVE
*ad RECIPROCAL
*V NEUTER/PASSIVE
*ed APPLIED/DIRECTIVE

All of the reconstructions are copiously supported. The regrettable part of Doneux's reconstructions is that he did not go far enough. Like other comparativists, no outside-West Atlantic data was considered. Nor, if such use of outside data is not considered kosher, did he address
himself to several crucial questions posed by such data as is cited under (44). Specifically, no accounting is given for the large inventory of extensions found in Fula, many of which can be related to neighboring languages as well as outside reconstructions.

The Fula data (44) lists only the morphological realisation of the numerous extensions to be found. It is cited only to give an indication of the richness of the system, without trying to characterize its properties in any detail. For further discussion the reader is referred to Arnott (1970) from which this data is taken:

(44) Fula (data from Arnott 1970)

- **REVERSIVE**: -t-, -i+-, -ut-  MODAL: -r-, -ir-
- **REPETITIVE**: -t-, -i+-, -ut-  LOCATIVE: -r-, -ir- /(-d-) -or-
- **REFLEXIVE**: -t-, -i+-  CELERATIVE: -law-, -ilw-
- **RETAILATIVE**: -t-, -i+-  DISTANTIVE: -oy-
- **INTENSIVE**: -i+-, -t-, -ut-  SIMULATIVE: -kin-, -ikin-
- **ASSOCIATIVE**: -d-, -id-/ud-  RECIPROCAL: -indr-
- **COMPREHENSIVE**: -d-, -id-/ud-  RECIPROCAL: -cotir-
- **CAUSATIVE**: -n-, -in-  DATIVE: -an-

From a comparative point of view, some of the extensions that Arnott distinguishes can be collapsed; perhaps this is even possible synchronically. For example, it is highly likely that the REPETITIVE and the INTENSIVE are not distinct. Similarly one might suspect that REVERSIVE and RETALIATIVE are possible identical forms, though that is not ascertainable at present.

**Mande.** We know of no evidence that Mande has verb extensions or ever had them. Bird (private communication) has indicated that there might be occasional traces in a number of languages. No further details exist on this possibility. Mande, therefore, will not be considered further.

46
Kordofanian. Typological similarities between Kordofanian languages and Niger-Congo languages have been recognized for some time. When Greenberg suggested that the Kordofanian and the Niger-Congo branches formed cobranches in an even larger Niger-Kordofanian no one objected. Greenberg (1963) recognized five subgroups for Kordofanian, the internal relationship of these to each other not being made clear: Koalib, Tegali, Talodi, Tumtum and Katla. Of these Tumtum appears to be most distant typologically, and since no evidence for verb extension could be found for this group we will consider it no further. T. Schadeberg, who has recently investigated these languages, suggested (in private communication) that Tumtum may not properly belong to Kordofanian.

Except for Stevenson (1956-57) nothing has been published on Kordofanian in recent years*, and, except for isolated instances, Kordofanian is not specifically discussed in Sebeok (1971). One might conclude from this, perhaps correctly, that there are no current trends in Kordofanian. For our discussion, therefore we will rely exclusively on Stevenson. Stevenson was not, however, the first to recognize verb extensions in Kordofanian languages. Meinhof (1915-16) in an accidental anticipation of Greenberg's grouping of Ful and Kordofanian into the same group as Bantu remarks specifically on the connection between the Tumale applied affix and similar suffixes elsewhere in the African domain:

Diese Suffixe erinnern an das Bantu, mehr noch das Ful; z. B. -ani, -ini1 applikativ, vgl. Duala -ne „mit jemand. für jemand etwas tun", Ful -ana, -ena, -ina applikativ; -andi, -indi, -andi habituell, vgl. Ful -ata, -ita intensiv, -ida konklusiv. (p. 189)

*The MLA linguistics bibliography for 1973 manages to list one item under Kordofanian by incorrectly identifying Mbe (Benue-Congo) as Kordofanian.
(45)  Koalib (data from Stevenson 1955-56)

DATIVE    pi-d1/pi beat    pi-cc/pi-cl beat for
REFLEXIVE/PASSIVE    pi-ne/pi-ni be beaten
RECIPIROCAL    pi-du/pi-qi beat each other
ASSOCIATIVE    pe-d1e/pe-d1i beat together
CAUSATIVE    'dir rise    'dir-e/'dir-i rouse
APPLIED    agir break    agir-adl break off
DIRECTIVE
  here '    ap-a carry here
  there    ap-3 carry there

Stevenson does not discuss the productivity of these extensions, although we must assume that they are. The label APPLIED and DATIVE seem to be confused. Typically one would expect beat for to be the APPLIED form and assign forms such as break off a different label. Nothing, follows, however, from the particular terminology.

(46)  Masakin (data from Stevenson 1955-56)

DATIVE    reg-e eat    reg-ine eat for
PASSIVE    reg-aak be eaten
CAUSATIVE    reg-i cause to eat, feed
APPLIED    monq-t stea1    monq-itc steal from
RECIPIROCAL    korr-e beat    korr-era beat each other
ASSOCIATIVE    arr-a laugh    arr-atc laugh together
FREQUENTATIVE    au go    au-aga go often

The following combination of two extensions was also noted: monq-ine-tc steal from someone for someone. Again, the terminology for DATIVE and APPLIED may better be exchanged. No evidence is given of the extended verbs in sentential environments.
(47) Kordofanian verb extensions—outlined (data from Stevenson)

<table>
<thead>
<tr>
<th></th>
<th>DATIVE</th>
<th>REFLEXIVE</th>
<th>PASSIVE</th>
<th>RECIPROC</th>
<th>ASSOCIAT</th>
<th>COMPARATI</th>
<th>CAUSATIVE</th>
<th>APPLIED</th>
<th>FREQUENTA</th>
<th>STATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>KOALIB</td>
<td>(1)ci</td>
<td>ne</td>
<td>ne</td>
<td>du</td>
<td>dize</td>
<td>e</td>
<td>agi</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEIBAN</td>
<td>jo</td>
<td>ni</td>
<td>ni</td>
<td>yo</td>
<td>jiyn</td>
<td>onu</td>
<td>eye</td>
<td>odi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTORO</td>
<td>jo</td>
<td>ni</td>
<td>ni</td>
<td>e</td>
<td>onu</td>
<td>i</td>
<td>ada</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MASAKIN</td>
<td>inæ</td>
<td>aako</td>
<td>ara</td>
<td>onu</td>
<td>i</td>
<td>te</td>
<td>aga</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TALODI</td>
<td>ṣnok</td>
<td>ƙk</td>
<td></td>
<td></td>
<td></td>
<td>ƙk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TUMALE</td>
<td>ani</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>RASHAD</td>
<td>an</td>
<td></td>
<td></td>
<td>iya</td>
<td>aga</td>
<td>ayo</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KATCHA</td>
<td>anæ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ada</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KRONGO</td>
<td>go</td>
<td>adene</td>
<td>ani</td>
<td></td>
<td></td>
<td></td>
<td>ja</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KATLA</td>
<td>ƙw</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>aka</td>
<td>Vk</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In many ways the chart (47) is more instructive in providing a comprehensive view of the extensiveness of the verb extension system in Kordofanian languages than the paradigms presented under (45) and (46). There can be no question about the genetic unity of the group as a whole nor about the historical reality of verb extensions throughout this group.

