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DENTALITY, AREAL FEATURES, AND PHONOLOGICAL CHANGE IN NORTHEASTERN BANTU*

Derek Nurse
University of British Columbia

A minority of the world's languages appear to have a series of dental (as opposed to alveolar) obstruents. Proto-Bantu does not have such a series, nor do most East African Bantu languages. By contrast, three Bantu languages in northeastern Kenya (the northern Swahili dialects, Pokomo, Elwana) have acquired such a series, which thus merits explanation. There are three mechanisms involved: (a) the borrowing of loan sounds along with loan vocabulary, (b) a simple phonological shift whereby inherited alveolars moved one place to become dental, and (c) a more complicated shift whereby inherited (pre) palatals bypassed an intervening alveolar series to become dental, a process little reported in the literature. It is hypothesised that these forms of dentalisation took place under historical conditions of contact with neighboring Cushitic communities—not the larger Eastern Cushitic communities of today (Somali, Orma), but rather the ancestral forms of what are now remnant languages, (probably) Southern Cushitic Dahalo and (possible) Eastern Cushitic Aweera.

1. Introduction

Our purpose is to attempt to explain the appearance of dentality as an areal innovation in the consonant systems of the Bantu (Sabaki) languages of the Lower Tana region of northeastern Kenya.

A series of dental stops occurs in a minority of languages worldwide. If we take the selection of 700 languages in Ruhlen [1976] to be representative of the world's languages, then we find the following. "Series" is understood to

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*I am grateful to J. Hewson, T. Hill, and A. Steinbergs for having read and commented on earlier parts and versions of this paper, also to R. Schuh and SAL's anonymous reviewer for their comments on the first version submitted to SAL.
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include at least stops, plus some or all of fricatives/affricatives/nasals, etc. A palatal series must include stops, not merely affricates, although comparison of Ruhlen's data indicates a certain confusion between the two. (The predominance of alveolars and of palatal affricates as opposed to dentals and palatal stops might be due to the fact that many of the researchers on whose data Ruhlen relies are English-speakers.)

(1) Alveolar series only between labial and velar: 51.5%
Dental series only between labial and velar: 22.5%
Alveolar and palatal series: 7.5%
Dental and palatal series: 3.5%
Alveolar and retroflex: 3.5%
Dental and retroflex: 3.0%
Alveolar and dental: 3.0%
All other combinations of the above (including none): 5.5%

No language has palatals or retroflexes as the only series between labial and velar. This is true whether palatal is interpreted as having stops or affricates.

If we interpret (1) to indicate relative frequency of a series according to position, regardless of whether it is the only, or one of several, series, then the presence of at least an alveolar series is almost twice as common as that of a dental series, which in turn is nearly three times as common as that of a palatal (which, as stated, never occurs as the only series).¹

An alveolar, not a dental, series is assigned to Proto-Bantu. The only East African Bantu languages in which dental stops or obstruents appear as reflexes of Proto-Bantu consonants are Makua, Soga, North Pare, Gweno, and the Thagicu languages of central Kenya. Thus, by contrast with the general topo-

¹ Maddieson [1984:31-32] is understandably more reluctant to distinguish dental and alveolar places, "partly because they are frequently not reliably distinguished in the sources and partly because a contrast between these two places is unusual". Nevertheless, for those languages for which he considers his sources adequate [Maddieson 1984:35] there is a clear preponderance of alveolar over dental.
logical and geographical absence of dental stops in the one hundred or so Bantu languages/dialects of East Africa, the three Bantu languages in the area under scrutiny have a full series of dental stops or obstruents. Since there is no a priori reason why this should be so, it needs some explanation. There is an underlying assumption that, while a number of choices for change are available to a language at any point in its development, the particular choices it makes are actuated by factors which ought to be describable.

The best known of these three languages are the northern Swahili dialects, which have developed their dental series out of what can be assumed to be a historical palatal or pre-palatal series, basically through bypassing an intervening alveolar series. The processes involved are not common (or at least not frequently described). As can be seen in (1), a palatal series is typologically even less frequent than a dental series.

These developments in northern Swahili are best seen in conjunction with what has happened in the two other Bantu languages, Pokomo and Elwana, since dentality in all three seems to have come about under the same formative influence, namely, interaction with certain neighboring Cushitic languages. The Lower Tana is the boundary between the Bantu languages of East Africa and the Cushitic (Afro-Asiatic) languages of northeastern Africa.

2. Background

2.1. The language situation. In all, seven languages/dialects are spoken in the area (see maps, pp. 246-247):

- Somali (Eastern Cushitic, SAM subgroup), spoken to the north and east of the Tana and into Somalia. Kenya Somali numbers are hard to estimate, but are

---

A dental series also appears in three languages/dialects known or suspected to have been spoken in the area within the last millennium. These are (a) the Swahili dialects of the southern Kenya coast, of which the best known is Mvita, the dialect of Mombasa Old Town; (b) at least some, perhaps all, of the Mijikenda dialects today spoken along the immediate hinterland of the southern Kenya coast; (c) Waata, an Orma dialect also spoken in the immediate hinterland of the central and southern Kenya coast. These are not dealt with here but each one of them can also be explained by one or other of the types of process outlined in this paper.
(Continuation south from previous page)
probably around 100,000. The majority of Somalis in northeastern Kenya and southern Somalia today speak northern Somali dialects, their ancestors having only migrated south during the nineteenth century.

-Aweera (also called Boni: Eastern Cushitic, SAM subgroup), spoken along the coastal hinterland north of the Tana and over the border into southern Somalia. Heine [1982] puts Kenya Aweera at nearly 2,000. Aweera, together with Garre and Tunni, is a southern Somali dialect.南方Somali dialects have most likely been spoken along this coast throughout the present millenium, that is, for a long time prior to the advent of northern Somali communities.

-Orma (also called Galla: Eastern Cushitic, Oromo subgroup), spoken along, and to the south of, the Tana. If we include just Orma and Munyo, the adjacent and thus relevant dialects, they number slightly over 20,000. Orma speakers are thought to have entered the region during the seventeenth century.

-Dahalo (Southern Cushitic remnant language), spoken in a small area bounded by the northern mouth of the Tana and the adjacent northern coast. Their numbers are not known, but are probably between 200 and 400 (Zaborski, p.c.). Dahalo has at some point in its history absorbed Khoisan elements. Dahalo speakers are likely to have been present throughout the present millenium.

-Elwana (also known as Ilwana and Malankote: Eastern Bantu, Sabaki subgroup), spoken along the Tana above Pokomo, almost to Garissa. Pokomo and Elwana together number some 50,000. Sabaki speakers are likely to have been present in the area throughout the present millenium.

-Pokomo (Eastern Bantu, Sabaki subgroup), spoken along the lower reaches of the Tana between Elwana and the coast.

-Northern Swahili (Eastern Bantu, Sabaki subgroup), spoken on the coast and islands north of the Tana and into Somalia as far as the town of Barawa. The population of the towns and villages housing the five commonly recognised dialects of northern Swahili (Amu, Pate, Siu, Bajuni, Mwiini) is about 40,000.

---

³For differences between northern and southern Somali, see Heine [1978].
2.2. Relevant parts of the consonantal systems

2.2.1. Eastern Cushitic: relevant parts of their consonantal systems. Somali and Aweera both derive from Proto-SAM, for which Heine [1978] reconstructs the relevant parts of the consonant system as:

(2) Proto-SAM:  
\[
\begin{array}{ccc}
\text{dental} & \text{alveolar/post-alveolar} & \text{palatal} \\
*\text{d} & *\text{t} & *\text{c} \\
*\text{t} & *\text{s} & *\text{z} \\
*\text{n} & \\
\end{array}
\]

Deriving from this, many northern and central Somali dialects today have a system such as [Armstrong 1964:3, Heine 1978:11-18]:

(3) Northern and Central Somali:  
\[
\begin{array}{ccc}
\text{d} & \text{t} & \text{j} \\
*\text{n} & \text{s} & \text{f} \\
\end{array}
\]

The only voiced fricative in this system is [\(\delta\)], the intervocalic allophone of /\(\text{g}\)/. This system reflects the Proto-SAM system almost exactly, except /\(\text{j}\)/ which results from palatalisation of */\(\text{g}\)/, /\(\text{j}\)/ from */\(\text{c}\)/, and /\(\text{\(\delta\)}\)/ from */\(\text{z}\)/. Ruhlen also shows an affricate /\(\text{\(\xi\)}\)/. (The nasal here could be dental, although it is not shown as such by Heine or Armstrong.)

The relevant parts of the Proto-Aweera consonant system are reconstructed as follows by Heine [1982:71]. Parentheses indicate borrowed units.

(4) Proto-Aweera:  
\[
\begin{array}{ccc}
*\text{d} & *\text{t} & (*\text{f}) (*\text{j}) \\
*\text{t} & *\text{s} & (*\text{c}) \\
(*\text{t}') & (*\text{c}') \\
*\text{n} & \\
\end{array}
\]

As in Somali, the only voiced fricative in the system is [\(\delta\)], the intervocalic allophone of /\(\text{g}\)/. The ejective series and the (parenthesised) palatal stops are all borrowed, mainly from Orma, possibly from Dahalo. The remaining consonants all derive directly from the Proto-SAM system, except:
Since the palatal stops are all borrowed, there was presumably a period before this borrowing when Aweera was devoid of such a series. Three actual Aweera dialect systems can be seen in Heine [1982:21, 44] and Heine [1977:251]. They are essentially the same as Proto-Aweera.

Excluding individual loan sounds, the relevant Orma dialects, Munyo and Waata (see fn. 2) both have the following system [Heine 1980:144, 1981:21]:

(6) Orma:    \[ \begin{array}{ccc}
\text{dental} & \text{alveolar/postalveolar} & \text{palatal} \\
\tilde{d} & \tilde{d} & j \\
\tilde{t} & \tilde{t} & c \\
\tilde{t}' & s & c' \text{ (ejectives)} \\
\tilde{n} & n & \\
\text{(nt\textsuperscript{h}) (nd) & nt\textsuperscript{h} & nd & nc\textsuperscript{h} & nj}
\end{array} \]

Again, /z/ is absent; [\delta], the voiced allophone of /\tilde{n}/, is mentioned for Waata, but not Munyo.

2.2.2. Bantu: relevant parts of the Pokomo consonantal system [Nurse 1983: 234]. Pokomo is a dialect spectrum, and what follows are the units between labial and velar common to all the dialects. Parentheses again indicate borrowed units.

(7) Pokomo:    \[ \begin{array}{ccc}
\text{c} & c \\
\tilde{d} & \tilde{d} & j \\
\tilde{d} & \tilde{d} & j \\
\tilde{\delta} & s & z & j \\
\text{(nt\textsuperscript{h}) (nd) & nt\textsuperscript{h} & nd & nc\textsuperscript{h} & nj}
\end{array} \]

In addition to what is shown in (7), Upper Pokomo also has ejective (\tilde{t}') and (c'); Lower Pokomo also has (nt\textsuperscript{h}), (t), ts, dz, ns, nts, nz, ndz, (c\textsuperscript{h}). It is not clear if the first element of the affricates is alveolar or
dental; in one closely related Sabaki language, Mijikenda, it is dental, whereas in another, Comorian, it is alveolar.

The nonprenasalised palatal stops in Upper and Lower Pokomo are both inherited but derive from different sources: in Upper Pokomo they are the regular reflexes of Proto-Bantu */c, j/* and are more frequent, whereas in Lower Pokomo they are less frequent, deriving from palatalisation of older velars. In Lower Pokomo palatalisation of */k/* at least seems to apply variably (in some northern Swahili dialects it is optional in certain contexts).

2.2.3. Bantu: relevant parts of the Elwana and Northern Swahili consonant systems. The available phonetic data for Elwana are limited, but the essential parts are:

(8) Elwana: $\d$, (d) $\j$, (f) $\t$, (t) c

\(\delta\) s z (f)

n n

(nd) (nj)

(ns) (nz)

The relevant parts of the Swahili dialects of northern Kenya and southern Somalia are (omitting a few prenasalised segments of low frequency):

(9) Swahili dialects

<table>
<thead>
<tr>
<th>Mwiini</th>
<th>Amu</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\d$</td>
<td>$\d$</td>
</tr>
<tr>
<td>$\t$</td>
<td>$\t$</td>
</tr>
<tr>
<td>$\j$</td>
<td>$\j$</td>
</tr>
<tr>
<td>(d)</td>
<td>(t)</td>
</tr>
<tr>
<td>((\delta)) s z (f)</td>
<td>((\delta)) s z (f)</td>
</tr>
<tr>
<td>n n n</td>
<td>((\delta)) ((\delta)) s z (f)</td>
</tr>
<tr>
<td>(n(\delta)) (n(\delta)) n(\delta) n</td>
<td>((\delta)) ((\delta)) s z (f)</td>
</tr>
<tr>
<td>nd nd nd</td>
<td>n n</td>
</tr>
<tr>
<td>ns nz</td>
<td>nd nd nd nj</td>
</tr>
<tr>
<td>ns</td>
<td>ns</td>
</tr>
</tbody>
</table>
In these dialects, many palatals are recent formations resulting from palatalisation of velars.

2.2.4. Southern Cushitic: relevant parts of the Dahalo consonantal system.

The relevant parts of Dahalo are [Ehret 1980:126, Elderkin 1976:22]:

2.3. Inherited dentality. As can be seen from section 2.2., the relevant parts of the consonantal systems of the three Eastern Cushitic languages have much in common. They have a series of dental stops, and in the case of two of the three (Aweera and Orma), a dental nasal. They have but a single alveolar stop, and no [z], with [ð], the intervocalic allophone of /d/, as the only voiced fricative. The size of their palatal series is variable: in northern Somali it is small; in Aweera it must have been small before the borrowing of today's stops; in the Orma dialects it is more extensive, but, as we will see, Orma is not an important factor in the scenario.

Examination of the material in Ruhlen [1976] and other sources [Maddieson 1984, Tucker and Bryan 1966] suggests that in the non-Bantu languages of northeastern Africa and even in related languages in the Middle East, a dental ser-
lies is at least as common as an alveolar one, if not more so, and thus seems to be both a geographical and a genetic feature. This stands in contrast to the overall world picture suggested in (1).

3. Borrowed Dentality, in the Bantu Languages, Dahalo, and Aweera

In other languages in the area, dentality has been introduced historically through lexical loan sets. This is most obvious in the Bantu languages, especially in Pokomo.

3.1. Pokomo. In general, languages along and near the Tana are characterised by having large consonant inventories. They include Pokomo, which is further characterised by a high percentage of loan units. Pokomo systems stand in clear contrast to those of Eastern Cushitic (see section 2.2): it is the palatal series in general which is inherited, with virtually all the dental obstruents borrowed, as are the nonprenasalised alveolar stops. In these systems the only dental not apparently borrowed is /d/. This is however misleading, since /d/ is only inherited in historical sequences of /lyV/, which appears in most Pokomo dialects as [d̪yV] or [dV]:

\[
\begin{align*}
\text{Pre-Pokomo} & \quad \text{Lower Pokomo} \\
-\text{ly} & \quad -\text{dya} \\
\text{mulyango} & \quad \text{mudyaango}
\end{align*}
\]

Since such sequences are infrequent, instances of inherited /d/ are in a statistical minority compared with many other cases of borrowed /d/ in all Pokomo dialects.

Although the detailed sources of the sets of borrowed lexis carrying each of these units would go beyond the scope of this paper (see Nurse [1983a, forthcoming a, b], the overall patterns are as might be expected. Dental and nonprenasalised alveolar stops and /d/ have in general been taken from Somali.

---

4If prenasalised consonants are treated as unitary, then between 35% and 40% of Pokomo consonants (depending on dialect) are borrowed. If treated as sequences, then the percentage rises to between 42% and 48%. None of the t-sounds is inherited, Proto-Bantu nonprenasalised */t/ having weakened to a spirant or /h/ in all Pokomo dialects.
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Orma, Dahalo, and northern Swahili, and possibly also from Aweera and Elwana, but the data are sparse. Orma and possibly Dahalo are the sources for the Upper Pokomo ejectives and their Lower Pokomo congeners, the aspirated voiceless stops. The two prenasalised dentals are from northern Swahili mainly, but also from Dahalo:

(12) Pokomo (UP = Upper Pokomo, LP = Lower Pokomo)  

<table>
<thead>
<tr>
<th>UP/LP</th>
<th>Source</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>UP/LP</td>
<td>diba '100'</td>
<td>Orma</td>
</tr>
<tr>
<td>UP/LP</td>
<td>dalea 'cattle pen'</td>
<td>Orma</td>
</tr>
<tr>
<td>LP</td>
<td>tem 'try'</td>
<td>Dahalo</td>
</tr>
<tr>
<td>UP</td>
<td>ntuntuma 'lower arm'</td>
<td>Dahalo</td>
</tr>
<tr>
<td>UP/LP</td>
<td>tunga 'herd cattle'</td>
<td>N. Swahili</td>
</tr>
<tr>
<td>UP/LP</td>
<td>mudewere 'spinach'</td>
<td>Dahalo</td>
</tr>
<tr>
<td>UP</td>
<td>kidole 'finger'</td>
<td>N. Swahili</td>
</tr>
<tr>
<td>LP</td>
<td>kidoe</td>
<td>N. Swahili</td>
</tr>
<tr>
<td>UP/LP</td>
<td>saifu 'weak'</td>
<td>N. Swahili</td>
</tr>
<tr>
<td>UP</td>
<td>tandu '(building) sticks'</td>
<td>N. Swahili</td>
</tr>
<tr>
<td>UP</td>
<td>fit'o '(building) sticks'</td>
<td>Dahalo</td>
</tr>
<tr>
<td>UP</td>
<td>-obada 'all'</td>
<td>Somali</td>
</tr>
</tbody>
</table>

For /t, d/ and possibly /nd/, loan words indicate a further source, the Thagicu Bantu languages of central Kenya [Nurse 1983a:236-238]. In view of recorded migration patterns a few centuries ago [Fadiman 1973] this is not surprising. What is more surprising is that Thagicu languages themselves have alveolar /t/ (and /nd/), which appear in loan words in Pokomo as dental /t/ (and /nd/). In all Pokomo, dental /t/ is the most frequent t-unit, but it is borrowed, inherited Proto-Bantu */t/ having weakened in all dialects to a fricative or /h/. This implies, inter alia, that the dental units were already available in Pokomo at the time of borrowings from Thagicu.

