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REANALYSE DES TONS DU BAMBARA:
DES TONS DU NOM A L'ORGANISATION GENERALE DU
SYSTEME

Annie Riallnd Mamadou Badjimé
Paris Université Catholique
de Louvain

A partir de l'étude des noms, il est apparu progressivement (1) que le bambara,
comme le mende, possédait des schémes tonaux de mot; (2) qu'à ces schémes
s'ajoutait un ton haut flottant, que nous avons appelé "ton haut de liaison"; (3)
que l'association des tons pouvait être posée en bambara comme fondamentale-
ment postlexicale. Considérant ensuite d'autres constituants et le comportement
du "ton haut de liaison" à diverses frontières, nous avons précisé le rôle de ce
ton haut qui participe de la nature de l'accent. Cet article présente donc une
conception nouvelle de l'organisation d'ensemble du système tonal bambara.

0. Introduction

Cet article\(^1\) porte essentiellement sur l'analyse des noms, point de départ pour
comprendre l'organisation tonale du bambara dans son ensemble. Nous décom-
poserons progressivement les tons en présence dans les noms monosyllabiques, di-
syllabiques, trisyllabiques et quadrisyllabiques et préciserons la nature et le rôle de
chacun d'eux.

On se rendra compte que le bambara comme le mende a des tons ou des schèmes
tonals lexicaux et on comprendra mieux la valeur d'un certain ton haut
rapprochable d'un accent. Etudiant l'association des tons aux syllabes, on dégagera
par ailleurs des principes d'association inédits ou peu attestés opérant

\(^1\)Cet article correspond à une version développée d'une communication présentée au colloque de
phonologie plurilinéaire de Lyon en juin 1985 et devait figurer dans les Actes de ce colloque, qui,
en fait, n'ont pu voir le jour.
fondamentalement à une strate postlexicale, au niveau de la formation de l’énoncé. Chemin faisant, c’est donc une réflexion sur la structuration d’ensemble du système tonal bambara qui sera menée.

A des fins de comparaison, et pour situer notre étude par rapport à une analyse tonale bien connue d’une langue de la famille mandé, nous commencerons par présenter les schèmes tonals lexicaux du mende et leurs principes d’association, tels que les décrit Leben [1978], entre autres.


L’exemple du mende a été maintes fois cité. Dans cette langue, les lexèmes nominaux ont deux composantes: un schème tonal lexical et une suite syllabique. Les deux composantes sont associées l’une à l’autre au niveau lexical. Le tableau suivant illustre la combinatoire engendrant une très grande partie du vocabulaire (90% du "vocabulaire de base"):

<table>
<thead>
<tr>
<th>schème tonal</th>
<th>nombre de syllabes du nom</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>nom d’une syllabe</td>
</tr>
<tr>
<td>H</td>
<td>kó  'guerre'</td>
</tr>
<tr>
<td>B</td>
<td>kpà 'dette'</td>
</tr>
<tr>
<td>HB</td>
<td>mbû 'chouette'</td>
</tr>
<tr>
<td>BH</td>
<td>mbă 'riz'</td>
</tr>
<tr>
<td>BHB</td>
<td>mbà ‘compagnon'</td>
</tr>
</tbody>
</table>

L’association entre tons et syllabes est d’abord biunivoque et se fait à raison d’un ton par syllabe du début à la fin du mot. Ensuite,

- s’il y a des tons excédentaires, ceux-ci sont réunis sur la dernière syllabe, d’où la formation de modulations:
- s'il y a des syllabes en excédent, celles-ci sont associées au dernier ton du schème tonal:

\[
\text{ndavula} \rightarrow \text{ndavula} \rightarrow \text{ndavula}
\]

\[
\begin{array}{ll}
\text{BH} & \text{B H B} \\
\text{association biunivoque} & \text{association de la syllabe restée libre avec le dernier ton}
\end{array}
\]

L'association du schème tonal peut se faire également au niveau du syntagme. Ainsi, le syntagme Nom + \textit{ma}, où \textit{ma} est une particule atonale signifiant 'sur', fonctionne comme une seule unité du point de vue de l'association tonale. Le schème tonal du nom s'associe à l'ensemble des syllabes de ce syntagme prises globalement:

\[
\begin{array}{ll}
\text{nom isolé} & \text{nom + ma} \\
\text{kó} & \text{kóma} \\
\text{mbú} & \text{mbúma} \\
\text{mbá} & \text{mbámá} \\
\text{pélé} & \text{pélémá} \\
\text{bélè} & \text{bèlémá} \\
\text{ngilà} & \text{ngilamá} \\
\text{nyáhá} & \text{nyahámá}
\end{array}
\]

Le syntagme \textit{nyáhámá}, par exemple, est dérivé de la façon suivante:

\[
/\text{nyaha - ma/} \rightarrow \text{nyahama} \\
\begin{array}{ll}
\text{BH} & \text{B H B} \\
\end{array}
\]

Cependant, si l'association des tons peut se faire au niveau du mot ou du syntagme, elle paraît se faire entièrement \textit{avant} la concaténation de ces mots ou de ces syntagmes pour former une phrase ou un énoncé; or, c'est la situation contraire que nous trouverons en bambara.
2. Les Tons des Noms en Bambara\(^2\) et leurs Principes d'Association

À la différence des noms en mende, les noms en bambara ne comportent pas seulement des tons lexicaux mais incluent d'autres tons, en particulier un "ton haut de liaison" dont les caractéristiques seront précisées en §3.

Nous dégagerons les tons des monosyllabes, des disyllabes, ensuite des trisyllabes et des quadrisyllabes, puis nous examinerons leurs principes d'association, ce qui nous permettra de montrer le mode respectif d'association des tons flottants et des tons lexicaux dans cette langue mandé.

2.1. Tons des monosyllabes et disyllabes nominaux en bambara. Les noms sont cités au défini en bambara. Les noms suivants illustrent les divers schèmes tonals possibles des noms monosyllabiques et disyllabiques dans leur forme de citation:\(^3\)

1. \(bâ\) 'le fleuve'
2. \(bâ\) 'chèvre'
3. \(bâlâ\) 'le balafon\(^4\)
4. \(bâlâ\) 'le porc-épic'
5. \(mûsô\) 'la femme' (de même schème que 4)

\(^2\) Le parler pris ici comme référence est celui d'un des deux coauteurs de cet article, Mamadou Sangaré, dont le parler usuel est une des formes de la koiné bambara qui s'est formée à Bamako. Les données présentées ici rejoignent très largement celles de nombreux auteurs (Bird [1966], Bird et al. [1977], et Bailleul [1981] entre autres).

\(^3\) A l'exception de deux lettres \(e\) et \(o\), le cadre alphabétique de la transcription des données est l'alphabet officiel pour l'orthographe du bambara établi par le décret n° 85/PG du 26 mai 1967, soit: \(a, b, d, j, e, (ê), f, g, h, i, k, l, m, n, ny, o, (ô), p, r, s, sh, t, c, u, w, y, z\). La majorité des lettres de cet alphabet se prononce comme en français, les exceptions étant les suivantes: \(c\) et \(j\) sont des occlusives palatales; \(y\) est une continue palatale; une voyelle nasale est transcrit au moyen de la voyelle orale correspondante, suivie de la consonne \(n\), e.g. \(an = [â]\), \(en = [ê]\), \(on = [õ]\). Les tons ne sont pas notés dans l'orthographe officielle. Ils sont ici représentés par deux signes diacritiques: \(\acute{\text{e}}\) = ton bas et \(\acute{\text{o}}\) = ton haut. Or, c'est cette notation des tons qui nous a amenés à remplacer les graphies \(e\) et \(o\) qui comportent un accent similaire à un ton bas par les symboles \(e\) et \(o\) empruntés à l'alphabet phonétique international.

\(^4\) Il faut signaler qu'un ton haut précédant un ton bas peut être relevé et connaître alors une réalisation suprahaute. Ainsi, le deuxième ton haut de \(bâlâ\), partiellement porté par la syllabe \(la\), pourra être réalisé un peu plus haut que le précédent. Ce type de réalisation suprahaute d'un ton haut devant un ton bas se trouve dans d'autres langues, par exemples en gurma, langue voltaïque [Rialland 1983]. Elle serait liée au downdrift; un ton bas relevant un ton haut précédent en même temps qu'il rabaisse un ton haut suivant. Cette réalisation suprahaute peut être phonologisée et donner naissance à un ton suprahaute comme en moba, autre langue voltaïque [Rialland 1983].
La plupart des auteurs—Welmers [1949], Bird [1966], Creissels [1978, 1981]—s'accordent pour poser le ton bas final comme marque du défini, position que nous adopterons également.

Par contre, la détermination du schéme tonal lexical n'a pas donné lieu au même consensus, le statut du ton haut préfinal ayant fait l'objet de controverses. Selon l'hypothèse la plus ancienne, émise à propos du maninka [Welmers 1949], reprise ultérieurement pour le bambara par de nombreux auteurs [Bird 1966, Diarra 1976, Creissels 1978], le ton haut préfinal est dû à une "règle de dissimilation" qui évite la rencontre de deux tons hauts à certaines frontières (dans les exemples précéders, entre le ton bas du lexème et le ton bas du défini). Cette règle est ainsi formulée par Bird et al. [1977:9]:

"A low tone which is followed by another low tone word will rise in pitch. We can say that the last part of a low tone word becomes a high tone when that low tone word is followed by another low tone word. In a word of one syllable, the tone will be rising. In a word of two or more syllables, the last syllable will become high."

Pour ces auteurs, cette réalisation montante ou haute n'est pas phonologique. Ainsi mûsô 'la femme' est-il pour Bird la réalisation de mûsô- et bâ 'la chèvre' la réalisation de bâ-.

Au vu de ces cinq exemples, cette règle, quoique surprenante comme n'ont pas manqué de le noter certains auteurs (Courtenay [1974], entre autres) paraît acceptable. On ne verra les difficultés qu'elle pose que lorsque d'autres données auront été introduites.


L'analyse que nous proposerons, tout en ouvrant une troisième voie, prendra pour point de départ ces deux groupes d'analyse. En effet, nous partagerons avec le deuxième groupe d'auteurs le sentiment que le ton haut est phonologique et qu'il n'est pas introduit par une règle de dissimilation. En revanche, comme le premier groupe d'auteurs, nous pensons que ce ton n'appartient pas au schème lexical et, en conséquence, que tous les schèmes lexicaux ne se terminent pas par un ton haut.

L'établissement de la nature de ce ton haut omniprésent se fera progressivement et il faudra examiner non seulement les comportements tonaux des noms mais aussi ceux des verbes et ceux d'autres morphèmes. Il sera posé comme un ton flottant.

---

5La thèse d'Aby Sangaré porte sur le dioula de Kong mais nous pouvons nous y référer vu la très proche parenté du dioula avec le bambara. En effet, le bambara, le malinké et le dioula constituent ce qui a été appelé la "langue mandingue".
ajouté au schème lexical: on verra comment, tout en jouant un rôle de liaison (d'où la dénomination de "ton haut de liaison"), il participe de la nature de l'accent.

Dans cette perspective, la décomposition de bâ sera bâ-̀ avec le lexème bâ de ton lexical bas et deux tons flottants: le ton haut de liaison et le ton bas flottant, marque du défini.

Pour mener l'analyse, nous allons maintenant introduire à côté des formes de défini des formes d'indéfini, et placer les unes et les autres devant les particules don, présentatif affirmatif 'c'est', et té, présentatif négatif 'ce n'est pas'.

avec don avec té

(6) indéf. a. bâ don b. bâ té 'c'est/ce n'est pas un fleuve'
déf. c. bâ don d. bâ 'té 'c'est/ce n'est pas le fleuve'

(7) indéf. a. bà don b. bà té 'c'est/ce n'est pas une chèvre'
déf. c. bà don d. bà 'té 'c'est/ce n'est pas la chèvre'

(8) indéf. a. bálá don b. bálá té 'c'est/ce n'est pas un balafon'
déf. c. bálá don d. bálá 'té 'c'est/ce n'est pas le balafon'

(9) indéf. a. bàlə don b. bàlə té 'c'est/ce n'est pas un porc-épic'
déf. c. bàlə don d. bàlə 'té 'c'est/ce n'est pas le porc-épic'

(10) indéf. a. musò don b. musò té 'c'est/ce n'est pas une femme'
déf. c. musò don d. musò 'té 'c'est/ce n'est pas la femme'

Au premier regard, on remarque des modifications affectant les deux particules-cadre don et té: la première porte parfois un ton bas, parfois un ton modulé descendant (don/don) tandis que la seconde est affectée ou non du downstep (té ou 'té). De même, les tons portés par le nom lui-même se modifient.

Un premier point est aisé à traiter: la réalisation dans ce contexte du ton bas, marque du défini. Dans les mots isolés, le ton bas était réalisé sur la dernière syllabe et engendrait une modulation (l à 5). En contexte, ce même ton n'est plus réalisé sur la syllabe finale du nom mais crée le downstep lorsque le mot suivant est de ton haut ou reste sans manifestation lorsque le mot suivant est de ton bas. Le ton bas du défini reste donc inassocié, ce qu'on peut ainsi figurer:
Reanalyse des tons du bambara

Certains auteurs, e.g. Courtenay [1974], se sont arrêtés à ce stade d'analyse et ont pris pour forme de base des noms la forme du défini privée du ton bas. De fait, pour abstraire les formes de base, il faut aussi considérer les formes de l'indéfini, qui sont formées sans le ton bas, marque du défini, et les observer dans divers contextes. Commençons par examiner les formes d'indéfini avec la particule de ton bas don, qui figurent dans la liste précédente.

Le ton haut des exemples (7a, 9a, 10a), où le nom comporte un ton bas, a été expliqué par la règle de dissimilation. Selon les auteurs qui ont utilisé cette règle, musô don serait la réalisation de musô + don, le ton haut porté par don évitant la rencontre de deux tons bas à cette frontière. Cependant, cette même règle ne permet pas d'expliquer le ton haut, pourtant similaire, porté par don dans les exemples (6a) et (8a) où le nom est à ton haut. Par ailleurs, les auteurs qui ont posé un ton haut sur la dernière syllabe des noms, doivent rendre compte des cas où ce ton n'est plus sur cette syllabe.

Lorsque ce ton haut est totalement absent comme dans tous les exemples avec la particule te, des règles diverses, plus ou moins formalisées, ont été avancées: "abaissement" [Longchamp et Coulibaly 1983], "destruction" [A. Sangaré 1984], "shifting rule" formulée ainsi par Courtenay [1974]:

\[ H \rightarrow B / B \{ H \} \]

Ces règles pourraient être acceptables. On notera cependant que leur forme même résulte de l'idée que le ton haut est attaché à la dernière syllabe et qu'il faut donc le remplacer dans certains contextes par un ton bas.

En revanche, lorsque ce même ton haut ne disparaît pas mais se reporte sur la syllabe suivante, en l'occurrence la syllabe don, il ne peut être question d'un remplacement par un ton bas. Et, souvent, le cas n'a pas été vu [Courtenay 1974], ce qui n'est sans doute pas fortuit, ou il a donné lieu à des interprétations par des règles variées telles que: règle de dissimilation [Longchamp et Coulibaly 1983], règle de...
réalisation descendante d'un ton haut après un ton bas suivie d'une règle
d'effacement du ton haut [A. Sangaré 1984].

En fait, tous ces auteurs partagent un même postulat : le schème tonal qu'ils
posent comme terminé par un ton haut est entièrement associé lexicalement. Cela
est explicite chez Courtenay [1974] pour qui les tons du bambara sont segmentaux
mais aussi chez Leben [1973] qui, après avoir reconnu des schèmes de mot, procède
t à leur association au niveau lexical. Ce postulat a empêché de concevoir que le ton
haut, tantôt porté par la syllabe finale de lexème (muso), tantôt par la syllabe de ton
bas suivante (dôn) pouvait être un seul et même ton.

Venons en maintenant à notre propre analyse. Nous proposerons, comme dans
les définitis vus précédemment, de poser le même "ton haut de liaison" dont la
présence se justifie par la nécessité d'enchaîner le lexème avec la particule qui le
suit. Ce ton haut n'est d'ailleurs absent que devant une frontière forte (cf. §3.2). Ce
ton haut flottant s'associe à droite sur la particule dôn et le ton lexical s'associe aux
syllabes du nom. Ainsi, pour les exemples (6a, 7a, 8a, 9a, 10a) l'association des tons
procède-t-elle de la façon suivante:

\[
\begin{array}{ccc}
\text{ba} & \text{don} \\
\text{H} & & \\
\text{H} & \text{B} & \\
\end{array}
\rightarrow
\begin{array}{ccc}
\text{ba} & \text{don} \\
\text{H} & \text{H} & \text{B} \\
\end{array}
\] (6a)

\[
\begin{array}{ccc}
\text{ba} & \text{don} \\
\text{B} & \text{H} & \\
\text{B} & \text{H} & \\
\end{array}
\rightarrow
\begin{array}{ccc}
\text{ba} & \text{don} \\
\text{B} & \text{H} & \text{B} \\
\end{array}
\] (7a)

\[
\begin{array}{ccc}
\text{bala} & \text{don} \\
\text{H} & \text{H} & \\
\text{B} & \text{H} & \\
\end{array}
\rightarrow
\begin{array}{ccc}
\text{bala} & \text{don} \\
\text{H} & \text{H} & \text{B} \\
\end{array}
\] (8a)

\[
\begin{array}{ccc}
\text{bala} & \text{don} \\
\text{B} & \text{H} & \\
\text{B} & \text{H} & \\
\end{array}
\rightarrow
\begin{array}{ccc}
\text{bala} & \text{don} \\
\text{B} & \text{H} & \text{B} \\
\end{array}
\] (9a)

\[
\begin{array}{ccc}
\text{muso} & \text{don} \\
\text{B} & \text{H} & \\
\text{B} & \text{H} & \\
\end{array}
\rightarrow
\begin{array}{ccc}
\text{muso} & \text{don} \\
\text{B} & \text{H} & \text{B} \\
\end{array}
\] (10a)

Nous pourrons montrer plus loin, lors de notre étude des trisyllabes et
quadrisyllabes que l'association des tons flottants se fait prioritairement avant celle
des tons lexicaux, en l'occurrence du ton lexical. Dans le cas de ces monosyllabes et
disyllabes, le ton lexical pourrait être associé avant le ton haut flottant, les deux
ordres d'association restant ouverts.

On aura pu noter que l'association régulière du ton haut de liaison avec don
permet d'expliquer l'occurrence de la modulation après tous les noms "indéfinis",
qu'ils soient de ton haut ou de ton bas. D'autre part, en dissociant le ton lexical du
ton haut de liaison, nous pourrons poser un seul ton, soit un ton haut soit un ton bas
comme ton lexical, ce qui est plus satisfaisant qu'un schéma toujours terminé par un
ton haut.

On considèrera maintenant ces mêmes indéfinis (6b, 7b, 8b, 9b, 10b) devant la
particule té. Les tons portés par les syllabes du lexème sont les mêmes qu'avec la
particule don: ils résultent comme précédemment de l'association du ton lexical
avec les syllabes du lexème. Le té présente son ton haut et aucun autre ton ne se
manifeste. A cette absence deux explications peuvent être fournies: soit le ton haut
de liaison s'associe avec la syllabe té comme il s'associait avec la syllable don, soit il
tombe devant un ton lexical haut. Les données présentées jusqu'ici laissent ouvertes
les deux possibilités; cependant, des données que nous verrons ultérieurement
(§3.3) nous ferons pencher vers la deuxième solution.