In the next chapter we will tie together the extensions discussed so far, providing historical explanations for a number of them, while bringing to bear considerable more evidence from individual languages.
CHAPTER 4

The Niger-Kordofanian verb extensions reconstructed.

In the last chapter we have given a typological survey of verb extensions throughout Niger-Kordofanian. While many questions regarding productivity (and, in fact, gaps in the data itself) remain, we are able to infer that Niger-Kordofanian had a system of verb extensions very similar in function to that found in the languages we have just cited. Moreover, we are in the position to propose which of the extensions must have been an integral part of the proto language and what the phonological content of each of the extensions might have been. It is this latter task to which the present chapter addresses itself.

In establishing reconstructions for specific extensions we will tolerate cognition among extensions the meanings of which has changed, including cases where the meaning changes can not be immediately explained. We take this position for two compelling reasons: Firstly, one can observe even within 'narrow' Bantu a number of cases where a given extension appears with different meanings in different language. The case of *am is a sufficient example. *am has the reflex -am- in Shona, where it is said to be a STATIVE extension, e.g. -komb- bend/-kombam- be crooked. Shona also has the more productive -ek-, which has both STATIVE/NEUTER and POTENTIAL meaning. In Bolia, -am- is regularly the PASSIVE extension, the STATIVE/NEUTER meaning being rendered by -an- (which is also RECIPROCAL in meaning). The shift in meaning from STATIVE to PASSIVE or PASSIVE to STATIVE is relatively straight forward, involving simply the addition of the agent or the loss of the agent, respectively. The possibility that a given extension has changed its meaning or has added or lost a specific significance must be allowed, therefore.
One can, secondly, observe similar differences and changes of meaning in the noun class system. A single example from Bantu will suffice. Very typically class 15 has among its functions that of infinitive prefix/infinitive nominalizer. However, in a number of languages class 9 or 11 or 14 is used; and in yet others one finds class 5 prefix as the infinitive marker. It is this last form which appears to be the original Bantu infinitive prefix as supported by the extensive use of that class prefix for the same purpose in languages outside the Bantu domain, confirming Meinhof's (and, later, Guthrie's) hypothesis that class 15, ku-, INFINITIVE is a Bantu internal innovation.

In broad terms, then, we take the kind of approach here that one might take in reconstructing the noun class system of Niger-Kordofanian by focussing first on the similarity of form and only secondly on the similarity of meaning. Nevertheless, the overall agreement from language to language between a given cognate affix and its meaning is most surprising, more initial confusion being caused by the misuse of semantic labels or multiplicity of terms for a given extension than are difficulties raised by actual differences in meaning and or use.

As might be evident by now, extensions have, for the most part, the canonical shape $C_1V_2$ or $V_1C_1$. Either of these shapes could have been the historically correct form (along with any number of other possibilities). While we consider the consonant $C_1$ to be the focal point of the extension, assuming that it has remained in a constant position vis-a-vis the vowels, $V_1$ or $V_2$, the relationship between the associated vowels occurring either before or after the consonant is far from clear. It is an open question whether cognation needs to be established between $V_1$ and $V_2$ in order to demonstrate that the extensions are cognates. If it can
be established that the two vowels are cognates, as is claimed here, then the interesting question as to why the vowel surfaces in a different position needs to be answered.

Assuming that the original canonical shape was CV one can envision the following possible scenario for the occurrence of VC extensions in West Atlantic and Bantu. For the most part, word structure in Bantu languages displays a (C)VCV... canonical shape. This is true for the surface realization in a large number of languages and at some more abstract level for most (if not all) 'narrow' Bantu languages. The striking exception to this generalization are verb stems and nouns derived from verbs. For all of these a (C)VCV...C shape would be the most apt characterization. On the surface this apparent violation of Bantu phonotactics is usually remedied by the addition of various tense/aspect marking vowels.

Already Bleek hypothesized that the original verb stem must have ended in a vowel, the nature of which is no longer recoverable. He assigned to the vowel the value of the Hebrew letter aleph, א (Bleek 1862. 50). Meinhof, concurring, cites a number of 'defective' monosyllabic verbs with the structure CV where V is not an a as supporting evidence for Bleek's hypothesis (Meinhof 1948.96). To the extent to which monosyllabic verbs constitute evidence for Bleek's aleph, one could also cite monosyllabic verbs which superficially consist of only a single consonant, but which on further analysis must consist, at least historically, of a consonant plus a HIGH or a nonHIGH vowel to explain the alternation of the vowels in the APPLIED, STATIVE and REVERSeIVE extensions (cf. Givon 1968 for an example from Bemba and further discussion). No such evidence exists for -CVC- stems. Let us assume, nevertheless, that
verbs had the basic structure CVC at some earlier stage.

The verb extensions also violate expected Bantu morpheme structure in being -VC- rather than -CV-. Let us assume that the original extension structure was CV and that the VC shape is secondary in development. At one stage in the history of Bantu (or preBantu), then, the verb plus extension structure was CVCn+CV. The chain of events envisaged in this proposal is outlined under (48):

(48) 1. C1V1C2n C3Ve
   2. C1V1C2VeC3Ve [n + Ve/___C3Ve]
   3. C1V1C2VeC3Ve+VT/A [T/A vowel replaces Ve]

In step 2, n assimilates to the vowel of the extension. The original vowel of the extension is then ultimately replaced by the tense/aspect marking vowel(s).

The reconstruction of the vowels of the extensions is hindered by a fundamentally inadequate understanding of the Niger-Congo--Kordofanian vowel inventory and its putative reflexes in the various branches. The history of the reconstruction of Niger-Congo vowel systems is marked primarily by an ever increasing inventory of vowels rather than a more thorough accounting and explanation of the history of the vowels.

For his UrWestsudanisch of 1927 (which we consider to be largely synonymous with Niger-Congo) Westermann proposed a vowel system consisting first of a, i, and u. This system developed into the five vowel system a, e, i, o, and u, and then into a seven vowel system i, e, e, a, c, o, and u in a fashion similar to that proposed by Meinhof for Bantu, by deriving e < ai, o < au, c < ua, and e < la (Westermann 1927.197). Armstrong (1964) similarly posits a basic three vowel system, adding, however, two high,
back vowels, \( \mathcal{y} \) and \( u \), for each of which he cites a single example.