(13) Lower Pokomo  

<table>
<thead>
<tr>
<th>Source</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>-sambya 'wash'</td>
<td>-thamba</td>
</tr>
</tbody>
</table>
3.2. **Aweera, Elwana, northern Swahili, Dahalo.** While most of the Aweera dental series is inherited (section 2.2.1), ejective /ᵢ/ occurs only in loan words. While Elwana dental stops are induced (section 4.1), /θ/ occurs only in loan words, most obviously from Thagicu. While many of the northern Swahili dental series are induced (section 4.2), a few occur only in loan words. The details vary from dialect to dialect, but in all /θ, θ/ are borrowed, as is non-aspirated /nt/, e.g. binti 'woman' and akhsante 'thanks', from Arabic. These, and also other dentals, are incorporated in lexical loan sets from languages of the Middle East and the Indian subcontinent and from local Cushitic languages:

(14) **Northern Swahili** | **Cushitic**
--- | ---
mdewere 'spinach-like vegetable' | Dahalo ḍeḥere
γuko 'deaf' | Dahalo ḍu:ko
Bajuni ḍandara/ ḍindiri | Dahalo dadi:ri 'lesser kudu(?)
γuhu 'bone marrow' | Aweera dadi:r/gidi:r [Heine 1982:91]
γara 'touch' | Somali ḍaːh

While all Dahalo dental obstruents are inherited or induced, Dahalo does have a (dental) click [ƙ], occurring with and without prenasalisation. This click is borrowed, presumably from contact with an earlier Khoisan community.

4. "**Induced**" Dental Articulation

"Induced" dentality here refers to consonants which can be demonstrated to derive in a regular way from earlier stages of the languages involved but in which contemporary dental articulation has replaced an earlier articulation which can be shown to have been non-dental, i.e. alveolar or palatal. Thus, where most East African Bantu languages have alveolars, Elwana has dentals (here Standard Swahili is typical of East African Bantu), as in (15a), and where Standard Swahili has palataals or alveolars, northern Swahili has dentals, as in (15b):
The changes involved here are always of place, sometimes also of manner. As will be shown, the mechanisms by which these changes have come about vary. The changes are assumed to have been brought about under the earlier influence of non-native speakers. What is meant by "influence" is discussed in section 5. "Induced" dentality is responsible for most dentals in Elwana, northern Swahili, and Dahalo.

4.1. **Elwana** (see section 2.2.3). Elwana */t, d/ derive from older alveolar */t/ and */nt, nd/ respectively. There are three processes involved: voicing of stops after homorganic, nonsyllabic nasal (which also applies to the other stops); deletion of nasal before voiced stop; and dentalisation. The first two are ordered, the third unordered. A schematic representation of the relevant parts of the system, and omitting */nj/, which involves particular problems, would be:

(16)

<table>
<thead>
<tr>
<th></th>
<th>*p</th>
<th>Np</th>
<th>Nb</th>
<th>*t</th>
<th>Nt</th>
<th>Nd</th>
<th>*c</th>
<th>Nc</th>
<th>*k</th>
<th>Nk</th>
<th>Ng</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postnasal voicing</td>
<td>p</td>
<td>Nb</td>
<td>t</td>
<td>Nd</td>
<td>c</td>
<td>Nj</td>
<td>k</td>
<td>Ng</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasal loss</td>
<td>p</td>
<td>b</td>
<td>t</td>
<td>d</td>
<td>c</td>
<td>j</td>
<td>k</td>
<td>g</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dentalisation</td>
<td>p</td>
<td>b</td>
<td>t</td>
<td>d</td>
<td>c</td>
<td>j</td>
<td>k</td>
<td>g</td>
<td></td>
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</tbody>
</table>

The contemporary dental stops here are the result of a simple change of place of the articulator from (apico)alveolar to (apico)dental.
4.2. **Northern Swahili** (see section 2.2.3). What has happened in the northern Swahili dialects is not so simple. In order to expedite discussion of the dentals, the relevant inherited consonants can be rearranged. The left to right ordering below corresponds to a geographical north to south situation within the area covered by these dialects, i.e. Mwiini is the most northerly and Amu the most southerly:

<table>
<thead>
<tr>
<th>(17)</th>
<th>Northernmost</th>
<th>Southernmost</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mwiini</td>
<td>Bajuni</td>
</tr>
<tr>
<td>(1a)</td>
<td>$t^h$</td>
<td>$t^h$</td>
</tr>
<tr>
<td>(1b)</td>
<td>$nt^h$</td>
<td>$t^h$</td>
</tr>
<tr>
<td>(2)</td>
<td>$nd$</td>
<td>$nd$</td>
</tr>
<tr>
<td>(3)</td>
<td>$nz$</td>
<td>$nd$</td>
</tr>
<tr>
<td>(4)</td>
<td>$z$</td>
<td>$\ddot{o}$</td>
</tr>
<tr>
<td>(5)</td>
<td>$\eta/\eta^h$</td>
<td>$n$</td>
</tr>
</tbody>
</table>

The base forms of lines 3-5 need no justification since they are shared by all the Sabaki languages and a majority of the closely related North East Coast Bantu languages. The base forms for lines 1a/1b/2, however, do need some explanation as they are crucial to the whole process. Northern Swahili, Elwana, and Pokomo form part of the Sabaki subgroup of languages, together with southern (including Standard) Swahili, Mijikenda, and Comorian. Corresponding to lines 1a/1b/2 we find in Sabaki:

---

5. In Siu, Pate, and Amu, the prenasalised segments are kept in monosyllables where the nasal is apparently retained for purposes of (penultimate) stress. In other contexts the nasal is lost.

6. The nonprenasalised voiced (pre)palatal, */j/ or dj, behaves asymmetrically, leniting to [j] and then zero in northern Swahili. Being the least energetic of the set, it is the one we would expect to drop to an even lower energy level.

7. Where all the other Sabaki languages have the palatal nasal and Bajuni has the dental nasal, Mwiini shows some words with the palatal, others with the dental. We could either say that the change from palatal to dental nasal is in progress in Mwiini or, more likely, that forms with the dental nasal are historical loans from Bajuni, where the change is regular and which until recently was spoken in the area adjacent to Mwiini.
There are two types of arguments for proposing the historical base forms on the right, geographical and phonological. Geographically, the palatals or prepalatals are found only in languages/dialects on the periphery of the area, Elwana, Upper Pokomo, and southern Swahili. It is simpler to assume retention in historically peripheral relic areas than to assume independent innovation in those same areas for no apparent reason. Phonologically, the assumption of *tč/c, *ntč/nc, *ndj/nj would lead to processes such as those in (19) (ignoring aspiration):

(19) \((n)tč \rightarrow (n)nts \rightarrow \begin{cases} (n)t\text{s} & \rightarrow (n)t \\ (n)tʃ \rightarrow ndj & \rightarrow ndz & \rightarrow nd \end{cases}\)

Such processes are phonetically and phonologically plausible. An alternative scenario would start with *(n)tʃ, *ndz, from which the present situation might also be plausibly explained. The point is that whichever of these starting points be assumed, the dental forms are the end result and need to be explained, since the processes leading to them are not well attested elsewhere.

Viewed as an areal spread, it can be seen that Bajuni is at the center of the changes in (17), as it alone has been affected by all five. Siu-Pate have been affected by four, Amu by three, and Mwiini is peripheral, having been touched by the two core changes, as have the dialects of the southern Kenya coast.
The changes affecting */z/ (lines 3, 4 in (17)) represent the type of change already seen in Elwana. The articulator moves one place, from alveolar to dental. The surface result is something we have already seen from the Cushitic languages, an absence of [z] and a synchronic alternation of intervocalic [ʒ] and prenasalised [d̪].

But the phenomena affecting the (pre)palatals (lines 1, 2, 5 in (17)) are not so readily explained. The change of articulation affecting */z/ involves a movement from alveolar to dental and involves no intervening series. But in the movement from (pre)palatal to dental, there was an intervening alveolar series.

(20) labial dental alveolar palatal velar
Stage 1 p, etc. t, nt, nd tç, ntç, ndj k, etc.
Dentalisation
Stage 29 p, etc. t, (n)t, nd t, nt, nd k, etc.

Examples, using modified Roman script:

So. Swahili: paa 'roof'
-tetema 'shiver'
-cheka 'laugh'
kichwa 'head'

nt' a
nch' i
'wax'
'country'

-enda njaa
'go'
'hunger'

No. Swahili:
(Amu) paa -têka -tetema kitwa

ni' i
nt' a

ndaa -enda

8For what follows I am indebted to substantial advice from Trevor Hill.

9Siu-Pate and Bajuni have redressed the situation created by the move from Stage 1 to Stage 2 by introducing a third, later, stage:

Stage 2 p t k
Stage 3 p tʃ k

whereby the original Stage 1 situation of alveolars and palatals has been replaced by Stage 3 dentals and palatals, albeit affricates.
Any explanation involving a simple change of place of articulation to dental would affect the intervening alveolars rather than the (pre)palatals, or if it did affect the latter, would be also likely to affect the alveolars.

For the changes from (pre)palatal to dental we should rather consider that for the palatals and dentals the tongue lies in the same region in both cases, but different parts of the tongue act alternately as the active articulators at the point where they lie. For the former, the blade operates on the palate, while the apex is raised, lying behind the teeth. For the latter, the apex operates on the teeth, while the blade is raised above the palate. Disposition of blade and tip of tongue is identical or similar in both, but, in a kind of rocking movement, one part is raised as the other is lowered.¹⁰

The foregoing involves an articulatory choice. What kind of choice a body of speakers makes may presumably be related to any of a number of factors, including the general typological environment. Most of Bantu-speaking East Africa has an alveolar (sometimes, with a palatal), not a dental, series of stops. This is true also of southern and Standard Swahili, whose consonant system in this respect more nearly resembles the historical system underlying the northern dialects. But the communities speaking these northern dialects have lived for a millennium or more at the interface with Cushitic northeastern Africa. Northern Swahili dialects presumably made a different articulatory choice during many centuries of exposure to Cushitic-speaking communities for whom dental, rather than non-dental, obstruents were "normal".

4.3. Dahalo (see 2.2.4). The protolanguage ancestral to Dahalo, Proto-Southern-Cushitic (PSC) [Ehret 1980:127] is not credited with any dentals at all. Present day Dahalo dentals derive from the PSC alveolar series, contemporary Dahalo alveolars from PSC palatals, and most modern Dahalo palatal stops and affricates are loans, either from northern Swahili, Pokomo, Elwana, or Orma. Even /ʃ/ does not derive from a PSC palatal stop. Ehret [1980:115-116] interprets all this as a classic chain reaction affecting PSC alveolars and palatals in which

¹⁰This alternation across an intervening alveolar is not much reported in the literature but occurs in Sudanese Arabic and some Ewe dialects, according to T. Hill.
the first shift was that of articulation from alveolar to dental, similar to what has happened in Elwana. There is no obvious reason to interpret the Daha-lo data differently.

4.4. Summary. All the Bantu languages in the area have evolved a series of dental stops or obstruents which formerly they did not have. This is true also of Dahalo and of two Bantu languages/dialects (Mijikenda, the Swahili dialects of the southern Kenya coast) which may have been spoken earlier in the area.

Three different mechanisms have operated. One involves assuming the historical borrowing of large sets of loan words containing dentals: these sets can be shown for all the languages, most obviously Pokomo. The second involves a relatively simple shift of place of articulation from alveolar to dental and is most clearly seen in Elwana and Dahalo. The third is more complicated, involving a jump over intervening alveolars from (pre)palatal to dental. This is what has happened in northern Swahili.

It cannot be a coincidence that these three processes have all occurred in the same geographical area. The communities affected have all been present in the area for a millennium or slightly longer, as have at least some Cushitic-speaking communities. The Cushitic languages have now, and have always had, a dental series. Hence there must be at least a very strong suspicion that interaction with these Cushitic-speaking communities over a thousand years is responsible for the shift to dentality.

5. Discussion

We need now to try to identify the specific early potential Cushitic languages most likely associated with initial dentalisation in the three Bantu languages. Apart from the requirement that the potential donors have a dental series themselves (already demonstrated) there are three ways in which these early donors might be identified. One involves looking at the external historical chronology of the communities concerned in order to establish if it was at least possible or likely that they co-existed with the Bantu languages a thousand years ago. Another is to show the existence of loan word sets from the potential donors, for loan sounds cannot exist independently of loan words. The third would be, if possible, to demonstrate that the potential donors have af-
fected the recipients other than lexically or dentally, in order to strengthen the case.

There is good reason to think that all these Sabaki communities, certainly northern Swahili, probably equally likely but less demonstrably Elwana and Pokomo, have been present in much their present locale since the second half of the first millennium A.D. [Nurse and Spear 1985]. Since dentalisation of original (pre)palatal stops (lines 1, 2 in (17)) occurred in all the northern Swahili dialects, plus those of the southern Kenya coast but in none of the southern Swahili dialects, they are likely to have appeared during the emergence of proto-Northern-Swahili or shortly thereafter, that is, by ca. A.D. 1000.

The known or assumed facts of Thagicu history [Muriuki 1974] make it likely that, although Meru-speakers were on the Lower Tana for some time prior to ca. A.D. 1700 [Fadiman 1973, Nurse 1983a], they were certainly not present there in A.D. 1000. Thagicu loan words, most probably from Meru, are present in considerable numbers in Lower Pokomo, to a lesser extent in Upper Pokomo, Elwana, and Dahalo, but hardly at all in northern Swahili. There are no phonological or other parallels between Thagicu and Pokomo/Elwana/northern Swahili linguistic development. Finally, as we have seen, although Thagicu itself has no dental stops, Thagicu alveolars are interpreted in Pokomo as dental, which implies that dentity already existed in Pokomo before the advent of Thagicu loan words. 11 All this excludes any Thagicu language from the possible set of early contributors to northern Sabaki dentalisation.

The known or assumed facts of Orma history bring them to the coast during the seventeenth century. There are sizeable loan word sets from Orma in Elwana and Pokomo, to a lesser extent in Dahalo and Aweera, not at all in northern Swahili. There is no evidence of any parallel phonological or other processes between Orma and northern Swahili, Pokomo, or Dahalo. 12 This likewise excludes
Northern Somali speakers, although today the largest single community in the area, arrived only during the nineteenth century [Lamberti, p.c.]. There is no evidence of parallel phonological or other processes between these Somali dialects and any of the three Bantu languages. And although there are loan words from these Somali dialects in all the languages of the area (for northern Swahili, see Nurse [forthcoming appendix 2]), they are surprisingly few in number in view of Somali numbers today. These considerations also rule out northern Somali dialects as a potential early source of dentality in the target languages.

A final possible formative influence consists of languages from across the Indian Ocean. In discussions of the historical forces that have touched Swahili linguistically there is always mention of lexical, even phonological, material from Arabic, sometimes from Persian and a variety of Indian languages. Part of the same lexis is also present in Pokomo, Elwana, Aweera, and Dahalo, although in these mediation through Swahili may be strongly suspected. It tends to cluster in certain specialised semantic areas. In the speech of first language Swahili speakers it is also responsible for most occurrences of /d, ə, x, y/ and statistically infrequent [nt, nt] etc, for /ʤ/ in dialects other than Siu, Pate, and Bajuni, and for many occurrences of /š, h, r, ŋ/. Most dialects of Arabic and Persian have dental obstruents, as have at least some of the languages of Indian communities known to have come to East Africa. However, not a single convincing study has ever been made of the detailed chronology of this linguistic influence, so we simply do not know the details of how or when it occurred during the last millenium. In the absence of such an analysis, we have to follow the conventional wisdom which says that, although traders and others from the Middle East certainly, and from the Indian subcontinent possibly, have been operating along the East African coast for some two thousand years, Arabic linguistic influence is more obvious than that of Persian or Indian languages.

Logical features such as nominal pluralisation by suffixation, said to be Orma (or Dahalo?) in origin, but to my knowledge not analysed in any publication to date.
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[1983b], and Arabic influence has been heaviest only since the inception of the recent Omani period which started after the departure of the Portuguese in the seventeenth century [Knappert 1983:112]. In the absence of a clear picture of outside linguistic influence in the pre-Portuguese period, i.e. before 1500, which is the period in which we are primarily interested, and in the likelihood that such influence was in any case of secondary importance at that period, it is fair to assume that most influence on Swahili, Pokomo, and Elwana in the past millennium has been exercised by local, and not outside, languages, despite the weight of discussion that emphasises the latter.

Excluding Thagicu languages, Orma, northern Somali, and non-African languages leaves us with Dahalo and Aweera as the only potential sources for northern Sabaki dentalisation. We now examine the three Bantu languages in some detail in an attempt to show exactly what has happened to them other than the appearance of dentality.

5.1. Elwana. The Elwana are few in number, have been directly exposed to many outside influences as a result of their geographical position, and for what it is worth, claim to have lived long in their present location [Bunger 1973]. This combination of factors makes Elwana a natural possible recipient, and it is not surprising that Elwana contains lexical loan sets from virtually all the surrounding languages: northern Somali, Orma, probably Aweera (?), Dahalo [Nurse forthcoming b], Thagicu, Pokomo, northern Swahili, and indirectly from Arabic through Swahili.

If, however, the phonological processes deriving Elwana from Proto-Bantu or Proto-Sabaki and the results of these processes are compared with the processes deriving the other languages from their earlier forms and the resultant systems, by far the clearest parallel is with Dahalo [Nurse 1983a]. There is a considerable set of rules, some idiosyncratic, shared by Dahalo and Elwana alone. Some have also spread into Pokomo:

(a) Dahalo has done away with all inherited PSC sequences of nasal and voiced stop, by reducing them to the simple nasal congener (as has Aweera). Elwana observes the same surface constraint, but by replacing the same sequences to the simple stop congener. It also replaces inherited sequences of nasal and voiceless stop by the intermediate step (see section 4.1) of
voicing the stops:

(21) **Elwana** | **Lower Pokomo** | **So. Swahili**
--- | --- | ---
bebe | mp'embe | p'embe
-enda | -enda | 'go'
βijja | -winza | -winja
mucaga | mutsanga | mcanga
\(\hat{n}\)atu | nt\(\check{a}\)tu | t\(\hat{a}\)tu
jatu | nts\(\check{a}\)tu | c\(\hat{a}\)tu
\(\hat{h}\)oba | nk\(\hat{h}\)omba | k\(\hat{h}\)omba
-\(\hat{h}\)uga | -\(\hat{n}\)\(\hat{u}\)\(\hat{k}\)a | -nuk\(\hat{h}\)a

(b) Dahalo has replaced PSC *mf by mp. So also Elwana:

(22) **Elwana** | **Pokomo** | **So. Swahili**
bisi | mfwisi | fisi

(c) Dahalo has replaced PSC */t, d/ by /\(\check{t}, \check{d}/ as Elwana has replaced Proto-Bantu */t, d/ by /\(\hat{t}, \hat{d}/ (see (21) and section 4.1). Dahalo has developed a dental vs. alveolar contrast in stops. Elwana, Pokomo, and a few of the northern Swahili dialects are virtually the only Bantu languages in East Africa to have done the same.