Reprenons maintenant les définis pour compléter les principes d'association des
tons flottants. Nous avons vu que le ton bas, marque du défini, restait inassocié; le
ton haut de liaison s'associe, lui, à la dernière syllabe, ne laissant au ton lexical
qu'une seule syllabe lorsqu'il s'agit d'un disyllabe, et créant une modulation
lorsqu'il s'agit d'un monosyllabe. Le ton bas flottant empêche l'association du ton
haut à la syllabe suivante, en l'occurrence don.

\[
\begin{align*}
\begin{array}{c}
\text{ba} \\
\text{H} \\
\text{B}
\end{array} + \begin{array}{c}
\text{don} \\
\text{B}
\end{array} & \rightarrow \begin{array}{c}
\text{ba} \\
\text{H} \\
\text{H} \\
\text{B}
\end{array} \quad (6c) \\
\begin{array}{c}
\text{ba} \\
\text{B} \\
\text{H} \\
\text{B}
\end{array} + \begin{array}{c}
\text{don} \\
\text{B}
\end{array} & \rightarrow \begin{array}{c}
\text{ba} \\
\text{B} \\
\text{H} \\
\text{B}
\end{array} \quad (7c) \\
\begin{array}{c}
\text{bala} \\
\text{H} \\
\text{H} \\
\text{B}
\end{array} + \begin{array}{c}
\text{don} \\
\text{B}
\end{array} & \rightarrow \begin{array}{c}
\text{bala} \\
\text{H} \\
\text{H} \\
\text{B}
\end{array} \quad (8c) \\
\begin{array}{c}
\text{bala} \\
\text{B} \\
\text{H} \\
\text{B}
\end{array} + \begin{array}{c}
\text{don} \\
\text{B}
\end{array} & \rightarrow \begin{array}{c}
\text{bala} \\
\text{B} \\
\text{H} \\
\text{B}
\end{array} \quad (9c) \\
\begin{array}{c}
\text{muso} \\
\text{B} \\
\text{H} \\
\text{B}
\end{array} + \begin{array}{c}
\text{don} \\
\text{B}
\end{array} & \rightarrow \begin{array}{c}
\text{muso} \\
\text{B} \\
\text{H} \\
\text{B}
\end{array} \quad (10c)
\end{array}
\end{align*}
\]

On notera ici que si le ton lexical avait été associé lexicalement préalablement à
l'association du ton haut de liaison, il aurait fallu dans le cas des disyllabes (8c, 9c,
10c) le désassocier de la dernière syllabe pour faire place au ton haut de liaison. Ces
exemples apportent donc un début de confirmation à la thèse de la non-association des tons au niveau lexical.

Les mêmes processus peuvent être observés dans d'autres constructions, en particulier la construction Sujet-Prédicatif-Objet-Verbe selon l'ordre usuel de ces termes en bambara.

\[
\begin{align*}
\text{indéf} & \quad \text{déf} \\
(11) \ a. \ a \ bélé \ jírà & \quad b. \ a \ bélé \ jírà \\
'\text{il montre un porc-épic}' & \quad '\text{il montre le porc-épic}' \\
(12) \ a. \ a \ bélé \ jélemà & \quad b. \ a \ bélé \ jélemà \\
'\text{il retourne du maïs}' & \quad '\text{il retourne le maïs}'
\end{align*}
\]

Dans ces exemples, l'association des tons s'effectue de la façon suivante:

\[
\begin{align*}
(11a) & \quad \begin{array}{c}
[ a ] + [ bélé ] + [ [ bélé ] ] + [ jírà ] \\
\rightarrow [ a \ bélé \ bélé \ jírà ]
\end{array} \\
(11b) & \quad \begin{array}{c}
[ a ] + [ bélé ] + [ [ bélé ] ] + [ jírà ] \\
\rightarrow [ a \ bélé \ bélé \ jírà ]
\end{array} \\
(12a) & \quad \begin{array}{c}
[ a ] + [ bélé ] + [ [ kabal ] ] + [ jéléma ] \\
\rightarrow [ a \ bélé \ kabal \ jéléma ]
\end{array} \\
(12b) & \quad \begin{array}{c}
[ a ] + [ bélé ] + [ [ kabal ] ] + [ jéléma ] \\
\rightarrow [ a \ bélé \ kabal \ jéléma ]
\end{array}
\]

Les modes d'association des tons flottants nominaux sont les mêmes que précédemment dans les exemples (6 à 10). En outre, on aura remarqué que le ton bas lexical du verbe a été traité comme celui des noms: il n'a pas été associé lexicalement, ce qui a évité, à nouveau, des désassociations pour laisser la place au ton haut de liaison (11a, 12a). Notons que ces faits viennent à l'appui de la non-association d'un ton lexical à la première syllabe, susceptible elle aussi de recevoir le ton haut de liaison et ils seront rejointes, plus loin, par d'autres faits (voir §3.3). Quant à la chute du ton flottant en finale de phrase, elle sera traitée en §3.2.

Nous n'avons pas envisagé d'exemples avec un verbe de ton haut, mais on trouverait alors les mêmes règles qu'avec la particule té.
2.2. Schèmes tonals des trisyllabes et quadrisyllabes nominaux. L'étude des schèmes tonals des trisyllabes et quadrisyllabes nominaux nous permettra de mettre en évidence la priorité d'association des tons flottants par rapport aux tons lexicaux et de montrer comment des schèmes tonals peuvent se resserrer ou s'étirer en fonction du nombre de syllabes disponibles.

2.2.1. Schèmes tonals des trisyllabes. Les exemples suivants illustrent les divers schèmes possibles des trisyllabes au défini et à l'indéfini devant les particules don et té:

(13) indéf. a. gàlàmà dòn b. gàlàmà té 'c'est/ce n'est pas une louche'
    déf. c. gàlàmà dòn d. gàlàmà 'tè 'c'est/ce n'est pas la louche'

(14) indéf. a. sùngùrùn dòn b. sùngùrùn té 'c'est/ce n'est pas une jeune fille'
    déf. c. sùngùrùn dòn d. sùngùrùn 'tè 'c'est/ce n'est pas la jeune fille'

(15) indéf. a. màngôrò dòn b. màngôrò té 'c'est/ce n'est pas une mangue'
    a'. màngôrò dòn b'. màngôrò té 'c'est/ce n'est pas une mangue'
    a". màngôrò dòn b". màngôrò té 'c'est/ce n'est pas une mangue'
    déf. c. màngôrò dòn d. màngôrò 'tè 'c'est/ce n'est pas la mangue'
    c". màngôrò dòn d". màngôrò 'tè 'c'est/ce n'est pas la mangue'

(16) indéf. a. bànfùlà dòn b. bànfùlà té 'c'est/ce n'est pas un chapeau'
    a'. bànfùlà dòn b'. bànfùlà té 'c'est/ce n'est pas un chapeau'
    a". bànfùlà dòn b". bànfùlà té 'c'est/ce n'est pas un chapeau'
    déf. c. bànfùlà dòn d. bànfùlà 'tè 'c'est/ce n'est pas le chapeau'
    c". bànfùlà dòn d". bànfùlà 'tè 'c'est/ce n'est pas le chapeau'

(17) indéf. a. sàkèné dòn b. sàkèné té 'c'est/ce n'est pas un sakène (= sorte de lézard)'
    déf. c. sàkèné dòn d. sàkèné 'tè 'c'est/ce n'est pas le sakène'

On notera d'abord que le nombre des schèmes est limité et que, d'autre part, entre les formes à l'indéfini et au défini, les transformations tonales ne touchent pas seulement la dernière syllabe du nom mais peuvent remonter jusqu'à sa première syllabe, e.g. sàkèné/sàkèné.
Les schèmes seront considérés les uns après les autres. Les exemples (13) correspondent à des noms formés sur le lexème *galama* de ton bas. De la même façon qu'en mende, un ton bas unique, au niveau lexical, peut être posé à savoir:

\[
\begin{array}{c}
galama \\
B
\end{array}
\]

Ce ton bas pourrait être associé lexicalement aux syllabes *ga-la-ma* de la façon suivante :

\[
\begin{array}{c}
galama \\
\bigtriangledown \\
B
\end{array}
\]

Mais au défini (13c, 13d) il faudrait désassocier le ton bas lexical de la dernière syllabe pour laisser la place au ton haut de liaison : il paraît plus simple encore une fois de l'associer après association de ce ton haut. Ainsi, pour l'exemple (13a), les deux étapes d'association suivantes peuvent être prévues ... 

1. Association du ton haut de liaison

\[
\begin{array}{c}
galama \\
B
\end{array} + \begin{array}{c}
don \\
B
\end{array} \rightarrow \begin{array}{c}
galama \\
B
\end{array} + \begin{array}{c}
don \\
H \\
B
\end{array}
\]

2. Association des tons lexicaux (celui de *galama* et celui de *don*)

\[
\begin{array}{c}
galama \\
B
\end{array} \bigtriangledown \begin{array}{c}
don \\
B
\end{array} \rightarrow \begin{array}{c}
galama \\
B
\end{array} + \begin{array}{c}
don \\
B
\end{array}
\]

Cependant, les arguments déterminants pour préférer cet ordre d'association viendront plus loin lors de l'examen des noms formés sur les schèmes HB, BH et BHB.

Les noms des exemples (14) sont formés sur un lexème de ton haut, à savoir *súngúrún* et les principes d'association sont les mêmes que ceux vus précédemment pour les disyllabes.

Considérons maintenant les exemples (15) en commençant par les indéfinis. Ceux-ci présentent trois variantes mais qui ne sont pas équivalentes. Les deux
premieres forment en fait un doublet alors que la troisieme est plus eloignee. Les variantes (a) et (a'), (b) et (b') correspondent a deux modes d'association du scheme HB aux trois syllabes du nom, le ton haut de liaison s'etant reporte sur la syllabe don (ou etant tombe devant la particule te comme dans les exemples precedents), engendrant les exemples (15a) et (15a'). Ces deux modes d'association peuvent etre ainsi figure:

\[
\begin{align*}
\left[ \begin{array}{c}
\text{mangoro} \\
\text{HB} \\
\text{H} \\
\end{array} \right] & + \left[ \begin{array}{c}
\text{don} \\
\text{B} \\
\end{array} \right] \rightarrow \left[ \begin{array}{c}
\text{mangoro} \\
\text{H} \\
\text{B} \\
\text{H} \\
\text{B} \\
\end{array} \right] \\
\left[ \begin{array}{c}
\text{mangoro} \\
\text{HB} \\
\text{H} \\
\end{array} \right] & + \left[ \begin{array}{c}
\text{don} \\
\text{B} \\
\end{array} \right] \rightarrow \left[ \begin{array}{c}
\text{mangoro} \\
\text{H} \\
\text{B} \\
\text{H} \\
\text{B} \\
\end{array} \right]
\end{align*}
\]

(15a)

En (15a), le ton bas du scheme HB s'associe a deux syllabes alors qu'en (15a'), il ne s'associe plus qu'a une syllabe et inversement pour le ton haut. Cela laisse penser qu'il n'y a pas d'association directionnelle syllabe par syllabe comme nous en avons vu en mende, mais une association "par les extremites", le premier ton s'associant sur la premiere syllabe, le deuxieme sur la derniere syllabe, et la syllabe intermediaire recevant une extension soit du ton haut soit du ton bas. Nous verrons plus loin, a propos des exemples (16) que l'autre scheme bitonal du systeme, a savoir le scheme BH a egalement une double possibilite d'association.

La variante (16a") est, elle, formee sur un scheme tonal lexical different, uniformement haut. Les auteurs parlent parfois de scheme "irregulier" . En fait, ce scheme haut n'est pas sans rapport avec le scheme HB des variantes precedentes. Le premier ton du scheme, a savoir le ton haut, s'est imposé au detriment des autres tons. Cette primauté n'est pas en fait isolée mais est á mettre en rapport avec d'autres faits (cf. §2.3). Nous verrons que l'autre scheme bitonal, le scheme BH, peut connaître cette meme reduction.

Les definis s'expliquent egalement á partir de ces deux schemes. Dans l'exemple (15c), le scheme HB est resserre sur les deux premiere(s) syllabes, la derniere etant occupée par le "ton haut de liaison". L'association des tons dans cet exemple se fait de la faÁ»on suivante:

\[
\begin{align*}
\left[ \begin{array}{c}
\text{mangoro} \\
\text{HB} \\
\text{H} \\
\text{B} \\
\end{array} \right] & + \left[ \begin{array}{c}
\text{don} \\
\text{B} \\
\end{array} \right] \rightarrow \left[ \begin{array}{c}
\text{mangoro} \\
\text{H} \\
\text{B} \\
\text{H} \\
\text{B} \\
\end{array} \right]
\end{align*}
\]

(15c)

Le resserrement du scheme HB sur deux syllabes presuppose encore une fois que le scheme lexical HB n'est pas associe préalablement au ton haut de liaison.
Les exemples (16) sont parallèles aux exemples (15) mais avec des schèmes lexicaux inverses, à savoir BH et B au lieu de HB et H. Dans les formes d'indéfini, nous trouvons les mêmes variations d'association du schème bitonal:

\[
\begin{array}{c}
\text{banfula} \\
\text{BH} \quad \text{H}
\end{array}
\] + \begin{array}{c}
\text{don} \\
\text{B}
\end{array} \rightarrow \begin{array}{c}
\text{banfula} \\
\text{B} \quad \text{H} \quad \text{H} \quad \text{B}
\end{array}
\] (16a)

Le ton haut de liaison est toujours associé à don. Les deux tons du schème tonal lexical sont associés aux syllabes extrêmes du nom, la syllabe centrale recevant l'un ou l'autre ton.

Les exemples (16a") et (16b") sont, quant à eux, formés sur un schème entièrement bas. Comme précédemment, le schème alternant est formé du premier ton du schème à l'exclusion du second. Le ton initial bas impose ici sa primauté. Les exemples (16c", d", d") peuvent recevoir une explication parallele à celle des exemples (15) correspondants.

L'effet de "accordéon" est sans doute le plus clairement illustré par les exemples (17) formés sur un schème BHB. Dans les indéfinis (17a, b), le schème tonal lexical s'étend sur les trois syllabes du nom, celles-ci restant libres du fait de l'association du ton haut de liaison à la particule don ou de sa chute devant la particule té. Ainsi, l'association procède-t-elle de la façon suivante dans l'exemple (17a):

\[
\begin{array}{c}
\text{salerne} \\
\text{BHB} \quad \text{H}
\end{array}
\] + \begin{array}{c}
\text{don} \\
\text{B}
\end{array} \rightarrow \begin{array}{c}
\text{sakene} \\
\text{B} \quad \text{H} \quad \text{B} \quad \text{H}
\end{array}
\] (17a)

Dans cet exemple, chaque ton du schème tonal dispose d'une syllabe. Dans les définis (17c, d), par contre, le schème lexical ne se trouve associé qu'aux deux premières syllabes du nom, la dernière syllabe étant occupée par le ton haut de liaison. L'association se fait en deux étapes, comme suit:

1. Association des tons flottants

\[
\begin{array}{c}
\text{salerne} \\
\text{BHB} \quad \text{H} \quad \text{B}
\end{array}
\] + \begin{array}{c}
\text{don} \\
\text{B}
\end{array} \rightarrow \begin{array}{c}
\text{sakene} \\
\text{BHB} \quad \text{H}
\end{array} + \begin{array}{c}
\text{don} \\
\text{B}
\end{array}
\] (17c)
Le ton bas du défini ne s'associe pas et reste flottant tandis que le ton haut de liaison s'associe à la dernière syllabe du nom.

2. Association des tons lexicaux (ceux de sakene et celui de don)

\[
\begin{array}{c}
\text{saleme} \\
\text{BHB} \quad \text{H} \quad \text{B} \\
\end{array} + \begin{array}{c}
\text{don} \\
\text{B} \quad \text{BHB} \quad \text{H} \quad \text{B} \\
\end{array} \rightarrow \begin{array}{c}
\text{sakene} \\
\text{BHB} \quad \text{H} \quad \text{B} \\
\end{array} + \begin{array}{c}
\text{don} \\
\text{B} \quad \text{BHB} \quad \text{H} \quad \text{B} \\
\end{array} \quad (17c)
\]

Les trois tons BHB se resserrent sur les deux premières syllabes. Si nous avions ici associé les tons lexicalement, soit sakene,

\[
\begin{array}{c}
\text{BHB} \quad \text{H} \quad \text{B} \\
\end{array}
\]

il aurait fallu, dans la forme définie, désassocier non seulement un ton mais tous les tons pour les repousser vers la gauche. Ce déplacement général est une manifestation particulièrement claire de la non-association des tons au niveau lexical. Par contre, si les tons lexicaux ne s'associent qu'après les tons flottants, ils ne peuvent sortir du cadre du lexème dont ils sont une composante.

Nous pouvons d'autre part remarquer que les schémes tonal des trisyllabes bambara, à savoir H, B, HB, BH et BHB, sont identiques à ceux posés par Leben pour le mende. Ils peuvent même rendre compte en bambara d'une partie encore plus grande des trisyllabes qu'en mende, en fait de leur totalité.6

2.2.2. Schémes tonals des quadrisyllabes. Les quadrisyllabes ont en fait les mêmes schémes que les trisyllabes; les divers schémes peuvent être illustrés par les exemples suivants où les noms sont toujours placés devant les particules don et té.

**SCHEME BAS**

(18) indéf. a. bùgùnì nkà don  b. bùgùnì nkà té  'c'est/ce n'est pas un fouet'
déf. c. bùgùnì nkà don  d. bùgùnì nkà té  'c'est/ce n'est pas le fouet'

---

6Si on examine le dictionnaire de Bailleul [1981], on retrouve pour les trisyllabes les mêmes schémes lexicaux (à savoir H, BH, HB, BHB) que ceux que nous avons posés; ils apparaissent une fois ôté le ton haut qui figure chez cet auteur en finale de tous les noms. Et, on ne remarque aucune exception. La notation de Bailleul correspond aux définis après soustraction du ton bas; les tons sont associés comme dans les définis. Ainsi, note-t-il sàkènè, misèli (à ceci près que les tons sont chez lui indiqués sous les symboles segmentaux, par un trait pour le ton bas opposé à une absence de trait pour le ton haut).
Dans les quadrisyllabes, comme dans les trisyllabes, le schème tonal s'étend ou se resserre en fonction du nombre de syllabes qui lui est laissé après l'association du ton haut de liaison. La différence tient à ce qu'il dispose d'une syllabe en moins.

Nous n'avons pas noté ici les variantes dues aux associations des schèmes HB et BH. Comme dans les trisyllabes leur point commun est l'association "par les extrémités" (le premier ton à la première syllable et le deuxième ton à la dernière syllable). Les fluctuations portent sur la ou les syllabes intermédiaires, la tendance générale étant au partage des syllabes à part égale entre les deux tons. Cela est particulièrement clair lorsque les tons d'un schème bitonal se partagent quatre syllabes (20a et b, 21a et b) puisque chaque ton s'associe alors à deux syllabes.

Les schèmes qui rendent compte des tons des quadrisyllabes sont donc encore les mêmes que ceux du mende. Et, en bambara, les exceptions sont à nouveau très peu nombreuses: aucune dans le parler ici considéré, trois dans le dictionnaire de Bailleul [1981], soit les mots jàhànàmá 'l'enfer', lâhórmá 'grâce, gloire', càpùùcà 'catégorie de griot', notés avec le ton haut de liaison sur la syllabe finale. Encore, faudrait-il supposer que ces réalisations soient stables et ne viennent pas rejoindre celles des schèmes HB et BH. Si tel était bien le cas, il faudrait envisager de poser, pour ces trois mots, deux schèmes lexicaux supplémentaires à savoir BHH et HHH.

2.3. De la liberté des tons par rapport aux segments: la variété des points de vue. Notre étude vient après de nombreuses analyses où les tons sont apparus beaucoup moins libres par rapport aux segments. Nous avons vu qu'elle
aboutissait même à des conclusions inverses de celles d'un certain nombre d'auteurs en particulier de Courtenay [1974] qui a soutenu explicitement que les tons doivent être totalement associés aux segments et que chaque ton, fixé sur son segment est indépendant des autres tons. Cette dernière position ne faisait cependant pas l'unanimité puisque, comme nous l'avons déjà mentionné, certains auteurs [Welmers 1949, Leben 1973] avaient reconnu des schèmes tonals de mot.

Le lecteur peut évidemment se demander comment une même langue peut donner lieu à des interprétations aussi opposées et si les données varient d'un auteur à l'autre. Dans un appendice, nous examinerons avec précision des données de Courtenay [1974] pour montrer qu'elles sont en fait beaucoup plus proches de celles des autres auteurs, y compris des nôtres que les déclarations théoriques du corps de l'article pouvaient le faire supposer.

On verra alors mieux comment beaucoup de différences viennent en fait de l'analyse et d'un éclairage différent des données en fonction des prises de position théoriques; notre interprétation du système est ainsi fondée sur la reconnaissance de la mouvance du ton haut de liaison et des tons des lexèmes—qui a été très amplement aidée par le cadre théorique autosegmental—et sur l'extraction hors du schème lexical du ton haut final.