In the reconstruction of specific subgroups of Niger-Congo a more complex vowel system is usually proposed. Swadesh, et al. for Common Gur, Heine for the Togorestsprachen and deWolf for Benue-Congo all propose five vowel systems consisting of \( i, e, a, o, \) and \( u \). Heine additionally suggests that \( e \) and \( o \) are derived from the above system via a set of rules characterizing the system of (restricted) vowel harmony found in these languages (Heine 1968:142). Both Meeussen and Guthrie reconstruct seven vowels for Bantu, viz. \( i, e, \epsilon, a, o, \) and \( u \). Most recently, Coupez has proposed a ten vowel system, consisting of the basic set of five vowels, \( i, e, a, o, \) and \( u \), which is to be distinguished furthermore by \([ \pm ATR ]\).

Stewart, in a series of articles beginning 1967, has proposed an ever increasing inventory of vowels for an ever waxing linguistic subgroup of Niger-Congo, most recently called Volta-Congo. The vowel system, outlined in (49) below, consists of a basic set of five vowels, \( i, e, a, o, \) and \( u \), which can each be further distinguished for \([ \pm ATR ]\) and \([ \pm NASAL ]\). The former feature is proposed in response to vowel distinctions often found in the Volta-Comoe languages, the latter allows Stewart to eliminate nasal consonants from the inventory of segments needed for Volta-Congo (Stewart 1976).

\[
\begin{array}{c|c|c}
\text{+ ATR} & \text{- ATR} \\
\hline
- \text{NASAL} & \begin{array}{cc}
\hat{i} & \hat{u} \\
\hat{e} & \hat{o} \\
\hat{a} \\
\end{array} & \begin{array}{c}
i \\
é \\
a \\
\end{array} \\
+ \text{NASAL} & \begin{array}{cc}
\breve{i} & \breve{u} \\
\breve{e} & \breve{o} \\
\breve{a} \\
\end{array} & \begin{array}{c}
\breve{u} \\
\breve{o} \\
\breve{a} \\
\end{array}
\end{array}
\]

54
All vowel systems so far proposed seem to meet the limited need for which they were designed. Guthrie's system does well for Bantu and Stewart's system is well motivated for the languages for which it was specifically designed. But neither can Guthrie's system account for the vowel distinctions found in Volta-Comoe languages nor can Stewart's system explain the peculiar type of vowel harmony system encountered in many Bantu languages.

In many respects the decision of what kind of vowels system Niger Congo had depends crucially on the reconstructions one ultimately proposes. If it turns out, as is assumed here, that a substantive portion of the vocabulary was disyllabic plus or minus various affixes, then it is easy enough to derive even the most complex vowel system with a basic set of five or seven vowels. Guthrie's Mfinu case constitutes an outstanding example to that effect (Guthrie 1956). If on the other hand monosyllabic reconstructions are the rule, then a more complex system must be envisaged, perhaps as complex as (49).

For our present purposes we are restricting ourselves to a five vowel system. This decision appears to be sufficiently motivated not only by the verb extensions, which are specifically considered here, but also by other affixes such as the noun class prefixes which one surely needs to reconstruct, as well, for Niger-Kordofanian. In establishing correspondences among the vowels, furthermore, we have considered it a sufficient condition for cognition if the vowels compared agreed in frontness/backness and lowness/nonlowness. Only in very rare cases, given these loose constraints, is there cognition among the consonants but not the vowels.
Previous researchers have posited extremely simple consonant systems for the Niger-Congo languages. The proposals of Westermann and Armstrong are given under (50):

(50) Westermann (1927, 198) Armstrong (1964)

\[
\begin{array}{c}
p & t & k & p & t & k \\
b & d & g & b & (d) & g \\
v & l & y \\
m & n & \eta & m & n
\end{array}
\]

The proposals for specific subgroups are in most cases more complicated, reflecting a more advanced stage of research. Those proposed for Benue-Congo, Togo-Remmant, Common-Gur and West Atlantic are listed under (51):

(51) Benue-Congo (de Wolf 1971) Togo Remmant (Heine 1968)

\[
\begin{array}{c}
p & t & k & kp & p & t & c & k & kp \\
b & d & g & gb & b \\
s & \phi & ts \\
z \\
w & l & y & wy \\
m & n & \eta & m & n & \eta & \eta
\end{array}
\]

Common-Gur (Bendor-Samuel 1971) West Atlantic (Doneaux 1975)

\[
\begin{array}{c}
p & t & c & k & kw & p & t & c & k \\
b & d & j & g & gw & b & d & j & g \\
w & y & w & l & y \\
m & n & \eta & \eta & \eta & m & n & \eta & \eta
\end{array}
\]

56
Of particular interest is the reconstruction of *d and *l in West Atlantic and Benue-Congo, the two are usually found to be in complementary distribution in the present day languages, and the labiovelar series Benue-Congo, Togo Remnant and Common Gur. It can be shown in a number of languages that labiovelars are derived from sequences of velar stop and w-glide (e.g. Ewe, Dzamba, etc.) and preliminary evidence indicates that they (labiovelars) are an areal feature which may may or may not be spreading. In the Bantu domain, for example, labiovelars are restricted to the northwest area, being found only in contiguous languages. Bendor-Samanuel's reconstructing *kw, *gw and *qw may correctly define an intermediate point in the development of the labiovelar but points to the probable nonexistence of this contrast in Niger-Congo.

The consonant correspondences which play a role in establishing cognition among the verb extensions are for the most part straightforward and, considering the depth of relationship, extremely regular and predictable. Only the correspondence series for *C! CAUSATIVE1 can be considered questionable at all. And even for this series, once supporting evidence is provided, little doubt remains as to its validity.

Based on evidence from the affixial morphology of Niger-Congo, i.e. noun class affixes and verb extensions, we need to deal with the highly restricted consonant system given under (52). (52) must not be construed to represent our present view of the Niger-Congo consonant system, but simply represents an inventory of the consonants for which we have evaluated the evidence.