(d) Dahalo has a contrast between (incomplete) series of implosive and non-implosive non-prenasalised voiced stops, PSC */b, d/ having become /b, d/. While it is true that the regular non-prenasalised voiced stops in some East African Bantu languages, especially along the coast, are normally implosive, no East African Bantu language other than Elwana and Pokomo has a regular implosive vs. non-implosive series.

(e) PSC */n, \(\check{n}\)/ are realised in Dahalo as /n, \(\check{n}\)/ respectively. In other words, Dahalo has replaced all inherited velar nasals. Likewise, Elwana and many Pokomo dialects have got rid of /\(\check{n}/:

(23) **Lower Pokomo** | **So. Swahili**
--- | ---
ngombe | \(\hat{n}\)ombe
bugo | mbuno

Most of these Dahalo processes are unique within Southern Cushitic and several of the same processes unique to Elwana (sometimes with Pokomo) within East African Bantu. Nurse [1983:214] hypothesised that these parallels resulted...
from widespread assimilation of Dahalo-speakers by the Elwana community.\textsuperscript{13}

Ehret [1980:125] suggests a means by which this assimilation could be partially dated. Sequences of intervocalic nasal and voiced stop were lost early in Dahalo, but later reintroduced into Dahalo (and Elwana) through loan words from, most obviously, Pokomo, northern Swahili, and Orma. The Pokomo and northern Swahili material cannot be dated absolutely, but Orma presence along the Tana started around A.D. 1600 and is thus the earliest date we can set on the reintroduction of intervocalic nasal and voiced stop. The preceding stage, involving the reduction of nasal plus voiced stop, and probably the shift of alveolar to dental stop, must have been completed by that time at least. This rather rough-and-ready method would then assign the assimilation of Dahalo-speakers into the Elwana community to a point before A.D. 1600, that is, at least the first half of the present millennium.

5.2. Pokomo. There are great similarities between the external situation of Elwana and Pokomo. Although more numerous, the Pokomo community is also strung out in a thin, vulnerable line of villages along the Tana. Their own traditions of origin, although not thoroughly analysed, are mixed. Some clans claim to have assimilated "Sanye" but since "Sanye" is a cover term referring indiscriminately to Aweera, Dahalo, and Waata, it is not helpful. Other Pokomo clans claim descent from the north, from "Shungwaya\textsuperscript{14}" at the time of the Orma incursions [Darroch 1943/4, Spear 1978, Werner 1912/3], but there is also reason to think some Pokomo speakers were along the Tana before that seventeenth century event [Nurse 1983a]. Loan sets in Pokomo derive from the same languages as those in Elwana.

When we compare the diachronic processes which derive Pokomo from Proto-Sabaki or Proto-Bantu with those deriving our other languages, we find nothing so clear as in Elwana. There are some general processes which show no obvious

\textsuperscript{13}Another possibility would be that the unique changes characterising Elwana and Dahalo were produced by their both assimilating speakers of a third, now extinct, language.

\textsuperscript{14}"Shungwaya" is an area, allegedly in southern Somalia or northeastern Kenya, claimed by many East African coastal Bantu-speaking communities as their place of origin.
parallel with any surrounding non-Bantu language. Individual Pokomo dialects have undergone some processes shared by neighboring languages, and especially Dahalo. So, as Dahalo for example, many Pokomo dialects avoid [ŋ] by replacing it in a variety of ways. As Dahalo, Upper Pokomo dialects delete nasals before all fricatives. As Dahalo, Lower Pokomo replaces intervocalic [j] by [Ɋ]. As the northern Swahili dialects of Kenya and some Aweera dialects, Lower Pokomo deletes [Ɋ] in some contexts [Nurse 1983a:212-214]. But whereas for Elwana it was possible to anchor the appearance of dentality in a convincing set of rules shared by Elwana and Dahalo, no such set exists for Pokomo as a whole. Hence there seems to be no firm means of isolating any single early source of the borrowed dentals in Pokomo. The similarities between Dahalo and individual Pokomo dialects, the likelihood that only Dahalo (and possibly Aweera of course) was present early enough, and the lack of parallels with any non-Bantu language other than Dahalo leave it as a possible candidate.

5.3. Northern Swahili. The same general argument that applied to Pokomo also applies to the northern dialects as a whole. There is a set of innovations affecting consonants that distinguishes northern Swahili from southern Swahili and the rest of Sabaki, but apart from the development of the set of dental consonants, there is no convincing body of similar phonological innovations with surrounding languages. However, examination of individual northern Swa-

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15Apart from the processes resulting in the dental set, and those mentioned below, some other consonant features defining the northern Swahili dialects are the following:

(a) Loss of nonprenasalised /g/, present in all northern Swahili, Elwana, and all Aweera dialects except Baddey, but only present in a minority of Pokomo (loan?) words. As it is also present in other Sabaki languages farther south, such as Comorian and Mwani, it is not necessarily of northern origin, which is supported by its failure to operate in all Aweera dialects. Probable direction is northern Swahili to Aweera.

(b) j to [j] to zero, present in all northern Swahili, otherwise only in the Baddey dialect of Aweera. Direction is northern Swahili to Baddey.

(c) Ɋ-loss before /a, e, o, u/. Ɋ-retention in Mwiini indicates that Ɋ-loss is a fairly recent development in the other northern Swahili dialects, supported by
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hili dialects permits a more detailed statement, which can be linked to geographical and temporal factors. Siu, Pate, and Amu, as far as we know, have always been spoken on the islands, separated from the mainland. By contrast, up to the Orma invasions of the seventeenth century, Bajuni was a mainland dialect, spoken from northern Kenya to at least Kismayu in southern Somalia [Nurse 1980]. Even after the Orma appearance, when some Bajuni communities moved on to the islands of the Lamu Archipelago, others stayed on, or moved back to, the mainland. The rulers of Siu, Pate, and Lamu contracted occasional strategic alliances with Orma and Somali on the mainland, but otherwise contact was of an indirect kind. On the other hand, we know from local traditions and European records that Bajunis mixed with Aweera and Garre Somali, at least, in much more intimate ways [Elliott 1925/6:10-22, 147-163, 245-263, 338-358].

Certain phonological processes affect Bajuni of the northern Swahili dialects, or if they also affect other northern Swahili dialects, they may be suspected of having originated in Bajuni. The general nonlinguistic background to this claim is that prior to the Orma incursions the Bajuni of the mainland coast seem to have been more numerous than the island communities. The Orma arrival forced the Bajuni on to the islands, where they moved into the towns (Siu, Pate, etc.), and today there are many residents who claim to be "Bajuni" (a nonlinguistic label) by origin, as a result. Organ [ms] cites a letter from the Portuguese Viceroy of India, dated 6 January, 1598: "...in no circumstances have you to permit the erection of stone walls there at Patta (Pate), not even then, if they say that the reason is to defend themselves against the Vanagunes (Vagunya, Bajuni)". 

Examples of the phonological processes affect-

greater frequency of /l/ in Swahili literature of recent centuries. L-loss in Swahili dialects further south suggests it is a widespread Swahili areal feature. Also lost in Lower, but not Upper, Pokomo before all vowels, and in some Aweera dialects in word final position.

These features seem unlikely to have originated in other local languages as they are also present in other Sabaki languages to the south and/or either absent (Dahalo, Somali, Orma) or not present in all the dialects of the local languages (Aweera).

I am indebted to Jim Allen for this information and the foregoing Elliott reference.
ing Bajuni are first, /z/ → /ð/. No dialect of Dahalo, Aweera,17 or southern Somali has /z/ or [z], but all have [ð]. In Dahalo modern /ð/ evolved from */z/ [Ehret 1980:115], and in Aweera and Somali [ð] is the intervocalic allophone of /ð/, also present in Siu and Pate. Second, deletion of homorganic nasal before voiceless stop [Nurse 1982:113], which has also occurred in Dahalo, Aweera, Garre Somali, and Elwana. In the latter, as we have seen, its deletion forms part of a set of rules linked to Dahalo influence. Although this form of deletion is natural enough and is not uncommon in North East Coast Bantu languages, it has conspicuously not happened at all in Pokomo or the northern Swahili dialect Mwiini, which is geographically isolated. In Siu, Pate, and Amu, it has occurred only in certain morphologically conditioned contexts (see fn. 5), and took place about three hundred years ago, just after Bajuni influence made itself felt in these towns. In Bajuni by contrast, it forms part of a wider rule whereby these nasals are also deleted before all fricatives [Nurse 1982:113-114].

Care has to be exercised in interpreting these phenomena. What we see is that, after the breakup of the proto-northern Swahili community, certain changes affected Bajuni in particular. They appear variously in adjoining languages and dialects but all are present in Aweera (and Dahalo). That is, there appears to have been particular phonological interaction between Bajuni and Aweera, which are adjacent and are known to have interacted in nonlinguistic ways. In the middle of the present millenium, and possibly for some centuries previously, the coastal Bajuni community is likely to have been large, powerful, and numerous [Grottanelli 1955, Nurse 1980]. It would therefore be tempting to assume that such a society attracted Aweera-speakers whose assimilation in numbers modified Bajuni pronunciation. In times of peace and prosperity down to the present, the Swahili towns of the northern coast and islands have always attracted Aweera and Dahalo.

However, although that is the more plausible direction of the interaction, there is no hard linguistic evidence that it could not have happened in the opposite direction. After all, in times of demonstrated hardship, e.g. in the

17Sole exception is the Jara dialect. See Heine [1982:21].
nineteenth century, Bajuni sometimes took prolonged refuge in the Boni forest [Ylvisaker 1979:31, 39, 67, 88-89, 126-127]. The most prudent summary would be to say that there is an area embracing Bajuni and Aweera where certain parallel phonological changes occurred. General historical accounts make it most likely that the best explanation lies in assuming a modification of Bajuni articulatory habits by assimilation of Aweera-speakers. Bajuni prestige, power, and numbers then carried some of these changes into Siu and Pate, probably starting in the seventeenth century. If that is the case, then the Bajuni-Aweera interaction must have preceded that date.

This interpretation would also fit lexical loan sets. We find loan sets in the northern Swahili dialects from Dahalo, Aweera, and/or southern Somali, e.g. 19

(24) Northern dialects (quoted in Amu) Dahalo (all these are from PSC)

<table>
<thead>
<tr>
<th>Bajuni</th>
<th>Dahalo</th>
</tr>
</thead>
<tbody>
<tr>
<td>mdewere</td>
<td>deβere</td>
</tr>
<tr>
<td>du:ko</td>
<td>du:ko</td>
</tr>
<tr>
<td>k'engewa</td>
<td>he:nawa</td>
</tr>
<tr>
<td>k'unewe</td>
<td>ngunewa</td>
</tr>
<tr>
<td>h'awau</td>
<td>ja?awu</td>
</tr>
<tr>
<td>-soa (Mwiini -soo+a)</td>
<td>*soːl- (not recorded, but the direct reflex of PSC *ʃəl- )</td>
</tr>
</tbody>
</table>

Those from Aweera and/or Somali are heaviest in Bajuni, lighter in Siu, Pate, and Amu:

(25) All northern dialects (quoted in Amu) Aweera Somali Proto-SAM

<table>
<thead>
<tr>
<th>Bajuni</th>
<th>Aweera</th>
<th>Somali</th>
<th>Proto-SAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>tamar!</td>
<td>*tamar</td>
<td>ądambar</td>
<td>*ądambar</td>
</tr>
<tr>
<td>(beestings)</td>
<td>(replaced by Somali form today)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

18 The opposite can be seen happening today. In parts of the Swahili-speaking Lamu Archipelago, /ɔ/ is felt to be rustic and is avoided.

19 Lexical loans from Orma are conspicuously absent. See Nurse [forthcoming a].
(25) All northern dialects (quoted in Amu)

<table>
<thead>
<tr>
<th></th>
<th>Aweera</th>
<th>Somali</th>
<th>Proto-SAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>ubole 'feather'</td>
<td>ɓāːl</td>
<td>baːl</td>
<td>*baːl</td>
</tr>
<tr>
<td>GaBulona 'marabou stork'</td>
<td>ɓāːɬu</td>
<td>bambu</td>
<td>?</td>
</tr>
</tbody>
</table>

Bajuni alone

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ch-ʊdi 'dung'</td>
<td>ʊdːi</td>
<td>*ʊɗi</td>
</tr>
<tr>
<td>abaya 'older sister'</td>
<td>?</td>
<td>abaːy</td>
</tr>
<tr>
<td>havule 'girl'</td>
<td>hablo</td>
<td>hablo</td>
</tr>
</tbody>
</table>

Bajuni could thus have acted as the funnel through which they flowed. The lexical material points to Dahalo, Aweera, or Somali. The phonological material points to Aweera.

These later phonological and lexical loans are not necessarily of the same time or origin as the changes including dentalisation, which had earlier affected all the northern Swahili dialects. The latter may be assumed to have occurred at the time of the proto-northern Swahili community or slightly later. The changes just discussed, and most obviously connected to Aweera, occurred after the breakup of this community, since they hardly affect Mwiini, and Siu, Pate, and Amu only to some extent. We should thus be cautious about attributing the earlier changes unambiguously to Aweera influence.

5.4. Conclusions. Dahalo and Aweera play a central role in this general scenario. Dahalo seems to have been the prime mover in the Elwana changes and to have played some role in those in Pokomo. There is a supporting set of Dahalo loan words in Elwana, Pokomo, and northern Swahili. Aweera is most prominent among the possible sources for the later set of phonological changes affecting Bajuni particularly after the breakup of the proto-northern Swahili community. There is a supporting set of Aweera loan words in northern Swahili, clearest in Bajuni. Either Dahalo or Aweera could have been the catalyst for the early northern Swahili changes.

Hitherto, reference to southern Somali dialects other than Aweera has been minimal. Several of the phonological changes that Aweera has undergone since Proto-SAM [Heine 1978:11-12, 41-42] are, however, also shared by other southern Somali dialects, notably Garre. Some of the loan word sets in northern
Swahili, apparently from Aweera, could as well have come from these other southern Somali dialects. Although today there are no speakers of these other dialects in northern Kenya, they are present in southern Somalia, and historical records indicate their former presence along the northern Kenya coast. Reference to Aweera in what preceded may thus be taken to refer also to other southern Somali dialects, particularly Garre. Henceforth, reference will be made to Aweera and southern Somali.

Is it possible to pinpoint just one of these languages, Dahalo or Aweera/southern Somali, as the single original catalyst? One way of doing this would be by proving that one but not the other had been physically present in the area at the beginning of the second, or end of the first, millennium A.D. But we know next to nothing of the facts (as opposed to the assumptions) of their external history. Of Dahalo history we know absolutely nothing, although loan word patterns in Elwana/Pokomo/northern Swahili suggest Dahalo has been present for a lengthy period on the coast [Nurse forthcoming (b)], and Ehret [1974:29ff] states that Southern Cushites were a major presence in East Africa in general during the first millennium A.D. General archaeological and linguistic considerations suggest that SAM-speakers could have been in the area by the time in which we are interested [Ambrose 1982:143, Heine et al. 1979]. This suggests the possibility that both could have been present a thousand years ago and does not favor one over the other.

Another approach is to look at the internal linguistic evidence, both phonological and lexical. Certain phonological changes are shared by Dahalo and southern Somali dialects: deletion of voiced stops after homorganic nasals intervocally; deletion of homorganic nasals before fricatives; replacement of (pre-Dahalo, SAM) /z/ by a dental obstruent in various ways; the appearance of certain implosives. The first two of these at least occurred wherever Dahalo can be shown to be the common factor in contact situations, that is, with Elwana and Aweera, although, as we have seen (section 5.1), the way in which intervocalic nasals plus voiced stop are changed in Elwana differs from

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20 There are also a few loans in Elwana of Somali origin which do not seem to come from northern Somali dialects.
the mechanism in Daholo and Aweera. As Ehret [1980:116] points out, deletion of voiced stop after nasal in Daholo is a very early rule, whereas the same has not been demonstrated for Aweera [Heine 1978, 1982]. A large number of rules distinguish Daholo from PSC, whereas relatively few rules separate Aweera from proto-SAM, which suggest that Daholo has a longer independent derivational history than Aweera.