2.4. De la primauté du premier ton des schèmes lexicaux. L'observation de la structure tonale des trisyllabes (15 et 16 surtout) et des quadrisyllabes révèle une invariabilité du premier ton: il est le seul qui n'admet pas d'alternance. Au contraire, comme le montre le schème isotone des trisyllabes màngóro vàバンフルà, le premier ton peut se maintenir seul et se propager à toutes les syllabes du lexème. L'existence même de cette alternance indique que le bambara connaît une organisation hiérarchique des tons lexicaux qui accorde la primauté au premier ton. Cette primauté se trouve d'ailleurs confirmée et justifiée par des propriétés particulières: le premier ton est la "clé de voûte" du schème tonal. Tout d'abord, il est le seul ton qui permette des oppositions entre les noms en bambara, les autres tons du schème lexical n'offrant pas de possibilité de paires minimales.7 En outre, c'est un fait bien connu que, en bambara, dans la composition nominale et dans la formation des syntagmes dits à compacité tonale, les règles tonales propagent le premier ton à toutes les syllabes des constituants, excepté à celles du dernier qui reçoivent un ton haut. Ainsi, màngórósún (formé à partir de màngóró/màngórò/màngôpò et de sún 'pied (d'arbre)') est la seule forme possible pour le mot composé signifiant 'manguier'. Le premier ton du schème double HB est associé aux trois syllabes de màngoro à l'exclusion de l'autre ton. Il en de même dans bànfùlàbà 'grand chapeau' (formé à partir de bànfùlà/bànfùlà/bànfùlà et de bà,

7L'absence de paires minimales fondées sur un autre ton que le premier d'un schème tonal a d'ailleurs conduit plusieurs auteurs de dictionnaires ou lexiques, entre autres DNFLA [1980] et Dumestre [1981, 1983, 1984], à ne noter que le premier ton des mots. Cette notation a été choisie dans un but de simplicité vu qu'il n'y avait pas de confusion possible.
bá, suffixe augmentatif). Dans le cas de schème tritonal, le premier ton impose également sa primauté sur les deux autres tons. Il est ainsi le seul à s'associer aux syllabes du premier terme de composé dans sàkènèmúsò 'sakene femelle' (formé sur les lexèmes sàkèné et músò). Lorsqu'on a trois termes dans le nom composé, ce même premier ton s'associe aux syllabes des deux premiers termes. Le composé formé à partir de sàkèné, músò et bá sera sàkènèmúsòbá 'grande sakene femelle'. Le même processus continue à s'appliquer dans les noms composés comportant plus de trois termes: le premier ton est toujours propagé sur tous les termes à l'exception du dernier.

Dans les syntagmes dits à compacité tonale, les mécanismes sont encore les mêmes. Ainsi, dans les syntagmes "qualificatifs" de la forme Nom + Adjectif, le premier ton du schème tonal nominal s'associe à toutes syllabes du nom au détriment des autres tons et l'adjectif, dernier terme de syntagme reçoit toujours un ton haut. Par exemple, dans sàkèné bìlèn 'sakene rouge' ou mísèlí bìlèn 'aiguille rouge', le premier ton du schème BHB dans le premier cas et HB dans le second cas, s'étend sur les trois syllabes du nom tandis que bìlèn 'rouge' voit son ton bas remplacé par un ton haut.

3. Un Peu Plus Sur le "Ton Haut de Liaison"

Nous avons vu que le "ton haut de liaison" suivait tous les lexèmes nominaux; mais il ne suit pas seulement les lexèmes nominaux. Sa distribution sera ici précisée, ce qui nous permettra de montrer les relations de ce ton avec la catégorie linguistique "lexème" ainsi que sa parenté avec un accent. Il a été d'autre part désigné, tout au long de ce travail, par la dénomination "ton de liaison". Cette fonction de liaison, plus précisément, d'intégration du lexème à une unité supérieure se trouvera confirmée par les occurrences et les absences de ce ton en fonction des frontières en jeu. Enfin, nous verrons que ce ton est susceptible de diverses associations.

3.1. Distribution du ton haut de liaison

3.1.1. Ton haut de liaison et lexèmes verbaux. Le ton haut de liaison suit les lexèmes verbaux comme il suit les lexèmes nominaux mais les constructions syntaxiques et la place du verbe, souvent en finale de phrase, sont moins favorables à son dégagement. On peut cependant le voir apparaître quand on ajoute après le verbe une particule de ton bas telle que kè 'bien sûr'.

(23) à bë músò jìrà kè 'bien sûr qu'il montre une femme'

qui résulte de l'association des tons suivants:
Nous verrons plus loin d'autres exemples qui mettront également en évidence ce ton haut de liaison, ainsi que sa double possibilité d'association.

3.1.2. Ton de liaison et autres lexèmes. Lexèmes nominaux et verbaux constituent la majorité des lexèmes; les autres lexèmes sont beaucoup moins nombreux. Il s'agit principalement des lexèmes numéraux et "adjectivaux". Ceux-ci ne font pas exception quant au ton haut de liaison.

Les exemples (34) et (41) (présentés plus loin) et qui contiennent des numéraux mettront en évidence la présence du ton haut de liaison après ces lexèmes. Les lexèmes adjectivaux, dont le nombre n'atteint pas cinquante, apparaissent quant à eux soit dans des syntagmes dits "qualificatifs", où ils jouent le rôle de déterminant, soit dans une construction à prédicat adjectival. Dans le premier cas, ils perdent leur autonomie tonale et fonctionnent comme partie d'un syntagme à compacité tonale (cf. §2.4). Par contre, dans la construction à prédicat adjectival, ils sont plus indépendants et sont suivis du ton haut de liaison.

(24) à ká fi n kê 'il est noir, bien sûr'

Ce ton haut est aussi susceptible d'une autre association (cf. §3.3).

Il resterait encore à traiter des lexèmes adverbiaux. Cependant, une fois mis à part les lexèmes locatifs tels que yàn 'ici' ou yèn 'là-bas' et les lexèmes temporels tels que bì 'aujourd'hui' ou kúnún 'hier', rattachables à l'ensemble des lexèmes nominaux, il ne reste guère que des adverbes idéophoniques. Ces derniers se caractérisent par un schéme tonal uniformément haut, à l'exception de gùrùbùgùrúbù 'bruit de galop' (cf. Bailleul [1981]) qui lui-même se termine par des tons hauts, et sont toujours placés à des frontières (cf. §3.2) qui ne permettent pas de dégager un éventuel ton de liaison.
3.1.3. Morphèmes non suivis de "ton haut de liaison".

(i) Les pronoms:

(25)  à té à fâgâlà  'il ne le tue pas (= il n'est pas en train de le tuer)'

(26)  à té í fâgâlà  'il ne te tue pas (= il n'est pas en train de te tuer)'

Après à (25) comme après í (26), la première syllabe du verbe reste de ton bas.

Il faut signaler ici un clivage entre les pronoms. Certains, principalement les démonstratifs, fonctionnent comme des nominaux vu qu'ils sont suivis du ton haut de liaison (42) et peuvent admettre le ton bas du défini.

(ii) Les prédicatifs bé, má, té:

(27)  à bé féèrélà  'il/elle/c'est à vendre' (= on est en train de le/la vendre)

(28)  à bé féérelà  'il/elle est en train de fleurir'

(29)  mûsò té yàn  'il n'y a pas de femme ici'

(30)  mûsò 'té só  'la femme n'est pas à la maison'

(31)  à má sì gi  'il ne s'asseoit pas' (ce n'est pas sa volonté)

(32)  à té sì gi  'il ne s'asseoit pas' (ce n'est pas sa ou ma volonté)

Après bé, má, té, le mot qui suit garde son ton. Si l'a un ton bas, celui-ci n'est pas relevé, ce qui indique l'absence de ton haut flottant. S'il a un ton haut, celui-ci n'est pas rabaisssé, d'où on peut conclure à l'absence de ton bas flottant.

(iii) Morphème de syndèse ni:

(33)  mûsò ní cè  'femmes et hommes' (tous confondus)

(34)  misî bà kélèn ní kème sàbâ  'mille trois cents vaches'

(35)  súngúrûn ní kámâlèn  'jeunes filles et jeunes hommes'

Après ní, le ton bas du nom suivant reste bas (33, 34) et un ton haut n'est pas rabaisssé (35).
La liste n'est pas exhaustive, mais on voit qu'elle concerne les mots fonctionnant comme des clitiques dans de nombreuses langues à accent.

3.1.4. **Ton haut de liaison, marque du "lexème", et parenté avec un accent.** Nous avons vu que les lexèmes nominaux, verbaux, numéraux et adjectivaux du bambara sont suivis d'un ton haut de liaison alors que les morpèmes prédicatifs, les morpèmes de syndèse, etc. ne le sont pas. Or, les systèmes accentuels comportent couramment les mêmes répartitions entre lexèmes porteurs d'accent et autres morpèmes dépourvus d'accent.

En bambara, le "ton haut de liaison" est une caractéristique du lexème; c'est le signifiant de cette catégorie linguistique: il s'ajoute aux composantes lexicales du lexème. Tout lexème a ainsi la structure suivante:

\[
\begin{array}{c}
\sigma \\
T \\
H
\end{array}
\]

où \(\sigma\) représente une suite de syllabes et \(T\) une suite de tons, ces suites pouvant être réduites à une seule unité.

Le ton haut de liaison, étant lui-même un ton, se trouve sur la même "ligne" que les tons lexicaux. Le rôle du ton haut est comparable, en tant que marque catégorielle, à celui de l'accent dans une langue à accent fixe. Dans ce type de langues, l'accent n'a, en effet, pas de fonction distinctive; mais il peut caractériser le lexème ou une classe de morpèmes.

3.2. **Frontières où le ton haut de liaison est absent et fonction de liaison ou d'intégration du ton haut.** Nous avons déjà mentionné au passage (l. l2) la chute de tons hauts de liaison en finale de phrase. Il s'agit en fait d'un mécanisme régulier: le ton haut de liaison tombe en finale d'énoncé ainsi que devant une frontière forte.

Examples en finale d'énoncé.

(36) \(cè ní músdò\) 'hommes et femmes'

(37) \(cè 'bé bòli\) 'l'homme court' (vérité générale)

Exemples à une frontière forte.

(38) \(jîrí bó dàbà 'lá\) 'déracine l'arbre avec la houe'

Vb. S. Postp.
Dans ces derniers exemples, la frontière forte où le ton haut est absent se situe entre le verbe et le complément postpositionnel (S. Postp.).

Le ton haut disparaît dans les contextes de rupture, de disjonction; ce qui traduit, à l'inverse, sa fonction de liaison, d'intégration. Il rend le lexème intégrable à une unité supérieure. Par lui, le lexème devient "prêt à l'emploi".

3.3. Diverses associations du "ton haut de liaison". Dans les associations étudiées jusqu'ici, le ton haut s'associait toujours à l'initiale du mot suivant mais il existe un autre possibilité: l'association avec la syllabe finale du mot précédent. Dans le parler étudié ici, certaines frontières admettent les deux possibilités d'association bien que souvent une des deux soit préférentielle. Nous n'insisterons pas sur ce point parce qu'il faudrait faire une analyse de l'ensemble des frontières et des implications sémantiques et énonciatives du choix de l'une ou l'autre des deux associations. En outre, une comparaison dialectale aurait pu montrer les choix opérés par les différents dialectes. Cependant, nous nous contenterons ici de montrer que les deux possibilités d'association peuvent coexister.

Exemples de double possibilité d'association:

(41) a. à yé mûrû sábà sàn "il a acheté trois couteaux"

b. à yé mûrû sàbá sàn "il a acheté trois couteaux"

NB: Il n'y a pas de différence de sens entre (41a) et (41b).

L'exemple (41a) résulte de l'association des tons suivants:

---

8Plus de précisions seront données dans la thèse de Mamadou Sangaré [en préparation] portant sur la phonologie de plusieurs dialectes et qui traitera plus particulièrement des diverses marques de frontières, qu'elles soient segmentales ou tonales. L’étude des frontières en khassonké (langue du même sous-groupe mandingue) a déjà été amorcée dans le mémoire de licence de M. Sangaré [1982].
Réanalyse des tons du bambara

Les tons de liaison s'associent à "droite", avec la première syllabe du mot suivant. L'exemple (41b), quant à lui, résulte de l'association suivante:

\[
\begin{array}{c}
\text{a} \\
\text{B}
\end{array} + \begin{array}{c}
\text{ye} \\
\text{H}
\end{array} + \begin{array}{c}
\text{muru} \\
\text{B} \\
\text{H}
\end{array} + \begin{array}{c}
\text{saba} \\
\text{B} \\
\text{H}
\end{array} + \begin{array}{c}
\text{san} \\
\text{B} \\
\text{H}
\end{array} \rightarrow \\
\begin{array}{c}
\text{a} \\
\text{ye} \\
\text{muru} \\
\text{saba} \\
\text{san}
\end{array}
\]

Les tons de liaison se sont ici associés à "gauche", avec la dernière syllabe du mot précédent.

Il faut signaler que cette double association révèle la chute du ton haut de liaison devant un ton haut lexical. Si ce ton haut, en effet, ne tombait pas, on devrait le voir apparaître en cas d'association à "droite" sur la syllabe d'un mot à ton bas. Or, à côté du doublet \textit{mùrù sâbà/mùrù sàbà} 'trois couteaux', on ne trouve qu'une seule forme: \textit{mùrù nàání} 'quatre couteaux'. Si le ton de liaison était maintenu, on attendrait la forme *\textit{mùrù nàání}, qui n'existe pas. La chute d'un ton haut flottant devant un ton haut lexical est d'autre part une règle très courante. Dans un autre ordre d'idées, elle évoque aussi la chute d'une consonne de liaison devant une consonne en début de mot suivant (cf. \textit{peti[t] chat/petit ami}).

Un autre exemple peut être ajouté:

(42) a. \textit{ô féère kè} b. \textit{ô féerè kè} 'vends-ceci, bien sûr'

la double association étant la suivante:

\[
\begin{array}{c}
\text{o} \\
\text{B} \\
\text{H}
\end{array} + \begin{array}{c}
\text{feere} \\
\text{B} \\
\text{H}
\end{array} + \begin{array}{c}
\text{ke} \\
\text{B} \\
\text{H}
\end{array} \rightarrow \\
\begin{array}{c}
\text{B} \\
\text{H} \\
\text{B}
\end{array}
\]
On aura aussi pu noter qu'en fonction des sens d'association du ton haut flottant, un ton de lexème pourra se trouver soit sur la première soit sur la deuxième syllabe d'un disyllabe. Cela confirme la non-association préalable de ce ton à l'une ou l'autre syllabe.

4. Conclusion

C'est en fait une partie importante de la tonologie du bambara qui a été examinée à partir des schèmes tonals nominaux et on a vu apparaître les lignes de force du système.

Pour que ce système apparaisse dans sa cohérence, il nous a fallu cerner la nature d'un ton haut énigmatique que nous avons appelé "ton haut de liaison", vu son comportement dans l'énoncé. Présent à la fin de tous les lexèmes, celui-ci constitue une marque de la catégorie lexème et peut être rapproché à divers égards d'un accent.

La dissociation des deux tons flottants—haute liaison et bas du défini—était indispensable pour qu'apparaissent les tons propres (schèmes tonals lexicaux) des lexèmes, qui se sont révélés comparables à ceux du mende.

Nous avons pu montrer que tons et syllabes n'étaient pas liés intrinsèquement dans la constitution des morphèmes. Si nous étions partis de l'hypothèse inverse, les tons étant des attributs de syllabe, nous aurions dû avoir recours à des règles successives complexes, en particulier de désassociations et de réassociations qui auraient obscurci la nature effective des processus en jeu.

Les tons (ou schèmes tonals) et syllabes, constitutifs les uns et les autres des morphèmes, s'associent en cours de dérivation. Il est apparu que cette association se fait fondamentalement dans une phase postlexicale, au cours de la formation de l'énoncé. L'absence de phase lexicale d'association a diverses expressions dans les faits. Une des plus frappantes est sans doute celle des "schèmes accordéon" que nous avons ainsi nommés par allusion à l'étirement ou au resserrement qu'ils subissent.

Les modalités d'association des tons ont été précisées et des principes d'association souvent inédits (association de droite à gauche, association "par les extrémités") ont été trouvés.

A partir de l'identification des tons en présence dans les noms, on a donc vu progressivement se dégager l'organisation d'ensemble du système tonal—tons ou schèmes lexicaux, ton haut de liaison comparable à un accent, ton bas du défini—avec une association fondamentalement postlexicale, au niveau de l'énoncé.
APPENDICE

Par notre analyse, nous nous situons dans la lignée des auteurs qui ont reconnu des schémes tonals de lexème en bambara ou maninka [Welmers 1949, Spears 1966, Leben 1973]. Or, ceux-ci ont été accusé d'avoir simplifié les données ou de s'être appuyé sur des données simplifiées par Courtenay [1974]. D'après cet auteur, une vue non tronquée des données invalidate toute hypothèse de ce type, y compris rétroactivement la nôtre. Dans un appendice, elle fournit l'ensemble des schèmes possibles pour les noms, les verbes et autres morphèmes en bambara. C’est cet appendice qu’il nous faut examiner et commenter et on verra qu’il y a en fait, dans l’ensemble, concordance entre ses données et les nôtres.

1. Les schèmes des monosyllabes

Il y a parfaite convergence entre nos données et celles de Courtenay qui reconnaît les schèmes haut et bas haut pour les noms et les verbes, le schème bas n’apparaissant que dans les autres morphèmes, e.g. à 3ème personne du singulier, kà marque d’infinitif.

2. Les schèmes des disyllabes

Pour les noms et les verbes, Courtenay reconnaît les schèmes HH et BH qui correspondent à nos schèmes H et B suivi du ton haut de liaison mais trouve, en outre, pour certains noms, un schème HB. Ce schème est illustré par les exemples suivants: kunun 'hier' et Săràn (nom propre).

Notons d'abord que kunun est transcrit kunún par de nombreux auteurs. De fait, le schème HB est très peu fréquent dans les disyllabes. On ne peut le trouver que dans des lexèmes temporels ou locatifs ou encore dans des morphèmes de syndése, dont sání 'avant' et wàli 'ou' cités par ailleurs par Courtenay. Ce schème apparaît également dans des noms propres, qui, comme dans beaucoup de langues, constituent une catégorie à part. Or, une fois écarté ce schème HB, les schèmes présents chez Courtenay réinterprétés dans notre optique deviennent similaires aux nôtres.

3. Les schèmes des trisyllabes

Les schèmes figurant dans la liste de Courtenay sont les suivants: HHH, BBH, BHB, HBH, BHH, HHH.

Les schèmes avec ton haut final ont les correspondants suivants dans notre analyse:
<table>
<thead>
<tr>
<th>Courtenay</th>
<th>Rialland et Sangaré</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHHH</td>
<td>H(H)</td>
</tr>
<tr>
<td>BBBH</td>
<td>B(H)</td>
</tr>
<tr>
<td>HBBH</td>
<td>HB(H)</td>
</tr>
<tr>
<td>BHH</td>
<td>BH(H)</td>
</tr>
</tbody>
</table>

(les tons lexicaux étant suivis du ton haut de liaison mis entre parenthèses)

Parmi les schèmes terminés seulement par un ton bas, le schème HHB illustré seulement par des noms propres ne peut être retenu. Par contre, le schème BHB est, en fait, le même que notre propre schème lexical BHB. C'est celui que nous aurions posé dans l'exemple de Courtenay *kùnànjè* 'le héron' qui, à l'indéfini, porte effectivement ces trois tons, identiques à ceux que nous avons rencontrés dans la forme indéfinie de *sàkènè*, par exemple. Ce schème a peut-être été dégagé par Courtenay dans des contextes où le ton haut était absent ou reporté sur la syllabe suivante.

En définitive, il est apparu que nos schèmes, avec adjonction du ton haut de liaison, pouvaient expliquer les données de Courtenay.

4. Les schèmes des quadrisyllabes

Les schèmes relevés par Courtenay pour les noms et les verbes sont les suivants: HHHH, BBBH, BHBH, BBHH, HBBH, BBHB, HBHB.

Pour les schèmes terminés par un ton haut, la correspondance avec nos schèmes s'établit comme suit:

<table>
<thead>
<tr>
<th>Courtenay</th>
<th>Rialland et Sangare</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHHH</td>
<td>H(H)</td>
</tr>
<tr>
<td>BBBH</td>
<td>B(H)</td>
</tr>
<tr>
<td>BHBH</td>
<td>BHB(H)</td>
</tr>
<tr>
<td>BBHH</td>
<td>BH(H)</td>
</tr>
<tr>
<td>HBBH</td>
<td>HB(H)</td>
</tr>
</tbody>
</table>

On aura pu reconnaître l'ensemble des schèmes que nous avons dégagés. Les schèmes terminés par un ton bas ne sont, à nouveau illustrés que par des noms propres ou des temporels. Plusieurs des notations ne font d'ailleurs pas l'unanimité, *Màlobàlî* et *kùnàsînî* 'avant-hier' étant, en général transcrits avec le schème BBHH.