(52) P T C K B D G M N

57
Below are given reconstructions for ten verb extensions that were very likely an integral part of Niger-Kordofanian, or minimally Niger-Congo. For each series we will give: i. Correspondences/reflexes for documented languages; ii. supporting evidence for the correspondences; iii. semantic import of the extensions; iv. syntactic properties; and v. distribution information. Where the form does not share the meaning of the reconstruction it is indexed by a superscript number which refers to one of the semantic labels listed under (53):

(53)

1. APPLIED: cover term for BENEFACTIVE, DIRECTIVE, etc.
2. ASSOCIATIVE: do together; be done together
3. BENEFACTIVE: do for
4. CAUSATIVE: cause someone to do; help someone do
5. CONTACTIVE: lean, put, place towards/against
6. DIRECTIVE: motion towards, to
7. FACTATIVE: ? (label unclear as used by various authors)
8. FREQUENTATIVE: do often
9. INCHOATIVE: become done
10. INSTRUMENTAL: do with
11. INTENSIVE: do often, thoroughly, extensively
12. NEUTER: cover term for STATIVE, INCHOATIVE, POTENTIAL, etc.
13. PASSIVE: be done by someone
14. PLURALITY OF ACTION: be done often/be done to many/be done by many
15. POTENTIAL: can do, doable
16. RECIPROCAL: do to each other

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17. REFLEXIVE: do (to) oneself
18. REVERSIVE-ACTIVE: undo
19. REVERSIVE-STATIVE: be undone (*by someone)
20. STATIVE: be done (*by someone)

Language names are cited in full. Citations for the sources of the language data are not given in the interest of parsimony. Supporting evidence is essentially provided from Westermann (1927) and Armstrong (1964). Under distribution information indication is given whether the particular form is restricted to Niger-Congo or is Niger-Kordofanian.

*DE  APPLIED

i. Bantu *ED, Mbuli 1°, Bamoun ro, Wute i, Nkom i, Tikar l°, Mambila l, Duka e, Tafi le, Grebo di10, Igbo rV, Urhobo re, Dagara l°, Ndunga le20, Ma le20, Dongho ni, Mba le20, Ngbaka di, Tula e, Banda nde, West Atlantic *ED, Temme er, Bulom 11, Fula ir, Koalib aqi, Heiban odi, Masakin ine, Otoro ine.

ii. *D corresponds to Westermann's *1: *la liegen; *la der, er (bestimmter Artikel); la (lla, lla) kaufen; lè lang-sam, leise; lè sein; lè Hirse; lè Wurzel, Ader; lè, lè essen; *l im auslöschen; *lim Zunge; *lu Knie; *lu, *l u flechten, weben; *um beißen.

iii. APPLIED, as noted above, is a cover term for a variety of semantic relationships also referred to as DIRECTIVE, BENEFACTIVE, APPLICATIVE, RELATIVE, PREPOSITIONAL, and others. Each of these constitutes a correct label for one of a number of semantic forces APPLIED "adds" to a given verb base, some of which are exemplified for Swahili under
(9) above. The extent to which any, or all of these notions were present in Niger-Congo--Kordofanian is unclear from the semantic data available on the individual languages outside of the Bantu domain. We feel safe in conjecturing that the APPLIED had minimally the BENEFACTIVE do for someone, on someone's behalf reading and the DIRECTIVE reading of move toward, to. The additional readings of doing...in someone's place for BENEFACTIVE and the topic function of the DIRECTIVE are easily derivable from the former meanings.

iv. Syntactically, APPLIED either constitutes a case marking for an additional argument, which in all cases must be a possible subject of the basic verb to which APPLIED was added and which in all cases follows the verb as the most immediate NP, or, in the DIRECTIVE reading, allows an additional argument expressing the goal of the verb of motion to which it is attached.

v. APPLIED must be considered to have been an extension in Niger-Kordofanian.

*C1 CAUSATIVE:

i. Bantu *EC, Bangam ci, Mbui s, Bamoun jə, Nyang si, Nkom sv, Tikar z, Duka s time before, Birom s, Izi ši8, 13, Grebo V, Igbo ci, si, Dagbara i, Dagbani si, Bicri e, Buli se7, Barambu ši, Tula jš, Banda ce, Temne as, Bulom i, Koalib ce6, e, Heiban eyo, Talodi ek.
ii. Supportive evidence for *C is most tentative at this point. It appears that de Wolf's reconstructions of *t+iV corresponds to Bantu *C. However only two convincing examples could be cited so that even this possibility remains marginal. The decision to posit *C was based on two considerations: i. In all but the Talodi case the consonant of the CAUSATIVE (if there is one) is a dental/palatal fricative or affricate. For pattern congruity reasons we have chosen *C rather than *S, maintaining a series of stops and no fricatives. ii. The possibility of positing *T as the consonant was eliminated by the fact that there are several languages which have both CAUSATIVE₁ and CAUSATIVE₂ where a putative *T and *C needs to contrast. Furthermore since a velar consonant also has been reconstructed (with different reflexes in the documented languages) the possibility of deriving the CAUSATIVE₁ from *K₁ is effectively eliminated.

iii. The meaning of CAUSATIVE is considerably more complicated than the label itself suggests. It seems probable that the form here reconstructed also had a FREQUENTATIVE meaning, do often, an INTENSIVE meaning, do thoroughly, ?expertly, and a PLURALITY of action/actor meaning, do to many, many do .... The basic causative meaning was probably: Help do, cause to do. It is not likely that there were any restrictions on the ability of CAUSATIVE to be added to any verb stems beyond those we have already
defined in chapter 1.

iv. Leaving out any arguments regarding the higher verb analysis of the causative extension, syntactically it is a case marking allowing the expression of an additional argument. That argument must meet the selectional restrictions of the subject of the basic (unextended) verb and, semantically, acts as its subject. When *C₁ has the meaning FREQUENTATIVE INTENSIVE, etc. no change in the syntax is to be observed. In the case its meaning is PLURALITY of action/actor, either the object or the subject, respectively, must be plural or a NP containing a conjunction of two or more NPs.

v. It is reasonably safe to assume that *C₁ was present in Niger-Kordofanian. Of special interest to us is the CAUSATIVE form found in West Atlantic. Doneux reconstructs *an. Yet we find a reflex of *C₁ in the Temne form əs, suggesting that the proto West Atlantic form might have been *es and that the use of *an as the CAUSATIVE, is an innovation. *an, in turn, must be considered the correct form for the RECIPROCAL, cf. Temne anə, and not the reconstructed form *ad. The picture of what was proto West Atlantic must be revised, therefore, based on external evidence.

*TI CAUSATIVE₂

1. Mбуi i⁶, Nyang ṭi¹, Duka ṭ₈, Mbe r₈, Bangangte te⁸, Dagara r, Yom r, ṭ₁¹, Wama re⁸, Zande ṭi⁶, Barambu r⁸, Yakoma rV⁸, Temne əth, Fula ṭ₈, Masakin te.
ii. *ɪ is fully supported by Westermann's *tfoot: *tfoot schießen, Gewehr, Bogen, Krieg; *tfoot Vater; *tfoot sagen, erzählen; *tfoot nicht; *tfoot Speichel; *tfoot tief Stein; *tfoot Oberschenkel; *tfoot, *tfoot früher, damals; *tfoot(+) abreifen, schneiden; *tfoot niesen; *tfoot, *tfoot wir; *tfoot, *tfoot Mitte (des Körpers); *tfoot, *tfoot nehmen; *tfoot, *tfoot Baum; *tfoot stoßen, einknicken; *tfoot spucken; *tfoot arbeiten, (zur Arbeit) schicken; *tfootna wollen.

iii. The difference in meaning between the two CAUSATIVES is not clearly discernible. To the extent to which (on purely numerical ground) the predominant meaning of the reflex of *ɪ is FREQUENTATIVE, INTENSIVE one might suggest that it be reconstructed with meaning. Yet reflexes of *ɪ appear with a CAUSATIVE meaning alongside of reflexes of *cɪ, leaving us to conclude that the label CAUSATIVE is appropriate for both.

iv. See *cɪ above.

v. *ɪ is Níger-Kordofanian. Curiously, it is not reported in narrow Bantu but does have reflexes in both Bangangte and Nyang.