Evidence from lexis points in the same direction. Daholo seems to have been in contact with coastal Sabaki languages longer than southern Somali because whereas loan words into Aweera are all recognisably from recent northern Swahili (since their shape is basically that of northern Swahili), Daholo not only has loans from recent northern Swahili, but also a number of items which represent not a recent, but an older form of Swahili or Pokomo or Mijikenda:

(26)

<table>
<thead>
<tr>
<th>Daholo</th>
<th>contemporary northern Sw. (Amu forms)</th>
<th>contemporary Mijikenda (Giryama)</th>
<th>contemporary Lower Pokomo</th>
<th>contemporary Upper Pokomo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bala:o-</td>
<td>-wanga</td>
<td>Digo -oranga</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>'count'</td>
<td>Mwiini -walanga</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(earlier *-wal-anga)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buna:ka</td>
<td>unga, but Bajuni vunga</td>
<td>unga</td>
<td>unga</td>
<td>unga</td>
</tr>
<tr>
<td>'flour'</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kalanaka:o-</td>
<td>-kanga</td>
<td>-kalanga</td>
<td>-kaanga</td>
<td>-kalanga</td>
</tr>
<tr>
<td>'fry'</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kitsoka</td>
<td>kitoka</td>
<td>kitsoka</td>
<td>(shoka)</td>
<td>(shoka)</td>
</tr>
<tr>
<td>'axe'</td>
<td></td>
<td></td>
<td>(loans from Standard Swahili)</td>
<td></td>
</tr>
<tr>
<td>Kitsiki</td>
<td>kisiki</td>
<td>kisiki</td>
<td>kisichi</td>
<td>siki</td>
</tr>
<tr>
<td>'tree stump'</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lompa:o-</td>
<td>-omba</td>
<td>-lomba</td>
<td>-yomba</td>
<td>-lomba</td>
</tr>
<tr>
<td>'ask for'</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mti:nga:ka</td>
<td>mzinga</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>'bee hive'</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mutso:ngi</td>
<td>mtungi</td>
<td>mtungi and kitsunji</td>
<td>mu:ngi and kichunji</td>
<td>mtungi and mtsunji</td>
</tr>
<tr>
<td>'water pot'</td>
<td></td>
<td></td>
<td>c.f. Comorian</td>
<td></td>
</tr>
<tr>
<td>Munta</td>
<td>mnda</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>'field'</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dahalo</td>
<td>contemporary</td>
<td>contemporary</td>
<td>contemporary</td>
<td>contemporary</td>
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<td>--------------</td>
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<td>--------------</td>
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</tr>
<tr>
<td></td>
<td>northern Sw.</td>
<td>Mijikenda</td>
<td>Lower Pokomo</td>
<td>Upper Pokomo</td>
</tr>
<tr>
<td></td>
<td>(Amu forms)</td>
<td>(Giryama)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>funta:o-</td>
<td>-funda</td>
<td>-fundza</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>'teach'</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>muts(?)okolo</td>
<td>myuyuu</td>
<td>mudzukulu</td>
<td>mudzukuu</td>
<td>?</td>
</tr>
<tr>
<td>'grandchild'</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>tsünkule</td>
<td>kitungue</td>
<td>(ka)tsungula</td>
<td>( sungura )</td>
<td>( sungura )</td>
</tr>
<tr>
<td>'hare'</td>
<td>Mvita kitungue</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>rúpanga</td>
<td>upanga</td>
<td>upanga</td>
<td>yuŋanga</td>
<td>luŋanga</td>
</tr>
<tr>
<td>'machete'</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(h)úluže</td>
<td>u(w)a</td>
<td>lua</td>
<td>( uwa )</td>
<td>luŋa</td>
</tr>
<tr>
<td>'flower'</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

but more recent

| tfú:mba      | chumba       | 'room'       |              |              |
| ?andã:o-     | -anda        | 'begin'      |              |              |
| manjá:nuni   | manjani      | 'yellow'     |              |              |
| tfú:ngwe:te  | chungwa      | 'orange'     |              |              |

These loans derive specifically from an earlier form of one Sabaki language or another [Nurse forthcoming b]. None of these earlier loans appears in this shape in any Sabaki language presently adjacent to Dahalo. They have either been lost in the probable source language(s) or have undergone certain sound changes.)

Of the 200 or so identifiable Bantu loan words in Dahalo, none has an original Bantu sequence of intervocalic nasal and voiced stop reinterpreted as simple nasal. In other words, not only is Ehret's claim that this is an early change in Dahalo apparently justified but it was complete and no longer active by the time of contact with Bantu languages.\(^{21}\) The earliest Bantu sequences of intervocalic nasal and voiced stop taken into Dahalo are interpreted with nasal and voiceless stop, but later ones keep the voiced stop as such sequences become phonemicised in Dahalo. As we have seen, Orma (and northern Somali) sequences of nasal and voiced stop are kept in Dahalo, that is, they are later

\(^{21}\)This applies to loan words from Swahili, Pokomo, Thagicu, and older Sabaki, but not, as we have seen, to Elwana, where it was complete but its surface effects still active.
loans, whereas the Sabaki loans interpreted as voiceless must be earlier, at least pre-seventeenth century.

Proto-Aweera likewise underwent the process of replacing inherited nasal and voiced stop by simple nasal. Contemporary Aweera nasals plus voiced stop are all loans, some from Orma. By the same reasoning we can attribute the loans to at least the seventeenth century and the simple inherited intervocalic nasal to the preceding period. Aweera has no older Sabaki forms. Therefore, its contact with Swahili is later than Dahalo's, and it has both simple nasal and nasal plus voiced stop in loans from Swahili:

(27) Aweera Northern Swahili

je:mə 'hoe' yembe

wi:mə 'millet sp.' wimbi

mtũŋi 'water pot' mtũngi

but si:mbə 'stick' simbo

senci 'money' senti/senchi (depending on dialect)

mgange 'doctor' mganga

mulo:nje 'tomato sp.' mlonje

a:ndik- 'write' -andika

At the stage Aweera was passing through this change it must have been in contact with Swahili, and the stage before the change can be attributed to the pre-seventeenth century period.

If we piece these bits of evidence together, we are forced to the conclusion that Dahalo is the more likely candidate for the earlier center of influence. That Dahalo has a longer derivational history than Aweera/southern Somali is not in itself significant because that history need not have evolved on the coast. That the NC → N change is clearly older in Dahalo than Aweera/southern Somali suggests at least the possibility that it may have come about in the latter under Dahalo influence. Although that suggests Aweera newcomers moving into an older Dahalo area, it could be interpreted in other ways. Dahalo loan words are found in all three Sabaki languages, while Aweera/southern Somali ones are most obvious in only northern Swahili. And Dahalo has older loans from a variety of Sabaki languages, while those in Aweera derive only
from northern Swahili more recently. Aweera/southern Somali phonological influence likewise has touched mainly Bajuni, which must have postdated the proto-northern Swahili period.

To proceed to the conclusion that the Dahalo community was therefore earlier on the coast and provided the catalyst for the appearance of the early dental series in the northern Sabaki languages is embarrassing. Dentality in Dahalo is itself induced, and if Ehret is right, is not a particularly early change in Dahalo. In other words, how and when did dentalisation come about in Dahalo itself? Was it present early enough in Dahalo to have provided the catalyst for the dentalisation in northern Swahili? One potential source would be the Khoisan language that provided Dahalo with its dental click, but that is difficult to prove, because although dentality is common enough in South African Khoisan languages, the only other languages in East Africa known to be Khoisan (Sandawe) or to have come in contact with Khoisan (Hadza) have an alveolar, not a dental, series.

Until we have more data on Dahalo and Aweera/southern Somali, until we know more about the linguistic interaction between them, and until we have a more reliable chronology for them, we must rest content with the hypothesis that Dahalo, firstly, and Aweera/southern Somali, secondly, are the prime candidates for the possible source of the changes that have occurred in northern Swahili, Pokomo, and Elwana, including the appearance of dentality.

A contemporary sociolinguist would be unhappy with what immediately precedes for a different reason. Although the likelihood of older Dahalo, southern Somali, and Sabaki presence and linguistic interaction can be shown, neither the exact nature of the interaction nor even the real fact of their presence can be proved. A sociolinguist would presumably claim that it is not enough to show that two or more historical communities coexisted and that a feature inherited in one led in some way to its appearance in the other. He would demand a more rigorous demonstration of the nature of the transfer. But that is an unrealistic demand, as the northern Kenya coast of a millenium ago is not Martha's Vineyard of today. It is only in a very few historical situations, most obviously where written records are available, that such a demonstration can ever be mounted. In this particular case it is impossible. Da-
halo and Aweera do not even appear in the written or archaeological record, nor in oral traditions. The concrete evidence for Elwana and Pokomo is not much stronger. Thus we can only speculate about the nature of the contact that occurred.

The situation today along the northern Kenya coast is probably the reverse of what it was a thousand years ago. In recent centuries the northern Swahili island settlements have been large, prestigious, and fairly powerful, trading and forging alliances across the Indian Ocean, owning large tracts of land and plantations on the adjacent mainland, and exercising their influence widely along the coast. Aweera and Dahalo, by contrast, have been at the opposite end of the social, economic, political, and cultural scale. People in Lamu are apt to bristle at the idea that they might owe anything to the "Sanye".

During the first millennium A.D., however, at least Southern Cushitic communities in East Africa in general were large and powerful. The earliest archaeological evidence for the area of the northern Swahili settlements [Horton 1980] suggests they were small and dependent, not on trade, but rather on small scale farming, stock, fishing, and hunting, similarly to their neighbors. At this point, the older established Cushites most likely coexisted on a fairly equal basis with the recently arrived ancestral Sabaki or were even superior to them in numbers and power, with the linguistic consequences that would entail. Contact with mainland peoples would have been mainly with Cushitic-speakers. From approximately the ninth to the twelfth century A.D., Swahili communities along the coast expanded rapidly in number, size, and economic power, presumably initiating the situation that exists down to the present, whereby they acted as a magnet for adjacent peoples on the mainland. This would result in continuous assimilation of non-native speakers, with consequences for northern Swahili general vocabulary, and a division of labor in which Cushitic specialisation in activities other than farming and trade would lead to their specialised lexis being absorbed by Swahili.

This would go a long way towards explaining in general how peoples whose presence and language today are of little consequence for adjacent Swahili communities could have provided a context for earlier northern Sabaki phonological development. A parallel exists with the situation in southern Africa, in
which languages ancestral to those spoken by millions of contemporary Bantu-speakers took clicks from Khoisan-speakers who are reduced today to a few thousand. The adoption of dentality is easier to envisage than the adoption of clicks.

REFERENCES


Swahili demonstratives h- and -i have traditionally been analysed to mean "proximity" and "non-proximity" respectively. However, this analysis fails in that it can only account for a small part of the distribution of these forms in actual texts. This paper suggests that meanings dealing with the speaker's relative concentration of attention on a referent are better able to account for the actual distribution of these forms. To validate this claim we will (1) show the relation of proximity to noteworthiness and thus explain the same range of data as the proximity hypothesis; (2) uncover other factors, e.g. new items, thematically important items, that override proximity and show their relation to noteworthiness to explain data not accounted for by the proximity hypothesis.

Standard Swahili is traditionally described as having three types of demonstratives, two of which are said to respectively denote "proximity" and "non-
proximity" relative to the speaker [Ashton 1944:58]. The third demonstrative, said to denote "(prior) reference", will not be discussed here.

The two "locative" forms are H, the traditional "proximate", and LE, the traditional "non-proximate". Numbers (1) and (2) are the kind of examples found in the traditional grammars:

(1) Traditional example of H "proximate":
Mke wa Sultani akasema, "A, a, a, h-uyu mbele yetu si mtoto wangu."
'The Sultan's wife said, "No, no, no, this one before us is not my son."
(after Ashton 1944:181)

(2) Traditional example of LE "non-proximate":
Nenda ukamtazame mtu yu-le ana nini.
'Go and find out what is the matter with that man."
(after Ashton 1944:182)

Now the traditional analysis is that H and LE respectively mean location proximate or non-proximate to the speaker. If we take these words seriously we will approach this view as a hypothesis subject to validation. The validation of such a hypothesis, it will be seen, depends on redundant information in the context. That is, if the entire body of data available for analysis were exactly like examples (1) and (2), then we would say that the data confirm the hypothesis that H means location proximate to the speaker, and LE means location non-proximate to the speaker. In (1) we see mbele yetu 'before us' which independently indicates proximity, and in (2) we see nenda 'go', indicating its goal—the man—is at a distance.

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1Although I only cite Ashton [1944], the best-known grammar of Swahili, there is seemingly complete agreement in the literature as to these meanings.

2Although Ashton [1944:182] states that location is "immaterial", some grammars assign, in addition to a referential meaning, a locative meaning of proximity to speaker [Wilson 1970:356], proximity to hearer [Zawawi 1971:146], or proximity to hearer/non-proximity to speaker [Hinnebusch and Mirza 1979:175]. This third demonstrative is H+class concord+0. Although not discussed in this paper, in the present analysis it is viewed as a discontinuous form H-0 that signals the meaning MID concentration of attention relative to H (HIGH) and LE (LOW). A fuller treatment of the demonstratives which includes H-0 is Leonard [1982].
However, throughout modern Swahili novels and plays we regularly encounter referents of H and LE in locations opposite to those indicated by the traditional hypothesis, that is, H referring to an item we can know from the context to be in a non-proximate location, or LE referring to an item in a location known to be proximate. Consider (3), in which the H form, the supposed "proximate", is used to refer to a location that is quite distant from the speaker: 3

(3) H "non-proximate" contrary to traditional hypothesis:
(A man climbs up a tall rock and surveys the landscape. He looks south, west, then east.)
Upande mashariki niliweza kuona nyumba ya Baba ikitokeza juu ya miti.
Nilikumbuka kwamba ~apa mtoto alikuwa akizaliwa. (KM 88)
'In the East I could see father's house sticking out above the trees. I remembered that there a child was being born.'
The location of the house is clearly not close at hand, yet the man refers to that location with H, the traditional "proximate".

In the next example we find LE, the traditional "non-proximate", with a referent that is clearly proximate (a herd of cows). The narrator states that they have drawn near to the cows, yet the cows are referred to with LE.

(4) LE "proximate" contrary to traditional hypothesis:
(The narrator and his brother come upon a cowherd who complains to them that she can't make her cows move. They go to help.)
Tulipowakaribia wa-le ng'ombe tulishangaa. Walikuwa wameinama wakunusasa chini. Jambo-li Ii lotushangaza ni kwamba ng'ombe h-awa walikuwa wakilia kwa sauti. (KM 87)
'When we got close to the cows we were amazed. They were bending down smelling the ground. The thing that amazed us was that the cows (H, traditional proximate) were crying loudly.'

Notice that reference to the cows is made with H as well as LE. A strict interpretation of the traditional hypothesis would result in the paradoxical

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3While examples (1) and (2) are adapted from Ashton, all other examples in the paper are taken from modern Kenyan and Tanzanian novels and plays, identified by title initials followed by page number. For complete references, see bibliography.
meaning that the cows are at once far from and near to the speaker.

Examples (3) and (4) run directly counter to the traditional analysis, and they are by no means isolated examples. Data like these show clearly how the traditional hypothesis that claims H to mean "proximate to speaker" and LE to mean "non-proximate to speaker" is not a hypothesis that adequately explains the actual distribution of these forms.

I will propose a new hypothesis as to the meanings of H and LE that I suggest enables us to account more satisfactorily for the distribution of these forms. This new hypothesis posits meanings that deal with the speaker's relative concentration of attention (COA) on a referent. Specifically H signals, relative to LE, HIGH concentration of attention (HCOA), and LE signals, relative to H, LOW concentration of attention (LCOA).

The validation of this hypothesis depends on redundant information in the context, as did the attempt to validate the traditional locative hypothesis. To validate the new hypothesis I will show contextual information that independently indicates that motivation exists for the speaker to concentrate a relatively HIGH or relatively LOW degree of attention on a referent. With this in mind let us review examples (3) and (4), which conflicted with the proximate/non-proximate hypothesis.

In (3) the narrator refers to his father's distant house with H, the signal for HCOA. A larger context that the one previously provided shows why. In that house, the narrator's emaciated sister is in labor, having been made pregnant, then abandoned by the narrator's worst enemy. (She dies in bringing forth a stillborn child.) This the the pivotal incident of the whole novel, the culmination of almost the entire first half of the book.

The narrator has previously left the house wanting to forget the entire situation. When he sees his father's distant house, he remembers what is happening in that very important place and refers to it with H, the signal for HCOA.

Returning to (4), what we find are entities that are at first thought just mildly worthy of attention becoming, suddenly, quite noteworthy indeed. In (5), below, a longer version of (4), we find the same entity referred to first by LE and then by H not because of a change in its relative proximity to the speaker, but because of a change in its relative importance to the speaker.
The narrator is fresh from college and very given to epistemological concerns. At first he finds the cows to be just cows and refers to them with LE, the signal for LCOA. Then he refers to them with H (HCOA) as suddenly he finds these cows to be objects quite worthy of his attention. They illustrate a question that for him throughout the rest of the novel is of central concern: whether we, as humans, in our incomprehension of the works of God, stand in the same relation to Him as dumb animals do to us. That is, are we as dumb animals to God? Or can we indeed fathom some of His works, and can animals indeed fathom some of ours?

(5) longer version of (4) with H, HIGH COA; LE, LOW COA:

'The narrator is fresh from college and very given to epistemological concerns. At first he finds the cows to be just cows and refers to them with LE, the signal for LCOA. Then he refers to them with H (HCOA) as suddenly he finds these cows to be objects quite worthy of his attention. They illustrate a question that for him throughout the rest of the novel is of central concern: whether we, as humans, in our incomprehension of the works of God, stand in the same relation to Him as dumb animals do to us. That is, are we as dumb animals to God? Or can we indeed fathom some of His works, and can animals indeed fathom some of ours?

(5) longer version of (4) with H, HIGH COA; LE, LOW COA:

Tulipowakaribia wa-le ng'ombe tulishangaa. Walikuwa wameinama wakinusanusa chini. Jambo lililotushangaza ni kama ng'ombe h-awa walikuwa wakilia kwa sauti. Tulipotazama chini tuliona damu na majani yaliyokuwa ndani ya tumbo la ng'ombe. Mara moja tulielewa kwamba hapa palikuwa mahali alipochinjiwa mwenzao. Sikuweza kuelewa kwa nini ng'ombe h-awa walitenda hivyo waliponusa damu ya wenzao. Sikuweza kujua kama kweli walifahamu jambo lililotendeka kwa mwenzao. Sikuweza kujua kama hayo yalikuwa masikitiko au woga tu wa kifo, au kama walikuwa wakifanya hivyo bila fahamu—kama wasemavyo wataalamu. (KM 87)

'When we got close to the cows (LE, LOW COA) we were amazed. They were bending down, smelling the ground. The thing that amazed us was that the cows (H, HIGH COA) were crying loudly. When we looked down we saw blood and grass that had been in the stomach of a cow. At once we understood that here was a place where one of their companions had been slaughtered. I couldn't understand why the cows (H, HIGH COA) did what they were doing when they smelled the blood of their companion. I couldn't figure whether in truth they understood the thing that had been done to their companion. I couldn't figure whether it was sadness or just fear of death, or whether they were acting the way they were without understanding—like the experts say.'

So at first the narrator views the cows with no special interest and refers to them with LE, the signal for LCOA. But when he sees them as being directly related to a central concern, he refers to them with H, the signal for HCOA.