A y regarder de plus près, on voit que nos données et celles de Courtenay sont plus proches que l'on aurait pu le soupçonner et, qu'une fois les formes séries, il n'y a pas d'obstacle à une réinterprétation en termes de schème tonal de lexème.
BIBLIOGRAPHIE


THEMATIC LINKING IN HAUSA ASYMMETRIC COORDINATION*

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This paper investigates "asymmetric coordination" in Nigerian Hausa. A range of constructions is presented in which asymmetric coordination occurs, and their syntactic and semantic properties are established. A "regularizing" analysis is considered, in which asymmetric coordination is represented as a symmetric coordination headed by an empty category, but this is rejected due to the exceptional distributional properties which would have to be assumed for the construction. An interpretive analysis is proposed which has the effect of incorporating the feature information of an independent NP marked by a "linker" into a dependent plural argument, and symmetric and asymmetric coordination are distinguished as involving interpretive operations of set union and set unification, respectively.

1. Introduction

The work reported on in this paper is part of a larger investigation I have undertaken concerning the typological properties of what I'll call "asymmetric co-

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ordination”; other studies on aspects of these constructions appear in Schwartz [1987a, 1987b, 1988a, 1988b, 1989, in preparation]. In this paper, I’ll use the term “thematic coordination” to refer to an interpretation in which two (or more) participants share the same thematic role within a clause. In many languages, the symmetry of thematic coordination is expressed in a symmetric syntax of the English coordination type shown in (1).

(1)  
   a. Sam and Sally went to the movie  
       b. They saw Sam and Sally  
       c. We sent letters to Sam and Sally

However, in many other languages, thematic coordination can be expressed in an asymmetric syntax, generally with overtones of greater cohesion along one of a number of parameters (see Schwartz [1987b]). In previous work, I have referred to the syntax of structures of this type as “asymmetric coordinations”. In Hausa, there is a particularly rich range of asymmetric syntactic structures of this type, as shown in (2-4), with the crucial parts of the structure given in bold face type.¹

(2)  
   mun je kasuwa da Adu
   1PL go market & Audu
   ‘Audu and I went to the market’

(3)  
   Audu ya: gan mû jiya da Binta
   Audu 3m see 1PL yesterday & Binta
   ‘Audu saw Binta and me yesterday’

(4)  
   a. Audu ya: fa’dâ manà labari da Binta
      Audu 3m tell IOM+1PL story & Binta
      ‘Audu told the story to Binta and me’

   b. *Audu ya: fa’dâ manà da Binta labari

¹The crucial judgements and interpretations of the structures involved are from Nigerian Hausa: Dr. Junaaidu is from Katsina and Dr. Sani is from Kano. I am informed by Attouman Bachir that some of the grammaticality judgements and interpretations represented here do not hold for the Hausa spoken in Niger. Hausa examples are cited for the most part using standard Hausa orthography. However, this orthography does not represent tone and vowel length. Since tone and vowel length are distinctive in pronominal forms and since it is crucial in this study to distinguish the various pronominal paradigms, these forms will be marked for tone and length. High tone will be unmarked, and low tone will be marked with a grave accent ('). A colon (:) will mark long vowels.
In (2), the plural morphology on the obligatory pronominal element *mun* preceding the main verb is the only overt cue to a thematic coordination, and the NP linked to the clause by *da* is interpreted as one member of that coordination. In (3), the thematic coordination is manifested syntactically by a plural direct object pronoun *mù* and an NP linked by *da*. The crucial dual interpretation of (3) indicates that the plural pronoun is not necessarily interpreted literally but, as in (2), can simply indicate that an argument, i.e. a participant playing a role in an event specified by the predicate, consists of a set, where the NP linked by *da* is one member of the set. In (4), the thematic coordination is manifested syntactically as a plural indirect object pronoun (identified by the marker *ma*) and an NP linked by *da*. It is clear from examples (2)-(4) that the overt syntactic elements of the thematic coordination do not form a surface syntactic constituent. In (2), the *da*-phrase is separated from the preverbal pronominal element by the verb and its subcategorized complements. In (3), the *da*-phrase is separated from the direct object pronoun by a temporal adjunct, and in (4), the *da*-phrase is obligatorily separated from the indirect object pronoun by the direct object, as demonstrated by the ungrammaticality of (4b).

Sentences like those in (2)-(4) are glossed here with a dual interpretation, where the thematic coordination has only two members. Since Hausa has no dual vs. plural contrast, sentences like those in (2)-(4) can also be interpreted compositionally, as they would have to be in a language like English. That is, taking (2) for example, *mun* is plural, so it can be interpreted as identifying a set of two or more participants, and adding *da* NP yields a total of three or more. In fact, (2) can have all three of the interpretations given in (5).

(5) i. Audu and I went to the market. (dual asymmetric coord.)
   ii. We and Audu went to the market. (plural asymmetric coord.)
   iii. We went to the market with Audu. (plural comitative)

While the compositional interpretations are probably universally available for constructions of this type in human languages (unless they have a dual/plural distinction), only a subset of languages allow the non-compositional dual interpretation like that in (5i). In the discussion that follows, I will concentrate on that crucial dual interpretation.

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2In Hausa, nouns are not case-marked. Pronouns are traditionally divided into several paradigms: the independent paradigm, the direct object paradigms, the indirect object paradigm, and various preverbal pronoun paradigms which vary with tense/aspect. The grammatical function terms subject, direct object, and indirect object as used in this paper will refer to NP’s (either noun-headed or pronoun-headed) for which the corresponding pronoun is from the preverbal paradigms, the direct object paradigm or the indirect object paradigm respectively. Thematic role terms used here will include the term “dative” to refer to animate goals and benefactives.
I argue in this paper that the *da*-phrase in such constructions behaves syntactically like an adjunct but semantically like part of one of the grammatical relations encoded pronominally on the preverbal pronoun, the verb, or the indirect object marker. I propose an analysis which has the effect of semantically combining the information of the *da*-phrase with the information of a plural pronominal argument within its clause, where the NP linked by *da* would then assume the thematic role of the pronominal argument and be interpreted as a member of the set specified by the pronominal argument.

In §2, I briefly present the relevant facts and generalizations about the syntactic and semantic properties of asymmetric expressions of thematic coordination in Hausa. In §3, I give reasons why an empty category analysis of this construction is problematic. In §4, I present an interpretive analysis along the lines outlined above. In §5, I deal with some apparent problems for the analysis presented in §4, and in §6, I propose a formal distinction between symmetric and asymmetric coordination.

2. The Structure of Asymmetric Coordination in Hausa

2.1. Symmetric coordinations, asymmetric coordinations, and comitatives. The first step is to distinguish asymmetric coordinations from symmetric coordinations and comitative structures.

2.1.1. Symmetric coordinations. Symmetric coordinations and comitatives are syntactically similar to asymmetric coordinations in Hausa, in that all involve the presence of the free morpheme *da* occurring before at least one NP. The following points are crucial in distinguishing symmetric coordination from asymmetric coordination:

i. Symmetric coordinations are optionally introduced by *da*, and each subsequent conjunct is obligatorily preceded by *da*, as shown in (6).³ There is no limit to the number of NP’s which can be part of a symmetric coordination.

(6) (da) Dauda da Audu (da Bala ...) sun je kasuwa & Dauda & Audu (& Bala ...) 3PL go market

‘Dauda and Audu (and Bala ...) went to the market’

³The morpheme *da* is not confined to these constructions. See §3 for some further examples of *da*-phrases. For an extensive account of expressions using *da* as a linker, see Kraft [1970]. *Da* in its linking sense will be glossed “&” in examples.
ii. When independent pronouns are conjoined in symmetric coordinations, there is no absolute person restriction on order within the coordination, as shown in (7).4

(7) a. da ni: da shi: mun je kasuwa & 1 & 3m 1PL go market
   ‘he and I went to the market’

b. da shi: da ni: mun je kasuwa & 3m & 1 1PL go market

iii. In the case of indirect object symmetric coordinations, it is acceptable for all members of the coordination to appear before the direct object, as shown in (8) and (9).

(8) Audu ya: kawo wa da Bala da Binta abinci
   Audu 3m took DM & Bala & Binta food
   ‘Audu took food to Bala and Binta’

(9) Audu ya: kawo wa da ni: da Binta abinci
   Audu 3m took DAT & 1 & Binta food
   ‘Audu gave food to me and Binta’

More generally, symmetric coordinations must be contiguous. This is demonstrated by the ungrammaticality of (10) and (11), where subject and direct object respectively are discontinuous.

(10) *da Audu sun je Kano da Bala
    & Audu 3PL go Kano & Bala

(11) *Audu ya: kawo wa da Bala abinci da Binta
    Audu 3m bring DAT & Bala food & Binta

2.1.2. Asymmetric coordinations. Asymmetric coordinations differ from symmetric coordinations in the following points:

4There seems to be a $1 < 2 < 3$ preference for conjoined pronouns. This preference is apparently less strong for a pronoun conjoined with a noun, so that in (7), (a) is preferred over (b), but in (7'), there is no corresponding preference.

(7') a. da ni: da Audu mun je kasuwa & 1 & Audu 1PL go market
    ‘Audu & I went to the market’
i. Asymmetric coordinations cannot occur where the plural pronoun is from the independent paradigm (glossed in the following examples as IND). This is illustrated in (12) for preverbal pronouns, parallel to (2) repeated here as (13). In (12), where there is an independent subject pronoun, there is no dual interpretation.

(12) *mu:* \textit{mun je kasuwa da Audu} ‘we and Audu went to the market’
1PL-IND 1PL go market & Audu

(13) \textit{mun je kasuwa da Audu (=2)} ‘Audu and I went to the market’
1PL go market & Audu

ii. This entails that the “coordinate” elements of asymmetric coordinations cannot be interchanged while still maintaining the crucial dual interpretation, as shown in (14), where in (14b), the plural pronominal element is after \textit{da} and a third person singular pronominal element occurs preverbally.

(14) a. \textit{mun je kasuwa da shi:} ‘he and I went to the market’ (dual)
1PL go market & 3m

b. \textit{ya: je kasuwa da mu:} ‘he went to the market with us’ (non-dual)
3m go market & 1PL

The sentences in (15) demonstrate the same point for asymmetric coordination with object function.

(15) a. \textit{sun gan mù da ita} ‘they saw me and her’ (dual)
3PL see 1PL & 3f+IND

b. \textit{sun gan tà da mu:} ‘they saw her and us’ (non-dual)
3PL see 3f & 1PL+IND

In (15a), the first person plural pronoun \textit{mù} is from the direct object paradigms, and the third person feminine singular pronoun \textit{ita} is from the independent paradigm. Here, the crucial dual interpretation is possible. In (15b), the third person feminine singular pronoun \textit{tà} is from the direct object paradigms, and the first person plural pronoun \textit{mu:} is from the independent paradigm. Here, the dual interpretation is not possible.

iii. From i it also follows that in asymmetric coordination, where no independent pronoun is present, the “linking morpheme” \textit{da} cannot occur before each constituent of the thematic coordination, as shown in (16-18). This is because, as
stated earlier, *da* takes as its object only pronouns from the independent paradigm. I will demonstrate in §4 that none of the plural pronouns crucial to the dual interpretation in asymmetric coordinations are syntactically independent.

(16) \[ *da \text{ mun je } kasuwa \text{ da Audu} \] 'Audu and I went to the market'
& 1PL go market & Audu

(17) Audu ya: gan *da mù jiya da Binta
Audu 3m see & 1PL yesterday & Binta
'Audu saw Binta and me yesterday'

(18) Audu ya: fad'a *da manà labari da Binta
Audu 3m tell & DAT+1PL story & Binta
'Audu told the story to Binta and me'

iv. Asymmetric coordinations are obligatorily discontinuous for NPs with dative thematic function when a theme-object is present, as shown in (4b). Examples (19) and (20) illustrate this further.

(19) a. Bala ya: kawo manà abinci da Musa
Bala 3m bring DAT-1PL food & Musa
'Bala brought food to me and Musa'

b. *Bala ya: kawo manà da Musa abinci

(20) a. an biya mù albashinmu da Musa
3impers pay 1PL salary+1POSS & Musa
'the salary was paid to me and Musa' (lit.: 'one payed the salary ...')

b. *an biya mù da Musa albashinmu

In (19), the verb *kawo* 'bring' has two NP objects. The one with dative thematic function occurs immediately following the verb and is marked with an indirect object marker (*wa* for NP, *ma* for pronouns in Standard Kano Hausa). In (20), the verb *biya* 'pay' is one of a very few verbs in Hausa which take two NP objects where the object with dative thematic function occurs immediately following the verb and is taken from the direct object paradigms. In examples of both types, the NP with

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5This obligatory discontinuity can be considered to be a result of the dependent nature of the object pronouns which immediately follow the verb in Hausa. See §4 for additional discussion of this point.
dative thematic function precedes the NP with theme function and in both cases, asymmetric coordination is necessarily discontinuous.

v. Asymmetric coordination is binary—*da* can only introduce one NP, as shown in (21)—cf. (6).

\[(21)\]  
mun je kasuwa *da* Bala & *da* Audu  
1PL+PAST go market & Bala & Audu

2.1.3. Comitatives. The structure in (2) can be the expression of an asymmetric coordination, where there is no independent subject noun phrase or pronoun and where the *da*-phrase is interpreted as one member of the set specified by the plural preverbal pronoun. Recall that the crucial interpretation is one where the set has only two members—that is, a dual interpretation, as given in (5i). Comitative structures overlap to a great extent with asymmetric coordinations, as shown by the interpretation in (5iii). However, they differ from the asymmetric coordination structure in several ways. First, they allow a singular preverbal pronoun, as in (22), or singular object pronoun, as in (23).

\[(22)\]  
(ni:) na je kasuwa da Audu  
1+IND 1 go market & Audu  
'I went to the market with Audu'

\[(23)\]  
Audu ya gan ni da Binta  
Audu 3m see I & Binta  
'Audu saw me (when I was) with Binta'

Second, comitative constructions are compatible with the presence of pronouns from the independent paradigm, as shown by the permissibility of the independent subject pronoun in (22) and by the plural comitative interpretation of (2) given in (5iii). Lastly, comitatives differ from coordinations in the control of adjunct modifiers, as will be shown in §2.3.

It is important to distinguish the comitative and coordinate structures and their corresponding interpretations, since these apparently have distinct entailments in at least some contexts. This is not so obvious for the examples given above, since many involve a motion verb, and "accompaniment" as well as thematic coordination would both require that the referent of the *da*-marked NP follow the same trajectory as that of the subject along the path specified by the motion verb. However, with non-motion verbs, the distinct entailments become clearer, as seen in examples (24) and (25).
Thematic Linking in Hausa Asymmetric Coordination

(24) sun mutu tare da abokinsa
   3PL die together & friend-3/POSS
   i) ‘he and his friend died’
   ii) ‘they died, and his (somebody else's) friend was with them and may or may not have died’

(25) Audu ya: mutu tare da abokinsa
    Audu 3m die together & friend-3/POSS
    ‘Audu died with his friend (who may or may not have died too)’

The asymmetric coordination interpretation (24i) of a sentence like (24) entails that everyone died, while the comitative interpretation (24ii) does not have this entailment. This is also shown in (25), which is only comitative because of the singular possessive pronoun. Note also in the interpretation (24i) that with the dual reading, the third singular possessive on aboki ‘friend’ can be coreferential with the other member of the thematic coordination, but it cannot be in (24ii). This is because in the latter interpretation, the subject is plural while the possessive is singular. While it is the case that the comitative construction may have the interpretation that everyone died, the point is that this is not a necessary interpretation, and the plausibility of the interpretation varies with the pragmatics of the situation.\footnote{There is actually more slippage here than I can account for easily, even though some cases, such as that in (24-25), seem quite clear. In a sentence that is pragmatically loaded against the participation of the da-marked NP, such as (i) and (ii), the comitative and asymmetric coordination interpretations are much closer: in this case, even with the crucial dual interpretation of (ii), first person and baby, speakers feel that this does not entail that the baby must be working:}

In this section, I have distinguished three very similar constructions: symmetric coordination, asymmetric coordination, and comitative. Only asymmetric coordination will have plural morphology but a permissible dual interpretation. In the rest of the paper, I will take the permissible occurrence of da before each conjunct as diagnostic of symmetric coordination and the permissible absence of a plural pronoun as diagnostic of a comitative.

2.2. Extraction structures. Evidence from extraction structures indicates that asymmetric coordinations apparently do not behave like syntactic coordinate

(i) ta: yi aiki a gona da jariri
    3f do work in field & baby
    ‘she worked in the fields with the baby’

(ii) mun yi aiki a gona da jariri
    1PL do work in field & baby
    ‘I worked in the fields with the baby’
structures of the English type, in that the sequence \([da \text{ NP}]\) can be displaced from its postverbal position in topic constructions and focus constructions\(^7\) and still maintain the crucial dual interpretation, as shown in the examples (26-30).\(^8\)

**Topic**

(26) \(da \text{ Bala (kam), mun je kasuwa}\)
\& Bala TOP 1PL go market
‘as for Bala, he and I went to the market’

(27) \(da \text{ Musa (kam), Audu ya: gan mù}\)
\& Musa TOP Audu 3m see 1PL
‘as for Musa, Audu saw me and him’

**Focus**

(28) \(da \text{ Bala (ne) muka je: kasuwa}\)
\& Bala FOC 1PL+rc\(^9\) go market
‘BALA and I went to the market’

(29) \(da \text{ Musa (ne) Audu ya gan mù}\)
\& Musa FOC Audu 3m+rc see 1PL
‘Audu saw me and MUSA’

---

\(^7\)See Junaidu [1987] for an analysis of topic and focus constructions in Hausa. Both of my primary consultants allowed forms with overt topic morphology and without resumptive pronouns, as these examples illustrate. It should be noted, however, that topic structures also occur with resumptive pronouns. These would not be analyzed as extraction structures, however, and would not be relevant to the issue addressed here. If there are speakers with more restrictive topic structures which require resumptive pronouns, however, the same point can be made taking the evidence from the focus structures.

\(^8\)This evidence would also indicate that what I am calling symmetric coordination in Hausa is not totally analogous to English coordination, since extraction is allowed there as well, as shown in (i) and (ii) below.

(i) \(da \text{ Binta ce, da Audu sun tafi}\)
\& Binta TOP & Audu 3PL go
‘as for Binta, she and Audu went’

(ii) \(da \text{ Musa ne da Audu za: sù zo}\)
\& Musa FOC & Audu FUT 3PL come
‘MUSA and Audu will come’

\(^9\)The abbreviation \(rc\) is used here for the “relative completive” aspect in Hausa.
Thematic Linking in Hausa Asymmetric Coordination

(30) *da Binta* (ne) *ya fa’d’a manà labari*  
& *Binta* TOP 3m+rc tell DAT+1PL story  
‘he told me and BINTA the story’

(31) *da wa Lami* ta ba kù *abinci?*  
& who Lami 3f+rc give 2PL food  
‘who (sg.) besides you (sg.) did Lami give food to?’  
(lit.: ‘and who did Lami give you food?’)

The dual interpretation is also possible in relative clauses as shown in (32). However, as can be seen from these examples, Hausa relative clauses are formed using a resumptive pronoun strategy, so these are not extraction structures.10

Relative Clause

(32) *matar da ya gan* mu *da ita tana:* zuwa Kano  
woman REL 3m+rc see 1PL & her 3f+PROG come Kano  
‘the woman that he saw me and her is coming to Kano’

2.3. Control. Even though there seems to be no syntactic evidence that asymmetric coordinations behave like a syntactic coordination, control evidence indicates that they do behave like a single grammatical relation, in that the *da*-phrase is interpreted as part of the set which can function as controller in obligatory control structures. For example, asymmetric coordinations can antecede reciprocal pronouns, as shown in (34), and function as controllers for adjunct modifiers, as shown in (36).

(33) *da Audu da Dauda* suna:* dukan juna*  
& Audu & Dauda 3PL+prg beat RECIP  
‘Audu and Dauda are beating each other’

10WH-questions may also have a form in which the WH-phrase is not extracted, in which case the syntactic structure and the possibility of dual interpretation is identical to that of a declarative sentence, as illustrated below.