*TA CONTACTIVE

i. Bantu *AT, Mbuti *t, Nkom *tv, Dongo *ta²⁰, West Atlantic *ad¹⁶, Dyola or¹⁶, Masakin etc.

ii. See *ɪ above.

iii. Semantically CONTACTIVE is an elusive category. Dammann (1962) defines it as an extension with the meaning of
Umgebens (surrounding), Umschließens (enclosing). Defining the CONTACTIVE is complicated by the fact that it appears as a fossilized form in many languages. In Bantu, in particular this seems to be the case, suggesting that it is clearly ancient in origin. Guthrie has reconstructed a few of the fossilized forms all of which appear to fit within Dammann's definition: *KŬÁT seize *KŬMBAT hold in arm or hand, *PĂKAT hold a child.

iv. Nothing specific is known about the semantic behavior of this extension.

v. While the CONTACTIVE has reflexes throughout the Niger-Kordofanian area, it is also only marginally documented. It appears that it was already fossilized in Proto Bantu, there being no good indications from within Bantu that it is still productive in any present day language. In West Atlantic its reflexes occur with the meaning of RECIPROCAL. The connection between CONTACTIVE and RECIPROCAL and the process of deriving one from the other remain unclear.

*0

PASSIVE

i. Bantu *O, Mbe o²⁰, West Atlantic *V[+ back], Dyola o²⁰.

ii. For supportive evidence compare the discussion under vowels above.

iii., iv. Passive allows the deep (semantic) object to appear as the surface subject and allows the deep subject to surface as the agent. The expression of agency is somewhat skewed, a variety of options appearing in each of the branches in

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which the PASSIVE form is documented, e.g. Swahili uses
na and, with + NP while Xhosa employs the copulative,
agreeing in gender and number with the agent, + NP.

v. The PASSIVE form occurs only in West Atlantic and in
wide Bantu. We must, therefore, conclude that it is
a form unique to Niger-Congo.

NA

RECIPROCAL

i. Bantu *AN, Bangam ne, Mbuí n, Bamoun ne, Wute in, Nkom
nV, Tiv n⁹, Lammsok Vn²⁰, Grebo ne,Yergum an, Bieri nV,
Wama na¹⁰, Tula n²⁰, Birri nį, Banda nė, West Atlantic
*an⁴, Temne nė, Bulom nį, Koalib nė¹⁷, Heiban nu¹⁷, Otoro
nu¹⁷, Katcha anė, Rashad an¹³.

ii. *N correspondences are extensively documented in Westermann:
*na gehen, ?Fuβ; *nā sein, *na Spinne; *na, *ni Mutter;
*na, *nak, *ni, *nik Rind; *na, *nan, *ni vier; *ni
Elephant; *ni ich; *ni Wasser; *ni, *nin Zahn; *ni, *nu
Mensch; *ni, *nu, *nui, *niua trinken; *niam Tier, Fleisch;

iii. RECIPROCAL expresses an action/activity mutually experienced
by/on the subject. In some cases RECIPROCAL can also have
an ASSOCIATIVE meaning, i.e. to do something together or with
someone, and a STATIVE meaning, e.g. be mixed together. We
attribute both an ASSOCIATIVE and a RECIPROCAL meaning to
*NA.

iv. Syntactically, RECIPROCAL requires either a plural subject
or a conjoined subject, or a subject and an object which is
marked with some kind of associative marker, e.g. and, and
meets the selectional restrictions for subject of the verb.

v. RECIPROCAL is documented throughout Niger-Kordofanian.
Curiously, reflexes of *NA appear with the meaning of CAUSATIVE in much of West Atlantic, leading to the reconstruction of *an as CAUSATIVE.

It is tempting to speculate on the possibility of an etymological relationship between *NA RECIPROCAL and Bantu *NÀ and, with (c.s. 2264). In so far as the former form is distributed throughout Niger-Kordofanian and the latter is restricted to 'narrow' Bantu one must conclude that the direction of derivation, if any, must have been from *NA RECIPROCAL to Bantu *NÀ and, with. The first step in such a development would have required the structure

\[ \text{NP}_1 + V - \text{NA} + \text{NP}_2 + \ldots \]

where NP₁ and NP₂ were both the subject of a symmetric predicate, V - NA. Next, NA would have become detached from the verb (and, in most Bantu cases today, attached to the NP):

\[ \text{NP}_1 + V + \text{NA} - \text{NP}_2 + \ldots \]

Acquiring the meaning and, with in time, NA would ultimately become generalized as the only conjunction. To the extent to which information is available it appears that this process must have occurred only in 'narrow' Bantu. Even within 'narrow' Bantu a number of other, equally reconstructible forms occur, i.e. *yà and *dà, raising the possibility of a relatively late internal development of *NÀ.
REVERSIVE

i. Bantu *OD, Nkom ıV, Efik rë, Tayari ḫ, t, rV, Yom te, Bicri te, re, Buli ñi, Wama ri, Ngbaka ñi, West Atlantic *u̯, Dyola u̯, Fula u̯, Koalib du̯.

ii. As a correspondence series, REVERSIVE behaves mostly like a *T series, cf. *T!, above. The aberrant form is the Bantu *OD. One would have expected *OT. No reason for this apparent lack of correspondence could be determined. It is possible, as a pure conjecture, that *T > *D in analogy to the APPLIED form, *DE > Bantu *ED. (See also the discussion under *KO, below.)

iii. Strictly speaking, *TO REVERSIVE should be REVERSIVE-CAUSATIVE, at least in those cases where it is attached to intransitive verbs. Verbs which allow REVERSIVE must entail the possibility that the state or action can be reversed. That is, change of state verbs can not take *TO, cf. *unshatter.

v. *TO is attested throughout Niger-Congo. Whether the Koalib form is a cognate is not certain, though the correspondence, but not the semantics, fits.