Now we have seen in (3-5) illustrations of how a referent that would normally be of only casual interest can be upgraded to having HCOA focused on it because of what might be called its thematic importance. It is also the case that an item of high thematic importance can be downgraded to suit a speaker's
specific purpose.

In (6), below, we find a man who in the commission of a robbery has killed a policeman. He is beside himself with fear of discovery. He asks himself pesa h-izi zote nitaziweka wapi? Where can I hide all the money? Notice H, HCOA. In a very agitated state he enters his house, takes off his coat in which he has placed the money. His sister enters, sees the coat and goes to brush it. She feels its pocket.

(6) Money—importance purposely discounted—LE

Brother: Wewe mpumbavu asiye adabu. Ni nani aliyekuruhusu kuligusa koti langu?
Sister: Kwani hutaki nikupigie brashi?
Brother: Sikukuufuma.
Sister: Na pesa naona una nyingi sana, umenipata wapi zote?
Brother: Zi-le ni pesa zangu, waziitakia nini?
Sister: Hebū nizihesabu.
Brother: Zote ni shilingi elfu moja. (NL 21)

Brother: 'You're an idiot with no manners. Who gave you permission to touch my coat?'
Sister: 'Why, don't you want me to brush it for you?'
Brother: 'I didn't tell you to.'
Sister: 'And money, I see you've very much, where did you get it all?'
Brother: 'It (LE, LOW COA) is my money, what do you want from it?'
Sister: 'Hey, let me count it.'
Brother: 'Altogether it's a thousand shillings.'

Pressed for an explanation, he nonchalantly says he won it in a lottery.

The brother's purpose is clear. In his monologue he refers to the money that now threatens his life with the HIGH COA it indeed demands. But when discovered by his sister, this money, which, besides its thematic importance, happens to be a small fortune, is referred to with LE, the signal for LOW COA, downplaying its existence as if it were a commonplace not worthy of special note.

Now let us return to examples (1) and (2), in which we found the referent of H close to the speaker, and the referent of LE at a distance. The present hypothesis is that the choice between H and LE is motivated by the relative noteworthiness of the referent. Viewed in terms of the hypothesis, examples (1) and (2) show the semantic congruence of a speaker's higher COA with an item near him and a lower COA with an item far from him. All other things being
equal, a nearby item is more likely to demand attention than a distant item. A nearby entity has a greater possibility of interaction and greater frequency of interaction with a speaker. Humans are undeniably egocentric and regard their own experience as more interesting than those of others. It is in the nature of things that a human will interact with entities close to him far more often than with entities at a distance from him. Similarly, a human will find the place itself where he is more noteworthy than a place where he is not. So other things being equal, nearby entities, relative to distant ones, should be seen as one class of important, noteworthy entities, one on which a speaker will normally concentrate higher attention.

It must be stressed that nearness and distance are not part of the meanings of H and LE but only inferences sometimes made from the HIGH and LOW attention meanings. Although we frequently find nearby items referred to by H and distant items referred to by LE, it is not by virtue of the relative closeness of these entities but by virtue of the importance often attached to relative close­ness. It is more likely that a speaker will find noteworthy an item close to him than one at a distance, other things being equal.

But other things are often not equal, as we saw in (3–5), in which an entity's thematic importance, its importance within a specific discourse, out­weighs any importance that might stem from location.

As a further validation of the hypothesis, let us examine another case of items that are noteworthy. These are new or previously unmentioned entities.

A speaker will want to concentrate attention on a new, previously unmen­tioned referent in an effort to effect a successful discourse. A speaker signaling HCOA is actually instructing the hearer to pay close attention. For a discourse to be successful, it is of course necessary that the hearer be able to identify and keep distinct the entities within the discourse. It is there­fore quite reasonable to assume the speaker will insist that the hearer attend more strongly to new items, items that are not yet known, than to old, pre­viously identified ones. So we will expect to find a correlation of H with new items versus LE with old. Table 1 shows such a correlation (see next page). We find that of all referents of H and LE in four randomly selected chapters of different modern novels, non-previously mentioned, that is, new
Table 1: Previous mention of referent by H and LE
(Source: MZ Chs. 7, 9; KM Ch. 6; JM Ch. 1)

<table>
<thead>
<tr>
<th>Referent is new, i.e., not previously mentioned</th>
<th>Referent is old, i.e., previously mentioned</th>
</tr>
</thead>
<tbody>
<tr>
<td>H: HIGH COA</td>
<td>64% (32)</td>
</tr>
<tr>
<td>LE: LOW COA</td>
<td>32% (47)</td>
</tr>
</tbody>
</table>

items are referred to by H 64% of the time compared with only 36% for LE. Conversely, previously mentioned, that is, old items are referred to by LE 68% of the time compared to only 32% for H. So H skews towards new items, not before.

The terms "new" or "non-previously mentioned" and "old" or "previously mentioned" are here used in the following manner: a referent is considered to be "old" if a noun is mentioned (with or without a demonstrative) and then subsequently referred to by

(a) a demonstrative plus the same noun
   kijana...kijana yu-le 'youth...that youth' (MZ 39) (= (8) in text)

(b) a demonstrative plus an equivalent noun
   nyumbani kwa Sembuli...watu h-awa 'the (people of the) household of Sembuli...these people' (HT 17)

(c) a demonstrative alone, with appropriate concord
   mahali pa-le...pa-le 'that place...there' (MZ 43)

(d) a demonstrative (with or without a noun) that is a summary of preceding items, e.g., a quotation referred to by maneno ya-le 'those words' (MZ 40).

A referent is considered to be "new" in cases other than the above (and, of course, with no previous mention), e.g.

(a) example (7) from the text h-ivi 'this' (HT 26);

(b) najum alisema na h-uku akicheka 'Najum spoke while at the same time laughing' (MZ 37);

(c) u-le wimbo 'that song' (JM 5).

In (c), the narrator says he remembers 'that song that goes...' and explains how he realizes the words describe his life. The context suggests it is a well-known song. One could thus make a case for the song being in the hearer's consciousness and therefore "old." For the purposes of Table 1 I counted such entities as being, strictly speaking, "new." Had I counted them as "old," the skewing of LE to "old" would have been stronger, i.e. 80% rather than 68%.
mentioned, and LE skews towards old, already mentioned items.\(^5\)  

Number (7) is an example of H introducing new items, viz. previously unknown methods of acting and of speaking.

(7) H, HIGH COA = new entity:

(An oath-giver is explaining to an oath-taker the procedure to be followed.)

*Sasa basi ni h-ivi. Mimi kwanza nitasema maneno yangu, utayasikia, halafu nikishayasema nataka wewe useme h-ivi: "Mikale mikale..."* (HT 26)

'Now, it's this way (H, HIGH COA). First I'll say my words, you'll listen to them, then when I'm finished speaking I want you to speak thusly (H: HIGH COA): "Mikale mikale..."'

In (7) the oath-giver uses H, the signal for HCOA, to introduce the new, previously unmentioned procedures to which he wants the oath-taker to pay careful attention.

Number (8) is an example of LE referring back to an already specified, previously mentioned youth.

(8) LE, LOW COA = old entity:

*Kwa pembeni kidogo alikuwapo kijana mmoja wa Kiswahili amesimama kimya... kwa wakati huu, kijana yu-le aliyekuwa amesimama kimya, alipata hisi kuwa nyuma yake kuna watu. (MZ 39)*

'Off to one side was a Swahili youth standing quietly... (another character does something). Meanwhile, that (LE, LOW COA) youth who had been standing quietly realized that there was someone behind him.'

\(^5\)All other things being equal a speaker will use H for new and LE for old. But as we saw in the discussion on proximity, other things are often not equal—other factors can outweigh the noteworthiness that stems from newness or make an old item worthy of attention. Examples of the former include the deliberate downplaying of a new item for thematic reasons as well as the introduction of new but purely background items. Examples of the latter are (3) and (4) in the text. Thus we do not expect a 100% correlation between H and new, LE and old, just as we do not expect (and most certainly do not find) a 100% correlation between H and proximity, LE and non-proximity. By definition, the invariant meaning of a form correlates 100% with the form's utterance. "New" and "old", "proximate" and "non-proximate" are but categorizations of factors that tend to influence a speaker in his choice of H (HIGH COA) vs. LE (LOW COA).
Individual examples such as (7) and (8) are useful illustrations of \( H \) introducing a new item and \( LE \) referring back to an old item, but the presentation of a statistical skewing, as in Table 1, allows us a more forceful line of argument. This type of quantitative presentation can cover relatively large amounts of data at once and can therefore show conclusively that the correlation of the meaning and a validating context is not a feature of, say, just a particular passage or the style of a certain author. It shows us that throughout the data, \( H \) tends strongly towards new referents and \( LE \) tends strongly towards old referents, additional validation of the present hypothesis that claims \( H \) means \( HCOA \) and \( LE \) means \( LCOA \).

Furthermore, and here we come to an important point, the data in which \( H \) tends towards new and \( LE \) tends towards old shows the inadequacy of any possible explanation of the data that would expand the traditional meanings to include metaphorical proximity and non-proximity. Let us look once more at the father's house in (3). A hypothesis claiming \( H \) to mean metaphorical proximity would say that the house becomes metaphorically closer to the narrator when he remembers what is happening there and so utilizes \( H \) for the effect, perhaps, of something like a zoom lens, making a distant object seem near.

This zoom lens, however, were it to be considered properly analogous to the effect of \( H \), could also be viewed as support for the present hypothesis, since the very thing that a zoom lens does is focus the attention on a specific part of one's field of vision. This is what the narrator does in (3). Of all the places he surveys from his vantage point on the rock, only one does he find important enough to highlight with \( H \)—his father's house, where his sister is giving birth.

In any event, the only reason the house in (3) could be considered metaphorically closer to the narrator is because the narrator is himself a participant in the actions of the story. The narration is in the first person. But let us review example (8), taken from a novel with third person narration. In what possible sense can the Swahili youth be considered even metaphorically close to or far from the author, when the author is not himself involved in the story's plot? The only conceivable thing the youth might be considered closer to, or further from, would be the center of the author's attention, and that would cer-
tainly be support for the present meanings of HIGH and LOW COA.

The point is that the data explainable by a metaphorical proximity hypothesis is only a sub-set of the data explicable by the attention hypothesis. Any example which can be reasonably explainable by the attention hypothesis. Any can be more reasonably explained by attention meanings, and the attention hypothesis further covers data completely unexplainable by metaphorical proximity. Let us review Table 1, which presents the skewing of H to new and LE to old.

It is of course obvious that the newness or oldness of a referent does not make that referent physically, that is, literally close to or far from the speaker. An argument in terms of metaphorical closeness, which perhaps in this case would be closeness to the moment of speaking, is equally untenable. It is not the case that a new referent is closer to the moment of speaking than an old referent; clearly the mention of a new referent and the re-mention of an old referent both occur at the moment of speaking. H forms are used overwhelmingly for new items not because they are in any sense "closer" to the speaker or hearer, but because they require more attention be paid them than be paid old referents if the speaker is to have his communication understood.

It is characteristic of improved hypotheses that they promote discovery of previously unknown distributional facts like this new-old skewing. For the traditional hypothesis such facts about the distribution of H and LE are not even available for analysis since the choice between the proximate and non-proximate meanings cannot predict that such a skewing would even exist.

So in conclusion, we see that the attempt to test the validity of the two competing hypotheses consists of analyzing the correlation of the two different sets of meanings with independent information from the contexts in which we find the forms. In procedural terms, we examine how well the meanings of the

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6This approach to linguistic analysis derives from the theoretical framework known as "form-content" grammar, an approach to the semantics of grammatical systems originally developed by Prof. William Diver at Columbia University. For a general introduction to the theory, see Diver [1975:Introduction] and Garcia [1975:Ch.2]. For a detailed application of the theory, see Garcia [1975]. Other studies of Swahili within this framework include Contini [1976, 1983], Hawkinson [1979], and Leonard [1980].
different hypotheses are able to explain a speaker's motivation for the use of H or LE in a particular context. We see that the present hypothesis can explain all data explainable by the traditional hypothesis and it can explain data not explainable by the traditional hypothesis. This most strongly suggests that between the competing hypotheses, the one that better fits the linguistic facts is the attention hypothesis, that posits the meanings of H versus LE to be HIGH versus LOW COA.
REFERENCES


SWAHILI TEXTUAL REFERENCES


This paper examines the structural behaviour of various types of complex verbs in Nupe and Yoruba in relation to causative constructions. When such verbs occur in simple non-agentive causative sentences as well as in agentive non-causative sentences, they freely permit sentence embedding, resulting in biclausal causative structures. But in the case of non-agentive causatives, it is only Yoruba which allows the verbs to be irregularly embedded into causative matrix sentences in such a way that the biclausal causative structure constitutes input to Causative Clause Union, which compresses it into a uniclausal agentive causative sentence. Functionally, Yoruba uniclausal and biclausal agentive causatives are interchangeable in many cases. On the other hand, only uniclausal agentive causatives are attested in Nupe, as Causative Clause Union has disappeared from its grammar. It is concluded that causative constructions in these languages demonstrate clearly that the CCU rule is motivated by a diachronic process of moving from a pragmatic mode of expression to a syntactically elaborated one, and where a particular target has been hit, the rule ceases to function.

0. Introduction

Grammatical descriptions of many languages of West Africa have shown that complex verbs comprising two or more syllables exist alongside monosyllabic verbs, which constitute the majority. A few examples include Gwari [Hyman and

* A preliminary version of this paper was presented at the 12th Conference on African Linguistics, Stanford University, April, 1981, and later at a Seminar of the Department of Linguistics and Nigerian Languages, University of Ibadan. I am grateful to the participants at those gatherings for their useful comments and suggestions. I wish to thank Adekunle Adeniran in particular for assisting me with the Yoruba data.
Magaji 1970], Idoma [Abraham 1967], Nupe [Banfield and Macintyre 1915, Smith 1969, Madugu 1981], and Yoruba [Ward 1952, Bamgbọ̀́se 1964, Awobuluyi 1978]. A description of the typical morphological composition of such verbs is provided by Ward:

Verb stems may consist of one or more syllables: monosyllabic verbs are very common and there are a number of disyllabic verbs: verbs consisting of more than two syllables are less frequent, and of these, as well as of two-syllable verbs, many are compounds either of two or more verbs or of verbs and nouns (p. 76).

In the present study verbs of the type verb + noun in Nupe and Yoruba are singled out for discussion,¹ the purpose of this is not so much to give a formalistic account of syntactic structures containing them, but to provide evidence to support the notion that diachrony is an important explanatory parameter in language. In particular, following Givón [1979], it will be shown that certain synchronic rules involving these verbs in causative constructions are functionally motivated by diachronic processes of moving from one mode of expression to another and that at the completion of the processes, when a new mode has been rigidly established, the rules are dropped from the grammar.

The study is arranged as follows: section one provides the necessary background information, showing the nature of the morphological make-up of complex verbs and the fact that they have idiomatic meanings. Section two sketches the behavioural patterns of the verbs in causative constructions, where attention is focussed on certain processes of syntacticization. Section three is concerned with the nature of the emerging syntactic mode in which nouns functioning as Indirect Objects rather than Direct Objects, being Goal (target) Objects, most of them human, invariably occur immediately after the verb. Its widespread incidence is also highlighted. It is concluded that the structure can be accounted for in terms of the familiar generalization known as Top-

¹Nupe and Yoruba, both Kwa languages by Greenberg's [1963] classification and members of the Western South Central Niger-Congo by Bennett and Sterk's [1977] reclassification, are geographically contiguous, though not closely related genetically. In this study the illustrative materials are given in the orthographical conventions of the languages. Lexical tones are marked as follows: ['] High, ['] Low, and Mid is left without any marking.
icality Hierarchy. Section four summarizes the discussion.

1. **Components of the Complex Verb**

A few introductory remarks on the morphological composition of the complex verb will be useful for subsequent discussion. We consider, then, the following examples:

(1) Nupe: a. mi è dinya 'I am hurrying'
    I Prog. hurry
b. eyé è dín mi 'I am hurrying'

(2) Yoruba: a. mo n kanjú 'I am hurrying'
    I Prog. hurry
b. ojú n kán mi 'I am hurrying'

In the examples of (1) and (2), the verb 'to hurry' in both languages comprises a verbal constituent (VC) followed by a complementing nominal constituent (CNC): Nupe dinya(e)ye and Yoruba kan(o)jú. Whereas the two constituents are syntactically contiguous in the (a) sentences of (1) and (2), they are separated in their (b) counterparts. In terms of meaning, there seems to be no appreciable difference between the (a) and (b) versions.  

Sometimes the meaning of a verbal component can be specified in isolation, as is the case in (1) and (2) above, where the CNC means 'eye': Nupe eyé and Yoruba ojú. In both languages, however, the VC does not have any independent meaning that we know of. The combination VC + CNC then functions as a semantic unit whose meaning cannot be deduced from the semantic amalgamation of its constituents. As a matter of fact, the meaning of a complex verb is independent of whether the meaning of one constituent, of both constituents, or of none of the constituents can be specified in isolation. The four possibilities are illustrated as follows:

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2Not all complex verbs split in this fashion, but those that do provide a way of recognizing their morphological composition. Nupe has an additional means of identifying them. This is by a systematic process of nominalizing V+N verbs as distinct from V+V ones. Thus dinya 'to hurry' + (e)yédín, (i.e. V+N → N+V, and yakpe 'to believe + yi+yakpe (by partial duplication of the first V).
The first position (3a) means that the CNC, but not the VC, has meaning in isolation. This has already been noted in the examples of (1) and (2) above. Secondly, in (3b) the VC, but not the CNC, has reference. In Nupe gbín means 'to perish', but -ká has no independent reference. Similarly, the Yoruba VC fé by itself may mean 'to love/want/marry', but an isolated meaning of the CNC -rán is not known. Thirdly, (3c) stipulates that neither constituent of the complex verb has meaning in isolation. The verb 'to sit' (Nupe féèdùn and Yoruba jókòó) illustrates this. Fourthly, (4d) shows the possibility that both of the verbal constituents have identifiable references. Thus in Nupe we have tan + egwa 'rub hand', the semantic amalgam of which is different from the idiomatic meaning 'to plead'. And in Yoruba we have yí + òwò 'to turn the hand', the semantic combination of which is different from the meaning 'to be out of hand'.