(32′) *Lami* ta: ba *ku abinci da wa?:*  
Lami 3f give 2PL food & who  
‘Lami gave food to you and whom?’

(This sentence can be appropriate if the Questioner knows that only one other person besides the Addressee got the food.)
(34) **suna:** dukan juna da Audu
    3PL-prg beat  RECIP & Audu
    ‘he and Audu are beating each other’

In (33) is a symmetric coordination, *da Audu da Dauda*, which antecedes the reciprocal pronoun *juna*. In (34), the discontinuous asymmetric coordination *suna:*...*da Audu* likewise can antecede *juna*. *Da*-phrases in asymmetric coordinate structures can also function as part of the set which is a controller for adjunct modification, as shown in (36). Example (35) shows that the subject functions as controller of an adjunct modifier such as *agajiye* ‘tired’. Example (36) shows that the *da*-phrase of asymmetric coordination functions as part of the set of participants specified by the subject (as manifested by the preverbal plural pronoun).

(35) **Audu ya:** isa kasuwa a gajiye
    Audu 3PL arrive market at tiredness
    ‘Audu arrived at the market tired’

(36) a. **mun isa kasuwa a gajiye da Audu**
    1PL arrive market at tiredness & Audu
b. **mun isa kasuwa da Audu a gajiye**
    1PL arrive market & Audu at tiredness
    ‘Audu and I arrived at the market tired’

Example (36) also supports the adjunct analysis of the *da*-phrase in that the position of the *da*-phrase is free relative to the adjunct modifier, while postverbal adjunct modifiers generally follow objects, just as asymmetrically coordinate indirect objects follow direct objects as in (4). As noted in Section 2.1.3, adjunct modification distinguishes asymmetric coordinations from comitatives, in that in comitatives, the *da*-phrase is not included in the controller, as shown in (37),

(37) **na:** isa kasuwa da Audu a gajiye
    1 arrived market & Audu at tiredness
    ‘I arrived at the market tired (and) with Audu’

while (36) shows that the *da*-phrase is included in the controller for asymmetric coordinations. In summary, asymmetric coordinations in Hausa do not seem to behave like constituents but do seem to have the status of unitary grammatical relations.
3. An Empty Category Analysis

In this section, I argue that the da-phrase of asymmetric coordinations does not have the distribution or behavior of a noun phrase in Hausa but rather has the distribution and behavior of an adjunct phrase. On this basis, I conclude that an empty category analysis is not appropriate for these structures.

It might seem to be initially plausible to unify the analysis of symmetric and asymmetric coordinate structures in Hausa by assuming that the structure of the overt sequence [da NP] in asymmetric coordination is actually a symmetric coordination with the da-phrase conjoined to an empty category, as proposed for a similar but not identical structure in Irish by McCloskey and Hale [1984] and McCloskey [1986]. This “regularizes” asymmetric coordination by making it a subtype of symmetric coordination. This hypothetical structure is shown in (38).

(38) ... [NP e da NP] ...

Under an EC analysis, it would be this symmetric coordinate structure which would control the subject agreement of the preverbal pronoun or stand in apposition to the plural direct or indirect object pronoun. This analysis would be supported by the fact that symmetric coordination in Hausa uses the same linking morpheme da and by the assumption that Hausa is a pro-drop language, as argued in Tuller [1986]. This solution poses problems, however.

First, the distribution of the empty category in these constructions would not be the same as the distribution of other hypothesized empty categories in Hausa. It is true that Hausa finite clauses do not require independent nominal subjects, as shown in (39), where the pro-drop structure can still have a definite interpretation (typical of pro-drop languages). However, omission of objects is much more restricted, while no corresponding restrictions apply to object asymmetric coordination. Thus, only definite inanimate direct objects may be omitted, as shown in (40), while definite objects with dative thematic function cannot be omitted at all, as shown in (41) and (42).

(39) a. Audu ya: ga Bala
   Audu 3m see Bala
   'Audu saw Bala'

   b. ya: ga Bala
      3m see Bala
      'he saw Bala'
(40) *Audu ya: gani * 
Audu 3m see[-OBJ] 11
‘Audu saw it/*him’

(41) *Audu ya: kawo abinci * 
Audu 3M+PAST bring food
‘Audu brought food (to somebody/*to them)’

(42) *Audu ya: ba da abinci 12 * 
Audu 3M+PAST gave & food
‘Audu gave food (to somebody/*to them)’

On the other hand, asymmetric coordinate structures occur freely with direct object function only with an animate interpretation (preferably a human interpretation), as in (43),

(43) *Audu ya: gan sù da Binta * 
Audu 3m see 3PL & Binta
‘Audu saw them/*those things and Binta’

and they occur freely with objects of dative thematic function as shown in previous examples such as (19) and (20).

It might be argued that subject-linked da-phrases occur postverbally because of the correlation claimed in Rizzi [1982] between pro-drop and postverbal subject position, but Tuller [1986] observes that overt subjects in Hausa cannot appear postverbally, as shown in (44). 13

(44) a. *ya: je Audu kasuwa 
3m-PAST go Audu market

b. *ya: je ksuwa Audu 
3m-PAST go market Audu

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11 The verb *gani* ‘see’ is one which varies in form depending on the presence or absence of an overt postverbal direct object as well as on whether that object is pronominal or not. The form given here is the one used when no overt postverbal object is present.

12 In (42), *da* appears before the theme *abinci* ‘food’ because *ba da* ‘give away’ is the short form of *bayar da*, a grade 5 verb. See Newman [1983] for a discussion of the syntax and semantics of grade 5 verbs.

13 There is an “afterthought” construction in which subjects may appear at the end of a clause, but this is intonationally and functionally different from postverbal subjects in pro-drop languages.
A further distributional problem for an EC analysis occurs in the case of objects, in that nominal and pronominal objects with the same grammatical function are elsewhere in complementary distribution, and they may not cooccur in a single clause, as shown in (45) and (46). Example (45) shows that the nominal and pronominal objects cannot cooccur in the order nominal > pronominal (this is true regardless of whether the pronominal object appears in direct object form or independent form), and (46) shows that they likewise cannot occur in the reverse order.  

(45) \textit{ta: ga Dauda (*shi/*shi:)}
3f see Dauda (3m-obj/3m-IND)
'she saw Dauda'

(46) \textit{ta: gan shi (*Dauda)}
3f see him (*Dauda)
'she saw him'

Under the EC analysis, it would have to be stipulated that objects may be “doubled” only in the case of asymmetric coordinations. That is, a special provision would have to be made such that only if the nominal object contains a coordination with an EC, it may cooccur with the pronominal object, as in (47).

(47) \textit{ta: gan mu da Dauda}
3f-PAST see 1PL & Dauda
'she saw me and Dauda'

A last point regarding the lack of NP behavior for the da-phrase is that if the da-phrase is given the analysis in (38), we might expect extraction to be impossible (a Subjacency violation, in which a conjunct is moved outside both its NP and its clause), but as seen in (26–30), extraction is possible. However, although this behavior is interesting and calls for further investigation, it does not distinguish symmetric from asymmetric coordination in Hausa and thus cannot be taken to argue specifically against the EC analysis of asymmetrical coordination, but rather calls into question the structure of coordination in general in Hausa.

The position which the da-phrases of asymmetric coordination occupy, after the verb and its subcategorized nominal objects, is the typical position of adjunct

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14In (45), the verb form \textit{ga} indicates that the following object is nonpronominal, and in (46), the verb form \textit{gan} indicates that the following object is pronominal.
15Again, it is possible to have a nominal in apposition to the pronominal object in clause-final position, as in (46), but this is usually understood to be emphatic and to support an intonation break, while a sentence with asymmetric coordination does not have such a break.
phrases in Hausa, including *da*-phrases with other functions. A sample of such phrases is given in (48–50). Example (51) shows that this is also the typical position of a locative adjunct. (See Kraft [1970] for a detailed examination of the various uses of *da*.)

(48) *ya: soke shi da wuka*
    3m stab 3m da knife
    ‘he stabbed him with a knife’

(49) *Audu ya: je gonarsa da safe*
    Audu 3m go farm-his da morning
    ‘Audu went to his farm in the morning’

(50) *ya: koma gida da fushi*
    3m return home da anger
    ‘he returned home angrily’

(51) *ya: sa tasa a kan tebur*
    3m put dish on top table
    ‘he put the dish on the table’

In sum, the distributional evidence presented here causes problems for an EC analysis of asymmetric coordination in Hausa in two ways: first, such an analysis entails that the *da*-phrase of asymmetric coordination would have the distribution of an NP of the corresponding grammatical relation, but it does not; and second, such an analysis would not be able to account for the adjunct-like distribution which it does have.

There are other ways in which a regularized symmetric coordinate structure could be assumed for asymmetric coordination if multistratal syntactic analyses are considered. One of these involves a Relational Grammar-type raising analysis where plural pronoun information is registered on a dependent pronominal element even though a symmetric coordination present in one stratum is broken up by raising one conjunct (perhaps an EC or a pronoun subject to deletion) out of the coordination to take over the grammatical relation of the whole coordination in the next stratum, leaving the *da*-phrase as the “remainder”. This would account for the requirement that a plural dependent pronoun must be present (the result of plural agreement with the symmetric coordination) and for the adjunct-like behavior of the *da*-phrase (which after raising has no grammatical relation status). Such an analysis has been proposed in Aissen [1988] for Tzotzil, which has structures similar but not identical to asymmetric coordinate structures in Hausa. Another alternative would be to use a Government-Binding-type movement analysis,
moving the *da*-phrase out of a grammatical relation position (to account for its adjunct position) while leaving a trace (to account for its theta-role assignment). It is not my intention in this paper to pursue a comparison between these multistratal alternatives and the monostral one proposed in §3. (However, I argue in Schwartz [1987a] that Aissen's raising analysis is problematic for the analysis of structures in Chilean Spanish which are similar to Hausa asymmetric coordination.)

4. An Interpretive Analysis

The analysis to be presented here is a monostral analysis in which the structure of the sequence [*da NP*] will be assumed to be that of a *da*-phrase, i.e. this sequence is just like any other *da*-phrase, accounting for its syntactic distribution. To account for the dual interpretation, this phrase will then be “thematically absorbed” by a plural pronoun, where this pronoun can be manifested as either an object pronoun in the case of sentences like (3) and (4) or as the subject marking on the pronominal element of the tense/aspect complex in the case of sentences like (2). The pronouns in these positions will be taken to be dependent arguments, and it is these which will bear grammatical relations in the clause and receive thematic roles from the verb. “Dependent argument”, as used here, refers to an element with pronominal features which is not syntactically independent and which has argument status.

4.1. Evidence that the plural pronouns of asymmetric coordinations are dependent

I will first establish that the pronominal elements to which the *da*-phrase is linked in the thematic coordination interpretation are not syntactically independent. Evidence for this comes from the non-separability of the pronominal element and its “host”.

The pronominal elements which cross-reference subject nominals occur in preverbal position and are closely fused with aspect markers. Aspect is distinguished by vowel length and tone as well as separate clitics in some cases. A sample of these pronominal elements is given in (52) for first person forms.

(52) Preverbal (subject) pronouns 1 1PL

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>1PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completive</td>
<td>ná:</td>
<td>mún</td>
</tr>
<tr>
<td>Subjunctive</td>
<td>i n</td>
<td>mù</td>
</tr>
<tr>
<td>Continuative</td>
<td>ínà:</td>
<td>múnà:</td>
</tr>
<tr>
<td>Future I</td>
<td>zán</td>
<td>zá:mù</td>
</tr>
<tr>
<td>Future II</td>
<td>ná:</td>
<td>mâ:</td>
</tr>
</tbody>
</table>

Evidence of phonological dependence is not presented here. Such evidence is found in Newman [1979], where it is further claimed that the low tone direct object paradigm is more bound to the verb than the high tone paradigm, based on tonal evidence.
Relative Completive  
ná  múkà
Relative Continuative  
nákè:  mükè:
Habitual  
nákàn  mükàn

There is no other morpheme which can intervene between the pronominal element and the aspect marker, even in those cases where these are separable phonologically, as in the relative continuative or habitual aspects. Tuller [1986] analyzes these preverbal elements consisting of pronominal and aspect features as INFL. In what follows, I will follow Sani [1987] and Tuller [1986] in assuming that the INFL plus VP form a syntactic unit which I will assume is I'.

One piece of evidence that object pronouns are dependent comes from the "modal particles". These words can apparently occur just about anywhere in a clause except word-internally. For example, they can separate the verb from its nominal direct object even though other constituents cannot, as shown in (53). However, they cannot separate the verb from its dependent pronominal direct object, as shown in (54).

(53) ya: harbi dai Binta  ‘indeed, he shot Binta’
    3m shot  PRT  Binta

(54) a. ya: harbi (*dai) ta  ‘indeed, he shot her’
    3m shot  (PRT) 3f

    b. ya: harbi dai ita  idem
    3m shot  PRT 3f-IND

Although it is possible to express the meaning of a sentence like (54) by using the independent pronoun rather than the direct object form, as shown in (54b), the point is that the object form of the pronoun cannot be separated from the verb by any other morpheme. The non-occurrence of the modal particles between verb and object pronoun supports an analysis in which the direct object form of the pronoun is syntactically dependent on the verb.

Another piece of evidence that pronominal direct objects are more closely bound to the verb than nominal objects, brought to my attention by Paul Newman, has to do with the placement of the discontinuous negation marker ba...ba. In sentential negation in Standard Hausa, the first negative element appears before the preverbal pronoun and the last appears at the end of the clause. However, many speakers also allow the second negative element to appear earlier in the verb phrase. If the pronominal direct object were bound to the verb but the nominal direct object were not, we might expect that the second negative element could appear between the verb and its nominal direct object, as shown in (55), but that it would appear only
after the verb and its pronominal direct object, as shown in (56). This is exactly what occurs.

(55) bai kama ba doki 'he didn't catch the horse'
    NEG+3m catch NEG horse

(56) a. bai kama shi ba 'he didn't catch it'
    NEG+3m catch 3m NEG

b. *bai kama ba shi

As noted earlier, indirect objects immediately follow the verb and are preceded by a marker ma for pronouns and wa for nouns. The pronominal forms used for indirect object are the same as the bound possessive pronouns except for the first person singular and plural forms. They are written as a single word with ma and are inseparable from it, unlike the nominal indirect objects, which may appear in topic position with wa occurring postverbally, as shown in (57–62). Example (58) shows that wa cannot be separated from the verb but its nominal object can, as shown in (59). The parallel examples with pronominal indirect objects in (61) and (62) show that neither ma nor its pronominal object can appear separated from the verb.

(57) Audu ya: kawo wa Dauda abinci
    Audu 3m bring IOM Dauda food
    'Audu brought food to Dauda'

(58) *wa Dauda ne Audu ya kawo abinci
    IOM Dauda FOC Audu 3m+rc bring food

(59) Dauda ne Audu ya kawo wa abinci
    Dauda FOC Audu 3m+rc bring IOM food
    'it was Dauda that Audu brought food to'

17 These different forms most likely reflect distinct historical origins of these markers. See Newman [1982] for one interpretation of their origins.

18 Paul Newman has pointed out to me that in the Guddiri dialect, wa + N appears to the right of the direct object, i.e. is separable from the verb, while ma + pronoun appears immediately after the verb as in Standard Hausa. This further supports the dependent analysis of the object pronouns in this dialect.

(60) *Bala ya: fa'da masa labari
Bala 3m tell IOM+3m story
‘Bala told him the story’

(61) *masa ne Bala ya fa'da labari
IOM+3m FOC Bala 3m+rc tell news

(62) *sa ne Bala ya fa'da ma labari
3(IOM)

There is another form of (62) which is grammatical. In this form, the independent pronoun is used in place of the bound direct object pronoun, and the pronominal indirect object marker is replaced with the nominal direct object marker, as shown in (63).

(63) shi: ne Bala ya fa'da wa labari
3m-IND FOC Bala 3m+rc tell DAT story
‘it was him that Bala told the story to’

However, there is no corresponding non-focussed version of this sentence with the nominal indirect object marker and the free pronoun, as shown by the un-grammaticality of (64).

(64) *Bala ya: fa'da wa shi: labari
Bala 3m tell DAT 3m-IND story

Whatever the analysis of structures like (63) may be, there are no grammatical structures in which the pronominal indirect object marker is separated from the verb and none in which the pronominal indirect object is separated from its indirect object marker.

Tuller [1984] also shows that the nominal indirect object but not the pronominal indirect object can be separated from the verb and indirect object marker by a modal particle, as shown in (65-66), adapted from Tuller [1984:449].

(65) bai fa'da wa fa matarsa ba
NEG+3m+PAST speak IOM PRT woman+3POSS NEG
‘indeed, he didn't speak to his wife’

(66) bai fa'da ma *fa ta ba
NEG+3m speak DAT PRT 3f NEG
‘indeed, he didn't speak to her’
It remains to be demonstrated that pronoun forms from the independent paradigm are separable from tense/aspect, verb and indirect object marker. This evidence is given in (68-72), using evidence from extraction structures and modal particles.\textsuperscript{19}

\[(68)\] \textit{ita ce ta je kasuwa} \\
3f+IND FOC 3f+rc go market \\
‘it was she who went to the market’

\[(69)\] \textit{ita fa ta: je kasuwa} \\
3f+IND PRT 3f go market \\
‘indeed, she went to the market’

\[(70)\] \textit{su: ne ya kawo wa Binta} \\
3PL FOC 3m+rc bring IOM Binta \\
‘it was them that he brought to Binta’

\[(71)\] \textit{ya: kawo wa Binta fa su:} \\
3m bring IOM Binta PRT 3PL+IND \\
‘indeed, he brought them to Binta’

\[(72)\] \textit{ita ce ya kawo wa abinci} \\
3f+IND FOC 3m+rc bring IOM food \\
‘it was her that he brought food’

To summarize, there is evidence from the non-interruptability of pronoun-host sequences that pronouns from the preverbal paradigms and from both object paradigms are syntactically dependent. In the case of the direct object pronouns, it would seem plausible to assume that they are verbal clitics, and I will do so. I will also assume that the unit formed by the indirect object marker \textit{ma} and the dependent possessive pronouns which mark indirect object is syntactically dependent on the verb. Lastly, following Tuller [1986], I will assume that the dependent pronominal

\textsuperscript{19}The modal particle placement parallel to (72) is not grammatical:

(i) *\textit{ya: kawo wa fa ita abinci} \\
I assume that the explanation for this is the same as that for the ungrammaticality of (64).
element corresponding to subject is part of INFL, an independent inflectional element containing tense/aspect features as well as the pronominal subject argument features. Representing the pronominal elements now as ARG, for argument, I am assuming a structure like that in (73), ignoring for the moment nominal subject position.

(73) \[i[\text{INFL TENSE/ASPECT, ARG}] [v[v V, (ARG)] ... da NP]]

INFL and V can each take only one dependent ARG. ARG is optional in V, allowing thereby intransitive as well as transitive verbs. When an indirect object is present and adjacent to the verb, the direct object pronoun is from the independent paradigm and is not a dependent argument.

4.2. The structural configuration of asymmetric coordination. In Schwartz [1987b] I argue that cross-linguistically, the linking morphemes in asymmetric coordinations, such as Hausa da, are preposition-like in that they are case-assigners which function to sanction the presence of an NP in the syntactic structure but that they are unlike true or semantic prepositions in that they do not assign a thematic role to their objects. Rather, the thematic role of their objects must be determined by the thematic roles associated with the verb, the nature of the NP object, and the pragmatics of the event. For example, da wuka ‘with a knife’ will most likely have an instrumental role because of the referent of the word wuka ‘knife’ and the presence of a verb which is compatible with a knife having an instrumental role in the event expressed by its clause; da safe ‘in the morning’ will most likely be interpreted as a temporal expression because of the nature of the word safe ‘morning’ and the compatibility of such an interpretation with the event expressed in the clause; da fushi ‘angrily’ will most likely be interpreted as a manner expression because of the nature of the word fushi ‘anger’ and the expression of a compatible event in the clause; da Binta ‘with Binta’ will most likely be interpreted as a comitative or as a member of an asymmetric coordination (or both interpretations will be possible) depending on the potential roles that the participant referred to by the name Binta can play in the event expressed in the clause and on the presence or absence of a plural pronoun in the appropriate structural configuration.

It is now possible to identify the appropriate structural configuration for the interpretation of a da-phrase as a member of a thematic coordination corresponding to a given grammatical function. A preliminary version of the interpretive rule is given in (74).