KO

REVERSIVE-STATIVE

i. Bantu *OK, Dagbari ki, gi.

ii. This series is based on the sparsest of evidence. Aside from the extensive Bantu attestation, only the Dagbari form appears (and with the wrong vowel). There is a curious parallel that appears to exist between the non-stative and stative, non-reversive and reversive extensions in Bantu:
Insofar as *OK is the weakest etymology, the possibility that it arose as an analogical form must not be overlooked. No conclusion can be drawn here, however.

iii., iv. *KO/*OK is the stative counterpart of *DO. In very strict terms, *KO should appear as *DO+*KO, and does in a number of Bantu languages.

*KE

i. Bantu *EK, Nyang e, Nkom i, Efik V, Tafi ke, Iizi kʰwʰfV, Yergum ko¹, Ndunga kV⁸, Bulom k².

ii. *K correspondence is extensively documented by Westermann an fully supported by Armstrong: *ká schneiden, abbrechen; ka nicht; *ká, *kát bleiben, sitzen; *ka, *kal Krabbe; *ki, *kiu Mond; *kia machen; *kú, *kúa schreien; ku, kul alt; *kú, *kúa sterben, töten, alt sein; *kú, *kúp, *kúa Knochen.

iii. iv. STATIVE has two meanings: It allows the object of the unextended verb to appear as the subject (with no agent implied) with stative significance, i.e. it disallows manner adverbs, etc., and, in Bantu only, it has the potential meaning, where the object of the verb becomes the surface subject of a verb totally analogical with the -able formation in English.
v. *KE is attested only in Niger-Congo. There are STATIVE extensions in Kordofanian but they could not be related to the reconstruction here proposed.

*MA

STATIVE

i. Bantu *AM, Wute m, Mambila əm, Duka m\(^1\), Lamnsok Vm, Efik m, Ijo mo\(^4\), Nembe mo\(^9\), Ogoni ma\(^1\), Temne a, Dyola a, Bulom ma\(^2\).

ii. The reconstruction of *M for Niger-Congo is well attested:

*mä Mutter; *mä Rücken, *mä nicht; *mä dieser, der, da; *ma, *man zu Ende sein; *man, *mal Flamme; *mi Fett, Öl; *mi, *mín schlingen, schlucken; mí, míná drücken, quetschen; *mi, *mu das Innere; *mû, *mûmû taub, stumm; *mua (mu) lachen; *mua, *mia süß.

iii., iv. The distinction between the two STATIVES here proposed, *KE and *MA, is not clear. In some 'narrow' Bantu languages, especially in the north-west area, *MA (> *AM) is reflected as the PASSIVE suffix. A number of complex radicals reconstructed for PB-X both eliminate the possibility that it was PASSIVE historically and shed light on a semantic difference between the two. Consider the following starred forms: *BANDAM crouch, *BATAM become flat, *BOTAM crouch *CEND/CENDAM lean (into) out of vertical, GADAM lie on back, *KJTAM become bent with age, etc. In all the above cases, and for several more examples, the STATIVE extension *AM expresses meanings involving the position and condition of animate objects/human beings. No confirmation of this could be found outside of Bantu. Nevertheless it is reasonable to
conjecture that the difference between the two STATIVES once entailed a distinction between states of a (human) body, i.e. *MA, and others, i.e. *KE.

v. The extension is restricted to Niger-Congo. Its attestation within this group is not overwhelming, but sufficient to suggest it was part of the Niger-Congo verb extension system.

A brief mention should be made regarding the cooccurrence possibilities of the verb extensions here reconstructed. Outside of Bantu, little to no evidence exists. Nevertheless, in so far as such cooccurrence possibilities are governed by semantic (and not formal) constraints it is possible to make a number of inferences about such combinatorial possibilities. We restrict ourselves here to the combination of two extensions, only.

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Vertically appearing extensions are to be read as occurring before horizontal ones. A * indicates that this combination is not possible, e.g. APPLIED + REVERSIVE is thought to be an impossible combination. A ✓ indicates, on the other hand, that this combination is feasible, e.g. APPLIED + CAUSATIVE. Combinations of the same extension, e.g. APPLIED + APPLIED, have been marked with a dash (-). Such combinations must not
APPLIED, have been marked with a dash (-). Such combinations must not be thought to be anomalous, apriorily, although RECIPROCAL + RECIPROCAL, STATIVE + STATIVE, PASSIVE + PASSIVE and REVERSIVE/st. + REVERSIVE/st. are most unlikely.
Chapter 5

Verb extensions, verb serialization, and SOV\SVO order.

If for Niger-Kordofanian verb extensions were an integral part of the derifational morphology, the question arises as to how verb extensions were lost in so many languages and what if anything replaced the meanings expressed by them.

The recent literature, particularly the discussions of Givon (1971 & 1975), intimately connect verb extensions, serialization and SOV order. The independent existence of verb extensions has been amply demonstrated for Niger-Congo so that any connection between the latter two issues is secondary in nature. Serialization, too, can be shown to be independent of the other two variables. There are a large number of languages, Bangam, Duka, to name a few, in which both verb serialization and verb extensions occur, although there seem to be no instances in which both have the same semantic function. Finally, word order is similarly independent of the others. There are serializing languages with SOV order as well as SVO order and there are numerous languages with SOV (and, of course, SVO) order which have verb extensions. Nevertheless, we wish to discuss in this chapter a number of factors that seem to tie together word order, verb extensions and serialization in a kind of a (linguistic/historical) cycle. It will be suggested, furthermore, that given languages find themselves at different points of that cycle with different aspects of their 'semantic' inventory.

The discussion will begin with a consideration of the phonological loss of verb extensions. Then we will review, in brief, the so far sparse evidence in support of the hypothesis that verb serialization is an areal
phenomena, a wave, which is expanding outward into neighboring areas. Finally, we will consider the development of the modified base from its source (a verb) to its present shape and, ultimately its successor.

As has been pointed out severally, in many Niger-Kordofanian languages only traces of extensions are to be found. In many others, no evidence at all exists. The loss of the verb extensions must not be viewed as a haphazard event, a random linguistic change. Rather, it is the consequence of a spreading phonological process which is reducing poly syllabic words to monosyllabic ones in an area reaching out roughly from the core of what might be called Kwa. The steps in this process appear to involve the progressive elimination of one segment at a time until only a CV structure remains: CVCV to CVC to CV.

The optimal evidence in support of this position would consist of numerous historical cases where CVCV words have become CV. This is not feasible. There is, however, strong inferential evidence which it is felt has equivalent import. Firstly, notice that it has been suggested traditionally that various subgroups of Niger-Congo had characteristic canonical shapes for word structure. Westermann & Bryan, for example, identify the following types for their language groups:

West Atlantic: CVC(V); Mande: CVCV, CVN, CVV; Kru: CV; Gur: CV, CVC; Kwa: CV; Togo Remnant CV.¹ If one were to make equal characterizations for the Benue-Congo languages, one might say: Bantu: CVCV; non-Bantu--Bantu: CVC, CV; etc.