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3Bamgbose [1964], in fact, points out that in general, even if a Yoruba monosyllabic verb collocates with a noun and we find the same form fused into one (verb) elsewhere, the meaning of the two forms will be different, e.g. kó èrọn; kèrọn (by contraction) 'collect meat' but kèrọn means 'to be done for'. Awobuluyi [1978:55] also remarks that the idiomatic meanings of such
From the above observation, it is clear that complex verbs have idiomatic meanings. It is on the basis of this fact that a complex verb is regarded as a single lexical unit in this discussion, as opposed to a monosyllabic verb followed by its object, for example, 'to bruise one's arm' (Nupe bọ + (e)kpá, Yoruba bọ + apá). To recognize a VC and its CNC as separate entities will amount to claiming that each entity is an independent lexical entry, and this will lead to positing many lexical items in the lexicon which will at times lack dictionary meanings.

It should be observed that the CNC in (1) and (2) is a body part ('eye'). This is not an isolated case, for there are instances of other parts of the body involved, as the following partial lists show (where independent meanings of the verbal components are not available for morpheme-by-morpheme glossing, simply VC or CNC will be used):

(4) Nupe
   a. gbómi gbó emi 'to argue'
bark mouth
   b. patí pa etí 'to be apprehensive'
tie head
c. sungwa sun egwa 'to hold'
   VC hand
(5) Yoruba
   a. bínú bí inú 'to be angry'
   VC stomach
   b. jéwó jé ọwọ 'to confess'
   reply hand
c. retí re etí 'to expect'
   VC ear
d. jàyà jà ayà 'to be afraid'
   snap hear/chest
e. yónu yọ ñu 'to give trouble'
pull out mouth

But it is not the case that all CNC's are body parts. Sometimes they are probably cognate or indefinite objects:

(6) Nupe
   a. kpógun kpó egun 'to shout'
   VC CNC

verbs in Yoruba provide a means of differentiating them from ordinary verb + noun combinations.
The existence of complex verbs amidst predominantly monosyllabic verbs in these languages poses a number of interesting questions. One of them is whether such verbs constitute a distinct subcategory of verbs, reflecting in any significant way common syntactic and semantic features, apart from their typical CV-CNC structure. Further, one may inquire as to what factors control the structural behaviour of the CNC. And a very intriguing question could involve the evolution of such verbs. The rest of this discussion will focus attention primarily on the first two of the questions.

### 2. Transitivity and Causativity

Complex verbs in Nupe and Yoruba do not constitute a homogeneous subcategory of verbs, nor are they in opposition to monosyllabic verbs in terms of sub-groupings. In other words, there are various subgroupings of complex verbs denoting different notions such as action, stativity, etc., just as there are monosyllabic verbs functioning in the same manner. For the purpose of this discussion, their syntactic and semantic properties will be examined from the perspective of Transitivity as proposed in Hopper and Thompson [1980] (HT).

According to them Transitivity is not merely a binary system of grouping clauses into Transitives and Intransitives, but a system comprising a number of parameters, "each of which suggests a scale according to which clauses can be ranked" (p. 252). The parameters are as follows:

<table>
<thead>
<tr>
<th>Yoruba</th>
<th>Nupe</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
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<tr>
<td>(7) Yoruba</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td></td>
<td></td>
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<tr>
<td>b.</td>
<td></td>
<td></td>
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<tr>
<td>c.</td>
<td></td>
<td></td>
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<tr>
<td>d.</td>
<td></td>
<td></td>
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<tr>
<td>e.</td>
<td></td>
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</table>

- **b. zèwùn** ze ewùn: turn angry
- **c. sunwùn** sun ewùn: VC anger
- **d. sùndàn** sun edàn: VC fear

- **a. pàṣẹ** pa ̀ṣẹ: utter order
- **b. bèrù** bà èrù: impinge on fear
- **c. ji'òn** jà iyòn: fight dispute
- **d. dàmù** dà àmu: VC CVC
- **e. bèrèrè** bi èrè: ask CVC
Complex Verbs in Nupe and Yoruba

HT explain that when the parameters are "taken together, they allow clauses to be characterized as MORE or LESS Transitive: the more features a clause has on the 'high' column... the more transitive it is—the closer it is to CARDINAL Transitivity" (p. 253).

An ideal Transitive clause then will have all the features on the HIGH column, while a least Transitive one will have all the features on the LOW column. The majority of clauses in any given language will fall between the two extremes. The question then arises as to how to determine the degree of Transitivity in given clauses. In order to achieve that purpose in this study, sentences will be characterized in terms of Causativity. Admittedly, causativity is an extremely complex topic, and its ramifications will not be discussed in this study. Instead, it will be shown that Nupe and Yoruba use syntactic rather than morphological mechanisms for causative expressions.

It is generally agreed that Causativity involves at least two participants (NP's) in a sentence, in which one participant, often designated the Agent, does something, intentionally or otherwise, and the other participant (the Ob-

<table>
<thead>
<tr>
<th></th>
<th>HIGH</th>
<th>LOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. PARTICIPANTS</td>
<td>2 or more participants, A and O</td>
<td>1 participant</td>
</tr>
<tr>
<td>B. KINESIS</td>
<td>action</td>
<td>non-action</td>
</tr>
<tr>
<td>C. ASPECT</td>
<td>telic</td>
<td>atelic</td>
</tr>
<tr>
<td>D. PUNCTUALITY</td>
<td>punctual</td>
<td>non-punctual</td>
</tr>
<tr>
<td>E. VOLITIONALITY</td>
<td>volitional</td>
<td>non-volitional</td>
</tr>
<tr>
<td>F. AFFIRMATION</td>
<td>affirmative</td>
<td>negative</td>
</tr>
<tr>
<td>G. MODE</td>
<td>realis</td>
<td>irrealis</td>
</tr>
<tr>
<td>H. AGENCY</td>
<td>A high in potency</td>
<td>A low in potency</td>
</tr>
<tr>
<td>I. AFFECTEDNESS OF O</td>
<td>0 totally affected</td>
<td>0 not affected</td>
</tr>
<tr>
<td>J. INDIVIDUATION OF O</td>
<td>0 highly individuated</td>
<td>non-individuated</td>
</tr>
</tbody>
</table>

**In their terminology, A and O refer to Agent and Object respectively. They explain that Actions are transferable. Aspect-wise they may be telic (completed) or atelic; they may also be punctual, i.e. "with no obvious transitional phase between inception and completing", or non-punctual.**
ject) is physically or emotionally affected by the activity of the Agent. It must, however, be emphasized that at times causative constructions are possible without Agents, in the narrow sense of the term. A causative verb then will express the activity of the instigating participant and its effect on the recipient participant. Syntactically, it will have at least one more participant than a corresponding non-causative verb.

It is important to note here that the salient features of Causativity, for example, Agency and Volitionality, are part of the defining parameters of Transitivity in (8) above. It is therefore expected that a clause which ranks high in Transitivity will also be highly causative, without implying that Transitivity and Causativity are understood to mean the same thing. We now examine various structures which will be characterized as follows:

(9) a. Non-agentive non-causative
   b. Agentive non-causative
   c. Non-agentive causative
   d. Agentive causative

Accordingly, how various sub-groups of complex verbs in Nupe and Yoruba function in (9a-d) will be examined.

As can be seen from the Parameters in (8), A, E, H, I, J relate closely to nouns; B, C, and D are closely associated with verbs; and F and G are more of a global nature. The first two sets are relevant for our consideration of complex verbs, but since the discussion will deal only with affirmative sentences, assumed to be possible in a real world, no further reference will be made to F and G.

2.1. Non-agentive non-causative constructions. The examples of (10) and (11) below illustrate this kind of construction:

(10) Nupe  Bàbá gbọká      'Baba is strong'
        Baba be-strong

(11) Yoruba Bàbá sanra      'Baba is fat'
        Baba be-fat

The sentences in (10) and (11) are non-agentive non-causative, since they contain neither Agentive nouns nor causative verbs. They also lack specifiable
objects, despite the inclusion of the CNC's. In terms of Transitivity features, they are non-action, and therefore non-transferrable. They score extremely low, perhaps the lowest possible, on the Transitivity scale. In the familiar terminology they are stative constructions. More examples of non-Agentive non-Causative verbs include Nupe lekpan 'to be thick', gôpè 'to be wide', and wûnkâ 'to be tall'; Yoruba lera 'to be strong in body' and môra 'to be light in complexion'.

Although Nupe and Yoruba do not have derivational causatives, the same effect can be produced by embedding non-causative sentences into matrix sentences containing causative verbs such as take, get, and make, resulting in biclausal causative sentences of the type (12) and (13) directly below:

(12) Nupe cinginni lâ Bâbâ gbôkâ 'pounded-yam made Baba strong'
    pounded-yam made Baba strong

(13) Yoruba iyân mú Bâbâ sanra 'pounded-yam made Baba fat'
    pounded-yam made Baba fat

Even though (12) and (13) are causative constructions, we should observe that the CAUSE element 'pounded-yam' is not a volitional Agent. It, however, has Potency.

As far as I know, there are no instances of Non-agentive non-causative complex verbs occurring in a configuration of the type [CNC-VC-(NP)].

2.2. Agentive non-causative constructions. These are sentences of the type:

(14) Nupe mi bici 'I ran'
    I ran

(15) Yoruba mo sáré 'I ran'
    I ran

The major characteristic features of an Agentive non-causative are as follows: first, the NP subject is, in general, Agentive endowed with Volitionality and Potency. Second, the verb expresses action. Third, the action is atelic and non-punctual, and fourth, there is no Object. The construction type therefore

5There are, of course, monosyllabic stative verbs in both languages, e.g. Nupe sà 'to be beautiful', ge 'to be good' and Yoruba ga 'to be tall', fè 'to be broad'.
scores high in terms of the first two sets of features mentioned above but low in the last two.

Like non-agentive non-causative sentences, agentive non-causative structures can be embedded into causative matrix clauses:

(16) Nupe Makun jin mi bici 'Makun made me run'
Makun made me run

(17) Yoruba Olu mu \{mi kə n\} saro 'Olu made me run'
Olu made me run

Since agentive non-causative express actions, naturally they often have adverbial phrases indicating the location, direction, etc. of the activities expressed by the verbs.

(18) Nupe a. u dazàn lo dzukó 'he/she walked to the market'
    he/she walked went market
b. u kön' yà yi7 'he/she sang for us'
    he/she sang gave us

(19) Yoruba a. o korin fún wa 'he/she sang for us'
    he/she sang gave us
b. o ransé sí wa 'he/she sent (a message) to us'
    he/she sent to us

One other feature of this type of construction worth noting is the fact that in certain circumstances, specifically, in some kind of focus construction and in relativization the verbal components can be separated from each other, the CNC being fronted:

(20) Nupe a. ecì ga mi bi o 'what I did was running'
    CNC it-be I ran Foc.
b. [ecì na nì bi na] màfi etsu 'the race that I ran'
    CNC ECM I ran ECM pleased chief pleased the chief
    (ECM = Embedded Clause Marker)

6 In many cases the Yoruba form kə optionally introduces embedded clauses; when it occurs before mi 'me', the variant n is often used.

7 In both languages certain verbs, e.g. go, give, are used like prepositions
(21) Yoruba

- a. *ere nì mo sá*  
  CNC Foc. I ran  
  'what I did was running'

- b. *[ere tì mo sá] dùnmó òba*  
  CNC that I ran pleased chief  
  'the race that I ran pleased the chief'

The (a) sentences of (20) and (21) are focus constructions, while those of (b) are nominalizations.⁸

Finally, verbs such as *ask* and *answer*, which fall within this subgroup, sometimes appear as discontinuous elements:

(22) Nupe

- a. *Makun gbïngàn*  
  Makun asked

- b. *Makun gbïngàn e.tsu*  
  Makun asked chief

- c. *Makun gbïn e.tsu gan*  
  Makun asked chief CNC

(23) Yoruba

- a. *olu béèrè*  
  Olu asked

- b. *olu béèrè òba*  
  Olu asked chief

- c. *olu bi òba l éèrè⁹*  
  Olu asked chief part. CNC

The (a) sentences of (22) and (23) express the fact that someone asked a question, but the locutionary target is not included. The (b) versions state that someone asked about the chief, but in the (c) constructions the chief is the locutionary target to whom the question was directed. It is a definite and hu-

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⁸In Nupe the form na...na is used to set off certain types of embedded clauses, e.g.

(i) *mi sì efin na nú na*  
  (relative clause)  
  'I bought a razor that is sharp'

(ii) *u ge na mi a sí efin na*  
  (sentential complement)  
  'it is necessary that I should buy a razor'

(iii) *efin gâ ù yì o na mi sì na*  
  (focus)  
  'it is razor that I bought'

⁹The Yoruba particle ní (underlyingly /Í/) has a variant lì, which may appear as l, depending on the phonological environment.
man noun, functioning as an Indirect Object. Meanwhile the CNC is demoted to the syntactic position after the IO. In the case of Yoruba, the particle ́f is inserted before the CNC. This is a syntactic operation similar to the well-known Dative Movement. We should notice, however, that in both languages the structures of (b) and (c) have different semantic interpretations. The demotion phenomenon will be further discussed in section 3.

2.3. **Non-agentive causative constructions.** Though few in number, non-agentive causative verbs, the type of which is exemplified by sentences (1) and (2) (repeated below for convenience), are by far the most interesting subset of complex verbs.

(1) Nupe  
- a. mi è dínýé  
  I Prog. hurry  
  'I am hurrying'
- b. eyé è dín mi  
  'I am hurrying'

(2) Yoruba  
- a. mo ū kánjú  
  I Prog. hurry  
  'I am hurrying'
- b. ojú ū kán mi  
  'I am hurrying'

For ease of reference, structures like (1a) and (2a) will be labelled A and those of (1b) and (2b) as B. More examples of such verbs are given in (24), showing their typology:¹⁰

(24)   

<table>
<thead>
<tr>
<th>A and B</th>
<th>A Only</th>
<th>B Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nupe</td>
<td>sundan 'to be afraid'</td>
<td>mání 'to be happy'</td>
</tr>
<tr>
<td></td>
<td>funí 'to be full'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>sunzunyé 'to be ashamed'</td>
<td>gansun 'to worry'</td>
</tr>
<tr>
<td></td>
<td>sáwánikó 'to be anxious'</td>
<td>dansàn 'to care'</td>
</tr>
</tbody>
</table>

¹⁰Although the Yoruba complex verb dájú 'to be sure' is non-agentive causative, it cannot be labelled as A or B since its subject is invariably a non-referent ō 'it' as in ō dájú pé... 'it is sure that...' and in Agentive Causative Constructions (see 2.4) it appears in a split form as in ō dá mi lójú pé... 'I am sure that...'
It is important to observe that structures containing these verbs relate strictly to animate nouns, most often human, and they express conditions which have arisen from the effect of activities of causative Agents or situations, though missing from the structures. Concerning their Transitivity features, they are non-action. There are no Agents, though personal pronouns occur in the subject position of the A structures. In fact, human nouns in these examples are Experimenter Nouns (EN).

One obvious peculiarity of the non-agentive causative complex verbs is the fact that some of them allow both structures A and B, which means that the syntactic positions of the EN and the CNC are interchangeable. It is thus the case that if the former is in the subject position the latter functions as the Object and vice versa, causing no difference in semantic interpretation. What is responsible for the alternation, and which of the two structures is basic synchronically? That is, given A and B, which one has been least (or has not been) disrupted by syntactic transformation?

Discussing causative constructions in English, Noriko McCawley [1976:197] observes that a non-agentive causative "involves one and the same human experiencer both in the subject and in the object of CAUSE. That is, someone's learning through his senses or perceiving something inevitably evokes in him a certain emotional reaction expressed by a variety of emotive adjectives such as happy, sad, surprised, amazed, shocked, etc." One example is It made Dale sad that Sue might marry Bill.

If this is correct, a human experiencer both as the subject and object of CAUSE is capable of having structures like A and B respectively. And precisely, this is what obtains in the case of the verbs which permit both A and B struc-
tures. In both construction A and B the human Experiencer is being affected (typically by his stomach, eye, heart, etc.). In the B type the body part is made the subject while the Experiencer is object ([CNC VC EN]). The EN is also the object in the structure of non-agentive causative sentences containing monosyllabic verbs in which nouns comparable to CNC's (but not incorporated into the verbs) function as subjects. Consider then the following:

(25) Nupe  
   a. mi è gun madan  
      I Prog. VC hunger  
      'I am hungry' (=A)  
   b. madan è gun mi  
      hunger Prog. VC me  
      'I am hungry' (=B)  

(26) Yoruba  
   a. mo ŋ pa ebi  
      I Prog. feel hunger  
      'I am hungry' (=A)  
   b. ebi ŋ pa mi  
      hunger Prog. feel me  
      'I am hungry' (=B)  

The examples of (25) and (26) illustrate non-agentive causative constructions comparable to those of (1) and (2). The difference between the two sets resides in the fact that the noun 'hunger' is not incorporated into the verb and that it alone functions as the subject, as the EN is excluded from that position. Since affected individuals are more topic-worthy than body-parts or other non-human nouns, speakers may prefer to make an affected human the subject, thus giving rise to the A configuration [EN VC-CNC] as an alternative, a process which enhances the fusion of VC-CNC into a semantic unit.

It is possible then that the B structure is the earlier form historically, and the Yoruba complex verb occurring only in this structure could be seen as "Islands" unaffected by the innovation that brought about A. Conversely, those verbs whose occurrence is restricted to A have completely stopped being used in their earlier syntactic form.