(74) Given the configuration \[x'[x ... ARG[PL]], ... da NP]\, optionally absorb the features of NP into the feature set specified in ARG[PL].
The spirit of what (74) expresses is that a da-phrase can be semantically combined with, or incorporated into, a plural argument internal to the head of the phrase to which the da-phrase belongs. Since in the structure given in (73) there are potentially two dependent ARGs, both dependent on the heads of phrases to which the da-phrase belongs, this should entail that if both are present, i.e. if there is an object pronoun as well as the preverbal pronoun present in the clause, the da-phrase should be able to be incorporated into either of them.20 This is correct: when that configuration occurs, either interpretation is possible. Thus, sentences in which both the subject and object are ARGs, the dual thematic coordination interpretation may be with either, as shown in (75) and (76).

(75) sun gan mù da Binta  
3PL+PAST see 1PL & Binta  
i. ‘they saw me and Binta’  
ii. ‘he and Binta saw us’

(76) sun fada mana labari da Binta  
3PL+PAST tell to+1PL story & Binta  
i. ‘they told the story to me and Binta’  
ii. ‘he and Binta told the story to us’

Using the INFL Phrase analysis of the clause in Hausa, I will assume here that the independent subject pronouns of Hausa are in SPEC position of IP (sister to I’), as shown in (77).21

(77) [IP pro-IND [I’ INFL [V, V ... ] ] ]

20Note that this entailment is correct no matter whether the da-NP is in VP or not when it is absorbed into INFL. That is, this analysis is neutral between placing the da-NP which is part of a subject asymmetric coordination in adjunct position, as in (i), or within the VP, as in (ii).

(i) [I’ ... [VP ... ] ... da NP ... ]

(ii) [I’ ... [VP ... da NP ] ... ]

21The independent pronouns functioning as subject can be demonstrated to not be in Focus position, since their presence doesn't automatically require the relative verb forms. It remains to be demonstrated that they are not necessarily in Topic position. The analysis presented here crucially depends on the assumption that the independent pronouns in these structures are subjects, and it would have to be changed if they were demonstrated not to be subjects. An alternative analysis, suggested to me by Russ Schuh and based on the Topic assumption, is that the sequence [da NP] cannot unify with a NP in a non-argument position. This would depend on a different definition of the notion “argument position” than that used in a standard GB analysis, since in my analysis dependent arguments would have to count as being in an “argument position”, given that I am not assuming here an incorporation, i.e. movement, analysis as in Baker [1988].
Under this assumption, the statement in (74) also entails that asymmetric coordinations should not be incorporated directly into the independent pronouns in Hausa. This is because the independent pronouns do not satisfy the structural condition for incorporation: they are not dependent on the head of a projection of which da-NP is a member. This entailment is also correct. Consider (78). Here, the independent pronoun appears and the crucial dual interpretation is not possible. Rather, in such cases there is only a compositional interpretation, with at least three members in the set.

(78) *mu: mun je kasuwa da shi:*  
1PL-IND 1PL go market & 3m  
‘we and he went to the market/we went to the market with him’

Some confirmation for the interpretive rule proposed in (74) comes from the contrast between (78) and (79).

(79) *mu: da shi: mun je kasuwa*  
1PL-IND & 3-IND 1PL go market  
i. ‘he and I went to the market’  
ii. ‘we and he went to the market’

In (79), as opposed to (78), the right structural configuration obtains for feature absorption and therefore for the dual interpretation if it is assumed that *mu: da shi:* is analyzed as in (80), where the independent pronoun is the head of an N-projection including the da-phrase, thus allowing absorption.

(80) $[\mathrm{NP}[\mathrm{N} \mathrm{ARG}, X] \ da \ NP]$  
The analysis of $[\mathrm{pro-IND} \ da \ NP]$ as an NP constituent is justified on the basis of distributional evidence: such sequences occur in NP positions, e.g. in subject position, as heads of relative clauses, etc.\(^{22}\)

However, structures like (79) (and corresponding structures with object pronouns) were not consistently permitted to have a dual interpretation by my Hausa consultants.\(^{23}\) Both accepted the dual interpretation for some structures of this type.

\(^{22}\)They can also be referred to anaphorically, e.g. by relative pronouns. However, the anaphoric evidence cannot be used to justify syntactic constituent status in the analysis presented here, because anaphoric interpretation is assumed to be a semantic relation rather than a syntactic one. Recall that the rule of thematic absorption would provide the appropriate semantics for this relation.

\(^{23}\)The lack of consistency in this case is striking in light of the very clear and consistent judgements given by both consultants on all other structures investigated. In fact, in all of the languages for
but rejected it for others, even with verbs, tense/aspect and participants held constant. Dr. Ismail tended to accept the dual interpretation more than he rejected it, while Dr. Sani tended to reject it more than he accepted it. This variation deserves a fuller investigation, but I would tentatively suggest at this point that a plausible hypothesis to account for variation here may have to do with the fact that the plural pronoun in this structure is from the independent paradigm and is itself the head of the construction rather than a syntactic dependent of a functionally distinct head. It is thus not structurally identical to the other cases where the dual interpretation is consistently possible. It may be that the similarities and differences between the structure in (80) and the typical asymmetric coordination structures represented in (73) are a source of variation in judgement about whether the dual interpretation is possible for structures like (80).

The analysis presented here gives a single, unified account of the dual interpretation of asymmetric coordinations in Hausa by identifying a dependent plural argument into which a da-phrase can be incorporated semantically. This accounts for its behavior as a controller in functional control structures, under the assumption that control is a semantic relation. Since the da-phrase is not syntactically represented as part of a coordination, its syntactic distribution (that is, the distribution of an adjunct da-phrase) is also compatible with this analysis.

5. Remaining Issues

The analysis presented thus far raises two serious questions which need to be addressed. First, as stated, it accounts for why the da-phrase doesn't combine directly with the independent pronominal argument mu: in a sentence like (78), because mu: isn't an argument dependent on the head of a projection (in the sense of dependency used here) of which da-NP is a member, but it doesn't yet account for why a coreference relation between mu: and the da-phrase cannot be established indirectly on the basis of the fact that in other cases, overt subjects are interpreted as being coreferential with the ARG which is in INFL, as shown in (81).

(81) Audu ya: je kasuwa
Audu 3m go market
‘Audu went to the market’

That is, given the schema in (82), it doesn't account for why the NP of the da-phrase cannot be incorporated into ARG₁, which in turn is coindexed with or otherwise interpreted as corefential to pro-IND₁. 

which I have investigated similar constructions, judgements in general are very clear and consistent.
Second, it also does not yet account for the dual thematic coordination interpretation of a sentence like (83) and other corresponding examples with other grammatical relations, such as those in (26-30).

(83) [da Audu kam [I' mun je kasuwa] ]
& Audu TOP 1PL go market
‘as for Audu, he and I went to the market’
(lit: with Audu, we went to the market)

Here, the condition given in (74) is not satisfied, because the da-phrase is not in the projection containing the relevant plural ARG, and yet the dual interpretation is possible. The two problems which have to be resolved, then, are why a dual interpretation is possible when the da-phrase is outside of its clause and why it is not possible when the da-phrase is in its clause but an overt subject pronoun is present.

5.1. Thematic absorption as unification. I turn now to the first problem, how to avoid the dual interpretation of a clause containing a da-phrase when that clause has an overt independent pronoun which shares its thematic and grammatical relation with the da-NP. To deal with this problem, an account of Subject-INFL cross-reference must be provided, as well as a more explicit account of what it means to say that the features of the NP in the da-phrase are absorbed into the features of a plural argument dependent on the head of a projection.

5.1.1. Pronoun features. Both of the phenomena to be investigated in this section refer to pronominal information, so the first step is to specify how I assume this information to be structured. I will assume that Hausa pronouns have the feature composition given in (84), illustrated with examples from the independent paradigm.
As can be seen in (84), I assume that expressions which are first person plural signify sets of individuals one of whom is Speaker and one (or more) of whom are not. Likewise, I assume that expressions which are second person plural signify sets of individuals one of whom is Addressee and the other (or others) of whom is not Speaker (it is left open as to whether the other members of the set specified by second person plural are Addressees or not). Finally, I assume that expressions which are third person plural signify sets of individuals of which all members are neither Speaker nor Addressee.

5.1.2. Thematic absorption. In order for the NP of the da-phrase to combine with ARG and yield a dual interpretation, the absorption operation will replace the feature specification \[(m)^*\] (where n = 1, 2, or 3 and m = ( ~ 1)* or (3)*) with the more specific features and feature values of the NP—represented here \[F_{NP}\], as shown in (85)—yielding \*[n ~ \[F_{NP}\]] as the semantic interpretation of ARG. In (14), repeated here as (86a), the product of the absorption operation is shown in (86b).

(84) Hausa pronominal features

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>first person</td>
<td>1</td>
<td>ni:</td>
</tr>
<tr>
<td></td>
<td>1 ~ ( ~ 1)*</td>
<td>mu:</td>
</tr>
<tr>
<td>second person</td>
<td>2, MASC</td>
<td>kai</td>
</tr>
<tr>
<td></td>
<td>2, FEM</td>
<td>ke:</td>
</tr>
<tr>
<td></td>
<td>2 ~ ( ~ 1)*</td>
<td>ku:</td>
</tr>
<tr>
<td>third person</td>
<td>3, MASC</td>
<td>shi:</td>
</tr>
<tr>
<td></td>
<td>3, FEM</td>
<td>ita</td>
</tr>
<tr>
<td></td>
<td>3 ~ ( ~ 1)*</td>
<td>su:</td>
</tr>
</tbody>
</table>

The process which I have termed “absorption” is more formally characterized as “unification” in the sense of Shieber [1986]. Unification combines feature values
from two sets and selects the most specific feature value for any feature shared by
the sets (see Shieber [1986] and Pollard and Sag [1987] for a more formal charac-
terization of unification). The operation of unification fails if the sets contain
contradictory feature values. The feature values for any NP other than first person
are an extension of the feature value “non-first person”, allowing for a unification
in which “non-first person” is replaced by the more specific feature values
corresponding to the NP of the da-phrase. The operation of thematic absorption
given in (74) can now be stated as in (87).

(87) Thematic absorption

Given the configuration \([X \cdot [X \ldots \text{ARG}[n \land (m)\>] \ldots \ldots \text{da NP}]\), unify the
features of NP and ARG.

5.1.3. Subject-INFL agreement. I assume that it is feature value compati-
bility24 which characterizes well-formed agreement, so that in a sentence like (88),
INFL may be said to agree with the subject pronoun in that both carry the relevant
agreement features, and these feature values are compatible.

(88) \text{mu: mun je Kano} \quad \text{‘we went to Kano’}
\text{1PL 1PL go Kano}

This can also be considered to be an operation of unification, which unifies the
features of an independent subject NP and those of the pronominal features in
INFL. The unification fails, and the agreement relation is not satisfied, if the in-
dependent subject NP and ARG in INFL contain contradictory feature values, e.g.
if the subject were \text{yarinya} ‘girl’ which has the gender feature value FEMININE
and INFL were \text{ya:} ‘he’ which has the gender feature value MASCULINE. Subject-
INFL agreement can be stated as in (89).

(89) Subject-INFL agreement

Given the configuration \([\text{IP NP [I [X, [FPRO] \ldots ]]}, \text{unify NP and [FPRO]}\].

Although thematic absorption of the da-phrase in asymmetric coordination and
subject-INFL agreement are both operations which unify features of an NP and an
ARG into a single set, they are not identical operations. Thematic absorption is
optional, requires that ARG have the feature value schema \([n \land (m)\>]\), and is not
limited to a single grammatical relation but rather can occur with any grammatical

\hspace{1cm} 24\text{See Barlow [1988] for a discussion of why compatibility rather than matching of features is}
\hspace{1cm} \text{preferable.}
Thematic Linking in Hausa Asymmetric Coordination

relation expressible as a dependent ARG, i.e. subject, direct object, indirect object. Subject-INFL agreement is obligatory, is not limited in the feature value for NUMBER, but can apply only to pronominal features in INFL. It remains now to ensure that both unifications cannot apply to a structure like (78), repeated here as (90).

(90) mu: mun je kasuwa da shi:
1PL-IND 1PL go market & 3m
‘we and he went to the market/we went to the market with him’

Given the operations as they are outlined above, they must be mutually exclusive because the pronominal features in INFL are functionally distinct in the two structures. I have assumed in the discussion so far that these pronominal features, as relevant to Thematic Absorption, function semantically as an argument of the predicate of the clause in which they appear (this was part of the definition of “dependent argument”). However, in the presence of an overt subject, I would claim that they do not have argument status; rather, there is evidence that in Hausa, like in Chichewa as analyzed in Bresnan and Mchombo [1987], object pronominal features consistently function as dependent arguments while subject pronominal features in INFL are dependent arguments when an independent subject NP is absent but agreement features when an independent subject is present. One piece of evidence to support this analysis is the asymmetry in the distribution of independent NPs between subject and object. Dependent object arguments never cooccur with coreferent independent NP objects in simple sentences, while independent subject NPs and subject pronominal features can always cooccur, as illustrated in (91) and (92).25

(91) a. ta: je kasuwa
3f go market

b. *Binta je kasuwa
Binta go market

c. Binta ta: je kasuwa
Binta 3f go market

'she went to the market'

'Binta went to the market'

25They need not cooccur in all aspects, however, as illustrated in (i) and (ii) [Abraham 1959:9].

(i) Musa yana zuwa
Musa 3m+PROG come

'Musa is coming'

(ii) Musa na zuwa
Musa PROG come

'Musa is coming'
Thus, the reason why there is no dual interpretation in (90) is because Thematic Absorption cannot apply since the pronominal features in INFL are agreement features rather than a dependent argument, and Thematic Absorption as stated in (87) applies only to ARG.

The question of how comitatives marked by *da* fit into the picture remains to be answered. I won't address that issue here, but I'd like to state briefly the direction that I intend to take. I will assume that the conceptual link between asymmetric coordinations and comitatives in Hausa and crosslinguistically is that comitative constructions, as well as other uses of linking elements like Hausa *da*, link an adjunct argument to a clause, and the role of this adjunct argument is pragmatically determined, while *da* in its function in asymmetric coordination links an NP to an argument position of the predicate rather than to the clause.

**5.2. Thematic linking of displaced NP's.** I will now turn to an examination of the problem of why a dual interpretation is possible when the sequence *[da-NP]* is outside of its clause. Current syntactic frameworks all assume that displaced topic or focus constituents such as those in (83) and (26-30), i.e. NP's in non-argument positions, will be linked to an argument position in the argument structure of a clause. This is done so that each noun phrase have an associated thematic relation, the assumption being that thematic relations are determined by the argument structure of clauses, requiring that all NP's be somehow linked to argument positions. However, I will not assume here that any syntactic mechanism is necessary to achieve this purpose. Rather, I suggest that the interpretive rule in (93) will suffice.

(93) An NP marked by *da* in a non-argument position is interpreted as a member of any pragmatically compatible clause.

This is possibly too restrictive given the variable judgements regarding NP-internal *da*-phrases, but at present I will leave it in this form. Thus, a *da*-phrase in an extraction structure will be linked semantically/pragmatically to a compatible clause (a clause in which a thematic role is available for the argument of the *da*-phrase). This condition may be satisfied in several ways: (i) *da*-NP may be analyzed by (87) as the *da*-NP relevant for unification when a head-dependent plural
ARG is present in the “candidate’ clause; or (ii) it may be pragmatically interpreted as an adjunct in any compatible “candidate” clause. An implication of this is that a da-NP in a non-argument position which is interpreted by (93) as a member of a clause with more than one dependent plural ARG should be ambiguous, as is the case for da-NP’s within a clause with more than one dependent plural ARG (see (75) and (76)). This implication is correct, as shown in (94) and (95).

(94) da Binta ne suka gan mù
    & Binta FOC 3PL-rp see 1PL
   i. ‘he and BINTA saw us’
   ii. ‘they saw me and BINTA’

(95) da Binta kam sun gan mù
    & Binta TOP 3PL see 1PL
   i. ‘as for Bintai, he and shei saw us’
   ii. ‘as for Bintai, they saw me and heri’

6. Symmetric Coordination and Asymmetric Coordination

We may now assume that da has a lexical specification incorporating the analysis proposed here. It is specified as being a unification operator under the condition that the head of a projection to which it is syntactically linked contain a plural ARG. The da-phrase thus shares in the thematic role of the plural ARG and functions as part of this argument in control structures such as reciprocal constructions and those with adjunct modifiers. It is also true, however, that in symmetric coordination, the da-phrase shares the thematic role of another NP in an argument position. The difference here is that the semantics of these constructions are compositional. I therefore propose that for these constructions, da is an operator of set union, not unification. In set union, the members specified in both sets are simply added together with no requirement of feature compatibility, so that, for example, in a phrase like that in (96a), the set union would be as in (96b).

(96) a. (da) ni: (...) da shi:

   b. {{1} \land {3}}

Similarly, the set union of (97a) would be that in (97b),
which is the ordinary compositional plural interpretation which Hausa and English both share for these constructions. What I would like to suggest, then, is that all languages with symmetric NP constituent coordination have NP linkers which are set union operators. On the other hand, a subset of languages, like Hausa, Russian, Chilean Spanish, and others, have NP linkers which are set unification operators. In fact, in Hausa, a single morpheme da serves both purposes. It isn't surprising that a single morpheme should have the three functions of comitativity, set union, and set unification. Conceptually, all involve addition: comitativity adds an argument to a clause where no argument is otherwise required by the argument structure of the predicate (though the predicate must be able to accommodate the added argument in a pragmatic sense); symmetric coordination (set union) adds individuals together to form a set in an argument position; and asymmetric coordination (set unification) adds a further specification to the information structure of the set of participants occupying an argument position.

This proposal is made independently in Bond [1988]. However, in other languages like Russian and Chilean Spanish, these are distinct and correspond to 'and' and 'with' constructions, where 'and' is an operator of union while 'with' is an operator of unification (as well as comitativity).
REFERENCES


In this paper we argue that to a great extent noun class agreement in Swahili is based on inflectional features. Yet where inflectional features are not present, a derivational feature of inherent noun class controls agreement. Swahili, then, is seen as having a dual noun class system in which agreement is controlled by a hierarchical set of features ranging from inflectional to derivational. The evidence from Swahili indicates that Anderson's [1982] claim that inflectional morphology alone is relevant to syntax may be too strong and supports a weaker version admitting some interaction of derivational morphology with syntax.

1. Introduction

Anderson [1982] proposed a principled distinction between inflectional and derivational morphology. His claim is that inflectional morphology alone is relevant to syntax. In this paper, we test this claim against facts provided by Swahili noun class affiliation and patterns of agreement. We provide evidence for a dual noun class system in Swahili and a hierarchical set of features that determine agreement. In face of this evidence, we find that Anderson's criterion is too strong. We do, however, support a weaker version of it that allows for some interaction between syntax and derivational morphology.

In the first section, we provide arguments for a bifurcated noun class system composed of nouns that affiliate with noun classes inherently and those which do so non-inherently. We then examine the relevance of noun class to agreement. We conclude that agreement is based on inflectional features. When these features are

* An earlier version of this paper was presented at the 1986 African Linguistics Conference at UQAM. We are grateful to those present for their comments. In particular, we acknowledge Ellen Eggers, Lioba Moshi, Sam Mchombo, and Derek Nurse for their help. Any errors, of course, are our own.
not present, agreement is carried out based on the derivational feature of inherent noun class.

2. The Swahili Noun Class System

Traditional Swahili grammarians like Ashton [1947] depict the noun class system in Swahili as composed of approximately sixteen individual classes. Membership in a particular noun class is often indicated by the presence of a prefix characteristic of that class.

(1)  
m -tu  vi -tunguu  u -zuri  ku -fanya  
c.1  c.8  c.14  c.15  
person  onions  goodness  to do, doing  

In the examples above, the prefixes are all indicative of the class to which these nouns belong. The word mtu is like other words in its class in that it refers to humans, and it takes the prefix m-.

(2)  
m -swahili  m -kurugenzi  m -toto  m -gonjwa  
c.1  c.1  c.1  c.1  
Swahili  person  boss  child  sick person  

Nouns in Swahili will also have their noun classes reflected on the modifying elements in the sentence. There are two types of agreement prefixes realized on these modifiers. An adjectival prefix occurs on attributive adjectives and is identical to the characteristic prefix of the noun class. A pronominal prefix is identical to the noun class prefix in only half of the sixteen noun classes, and it is realized on possessive particles and pronouns, demonstrative pronouns, and verbs. A full table can be found in the Appendix.