Clearly, such characterizations do not correctly describe the word structure of the languages involved. It would be absurd to suggest, for example, that a Kwa language such as Yoruba had only monosyllabic words. It does not.\textsuperscript{2} But there is a high correlation between such characterizations and the presence and absence of verb extensions (and noun class prefixes). It appears to be clearly the case that all languages characterized as having CVCV word structure also have noun class affixes and productive verb derivational suffixes. While no connection between the noun class affixes and the verb extensions is claimed here, it is suggested that their presence is directly connected to the expected/allowed canonical shape of the word. Conversely, those characterized as being CV structures do not have productive noun classes (except as remnants or in some nominalizing function) and also do not have verb extensions (except as traces).

Secondly, direct support for our position and further evidence comes from the Adamawa Eastern case cited in chapter 3. It will be remembered that in Zande (and its close relatives) verb extensions could be found only in cases where the verb was inherently monosyllabic. Most (if not all) traces of verb extensions on disyllabic or polysyllabic verb stems are lost. The Zande case (cf. 40 above) represents an intermediate step between languages which have productive verb extensions on any stem (Bantu, West Atlantic) to those which restrict extension to certain syllable types (Zande) to those which have no extensions at all. (Yoruba, etc.).

The specific nature of the phonological rule/constraint which we are alluding to here to explain the extensive loss of verb extensions

is as yet unclear. The fact that both noun class affixes and verb extensions are affected by it (as is argued here), suggests that it involves a constraint on word structure which demands a certain length word rather than a phonological rule which progressively deletes the final segment. In the former case the constraint would have the same ultimate result, but it would be structurally different in that it could delete either first or last segment(s) but no segments from the stem, or, more specifically, it could not delete the two (or three, or ...) segments immediately to the right of the stem boundary. Within this limitation, then, both noun prefixes and verb suffixes could be deleted without destroying the word stem, while reducing the overall canonical structure of the word as indicated above.

Evidence as to the extent of this 'constraint' (geographically) is equally unavailable. Preliminary investigation indicates that much of Kwa has been subject to a progressive reduction of word structure to ever shorter forms. A similar phenomenon can be observed in several Gur languages. Much of Benue-Congo, except for narrow Bantu (and even some of these, i.e. Teke) displays a reduced word structure which needs to be reconstructed to (minimally) disyllabic stems (cf. de Wolf 1971). There is an overwhelming tendency in many Bantu languages, but particularly towards the north-west, to devoice the final vowel, or even delete it and to reduce the consonant contrasts in second position. All of this clearly supports our hypothesis that this 'constraint' is an areal feature which is, moreover, expanding outward.³

³It is an interesting fact of language that as word structure is being reduced in length, complex (and competing) word formation rules continue to play a productive role in word formation in many of these languages, cf. Lord 1977, for a discussion of some of these.
Serialization, too, has been argued to be an areal feature (cf. Hyman 1975). Again, evidence for the extent and direction of its use is most superficial at this time, making the task of bringing forth supporting evidence most difficult. A number of studies have suggested that serialization is undergoing, or has undergone, specific changes, cf. Lord (1973 & 1977). The interrelationship between verb serialization and verb extensions has not been detailed.

In Duka (Plateau–Benue-Congo) both verb extensions and verb serialization occurs. Examples of each are given under (26) above. 4

The specifics of the serial examples there discussed point to the interesting phenomenon where the complementizing (the higher) verb is marked for extensions, in this case *movement towards* on and *causative*.

(55 (=26.a)) ṣọ hantɛ a wenet ɛ am -rɛw [[it Fl brought one hindered them INF-sleep]]

That is why they were hindered from sleep.

The higher verb, hantɛ, while behaving as the first verb in a serial construction, nevertheless, requires the marking of the (previously) productive causative suffix. It is expected that the next step in this process of expansion of the serial construction will be the loss of the use of the verb extension with the higher verb.

In evaluating the relationship between verb extensions and verb serialization on an absolute scale of presence versus absence we would find some languages, such as Yoruba and Yatye on one end with no verb extensions and extensive use of verb serialization, and other languages,

4Since we are arguing that serialization in its truest sense, e.g. as in Yatye, cf. Stahlke 1970, will ultimately replace verb extensions, we are not concerned here with any specific definition of serialization but allow ourselves a rather loose interpretation.
such as Luba and Fulani on the other end with extensive verb extensions and no serialization to speak of. Furthermore, we would find a large number of languages who find themselves in between, e.g. Duka, Fe?fe?, and many others. Since we assume all of them to be genetically related, and since we have demonstrated that verb extensions were present in the parent language we can only conclude that verb serialization in its absolute form is an innovation. Verb serialization, moreover, is not clearly the single innovation of a given subgroup of Niger-Congo. It cuts across relatively well defined linguistic boundaries. It is clear therefore, that it is expanding, and that it is, by inference, replacing verb extensions.

If verb serialization is replacing lost verb extensions one would not expect phonological cognition, even if serialization is the cause for the loss. An assumption to the contrary would suggest that verb extensions become separated from the verbs and acquire full verbal status. This seems unlikely. Verb serialization and verb extensions show semantic cognition to a large degree, however. A reading of Givon's discussion of the semantic relationships expressed by serial constructions in Ijo reads like a list of verb extensions: Instrumental, Manner, Dative/Benefactive, Accusative, Locative, Causative, Comitative, etc. (Givon 1975:75-80). This reassignment of semantic function to the serial constructions must not be viewed to be either chronologically sequential nor complete. In a large number of language we find both periphrastic and morphological causatives. In many of these the periphrastic is clearly a serial construction, e.g. Dagara and many others. The fact that both constructions co-exist would seem to suggest that they are, at least in part, chronologically independent.
Serialization furthermore does not replace all lost extensions in any language we know of. If our reconstructions of the extensions in chapter 4 are correct then we find many languages with serialization which do not appear to have constructions expressing the notions captured by the PASSIVE, REVERSIVE or REVERSIVE-stative extensions, e.g. Bangam-Bamileke or Koyo (Kru).

Finally, there appear to be no languages in the Niger-Congo domain which lack both verb extensions and verb serialization, though such a language is surely possible.

So far no mention has been made about the status of *[de perfect, also known as the modified base. While argumentation will rage back and forth about its status, its etymology most crucially bears on the substance of what has been said of verb extensions, serialization and word order.

There exists considerable evidence that *de must be reanalized as consisting of two morphemes, *d and e. Evidence for this hypothesis is so abundant that only a few instances need to be cited here.