It is appealing to consider B as the basic form synchronically, but this is ruled out by the fact that complex verbs in both languages, as was pointed out in section 1, have been lexicalized as single units. Apart from that CNC's generally lack the universal subject properties such as independent existence, autonomous reference, and high referentiality like pronominalization [Keenan 1976].
2.4. Agentive causative constructions. This type of construction is arrived at through the embedding of structures considered in 2.3 in higher causative clauses, following which other processes may produce rather elaborate simple sentences. In principle then, agentive constructions are expressed in two ways, and this is the case in Yoruba, where uniclausal and biclausal causatives exist alongside each other. Nupe, on the other hand, has gone a step beyond Yoruba in the sense that only uniclausal causatives are used. Here are a few examples:

(27) Nupe
   a. *Makun lá mi dǐnyé
      Makun caused me hurry
      'Makun made me hurry' (A)
   b. *Makun lá eyé dǐn mi
   c. Makun dǐn mi yé
      Makun hurried me CNC
      'Makun made me hurry'

(28) Yoruba
   a. Olu mú
      Olu caused me angry
      \{kfr n\}_{mi} bǐnú
      'Olu made me angry' (A)
   b. Olu mú (kfr)nú bǐ mi
      'Olu made me angry' (B)
   c. Olu bǐ mi ní nú
      'Olu made me angry'

The Nupe non-sentences of (27a,b) are biclausal structures, which simply show that agentive sentences are not expressed in that form, irrespective of whether the embedded clause is structurally A (27a) or B (27b). Instead, the uniclausal of the type (27c) is the mode for such expressions. But the Yoruba sentences of (28) show three ways of expressing Agentive causative, two of which are biclausal, i.e. (28a,b), where the embedded clauses have the structures A and B respectively, while (28c) is a uniclausal and, in fact, the counterpart of Nupe (27c). All three structures have the same semantic interpretation. Although all of the sentences of (28) can be used interchangeably, (28c) has a non-causative additional meaning, which is something like 'the mere sight of Olu annoys me'.

The syntactic rule involved in the derivation of Yoruba (28) is the familiar Causative Clause Union, attested in many languages, for example, French [Herschensonhn 1981] and Georgian [Cole et al 1980]. This is the rule which maps bi-

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11The relationship between Yoruba biclausal and uniclausal Causatives with complex verbs is irregular, both structurally and semantically (see (32) and (33) below).
clausal constructions as schematized in (29a) onto (29b) below.

(29)  a. \( NP_1 \) CAUSE \( S[NP_2 \ VP]_S \)  
      b. \( S[NP_1 \ cause-verb \ NP_2 \ NP_3 ]_S \)  

Details aside, rule (29a) will convert the following Yoruba (30) to (31).

(30)

\[ \begin{array}{c}
\text{S} \\
\text{NP} \\
\text{V} \\
\text{NP} \\
\text{N} \\
\text{Olu} \\
\text{caused} \\
\text{me} \\
\text{angry} \\
\text{CNC} \\
\end{array} \]

'Olu made me angry'

(31)

\[ \begin{array}{c}
\text{S} \\
\text{NP} \\
\text{V} \\
\text{NP} \\
\text{N} \\
\text{Olu} \\
\text{b'f} \\
\text{mi} \\
\text{n'f} \\
\text{nú} \\
\end{array} \]

'Olu made me angry'

The important syntactic processes include Predicate Raising, which attaches the embedded verb (VC) to the cause verb (leading to the fusion of the two), and the eventual disappearance of the cause verb of the matrix clause with subsequent Pruning. Finally, the particle \( n'f \) is inserted before the CNC. The emerging structure (31) is a compressed form of (30), though an elaborate simplex sentence in itself, as it contains two nouns (the CNC inclusive) and a particle in the predicate phrase.

The productivity of the Causative Clause Union rule in Yoruba is quite limited, and the trend is clearly that the mode represented by (31) is emerging as
a terse, syntacticized form. This is easily supported by the fact that sometimes there are structures like (31) without corresponding biclausal sentences of the type (30). Thus example (32b) below is unlikely to be derived from the ungrammatical (32a):

(32) a. *ọrọ náà mú mi yanu 'the matter surprised me'
    matter the caused me surprised

b. ọrọ náà yà mú l ènu 'the matter surprised me'

In (32) the syntacticized form (32b) has become rather rigid, and there is no oscillation between biclausal and uniclausal Causatives in such cases.

Another piece of support for the position that Causative Clause Union has a limited productivity in Yoruba comes from the fact that occasionally certain uniclausal Causatives superficially appear to be derivable from corresponding biclausal Causatives, but in reality this is not the case. Consider, then, the following:

(33) Yoruba a. Ayọ mú mi rǎntʃ i lè 'Ayọ made me remember home'
    Ayọ caused me remember home

b. Ayọ rǎn mi ʃ i lè 'Ayọ reminded me of home'
    Ayọ reminded me part. CNC home

Clearly, the meaning of (33b) is sufficiently different from that of (33a) as to cast doubt on their derivational relationship.

We have seen that the operation of Causative Clause Union is weak in Yoruba and non-existent in Nupe. The situation is therefore that in Yoruba there is considerable amount of oscillation between the use of biclausal and uniclausal Causatives. But the oscillation is non-existent in Nupe, because the uniclausal construction has been firmly established as a syntactic mode.

This is significant, as it goes beyond a mere formulation of syntactic rules present in one language but absent in another, and illustrates a major diachronic process as proposed in Givón [1979:208], namely that "pragmatic discourse structures develop—over time—into tight, grammaticalized syntactic structures." Further, Givón isolates two "extreme poles of communicative

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12 Diachronic processes, of course, occur in other aspects of language, in-
mode: the pragmatic mode and the syntactic mode", under which loose conjunction and tight subordination fall respectively (p. 223). Since our main concern is with a movement from tight subordination to complex uniclausal structures, we would like to propose that in fact tight subordination is an intermediary stage between the poles.

(34) Pragmatic Mode Intermediary Mode Syntactic Mode

| Loose conjunction | Tight subordination | Compressed uniclause |
---|---|---|

In this regard, the biclausal causative construction, which constitutes input to Causative Clause Union, is a relatively loose structure, in the sense that it comprises two clauses put together by embedding rules, where the matrix clause explicitly expresses what the causing Agent or situation is and the embedded clause states the effect. It could then be said that it is cast in a near-pragmatic mode, because it is somewhat iconic by nature. Given time, it would develop into a tighter syntactic mode, and this is precisely what we have. In Nupe the process has been completed in this particular instance, and thus causative expressions involving complex verbs—the output of Causative Clause Union—are cast in uniclausal constructions containing two nominals in the predicate phrase. In Yoruba, however, the process is an on-going phenomenon.

We should note in passing that it seems also that in Yoruba the movement in the direction of Morphology has already been set in motion. Not only do we have a process of rigid syntacticization in Causativity, but the rigidity is being extended to the lexicon, such that some Causative verbs include in their citation forms the particle ń́ as in:

(35) Yoruba  
| a. rànì́wò (< ràn X ì́ òwò) | 'to help' |
| b. yàlènu (< yà X ì́ ènu) | 'to be surprised' |

cluding morphology and morphophonemics. Givón schematically represents the "cyclic waves" as

Discourse → Syntax → Morphology → Morphophonemic → Zero (p. 209).
3. The Syntax of the Uniclausal Causative

In this section we discuss the syntax of uniclausal causatives, particularly in terms of their word order, Transitivity and in terms of their relation to other syntactic processes.

3.1. Uniclausal Causatives and Transitivity. The structure of the uniclausal causative sentence discussed in (2.4) above, given in (36a), as opposed to the non-occurring (36b), shows what the "real" Transitive Object is:

(36) a. Agent - VC - EN - (Particle) - CNC
    b. *Agent - VC - CNC - EN

In concrete examples we have:

(37) Nupe  a. Bàbá è díñ mi yé  'Baba is making me hurry'
baba Prog. hurry me CNC
    b. *Bàbá è dínyé mi

(38) Yoruba a. Bàbá ń kán mi ọjú  'Baba is making me hurry'
baba Prog. hurry me Par. CNC
    b. *Bàbá ń känjú mi

In (37a) and (38a) the word order of the nouns in the predicate phrase is EN-CNC, which means that the CNC has been separated from its VC and is now the rightmost constituent in the sentence. In a sense this is a kind of "demotion". The EN on the other hand is "promoted" to the position immediately after the verb, i.e. the VC.

The syntactic position of the EN is indicative of the fact that it has more Transitivity features than the CNC. This structural position has to be the case, since the only strategy for signalling Transitivity in both languages is syntax: the closer an object is to the verb the more Transitive it is.

The above observation that the EN has more Transitivity features than the CNC is in agreement with HT's argument that "Indirect Objects in fact should be Transitive Objects" (p. 259). The basis of their argument is that Indirect Objects tend to be definite and human, quite often reflecting a high degree of Transitivity. Evidence in support of this is found in many Bantu languages, and Sesotho (from Morolong and Hyman [1977:203]) is cited as an example: "When
two nouns follow the verb one of which is human, the other of which is non-human, the human noun MUST, independent of its semantic case, follow the verb."

We may then characterize the syntactic arrangement of nouns in the predicate phrase of Nupe and Yoruba uniclausal causatives in terms of Transitivity Hierarchy (39) below:

(39) Transitivity Hierarchy: EN > CNC

The schema in (39) stipulates that the EN is higher than the CNC on the Transitivity scale and, accordingly, it follows the verb, having displaced the latter. It is worth noting that the idea that the EN is higher on the Transitivity scale than the CNC makes sense only when the situation is considered in the light of Affectedness, which should be interpreted not only in the physical sense but also in emotional terms.

The effect of the conformity of the Causative structure to (39) is the placing of the CNC in a "demoted" position. This means a disruption of the expected word order from VC-CNC-EN to VC-EN-CNC has taken place. As pointed out in Givón [1979:146], when a disruption of this nature has occurred, the problem of recoverability of the case function of the displaced nouns arises. In such instances languages have an option of resorting to the use of certain strategies for recovering the lost cases. Precisely, Yoruba, but not Nupe, uses the particle ni before the CNC to achieve that purpose. In fact the phenomenon of placing human nouns right after the verbs and the concomitant demotion of the CNC is related to wider processes in these languages, which we examine directly below.

3.2. Transitivity Hierarchy in a wider context. In the study of the ni-OBJECT (or Inverted Object) construction in Yoruba, Awobuluyi [1969] and Madugu [1982] have shown that certain kinds of Yoruba constructions, including Dative Objects, Possessives and Causatives, etc. alternate with ni-OBJECT structures. A few examples are as follows:

(40) a. Bàbabá fì èwù fún òba DO - IO
   Baba took gown gave chief
   'Baba gave the gown to the chief'
b. Bàbà fún ọba ní èwù

Baba gave chief part. gown

'Baba gave the chief a gown'

(41) a. olè jí èwù ọba

thief stole gown chief

'a thief stole the gown of the chief'

b. olè jí ọba ní èwù

thief stole chief part. gown

'a thief stole the chief's gown'

(42) a. oúnjẹ nàà mú ìnú run ọmọ

food the caused stomach constipate child

'the food constipated the child'

b. oúnjẹ nàà run ọmọ ní ìnú

food the constipated child part. stomach

'the food constipated the child'

(43) a. olè fí ìbẹ́ gún ọba

thief used knife stab chief

'a thief used a knife to stab the chief'

b. olè gún ọba ní ìbẹ́

thief stabbed chief part. knife

'a thief stabbed the chief with a knife'

Nupe also has structures which parallel those of (40) through (43), but without any particle:

(44) a. Bàbà lá èwò yà etsu

Baba took gown gave chief

'Baba gave the gown to the chief'

b. Bàbà yà etsu èwò

Baba gave chief gown

'Baba gave the chief a gown'

(45) a. yìgbècì yí èwò (yán) etsu

thief stole gown (of) chief

'a thief stole the gown of the chief'
b. yígbèci yì etsu èwò
thief stole chief gown
'a thief stole the chief's gown'

(46) a. eyangíci lá gbàko tán egi
food caused stomach pain child
'the food constipated the child'

b. eyangíci tán egi gbàko
food pained child stomach
'the food constipated the child'

(47) a. yígbèci lá èbi tun etsu
thief used knife stabbed chief
'a thief used a knife to stab the chief'

b. yígbèci tun etsu èbi
thief stabbed chief knife
'a thief stabbed the chief with a knife'

Viewed from the perspective of discourse pragmatics, Madugu [1982] groups nouns, mostly human, functioning in various environments as Indirect Object, Experiencer, Possessive, etc. as Goal Objects and accounts for the ní-OBJECT constructions in terms of information focus and relative topicality of NP's in the sentence, concluding that the Goal Object is more topical than the Direct Object (GO > DO); hence the Object Shift rule,

\[(48) \text{DO} \rightarrow \text{GO} \rightarrow \text{DO}\]

obtains in the sentences of the type (40) through (43). The Nupe constructions (44-47) above can be equally accounted for in this manner.

In another study, Madugu [1981], mainly concerned with Transitive Complex Verbs in Nupe like dagwa 'to push' as in

(49) a. Musa da mi gwa 'Musa pushed me'
Musa pushed me CNC

b. Musa da kpàko gwa 'Musa pushed the door'
door

the CNC is characterized as Fused Instrumental (FI), which undergoes the process of Demotion. Nouns in the predicate phrases in such constructions are therefore
accounted for in terms of the Topicality Hierarchy (50):

(50) Su > DO > FI

The emerging picture is extremely remarkable. First, we should note that the (a) sentences of (40-47), like the Yoruba biclausal causative constructions, are pragmatic structures. In fact, with the exception of the possessive sentences (41a) and (45a), they are serial verbal constructions, which are highly iconic in the sense that the order of verbs in a sentence corresponds to the order of the events they describe, e.g. X took Y gave Z. But their (b) counterparts, like the uniclausal causatives, are cast in a tight syntactic mode, where the number of the verbs is reduced, and the predicate phrase now contains two nouns. The syntactic processes that effect the Inverted Object Constructions must be similar to Causative Clause Union, at least in kind, having the force of compressing two clauses into one. These processes, we must note, are still operative in Nupe, including Agentive Causatives, e.g. (46) above, which do not involve complex verbs.

Second, just as Causative Clause Union is only weakly operative in Yoruba, so must be the rules of Inverted Object Constructions in both languages, for there are occasions where compressed structures exist without corresponding loose counterparts:

(51) Nupe u gí mi gbàtà 'he owes me a debt'
    he owes me debt
(52) Yoruba ó jẹ mí ní gbèsè 'he owes me a debt'
    he owes me part. debt

It is obvious, then, that the trend of moving from loose pragmatic structures to tight syntacticized ones is a widespread phenomenon in the two languages.

As a matter of fact, the alternation between the pragmatic and compressed sentences involving take and cause has been attested in Igbo as well. Givón [1975:95] cites the following examples (taken from Williamson [1965]):

(53) a. erí, opúru-mọ ǎki tọbọ̀ pírì-mi 'he gave the crayfish to he crayfish-the take boy give-Asp the boy'

b. erí, opúru-mọ-ní tọbọ̀ pírì-mi 'he gave the crayfish to he crayfish-the boy give-Asp. the boy
(54) a. eri`, uru ak[\-n] u-mi\$-n1 uru bou-mi
he wine take him Cause wine drink Asp.
'he made him drunk with wine' or 'he made him drink wine'

b. eri`, uru ak[\-n] u-bou-m\$-mi\textsuperscript{13}
he wine take him-drink-Cause-Asp.
'he made him drink wine'

Very likely, then, this kind of oscillation is common among the serializing languages of West Africa.

Third, in all instances of compressed sentences—Inverted Object Construction, uniclausal causatives, and Nupe Transitive Clauses involving complex verbs—it is the Goal Object that functions as the Transitive Object and any other noun follows. Clearly, the processes are similar. What is needed now is a generalization which will account for them. This can be done in terms of the familiar Topicality Hierarchy.

(55) Su > DO > IO > OBL > Others\textsuperscript{14}

To arrive at the TH (55) Goal Objects are optionally promoted to the position of the DO, while the original DO is demoted. Similarly, in Causative constructions as well as some Transitive structures in Nupe, IO's are placed right after the verbs and the CNC's are demoted.

4. Summary and Conclusion

Complex verbs in Nupe and Yoruba have been investigated and found to be heterogeneous. Those which occur in non-agentive non-causative constructions

\textsuperscript{13}Givón observes that in (54b) the lexical 'make/cause' is deleted, while the verb bou 'drink' acquires a causative suffix ( -m\$ ); but in some cases 'make' and -m\$ coexist, as in

(i) eri`, áry-bi mi\$ bilem\$-mi
he canoe-the make sink-Asp

(ii) eri`, áry-bi bilem\$-mi
he canoe-the sink-Asp

\textsuperscript{14}Cf. the generalization expressed by Keenan and Comrie [1977] concerning the accessibility to relative clause formation of NP's, given as:

SU > DO > IO > OBL > GEN > OCOMP
as well as those which occur in agentive non-causative constructions fully allow sentence embedding, resulting in biclausal causative structures. In the case of non-agentive causatives, however, the picture is different. In Yoruba, occasionally, but not always, these verbs can be optionally embedded into causative matrix sentences, such that they constitute input to Causative Clause Union, which maps them onto uniclausal agentive causative constructions. The result is that the latter are highly syntacticized and alternate with biclausal agentive causative sentences. In Nupe, due to the fact that Causative Union is no longer operative, only uniclausal causative constructions are found.

The importance of Causative Clause Union is highlighted. It clearly demonstrates that, as a syntactic process, it is motivated by diachronic processes, and in the instance of Nupe, where a particular target has been hit, it is dropped from the grammar. We have noted that in Yoruba the trend is in that direction as well.

It has also been shown that the emerging, compact, uniclausal causative constructions, where Experiencer nouns are the real Transitive Objects, bear a close relationship to Inverted Object Constructions in both languages, all of which can be accounted for in terms of the generalization known as Topicality Hierarchy.

We would like to stress that in synchronic grammars certain formal rules are functionally motivated in the sense that they are a reflection of diachronic processes in languages, where there are movements from one mode of expression to another. We conclude therefore that syntactic rules in synchronic grammars are better understood with reference to diachronic processes. The study above is an attempt in that direction.
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Ltd.
FACTIVITY, PRESUPPOSITION AND THE RELATIVISED PREDICATE IN KRIO*

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After a brief review of the literature on factivity and presupposition, the paper examines a case of asymmetry in the interpretation of a construction known as the relativised predicate (RP). Whenever the main verb of the sentence with RP is mék (= 'make'), the sentence may be interpreted in two ways, including one with "the fact that". However, if the matrix verb is other than mék, there is only one interpretation possible—without "the fact that". It is concluded that the dual interpretation is possible because the relative particle (which is also a complementizer linked to factive verbs) associates with the factive mék.