(3)  
m -ti  mi  -kubwa  hi  -i  y  -a  mwitu  
c.4  nom  a.a, c.4  adj  dem,prox  p.a.,c.4  p.a.,c.4  poss  
trees  big  these  of  forest  

i  -li  -anguka  jana  
p.a.,c.4  tense,past  V  
fall  yesterday  

‘these big trees of the forest fell yesterday’

In this example, “a.a.” stands for adjectival agreement and “p.a.” stands for pronominal agreement. Class 4 is one of the noun classes where the adjectival prefix and the pronominal prefix are different.
Most pedagogical texts and some theoretical works assume that agreement in Swahili is based upon the noun class of the head noun (cf., for example, Gregersen [1967]). There are various exceptions to this noun class based agreement. We will explore these exceptions below.

Diachronically, this noun class system is believed to have been semantically defined. In the synchronic grammar, this semantic cohesion is no longer evident. There are, however, some semantic sub-groups within each noun class (cf. Ashton [1947]). Zawawi [1979] rejects the traditional criteria of noun class and instead proposes a system based on a more limited set of semantically-defined "nominal indicators". These indicators correspond to a subset of the traditional prefixes. Below is her proposed system.

(4) Form | Function
---|---
\( m- \) | Indicates substance of life singular.
\( u- \) | Indicates substance of abstractness and singularity.
\( \emptyset, n- \) | Substance is not specified, a catch-all.
\( ki- \) | Indicates comparison of size or manner; singular may refer to person, animal, thing, or place.
\( ji- \) | Indicates intensification in substance or action; it is unmarked and therefore co-occurs with any nominal.
\( ba- \) | Indicates intensification; a marked form refers only to large.
\( ma- \) | Indicates a plural substance of unmarked or unspecified stems.
\( wa- \) | Indicates a plural number of substance which is marked for life in animals.
\( mi- \) | Indicates a plural number of substance which is marked for life in plants and trees or those inanimate singulars which co-occur with the prefix \( m- \).
\( vi- \) | Indicates a plural number of substance marked for comparison of size and manner

A distinction can be seen within some of these groupings. For example, in the group represented by the nominal indicator \( ki- \), the notion "comparison of size or manner" indicates a group of nouns in Swahili that are usually made diminutive or refer to manner when they take the \( ki- \) indicator. The second function in the \( ki- \)-group is to delimit a singular that may refer to a person, animal, thing, or place. It seems that any concrete noun fits into this category. It really does not capture a function at all in Swahili.
There is nothing in the meanings of these words that indicates anything about a comparison of size or manner. There is no semantic bond that renders the list in (5) a group. These nouns do, however, take the same set of agreement markers on their modifiers.

(6) ki -tabu hi -ki ch -a Ali ki -li -anguka
   c.7 N dem c.7 c.7 poss c.7,s.a. T,past V
   book this of fall
   ‘this book of Ali’s fell’

(7) ch -akula ki -le ki -li -pik -w -a naye
   c.7 N c.7 dem c.7,s.a. T,past V passive
   food that cook by her/him
   ‘that food was cooked by her/him’

Zawawi notes that the ki- group of nominals can be singular people, animals, things, or places. In this definition there is no semantic restriction at all since there are people, animals, things, and places that affiliate with other classes as well. On the other hand, the nouns in this group that refer to a comparison of size or manner are semantically defined.\(^1\)

(8) kitoto hiki kizuri ‘this little child is good’
    kikoba hiki kizuri ‘this little bag is good’
    kikombe hiki kizuri ‘this cup is good’
    kifagio hiki kizuri ‘this little broom is good’
    kigudulia hiki kizuri ‘this little water jar is good’
    kisanduku hiki kizuri ‘this little suitcase is good’

Note that in (8), all of the sentences but one, the one with kikombe, refer to the small size of the object. Corresponding to each of these diminutive nouns are nouns from other classes that refer to the same objects of normal size.

---
\(^1\)The following examples are from Zawawi [1979].
Morphologically Based Agreement in Swahili

(9) mtoto huyu mzuri  ‘this child is good’
    mkoba huu mzuri  ‘this bag is good’
    fagio hili zuri  ‘this broom is good’
    gudulia hili zuri  ‘this water jar is good’
    sanduku hili zuri  ‘this suitcase is good’

The one noun in (8) that is not diminutive can be made so with the intensifier -ji-.

(10) ki -ji -kombe  ‘a/the small cup’

This intensifier distinguishes an inherently class 7 form from its diminutive.

In each of the nominal categories in (4), there are nouns that correspond to the
function listed but there are other nouns which are exceptions to the delimiting
functions. Moreover, there is no delimiting function in one case, the n- case.

Some of the semantically defined functions that Zawawi lists are composed of
nouns that have corresponding nominals in other classes. These are listed in (11).

(11) Form  Function
    u-  Indicates substance of abstractness and singularity.
        utoto  ‘childhood’  mtoto  ‘child’
        uzee  ‘old age’  mzee  ‘old person’
        ushamba  ‘rural’  shamba  ‘farm’
        uongozi  ‘leadership’  kiongozi  ‘leader’

    ki-  Indicates comparison of size or manner.
        Cf. (8) and (9).

    jji-2  Indicates intensification in substance or action.
        toto  ‘large child’  mtoto  ‘child’
        jitu  ‘giant’  mtu  ‘person’
        jumba  ‘large building’  nyumba  ‘house’
        goma  ‘large drum’  ngoma  ‘drum’
        jito  ‘big river’  mto  ‘river’
        jisanduku  ‘big suitcase’  sanduku  ‘suitcase’

--

The noun class prefix or nominal indicator, ji-, only appears before monosyllabic or vowel initial
roots/stems.
ma-

Indicates a plural substance of unmarked or unspecified stems.

- makombe ‘large dishes’
- mabuzi ‘large goats’
- madege ‘large birds’
- matabu ‘big books’

vi-

Indicates a plural number of substance marked for comparison of size or manner.

- vitoto ‘small children’
- vikoba ‘small bags’
- vijikombe ‘small cups’
- vifagio ‘small brooms’
- vigudulia ‘small water jars’

Note that in all cases the nouns that are semantically predictable are those that belong to a subset of one of Zawawi’s functions. The nouns to which they correspond, in the right columns, are not affiliated with their class markers in any semantically transparent way.

It is obvious, then, that a subset of functions that Zawawi recognizes are functions that are applied to already existing nouns in the system. Their meanings are predictable and they delimit the meaning existing in these other nouns. Based on this distinction, we will henceforth call the nouns that correspond to the functions above “non-inherent nouns”, since they have a marked affiliation in the system already. The nouns to which the functions are applied we will refer to as “inherent nouns”, since belonging to the class to which they do must be a stated, inherent feature of the root or stem involved. In the discussion that follows, we will focus our attention on the non-inherent class of diminutives and adverbials.

In at least one case, there is phonological motivation for this morphological distinction. Looking again at the non-inherent ki- nouns, we find that these prefixes are not subject to the palatalization that the inherent nominal prefixes are.

\[
\begin{array}{ll}
\text{Inherent Nouns} & \text{Non-inherent Nouns} \\
\text{chakula} & \text{kialimu} \\
\text{‘food’} & \text{‘small teacher’} \\
\text{chuma} & \text{kiunguja} \\
\text{‘piece of iron’} & \text{‘Swahili dialect of Zanzibar’}
\end{array}
\]
This is not to say that inherent noun stems that begin with a vowel will always realize a palatalized *ki-* prefix, but we are not aware of any diminutive nouns that take a palatalized prefix.

Based on the functions discussed by Zawawi, we find that there is evidence that noun class affiliation in Swahili is of two types: inherent affiliation, in which a prefix and a stem are paired together to form a nominal that is not semantically decomposable, and non-inherent affiliation, in which such a pairing is semantically transparent. We may now ask if this morphological distinction is related in any way to derivational and inflectional morphology.

3. Inflectional Morphology

The traditional criteria for distinguishing inflection from derivation are informal and unreliable. Anderson [1982] provides counterexamples to each traditional criterion, and he goes on to argue for a more principled distinction. He proposes the following:

\[(13) \text{Inflectional morphology is what is relevant to syntax.}\]

Anderson assumes that agreement is a syntactic process.

It is assumed in the literature that noun class determines agreement in Swahili. Gregersen [1967:9, ex. 24b], for example, proposes that agreement in Swahili is accomplished by means of a transformational copying of the noun class prefix onto the modifiers:

\[(14) A \ast P - N - X \Rightarrow A \ast P - N - A - X\]

In (14), A indicates the left-most prefix, \(\ast P\) represents any number of following prefixes, N is the head noun, and X is the modifying element. This rule captures the alliterative copying of the noun class prefix which is restricted in the agreement system in Swahili but predominant in other Bantu languages. Initially, there does not seem to be any distinction between inherent and non-inherent noun with respect to agreement. Whatever the final prefix is, the agreement pattern follows. There are, however, some problems with this type of agreement rule. There is evidence that Bantu agreement is sometimes based upon more abstract features than overt noun class. Consider in this respect the following example from Swahili:
(15) a. \(ki\) -boko \(m\) -moja \(a\) -li -kula \(ma\) -jani
\[\begin{array}{cccc}
\text{c.7} & \text{N} & \text{c.1} & \text{num} & \text{c.1} & \text{T} & \text{V} & \text{c.6} & \text{N} \\
\text{hippo} & \text{one} & \text{s/he} & \text{eat} & \text{leaves} \\
\end{array}\]

\('one hippo ate the grass/leaves'\)

b. \(*ki\)boko \(kimoja\) \(kilikula\) \(majani\)
\[\begin{array}{cccc}
\text{c.7} & \text{c.7} & \text{c.7} \\
\end{array}\]

Here, the noun class of the subject is class 7, as indicated by the prefix \(ki\)-. The agreement prefixes, however, reflect not the noun class of the noun, but rather its animacy. No matter what class prefix an animate noun takes, it will usually take the agreement series of noun classes 1 and 2. The implication here, according to Anderson's criterion, is that the head noun prefixes in these cases are not inflectional. It is the more abstract feature [+animate] that must be the inflectional feature since it determines the agreement pattern. In addition, there are features that can override animacy. Consider these examples from Ashton [1947]:

(16) \(\emptyset\) -joka \(hi\) -li \(\emptyset\) -baya \(li\) -me -kufa
\[\begin{array}{cccc}
\text{c.5} & \text{N} & \text{dem} & \text{c.5} & \text{c.5} & \text{adj} & \text{c.5} & \text{T,perf} & \text{V} \\
\text{(aug) snake} & \text{this} & \text{bad} & \text{it} & \text{die} \\
\end{array}\]

\('this monstrous snake is dead'\)

(17) \(ki\) -toto \(hi\) -ki \(ki\) -zuri \(ki\) -me -kufa
\[\begin{array}{cccc}
\text{c.7} & \text{N} & \text{dem} & \text{c.7} & \text{c.7} & \text{adj} & \text{c.7} & \text{T,perf} & \text{V} \\
\text{(dim) child} & \text{this} & \text{good} & \text{it} & \text{die} \\
\end{array}\]

\('this good infant has died'\)

In (16) and (17), the animacy of the subjects is overridden by features of [+augmentative] and [+diminutive], respectively, in determining the agreement. Note also that the two subjects in question are non-inherent nouns. They correspond to the inherent nouns \(nyoka\) ('snake/s', c.9/10) and \(mtoto\) ('child', c.1). The agreement pattern of these two inherent classes is overridden as well. From these sentences, we can establish a hierarchy of features that trigger agreement. (The symbol > denotes "overrides").

(18) \text{animacy > noun class (cf. 15)}
\text{dim/aug > animacy (cf. 16-17)}

This pattern is not completely accurate because it is possible for animacy to override diminution as the controlling feature of agreement.
Morphologically Based Agreement in Swahili

(19) \( ki -toto \ hu -yu m -zuri a -me -kufa \)
\[
\begin{array}{cccc}
\text{dem} & \text{c.1} & \text{adj} & \text{T,perf} \\
\text{dim} & \text{child} & \text{this} & \text{good} & \text{she/he} & \text{die} \\
\end{array}
\]
‘this good infant has died’

It is clear from (15), (16), and (17) that diminution, augmentation, and animacy override noun class when they are features of the head noun, but there is some variation in the hierarchical relations among these three features, as seen from (17) and (19).

Another example of where the expected noun class agreement is superseded is in the case of locatives. Many nouns can be made locative by suffixing -ni to an already prefixed noun.

(20) \( n -(y)umba -ni pa -na watu wengi \)
\[
\begin{array}{cccc}
\text{c.9/10} & \text{N} & \text{loc} & \text{c.16} \\
\text{in/at the house} & \text{with} & \text{people} & \text{many} \\
\end{array}
\]
‘there are many people in the house’

The feature which determines agreement here is the abstract feature [+exact location], not the noun class of the noun as indicated by any affix. There are three different agreement patterns that are possible with any noun marked with the locative suffix -ni representing three aspects of location: exact, approximate, and contained. This information is not represented on the noun because it takes only one possible suffix, -ni, so agreement in location is not something that is realized overtly on both modified and modifier.

Note that (20) is different from the other cases of disagreement above in that the prefix of the inherent category is preserved, but its control over agreement is lost.

The last example of disagreement that we will discuss is that involved with the collective kinship terms, given below.

(21) \( ma -baba z -angu \)
\[
\text{pl. father c.10 poss} \\
\text{‘my fathers’}
\]

\( ma -dada z -angu \)
\[
\text{pl. aunt c.10 poss} \\
\text{‘my aunts’}
\]

\( ma -rafiki z -angu \)
\[
\text{pl. friend c.10 poss} \\
\text{‘my friends’}
\]

The noun class copying rule (cf. 14) would yield agreement markers that correspond to the \( ma \)-class, yet the agreement markers realized are those of the inherent class of these nouns, class 10.
This is an example of noun class overriding the non-inherent noun class of collectives. The hierarchy that emerges is given in (23).

(23) animacy > noun class (cf. 15)
dim/aug > noun class (cf. 16-17)
dim/aug > animacy (cf. 16-17)
animacy > dim/aug (cf. 19)
location > noun class (cf. 20)
noun class > collective (cf. 21)

The general implication in this hierarchy is that non-inherent noun class overrides inherent noun class in determining agreement. This is true in every case examined except in the case of collective animates (cf. 21). In these cases inherent noun class controls agreement on the possessive adjectives, although not on the other modifying elements. However, there is an explanation. All of the nouns which pattern like this are animate. Most of them originate in class 9/10, where possessive agreement is distinct between singular and plural. The agreement marker for animate possessives does not overtly distinguish between singular and plural.

(24) m -toto w -angu wa -toto w -angu  
c.1 N c.1 poss c.2 N c.2 poss  
‘my child’ ‘my children’

According to the hierarchy in (23) animate nouns from any class should take the agreement pattern in (24). Nouns in classes 9 and 10 do not show morphological number through a prefix. However, the agreement markers do show this distinction.

(25) n -dugu y -angu n -dugu z -angu  
c.9/10 c.9 poss c.9/10 c.10 poss  
‘my sibling’ ‘my siblings’

Zawawi claims that it is non-distinction of number in the animate possessive that leads people to use the possessives of class 9/10 to distinguish number. Moreover, she points out, if we use the agreement marker from class 6, the ma-class, the possessive prefix is phonetically identical to the singular n-class possessive prefix.
Morphologically Based Agreement in Swahili

(26) dada y -angu 
    sister c.9 poss 
    ‘my sister’

So, it is to avoid ambiguity that one violates the hierarchy above.

The hierarchy in (23), then, reflects a close relation between non-inherent noun class affiliation and agreement. When there is a non-inherent feature present, it triggers agreement. When there is no non-inherent feature present, agreement is based on the inherent noun class of the noun. Only where there is ambiguity in the system will the inherent class of the noun take precedence over the non-inherent class in agreement.

In our proposed analysis, we have not totally correlated the feature [+animate] with non-inherency. Animacy, after all, is an inherent feature of all nouns in classes 1 and 2. But there are cases of nouns where the feature animacy is unrelated to noun class (cf. 15). What makes this feature inflectional is that it is independently needed in the syntax outside of agreement. Keach [1982] refers to the feature animacy in the derivation of the following focus sentences:

(27) m -lima u -li -panda wa -tu 
    c.3 N c.3,subj. tense,past V c.2 N 
    mountain it climb people 
    ‘(focus) people climbed the mountain’

(28) Ø -hospitali i -me -ingia m -tu 
    cl.9/10,subj tense,perfect V cl.1 stem 
    enter person 
    ‘(focus) the person entered the hospital’

These sentences, which Keach considers a type of passive, can only be formed when the underlying subject is animate and the underlying object is inanimate.

(29) *mlima ulipandahospitali
(30) *watu wameingiamtu

Moreover, animacy is morphologically distinct in other ways in Swahili. There is a distinct form for the 3 sg. subject marker of locative expressions.

(31) Juma {yu -ko} nyumbani 
    {*a -ko} 
    ‘Juma is at home/in the house’

---

3This example is originally from Whiteley and Mganga [1979].
Also, standard Swahili requires object agreement when the object is animate. Otherwise, agreement with the object is optional.

(32) tu -li \{ -mw \} -ona Juma
    s.a.,l pl. T,past o.a.,3 sg. V
    ‘we saw him Juma’

(33) tu -li \{ -ki \} -ona ki -tabu chako
    s.a.,l pl. T,past o.a.,c.7 V c.7 N c.7, poss
    ‘we saw it your book’

According to Anderson, if animacy is a syntactically relevant feature, then it must be inflectional.

The strong version of Anderson's claim in (13) when applied to Swahili depicts the noun class system as a unified entity where noun class determines agreement. The exceptions noted above must be handled as stipulations in the system of agreement. We have provided evidence that the noun class system is not unified, but rather is made up of two types of classes, inherent and non-inherent. This morphological distinction corresponds to the distinction in the agreement system. Since animacy is an independently needed syntactic feature and it overrides noun class agreement, it must be an inflectional feature in Anderson's framework. By extension, we propose that all of the overriding features in agreement are inflectional. Whenever they are present, they determine agreement. This leaves inherent noun class as syntactically relevant only in those cases where there is no inflectional feature to determine agreement. Based on these facts, we propose a weakening of Anderson's claim.

(34) Inflection is what is most relevant to syntax.

In a morphologically rich language like Swahili, the distinction between inflection and derivation is not so clear cut. In Anderson's system, non-inherent/inflectional noun class takes precedence over inherent noun class in determining agreement, but is not the only syntactically relevant feature. To maintain the strong version of Anderson, it would be necessary to claim that inherent noun class agreement is extra-syntactic or that there is no distinction within the noun class system. Both of these alternatives have drawbacks. We maintain the position that agreement is syntactic since it operates between and across words. To deny that there is a distinction in the Swahili noun class system would miss an important generalization about the relation of noun class to agreement.
Although Anderson rejects the traditional criteria that differentiate inflection from derivation, he claims that many of these criteria fall out as a consequence of his model. This is also true in our system. Below are the traditional criteria that Anderson discusses:

\[
\begin{array}{ccc}
\text{Productivity} & + & - \\
\text{Category Changing} & - & + \\
\text{Paradigmatic} & + & - \\
\text{Exterior} & + & - \\
\text{Semantics Changing} & - & + \\
\end{array}
\]

In this regard, consider diminutives once again. According to the traditional criteria, diminution is inflectional. It is productive, it is not category changing, it is paradigmatic, and it is neutral to the exterior criterion since it does not cooccur with inherent noun class. It does not change the meaning of the word, but merely delimits it in a predictable manner. So, diminutives represent the traditional paradigm of inflection that Anderson rejects.

4. Conclusion

The distinction between inflectional and derivational morphology has never been clearly made. Anderson's attempt to attribute inflectional morphology to that morphology which is syntactically relevant, we believe, is a step in the right direction. We have provided evidence in this paper that it is too strong. The spirit of his proposal is, however, substantiated in Swahili. By looking at the noun class system and patterns of agreement in this light, certain unaccounted for facts acquire a principled explanation.

We have not provided a complete account of all of the inflectional classes in Swahili but we feel that we have established a program upon which future research can be directed.