In many languages the passive of the perfect appears in between the two morphemes just cited, for example, Sotho:

(56) Perfect active Perfect passive
bop-a bind, tie bop-il-e bop-il-o-e
rem-a out rem-il-e rem-il-o-e
rat-a love rat-il-e rat-il-o-e

Similarly, the reflex of the CAUSATIVE *I frequently intrudes between *d and e, e.g., in Kikuyu:

(57) Perfect (non-cause) Perfect cause
cok-a go back cok-ir-e cok-ir-ie
gwät-a take hold gwat-it-e gwat-It-i-e
Finally, in a large number of languages the perfect is realized as a stem internal ablaut plus the final e. The examples in (58) from Yao are representative of the range of changes that may occur:

(58) Perfect

-\text{pikan-} \quad \text{hear} \quad \text{pikeen-e}
-\text{lakas-} \quad \text{destroy} \quad \text{lakees-e}
-\text{p-} \quad \text{give} \quad \text{peel-e}
-\text{ly-} \quad \text{eat} \quad \text{léé-e}
-\text{waal-} \quad \text{wear} \quad \text{west-e}
-\text{pit-} \quad \text{pass} \quad \text{piit-e}

Any historical account of the modified base would therefore have the task of providing a source for and assign a function to both *10 and *E. M. Mould (1972) on evidence from internal reconstruction has raised the possibility that the perfect in Bantu must have been *GIDE. He cites as direct evidence (from Polome via Givon) data from Chaga that -gile appears as the surface form. This could not be confirmed. Let us assume, nevertheless, that *GIDE and *E are the appropriate forms.

Returning to Givon's hypothesis that verb extensions have their source in higher verbs we can now provide evidence that this clearly correct for the Perfect.

There are a large number of languages where the expression for the perfect is a complex construction consisting of a sequence something like (59.a) or (59.b):

(59) a. X V finish
b. X finish V

Examples of the latter type are given under (60) for Amo (Benue-
Congo--Plateau):

(60)  ñ-malù daķ  I have come
ñ-malù yenu  I have seen
ñ-malù malu  I have finished

Diluzio proceeds to relate the perfect marker malù to māla finish, which in turn is cognate with Proto Bantu *-MAD-.

Type (59.a.) forms occur in Mambila-Wute. Most interesting about the Mambila-Wute data is that it both presents the 'missing link' for the SOV word order required for Givon's hypothesis, V comp-V, and the complementizing verb, finish, is a possible cognate of *GID, the 'narrow' Bantu perfect:

(61)  a.  me ndeb  kàl gí
  granery tie finish
  hénè nor-à'-mà-bo tiel tana gí ké
  those my people cut finish PAST
  hénè nor -à'-mà-bo kóm kì gí ké
  those my people compl. hoe finish PAST

The underlined segments in (61) indicate the verbal construction V+finish.

Notice that fíni·ñ is marked for the past by ké·n.

It is a short step from constructions such as those under (61) where a series of verbs express the perfect to languages where gí·gí·l

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5Data from diluzio, A. 1972. Preliminary description of the Amo language (Plateau Province of Nigeria). AU 56.3-60. Notice that both the perfect 'marker' malù and the 'lower' verb are inflected for perfect with an u:

yènè/yenu  see/have seen
yàra/yaru  grind/have ground
màla/malu  finish/have finished
sìslìa/sìslìu  laugh/have laughed

In this way the Amo case parallels completely the Bantu situation where both the *GID and *E must be viewed as perfects. The latter form surfaces as the 'short form' of the perfect in Zulu and Xhosa, of course, and therefore contrasts with the reflex of the former, the 'long form'.

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The cognition between gl/gl and Bantu *-GID is fully supported by the following items:

<table>
<thead>
<tr>
<th>Mambila-Wute</th>
<th>Proto Bantu</th>
</tr>
</thead>
<tbody>
<tr>
<td>gel/gulu Bein</td>
<td>*-GODQ Leg</td>
</tr>
<tr>
<td>ger Elefantengrass</td>
<td>*-YATI grass</td>
</tr>
<tr>
<td>goai Speer</td>
<td>*-GONGA spear</td>
</tr>
<tr>
<td>golé kaufen</td>
<td>*-GOD- buy</td>
</tr>
<tr>
<td>gysi Fell</td>
<td>*-YOA skin</td>
</tr>
</tbody>
</table>

The word order in the Mambila-Wute case is SOV. Meyer cites this as an exception to the 'normal' SVO order. It is certain, however, that the Mambila-Wute case constitutes the most concrete evidence to date that the Bantoid languages were SOV in order at this time. The cognition between the Bantu perfect and the Mambila-Wute verb for finish and its position vis-a-vis the main verb cinches that argument.

With the evidence for the modified base just presented, we are now in the position to view a complete cycle of development of a verb extension from a verb, to a verb extension, to a marker on a higher verb to a new verb with the same semantic force. Consider the perfect in Swahili, the me tense. The me-tense, that is the perfect, no longer uses the modified base. The me, however, can be seen as an ablaut series of the verb *-MAD- finish plus *-GID- + *-E, i.e., *meele. This older form is reported for old Swahili. Subsequently, meele undergoes the typical Swahili rules: L-deletion after stress and vowel simplification to render the form me. Most recently, a new form for the perfect has been observed in colloquial Swahili (personal communication from Bernd Heine). Instead of the me-tense, kwisa plus the verb is used:

(63) Standard: Ameleta (mimi) chai he brought me tea.

Colloquial: Yeye kwisha leta (mimi) chai he finish bring me tea,

he brought me tea.
In conclusion we can summarize the development of the Swahili tense marker for the perfect in the following chart:

<table>
<thead>
<tr>
<th></th>
<th>Main Verb</th>
<th>example language</th>
</tr>
</thead>
<tbody>
<tr>
<td>i.</td>
<td>V</td>
<td>$V_1 \text{finish}$</td>
</tr>
<tr>
<td>ii.</td>
<td>V</td>
<td>$^{*}\text{G}I\text{D finish} + \text{E PAST}$</td>
</tr>
<tr>
<td>iii.</td>
<td>V</td>
<td>$^{*}\text{G}I\text{DE PERFECT}$</td>
</tr>
<tr>
<td>iv.</td>
<td>$V_2 \text{finish} + ^{*}\text{G}I\text{DE}$</td>
<td>V</td>
</tr>
<tr>
<td></td>
<td>mal + ile/meele</td>
<td></td>
</tr>
<tr>
<td>v.</td>
<td>Tense Aspect Marker V</td>
<td>me</td>
</tr>
<tr>
<td>vi.</td>
<td>$V_3 \text{finish}$</td>
<td>V</td>
</tr>
<tr>
<td></td>
<td>kwisha</td>
<td></td>
</tr>
</tbody>
</table>

NB. $V_1 = ^{*}\text{G}I\text{D}$, $V_2 = ^{*}\text{MAD}$, and $V_3 = \text{kwisha}$.

The difference between stage i. and stage vi. is only one of word order.
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