1. Factivity and Presupposition

1.1. Kiparsky & Kiparsky [1968]. In their classic paper, Kiparsky and Kiparsky [1968] divide predicates into two categories, factive and non-factive. The

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*I wish to thank an anonymous reviewer for Studies in African Linguistics for comments on an earlier version of this paper. Some of the issues raised here are also discussed in Nylander [1983] and Williams [1976, 1977]. Most of the data in the paper are from Krio, an "English-based" creole language spoken in Sierra Leone and elsewhere in West Africa. (The variety presented here is from a Sierra Leone dialect.) On pidgins and creoles in Africa, see Berry [1971]. On Krio more specifically, see Jones [1971]. One feature of Krio is that it is a tone language—see Berry [1961], Coker [1977], Coomber [1969], Fyle and Jones [1980], Johnson [1974], and Nylander [1979, 1983]. Tones are noted as follows: ' (low tone), ' (high tone). The transcription used is that of the International African Institute (IAI). The following abbreviations will be used: NOM = nominalising particle; PERF = perfective aspect; PROS = prospective mood; REL = relativising particle.

I Three different articles will be discussed in this section. Since it would take us too far afield to examine all the points made in each article, I have limited myself to what I consider most relevant for the discussion at hand.
Kiparskys point out a number of systematic differences between the two types of predicates. One of these differences is that only factive predicates are compatible with "the fact that". Thus, while the latter can combine with the factive predicate "be significant" (1a), it cannot associate itself with the non-factive predicate "be likely" (1b).

(1) a. The fact that he left is significant.
   b. *The fact that he left is likely.

The Kiparskys also stress the relationship between factivity and presupposition. Factive sentences presuppose the truth of the embedded clause, whilst non-factive sentences do not. Thus, the factive (2a) presupposes (2b), but the non-factive (3a) does not presuppose (3b).

(2) a. I regret that it is raining
   > b. It is raining

(3) a. I suppose that it is raining
   *⇒ b. It is raining

1.2. Kartunnen [1971]. Since the Kiparsky & Kiparsky paper, two other extremely important papers on factivity have been published. The common denominator of both papers is that they show that factivity is not as straightforward an issue as is usually assumed. The first of these papers is Kartunnen [1971]. Kartunnen shows, firstly, that presupposition cannot always be separated from the main sentence. For example, (4a) and (5a) can be analysed as (4b) and (5b), respectively:

(4) a. Some senators regret that they voted for the SST
   b. For some senators x, x regrets that x voted for the SST

(5) a. Some senators regret that some senators voted for the SST
   b. Assertion: "For some senators y, y regrets that for some senators x,

Unless otherwise stated, the examples in this section are taken from the articles referred to.

2The symbol > means "presupposes the truth of", ⇒ means "does not presuppose the truth of", ⊃ means "implies", and ⊄ means "does not imply".
x voted for the SST."
Presupposition: "For some senators x, x voted for the SST."

However, (4a) and (5a) do NOT have the same presupposition, as can be seen by comparing (4a') and (5a'):

(4a') Some senators, perhaps even Yarborough, regret that they voted for the SST.

(5a') Some senators, perhaps even Yarborough, regret that some senators voted for the SST.

Kartunnen also shows that the mood of the main sentence is important. Consider, firstly, the sentences in (6). Both sentences presuppose that Harry's wife is not a virgin. In short, in sentences like (6), there is no difference in presupposition between that-complements and poss-ing structures, in the indicative mood:

(6) a. That his bride is not a virgin bothers Harry.
    b. His bride's not being a virgin bothers Harry.

Consider, now, both sentences in the subjunctive mood. Sentence (7a) presupposes that Harry's wife is not a virgin, as confirmed by the * in the section in brackets, but (7b) carries no such presupposition. In fact, (7b) does not even presuppose that Harry is married:

(7) a. That his wife is not a virgin would bother Harry if he knew about it. (*Luckily, she is a virgin.)
    b. His bride's not being a virgin would bother Harry if he knew about it. (Luckily, she is a virgin.)

1.3. Givón [1973]. Givón [1973] makes a distinction between cognition verbs (C-verbs) and modality verbs (M-verbs). He points out that it is incorrect to

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3 The term subjunctive mood is Kartunnen's. It might be better to talk of conditional tense/mood rather than subjunctive mood in reference to the sentences in (7).

4 Kartunnen also makes a distinction between true factive verbs and semi-factive verbs. True factive verbs include regret, forget, and resent. Realise is a semi-factive verb, since it loses its factivity in conditionals. Verbs like discover, find out, and realise are also semi-factive, since they permit both factive and non-factive interpretation in questions.
assume that presupposition is linked to C-verbs only and implication to M-verbs only. Givón shows that C-verbs are not, in fact, a uniform group of verbs. Three types of C-verbs can be distinguished: factive (e.g. regret), negative-factive (e.g. pretend) and non-factive (e.g. decide). Factive verbs presuppose the truth of the embedded clause, as shown in (8). A negative-factive verb presupposes the falsity of the complement clause, as in (9). Non-factive verbs do not presuppose the truth of the embedded clause, as in (10).

(8)  a. I regret that she was hurt
     b. She was hurt
(9)  a. She pretended that she was sick
     b. She was not sick
(10) a. She decided to go
     *b. She went

Givón also divides M-verbs into three classes: implicative (e.g. manage), negative-implicative (e.g. forget), and non-implicative (e.g. want). Implicative verbs imply the truth of the complement clause, as in (11). Negative-implicative verbs imply the falsity of the complement clause, as in (12). Non-implicative verbs imply neither the truth nor the falsity of their complement clauses, as in (13) and (14).^5

(11) a. John managed to kiss Mary
     b. John kissed Mary
(12) a. John forgot to wash the dishes
     b. John did not wash the dishes
(13) a. John wanted to kiss Mary
     *b. John kissed Mary

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^5Givón also examines presupposition and implication in relation to what he calls the "time-axis phenomenon". An examination of these facts is unwarranted for the purposes of this paper. Givón continues his 1973 work in a later [1980] article.
The Relativised Predicate in Krio

(14) a. John didn't want to kiss Mary
 b. John didn't kiss Mary

2. Factivity and the Relativised Predicate

In Krio, the form we acts as a relative (REL) particle:

(15) a. dl mán we bìn k'àm nà mì pàdì
de REL PAST come be my friend
the man who came is my friend'
b. dl bûk we  l bìn báy bìn dìyà
de REL he PAST buy PAST be dear
the book that he bought was dear'

The particle we also acts as a relative particle in a construction known as
the relativised predicate (RP). The particularity of RP is that the relativised
element is a copy of the main verb of the relative clause.6

(16) dl álà we  l bìn álà bìn wèk  5lmán
de REL he PAST shout PAST awake everyone
his shouting (shouts) awoke everyone'

One particularity of RP in Krio is the following. Whenever the matrix verb
of the sentence is mék 'make' as in (17a) and (17b), there are two possible
ways of interpreting the sentence, one with and the other without "the fact
that":

6RP is attested in at least two other languages, Haitian Creole (HC) and
Yoruba. On RP in HC, see Dreyfuss [1977], Lefebvre [1982], Piou [1982b], and
Sylvain [1938]. Example (i) below is from HC [Sylvain 1938]. On RP in Yoruba,
parative analysis of RP in Krio and Yoruba. Example (ii) below is from Yoruba
[Bamgbose 1975].

(i) pu mize  2à l-te mize li te-dwe pote lavàlè kày-la
for dawdle kind she-PAST dawdle she PAST-should bring value house-the
'with all her dawdling, she should have brought enough to fill the
house'

(ii) rìfrà  tf mo ra lwè dára
NOM-buy REL I buy book be-good
'the fact that I bought a book is good'
(17) a. "dl álà wé l bín álà bín mék ̣ḷmán véks
the shout REL he PAST shout PAST make everyone be angry
(i) 'his shouting (shouts) angered everyone'
(ii) 'the fact that he shouted angered everyone'

b. "dl tíf wé John bín tíf dl ḳ̄p̣̄ò bín mék à ṇ̃̄m
the steal REL John PAST steal the money PAST make I be ashamed
(i) 'John's stealing the money made me ashamed'
(ii) 'the fact that John stole the money made me ashamed'

However, whenever the matrix verb is other than mék , as in (16) (repeated here as (18a)) and (18b), there is only one possible interpretation, without "the fact that":

(18) a. "dl álà wé l bín álà bín wék ̣ḷmán
the shout REL he PAST shout PAST awake everyone
(i) 'his shouting (shouts) awoke everyone'
(ii) *'the fact that he shouted awoke everyone'

b. "dl kṝy wé ḍ̣n bín kṝy bín fòs èm fò ḡ̣
the cry REL they PAST cry PAST force him to go
(i) 'their crying forced him to leave'
(ii) *'the fact that they cried forced him to leave'

Let us now try to account for this asymmetry in interpretation.

3. Complementation in Krio

3.1. Complementizer selection. One particularity of Krio is that the choice of complementizer depends on the semantic value of the matrix verb. There are three that-complementizers in Krio: se , wé and mék . The complementizer

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7For further work on Krio complementation, see Givón [1980], Larimore [1976], Nylander [1981, 1982a, 1982b, 1983], and Williams [1976].

8There is actually a fourth that-complementizer, lé , which is found in the same contexts as mék . Givón [1980] establishes a hierarchical difference between mék and lé . In my dialect of Krio, however, the two have the same status (see Nylander [1981]). Three of the four that-complementizers in Krio are also verbs. These are sé 'say'/ 'that', mék 'make'/ 'that', and lé 'let', 'allow'/ 'that'. See Nylander [1981, 1983]. On the relationship between verbs and that-complementizers, see Lord [1976].
sé is used with three groups of verbs: utterance verbs, e.g. álà 'shout'; cognition verbs, e.g. mèmbà 'think'; and sensory verbs, e.g. yèrl 'hear'. The use of sé is illustrated in (19):

(19) a. ì go sé tàyà 'he will shout that he is tired'
    he PROS shout that he be tired
b. à bìn mèmbà sé ùnà sìk 'I thought that you were sick'
    I PAST think that you be sick
c. dèn bìn yèrl sé ùnà dòn kàm 'they heard that you had come'
    they PAST hear that you PERF come

The complementizer wé is used with factive verbs, e.g. dà mú 'be surprised', glàdła 'be happy', and vèks 'be angry'. The use of wé is illustrated in the following examples:

(20) a. ì bìn dà mú wé wìn 'he was surprised that I won'
    he PAST be surprised that I win
b. à glàdła wé wì bìn kàm 'I am happy that he has come'
    I be happy that he PERF come
c. dèn bìn vèks wé wì bìn tòk 'they were angry that we spoke'
    they PAST be angry that we PAST talk

The third complementizer, mèk, is more difficult to classify. It can be associated with volition (21a) and intention (21b). However, it can also be associated with completed actions (21c).

(21) a. ì bìn wàn mèk dòn kàm 'I wanted them to come'
    I PAST want that they come
    (lit: 'I wanted that they come')
b. ì bìn sìn mèk à dàn s 'he sang so that I could dance'
    he PAST sing that I dance
c. ì bìn fòs àm mèk ì gò 'I forced him to go'
    I PAST force him that he go

3.2. Establishing a hierarchy of complementizers. The complementizers in the preceding section can be classified in relation to presupposition. Complement clauses introduced by sé never presuppose the truth of the embedded clause. For example, (22a) (= (19b)) does not presuppose (22b). Complement clauses introduced by wé always presuppose the truth of the embedded clause. For example, (23a) (= (20b)) presupposes (23b). The case of mèk is less straightfor-
ward. It sometimes presupposes the truth of the embedded clause, e.g. (24a) (= (21c)) presupposes (24b). However, (25a) (=21a)) does not presuppose (25b).

(22) a. à bìn memba só ùnà sìk
    I PAST think that you be sick
    'I thought that you were sick'
  > b. ùnà bìn sìk
    you PAST be sick
    'you were sick'

(23) a. à glàdù wé 'd dòn kàm
    I be happy that he PERF come
    'I am happy that he has come'
  > b. 'd dòn kàm
    he PERF come
    'he has come'

(24) a. à bìn fós ìm mék 'gó
    I PAST force him that he go
    'I forced him to go'
  > b. 'gó
    he PAST go
    'he went'

(25) a. à bìn wàn mék dèn kàm
    I PAST want that they come
    'I wanted them to come'
  > b. dèn bìn kàm
    they PAST come
    'they came'

On the basis of the above examples, we can establish a hierarchy of complementizer "strength". The top of the hierarchy will be occupied by wé, which always presupposes the truth of the embedded clause, and the bottom by só, which never presupposes the truth of the embedded clause. In the middle will be mék, which sometimes presupposes the truth of the embedded clause. The hierarchy is given in (26), where < means "is less strong than":

(26) só < mék < wé

4. Complementizers and the Relativised Predicate

The observant reader will already have noticed something, namely that wé is at once a relative particle and a complementizer. The obvious question to ask, then, is whether só and mék can also function as relative particles. The answer is negative. Thus wé in (27) (= (15a)) and (28) (= (17a)) cannot

9Giøn [1980:341] also concludes that mék is stronger than só (there is no reference to wé in Giøn's article).
be replaced by sé or mék:

(27) dì mán wé/*sé/*mék bìn kám nà mì pàdfì
    the man REL PAST come be my friend
    'the man who came is my friend'

(28) dì ali wé/*sé/*mék l bìn ali bìn mék ñimàn vêks
    the shout REL he PAST shout PAST make everyone be angry
   (i) 'his shouting (shouts) angered everyone'
   (ii) 'the fact that he shouted angered everyone'

The fact that sé is unacceptable in (27) and (28) raises other problems. In a number of languages, e.g. English (29), French (30) and Spanish (31), the same form is used for relative clauses and for introducing the complements of cognition-utterance verbs:

(29) a. The man that came is my friend
     b. I know that he came

(30) a. l'homme qu'elle a vu est mon ami 'the man that she saw is my friend'
     b. je sais que tu es venu 'I know that you came'

(31) a. el hombre que viene 'the man that is coming'
     b. se que esta casada 'I know that she is married'

The fact that Krio does not allow the complementizer for cognition-utterance verbs to act as a relative particle, unlike the above languages, indicates that in an identical syntactic environment, the "more factive" wé was extended to relative clauses rather than the syntactically more likely sé. Put another way, there seems to have been a fight (for the post of relative particle) between the syntactically more likely sé and the semantico-pragmatically more likely wé, with wé winning the fight.

5. **The Riddle Solved**

Let us now return to the central theme of the paper, namely, accounting for the asymmetry in interpretation between sentences like (32) (= (17a)) and (33) (= (18a)).

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10This also applies to Italian che [Cinque 1981] and Hebrew še .
Recall that \( \text{wē} \), as a complementizer, only associates with factive verbs. In (32) and (17b), \( \text{wē} \) associates with \( \text{mēk} \), which can be regarded as the factive verb par excellence. The verb \( \text{make} \) shares the semantics of (factive) predicates like \( \text{regret} \), \( \text{be happy} \) and \( \text{be sad} \), in that 'X was sad that [p]' is translatable as ' [p] made X sad' or ' [p] caused X to be sad'. Under this analysis, the absence of a second interpretation for sentences like (33) and (18b) is simply due to the fact that there is no factive verb for \( \text{wē} \) to associate with in the sentences.

6. Further Remarks on the Relativised and Cleft Predicates

6.1. The status of the relativised element in RP. Consider (34a), to which (34b) (= (17b)) is related:

(34) a. \( \text{John bīn tīf dī kōpō} \)
\( \text{John PAST steal the money} \)
'John stole the money'

b. \( \text{dī tīf wē John bīn tīf dī kōpō bīn mēk ā żēm} \)
\( \text{the steal REL John PAST steal the money PAST make I be ashamed} \)
(i) 'John's stealing the money made me ashamed'
(ii) 'the fact that John stole the money made me ashamed'

What is the exact status of the relativised element in (34b)? The answer lies in the sentences in (35):

(35) a. \( \ast \text{dī bīn tīf wē John bīn tīf dī kōpō bīn mēk ā žēm} \)

b. \( \ast \text{dī tīf dī kōpō wē John bīn tīf dī kōpō bīn mēk ā żēm} \)

Examples (35a) and (35b) show that the relativised element is not a verb, since
it is compatible neither with an auxiliary marker (35a) nor with a direct object (35b). In short, the relativised element is a deverbalised form. It can also be regarded as a nominalised form, since the relativised element in (34b) is preceded by the definite article, which can only associate with nominal forms. In short, RP involves two processes, deverbalisation and nominalisation.

6.2. The cleft predicate. Alongside ordinary cleft sentences, e.g. (36a), there is a construction in Krio known as the cleft predicate (CP), illustrated in (36b).11

(36) a. nà búk ñ bìn báy 'what he bought was a book'12
   it is book he PAST buy
   (lit: 'it is a book that he bought')

   b. nà báy ñ bìn báy dì búk 'he actually bought the book'13
   it is buy he PAST buy the book
   (lit: 'it is buying that he bought the book')

A comparison of (34b) and (36b) reveals one basic difference between RP and CP. Whilst the relativised element is a copy of the main verb of the relative clause in RP, the cleft element in CP is a copy of the matrix verb of the sentence. The status of the cleft element in CP must now be examined. Consider (37a) and (37b), alongside (36b).

(37) a. *nà bìn báy ñ bìn báy dì búk

   b. *nà báy dì búk ñ bìn báy dì búk

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11 For studies on CP, see Bynoe-Andriolo and Yillah [1975], Lefebvre [1982], Nylander [1983], Piou [1982a], and Williams [1976, 1977].

12 An anonymous reviewer for Studies in African Linguistics has questioned my translation of (36a) and claimed that the literal translation is fine. According to the reviewer, the pseudocleft translation corresponds to the following Krio sentence:

   (i) dì tìn wé John bìn báy nà bük
   the thing REL John PAST buy be book

(i) is NOT a native Krio sentence. As far as I can see, only people belonging to one of two groups would utter such a sentence: (a) native speakers of English who have learned Krio; (b) Sierra Leoneans whose mother tongue is other than Krio (e.g. Mende, Susu, Temne) and who know Krio and English.

13 The implication is that he did not steal it, borrow it, etc.
The above sentences show that the cleft element in CP is a deverbalised form, since it is compatible neither with an auxiliary (37a) nor with a direct object (37b). The cleft element can also be considered to be a nominalised form, since it is preceded by the clefting particle na 'it is'. As shown in (38), na can associate with a noun (38a), but not with a verb (38b). CP, like RP, therefore involves two processes, deverbalisation and nominalisation.

(38) a. na ṃbuk
   it is book
   'it is a book'

b. *na ṅs
   it is lift up
   'it is lift up'
REFERENCES


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