Further empirical evidence for or against this proposal will be found in the agreement facts of other languages outside of Swahili. If it is found that both syntactically relevant and irrelevant features determine agreement in other languages and furthermore that a hierarchy can be established between these, then this will constitute evidence for the weakened version of Anderson's hypothesis.
## APPENDIX

Noun classes and Agreement Markers

<table>
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<th>Noun Class</th>
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<th>Object Affix</th>
<th>Dem. Pro</th>
<th>Relative Affix</th>
<th>Adjective Affix</th>
<th>Possessive Affix</th>
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SOME YORUBA QUANTIFIER WORDS AND SEMANTIC INTERPRETATION: A CRITIQUE*

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This work takes a close look at the Yoruba quantifiers, *púpọ, ḍọpọ, and ḍọpọlọpọ* 'many', and concludes that, contrary to Lawal's [1986] claim, it is difficult to differentiate semantically between them.

1. Introduction

Lawal [1986:95] examines the Yoruba quantifiers, *pọ, púpọ, ḍọpọ*, and *ḍọpọlọpọ*, which she regards as the “four morphological encodings for the quantifier ‘many’” and concludes that the last three differ not only morphologically and syntactically, but also semantically.¹ She does not compare the first with the others because, according to her, it is the verb from which the others are derived. We agree that these three words differ both morphologically and syntactically, but we find it very difficult to differentiate semantically between them. The same applies to other native speakers we consulted. To support our argument, we shall use (i) Odell's [1984] paraphrastic criteria for determining whether “a linguistic expression has, in the same or a different linguistic context, the same sense as another linguistic expression” [Odell 1984:118] and (ii) one of the criteria for lexical relations proposed by Cruse [1986] to see if one could differentiate semantically between the

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* I am grateful to an anonymous reviewer and the editor for their comments on an earlier draft of this paper.

¹This classification assumes that ḍọpọ 'cheap' is distinct from ḍọpọ 'many' and *ogunkọgọ*, often glossed as 'many/several', is not a morphological encoding for 'many'. Note, too, that the three items can be used adverbially as in *ọ pọ púpọ, ọ pọ lọpọ, and ọ pọ lọpọlọpọ* 'they are too many'. Lawal does not discuss this use of the items and we shall not be concerned with them here.
items ḍpọ, púpọ, and ḍpọlọpọ. We shall then present empirical evidence to support our argument.

2. Theoretical Consideration

2.1. Odell's [1984] paraphrastic criteria. Odell [1984:118-119] distinguishes between two kinds of synonymy, “the kind which exists between two tokens of the same type, and ... the kind that exists between two tokens of different types”. The former is referred to as *monotypical* synonymy while the latter is called *multitypical* synonymy. They are defined as follows:

An expression \( e \) in S1 is *monotypically synonymous* with \( e \) in S2 if \( e \) is used in the same sense in S1 and S2.

An expression \( e \) in S1 is *multitypically synonymous* with \( f \) in S2 if \( e \) and \( f \) are used in the same sense.

As the items ḍpọ, ḍpọlọpọ, and púpọ are not three tokens of the same type, it is the latter definition that concerns us here. The criterion formulated by Odell [1984:119] for deciding whether some given items are multitypically synonymous is as follows:

An expression \( e \) in S1 is *multitypically synonymous* with \( f \) in S2 if (1) there is a word or phrase \( g \) which is a metaphrase of \( e \) in S1 and of \( f \) in S2, (2) there is no word \( h \) which is a metaphrase of \( e \) in S1 but not of \( f \) in S2, and (3) neither S1 nor S2 is odd.

If one applies this criterion to the use of the items ḍpọ, púpọ, and ḍpọlọpọ in sentences, one would note that they are multitypically synonymous. Given a situation of a thousand people standing watching a play and only fifty people sitting watching the same play, consider the following sentences where

\[
\begin{align*}
púpọ & = e \\
ńpọ & = f \\
ńpọlọpọ & = g \\
dié & = h
\end{align*}
\]

(1) a. ó rí ènìyàn púpọ ní i dúró ‘he saw many people standing’
    he see people many in standing

b. ó rí ńpọ ènìyàn ní i dúró ‘he saw many people standing’
    he see many people in standing

c. ó rí ńpọlọpọ ènìyàn ní i dúró ‘he saw many people standing’
    he see many people in standing
d. ??ó rí ènì yàn diè ní ́i dúró ‘he saw a few people standing’
   he see people few in standing

The púpò in (1a), the opò in (1b), and the opòlopò in (1c) are multitypically synonymous, but the 4th (=h ) is not because one cannot use diè 'a few' to describe a thousand people standing where only fifty are sitting.

2.2. Cruse [1986] on lexical meaning. Cruse [1986] also provides some criteria for determining whether some items are logically equivalent. According to him, a useful semantic test for deciding the logical relations between items is to see if the items mutually entail each other [Cruse 1986:15]. If one applies this test to the quantifiers under discussion, one would note that they are logically equivalent. For instance, I can say (2a,b,c) but not (2d).

(2) a. ó bá ènì yàn púpò ní ́i dúró ní ibi eré náà nítorí nínú
he meet people many in standing in place play the because inside
ègbèrùn ènì yàn, àádóta péré ní ó rí ́i jókòó
one thousand people fifty only FOC he get seats

‘he met many people standing in the concert because out of one thousand people, only fifty were able to get seats’

b. ó bá opòlopò ènì yàn ní ́i dúró ní ibi eré náà nítorí
he meet many people in standing in place play the because
nínú ègbèrùn ènì yàn, àádóta péré ní ó rí ́i jókòó
in inside one thousand people fifty only FOC he get seat

‘he met many people standing in the concert because out of one thousand people, only fifty were able to get seats’

C. ó bá opò ènì yàn ní ́i dúró ní ibi eré náà nítorí nínú
he meet many people in standing in place play the because in inside
ègbèrùn ènì yàn, àádóta péré ní ó rí ́i jókòó
one thousand people fifty only FOC he get seat

‘he met many people standing in the concert because out of one thousand people, only fifty were able to get seats’
d. ??ó bá ènìyànlè diè ní ìdúró ní ìbi èrè nàà nítòrí nínlù
he meet people few in standing in place play the because in inside
ègbèrún ènìyànlè, àádótà péré ní ó rí i jókòó
one thousand people fifty only FOC he get seat

‘he met a few people standing in the concert because out of one thousand people, only fifty were able to get seats’

Example (2d) is anomalous because in talking about people at a concert, nine hundred and fifty people would be an entailment of “many” not “few”.

From these tests, one can conclude that the quantifiers òpọ, òpọlọpọ, and púpọ are logically equivalent. To further support our argument, we shall check how these words are used in a Yoruba literary work. Our choice for this is Okediji’s [1983] Atótó Arére.

3. Empirical Evidence

3.1. Why Atótó Arére? As we have stated elsewhere,2 this prose is of interest because it depicts not only real characters but also reflects real life experiences of some Yoruba cities and villages. The prose is also one of those few writings in Yoruba which adequately represent the standard language. The dialectal variation is minimal, and most tones are indicated. The author has also been described as one who “makes use of the reader’s cultural knowledge and linguistic competence to good stylistic advantage” [Iṣọla 1978:501]. In this work, references from the novel are put in brackets [ ]. Before we start quoting examples from the novel to justify our claim, let us summarize some of the points touched upon by Lawal.

3.2. Lawal [1986] in brief. The points raised by Lawal which concern us in this work are that:

The size of the set referred to by òpọlọpọ is greater than that of òpọ and the one referred to by the latter is greater than that of púpọ.

Púpọ and òpọ emphasize the number or largeness of the set, òpọlọpọ emphasizes variety within a set.

Púpọ and òpọ imply undifferentiated mass of people only while òpọlọpọ is used for individual interpretation of a given set of people.

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2See Adewọle [forthcoming].
NP's higher in animacy are quantified by ọpọlọpọ while those lower in animacy are quantified by ọpọ or pùpọ. This supports Comrie's view on animacy that “individuated objects ... are viewed by humans as being higher in animacy than less individuated objects” [Lawal 1986:103].

In what follows, we shall examine these points one by one to see if they are justified by the facts of the language. We begin with size distinction.

3.3. The problem of size. Lawal states that the set referred to by ọpọlọpọ is greater than the one ọpọ refers to and that the one referred to by the latter is greater than the one referred to by pùpọ. That this claim is not correct is shown by the following examples:

(3) a. ọ rí ọpọ èrò tí wón ní lu àwọn méjì kan [p. 249]
   ‘he saw a crowd of people hitting two people’

   b. nígbà tí àwọn èrò náà rí òlópáá, wón síwóó lìlu àwọn
      àlejò náà, ọpọlọpọ sì sá lọ [p. 249]
      ‘when the (crowd of) people saw a policeman, they stopped hitting the
      strangers, many of them ran away’

What should be noted is that these two sentences are referring to the same set of people who are all farmers. The example in (3a), in which ọpọ is used, refers to the whole set of people. The example in (3b), where ọpọlọpọ is used, refers to only some of these people. This is contrary to Lawal's claim that ọpọlọpọ is used to refer to a set which is greater than the one referred to by ọpọ. If any of the two is greater in these two examples, it should be ọpọ because in (3b) where ọpọlọpọ is used, only some of the people ran away on seeing the policeman.

This is not to say that ọpọ cannot be used in place of ọpọlọpọ in (3b) and the latter in place of the former in (3a), but what we note is that when they are so used, they still give the same meaning. We still have more people in (3a) than (3b). Their use in sentences such as (3a) and (3b) depends on which of the two the speaker prefers.

3Context: A man has just been murdered in a village. The murderer escaped but some villagers, all middle-aged farmers, searching for the murderer/murderers saw two men loitering around. They concluded that the two men should be the murderers. They took the law into their hands and started hitting the men. A policeman came just in time to save the men from being lynched.
The two readings in the sentences are called forth by different types of contexts. The two items realize a common core meaning.

3.4. Largeness of the set and variation within the set. Lawal's claim that òpòlòpò indicates variety within a set while púpó and òpó imply largeness of the set is also incorrect. Witness the following examples:

(4) ó léegun ju òmọ olóbì lọ, sùgbón òmọ olóbì
he has power more than child kola-owner but child kola-owner

mọ ìyínlèke ija púpó [p. 26]
know technique fight many

'he is stronger than the boy selling kola but the boy knows the technique of wrestling better than he does'

(5) Alábá gba òpòlòpò súgà [p. 106]
Alaba get much sugar

'Alaba collected a lot of sugar'

In (4), it is not the largeness of techniques of wrestling that the boy knows but the various types that are being discussed. In (5), on the other hand, we are talking about the amount of sugar and not different types of sugars. This is because all the sugars are plain, white cubes.

In addition, if one looks at sentences (3a) and (3b), one would note that the people are farmers, so the use of òpòlòpò does not emphasize their background or discipline. The people are also all middle-aged, so, no distinction either of sex or age-group is made with the use of òpòlòpò in (3b).

We also note that òpòlòpò can mean 'much' or 'many' when applied to mass nouns or uncountable items. For example, both (6a) and (6b) are ambiguous between 'a lot of palm wine' and '(many) different kinds of palm wine' with no difference in preferred reading. The reading 'a lot of palm wine' applies when the same type of palm wine is used for the sacrifice and the other reading applies when different types of palm wine, e.g. iṣà 'a day old palm wine', àyò 'palm wine tapped and drunk on the same day', ògidi emu 'a palm-wine not mixed with water', òjú-ògún 'the first palm-wine to be tapped from a palm tree often used in sacrifice to Ògún, god of iron', etc., are used for sacrifice.

(6) a. ó fi òpòlòpò emu bọ àwon ọrìṣà
he use many/much palm-wine sacrifice many gods

'he used many different kinds of/a lot of palm-wine to sacrifice to the gods'
b. ó ̠́ fì ̠́ ëmu ̠́ pūpò ̠́ bò ̠́ òwọ̀n ̠́ òrì ̠́ sà
    he use palm-wine many/much sacrifice many gods
    ‘he used many different kind of/a lot of palm-wine to sacrifice to the gods’

3.5. Undifferentiated mass vs. individual interpretation. Lawal also claims that while òpòlòpò is used for individual interpretation, òpò and pūpò are used for undifferentiated mass. Our examples (3a) and (3b) counter this claim. As stated above, both òpò and òpòlòpò in (3a) and (3b) are used for the same set of people, òpò for all of them and òpòlòpò for some of them. There is no way one can know whether the people are differentiated or not. For one thing, the narrator of the story does not know any of the people hitting the men. What this means is that the set of people hitting the man is undifferentiated yet, as we have seen, both òpòlòpò and òpò can be used interchangeably.

3.6. The animacy property. The last criterion used by Lawal to distinguish these words from each other is that of animacy. According to her, NP's that are regarded as higher in animacy are quantified by òpòlòpò while those that are regarded as lower in animacy are quantified either by òpò or pūpò [Lawal 1986:102-103].

Most of the examples given by Lawal herself are counterexamples to this claim. Witness the following examples [Lawal 1986:101] (the numbering is ours):

(7) òpòlòpò ènì yàn lọ̀ ibi ọ̀kú náà
    many people went place-of funeral the
    ‘many people attended the funeral’

(8) òpò ènì yàn lọ̀ ibi ọ̀kú náà
    many people went place-of funeral the
    ‘many people attended the funeral’

(9) ènì yàn pūpò lọ̀ ibi ọ̀kú náà
    people many went place-of funeral the
    ‘many people went to [sic] the funeral’

As the glosses show, the three sentences have the same meaning, and they are all acceptable. Yet, in the three sentences, we have ènì yàn ‘people’, which is animate.

Other counterexamples to Lawal's claim are the following popular Yorùbá sayings:
(10) ṣpọ eja ní ń bẹ nínú ibú
many fish FOC PROG exist in inside deep sea
‘there are many fishes in the ocean’

(11) ṣpọlopọ irawọ ní ń bẹ lódé ọrun
many star FOC PROG exist in outside heaven
‘there are many stars in the sky’

(12) ṣpọlopọ iyanri n ní ń bẹ létí ìkun
many sands FOC PROG exist in side ocean
‘there are a lot of sands by the side of the ocean’

In (10-12), eja ‘fish’ is higher in animacy than both irawọ ‘star’ and iyanri n ‘sand’ yet, while ṣpọ is used to quantify eja ‘fish’, ṣpọlopọ is used to quantify both irawọ ‘star’ and iyanri n ‘sand’.

Also, examples (13-15) which Lawal [1986:103-104] marks as semantically anomalous are acceptable to some Yoruba speakers we interviewed (the numbering is ours).

(13) ṣpọlopọ iiyanri ló șe é po sibénti [sic]
many sands be do INF mix cement
‘many sands can be used to mix cement’

(14) ṣpọlopọ ẹfọn máa ní ń ɔsi ọyé
many mosquitoes habitual die at time cold
‘many mosquitoes die during the cold weather’

(15) wọn kó ṣpọlopọ kóriko dà sì ạjà
they carried many . grass throw at loft
‘they throw many grasses in the loft’

Other counterexamples to Lawal’s claim taken from Atótó Arére are as follows:

(16) ṣpọ eniyan ẹtì alài lágbára tàárà kò jèkjì Foràwáì lè
many people and powerless much NEG allow Forawai able
sá lọ ní tirè [p. 249]
run go in his own

‘Forawai could not escape because apart from the number of people around, he was also powerless’
(17) nígbà tí ó wo olúwa-rè, ó rí i pé èni kan tí
in time that he look person-his he see him that one person that

ó bá ḏun ra ṣpòlòpò tàyà ní Ilé-Ifè lái pé ni [p. 103]
he follow him buy many tyres in Ilé-Ifè in-not-long FOC

‘when he looked at the person, he saw that the person was the one who bought
many tyres from him in Ilé-Ifè recently’

In (16), ènìyàn ‘people’ is quantified with ṣpò, and in (17), tàyà ‘tyre’ is quan­
tified with ṣpòlòpò. With the animacy principle the reverse should be the case.

3.7. Further comments on animacy. We quite agree with Palmer [1986:2]
that linguists should look into different languages for items “identified and defined
in terms of the formal characteristics of each of those languages” that could be used
to illustrate some scholars' typological postulates. Such illustrations have recently
become the subject of a number of scholarly works. Some proposed illustrations
are entirely justified, but quite a few are not. Our detailed examination of the
quantifiers ṣpò, ṣpòlòpò, and púpò shows that the proposal that they could be
distinguished on the basis of their animacy property falls into the latter category.

4. Conclusion

The quantifiers ṣpò, ṣpòlòpò, and púpò, therefore, are semantically identical.
We are quite aware of the fact that absolute synonymy is a rare phenomenon but,
despite this, we have been able to provide both theoretical and empirical evidence to
show that if these items differ in respect of some semantic properties,4 they are not
the ones noted by Lawal.

4These still need to be investigated.
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SOME YORUBA QUANTIFIER WORDS AND SEMANTIC INTERPRETATION:
A REPLY TO A CRITIQUE*

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It is now an uncontroversial fact that if a linguist is to describe a language, the data on the basis of which he formulates his hypothesis should be the natural "speech" of native speakers of that language. Thus, in present day linguistics native informant tests and judgements are considered as more significant than text data. Native informants are considered the last arbitrament on questions of empirical fact. This requirement forces the linguist to observe the way people really do speak their language. He thus avoids basing his description on what he thinks they say. A linguistic description thus reflects the language of speech, not writing.

The empirical support for Adewole's critique of my paper (in this issue), "Some Yoruba quantifier words and semantic interpretation" [LawaI 1986], comes from a literary text Atótó Arére [Adewole p. 4]. Adewole's approach, which is characteristic of traditional or taxonomic linguistics, has been found to be most unreliable in dealing with questions of empirical fact and is strongly rejected in present day linguistics. Our study of the semantic interpretation of some Yoruba quantifier words was based on native speaker judgements/tests, specifically Yoruba speakers in Ilorin township of Kwara State of Nigeria. The account of Yoruba quantifier 'many' given by Adewole is very simplified. We examine his arguments below.

1. Logical Equivalence

Adewole disagrees with us as to the semantic differences which we say exist among the quantifiers ṭọpọ, ọpọ, and púpọ. According to Adewole the quantifiers are logically equivalent. If we say two linguistic items are logically equivalent it means they can be interchanged without affecting the validity of the argument. Now consider the following examples:
For native speakers, the above sentences (1a) and (1b) do not mean the same thing. In (1a) we are saying that the subject has a lot of physical power, i.e. he is very strong, while in (1b) we are saying that he has many different powers. According to native speakers ọpọlọpọ will be used when talking of a person who has metaphysical powers apart from physical power. Púpọ cannot be used in such a context. Again consider the sentences below:

(2) a. ọpọlọpọ ẹranko ló wa nínú ịgbọ
    many wild animals emph be inside jungle
    ‘there are many wild animals in the jungle’

    b. *ẹranko púpọ ló wa nínú ịgbọ
        wild animals many emph. be inside jungle

In (2b) the substitution of púpọ for ọpọlọpọ renders the sentence unacceptable. Speakers do not accept púpọ in this context because apart from the large quantity of animals found in the jungle, they are also of many different types, and this is not reflected in (2b), where we have púpọ. When one describes a situation which involves both quantity and types, the appropriate quantifier that will be used in natural speech is ọpọlọpọ, not púpọ. This explains the ungrammaticality of (2b).

The above examples show that contrary to what Adewole says the quantifiers are not logically equivalent since they cannot be interchanged without affecting the validity of the argument. Many other examples abound which support our claim.

2. Size of Set

Adewole also disagrees that ọpọlọpọ refers to a larger set than ọpọ. However, Adewole's claims are based on sentences taken from a literary text and not on natural speech. As we pointed out earlier, in present day linguistics, linguistic descriptions are based on natural speech, not written language. Our claim with regards to the size of the set denoted by ọpọ and ọpọlọpọ is based on native speaker judgements about the way these quantifiers are used in natural speech.
3. Variation Within the Set

Another semantic difference which we pointed out in our study is that òpòlòpò points to variation or types/kinds within the set while púpò and òpò points just to quantity. Adewole sees no such difference between òpòlòpò and púpò/òpò. His claim is again based on a sentence taken from the literary text Atótó Arére. However, native speakers consulted disagree with Adewole on this. For example, speakers did not see his examples (5) and (6) as being ambiguous. They said òpòlòpò does not refer to quantity only. More than that, it points to the fact that different kinds are involved. Our examples (1) and (2) above and (3) below support this claim:

(3) a. òpò wáyà ni ewu púpò
pole electric has danger much
‘electric poles have great danger’ or ‘electric poles are very dangerous’

b. òpò wáyà ni ewu lópòlòpò
pole electric has dangers many
‘electric poles have many dangers’

For speakers, (3a) and (3b) are not synonymous. The interpretation given to (3b) is that the dangers are of many types. For example, it can destroy houses by falling on them, it can give an electric shock to a person, it can cause fire outbreak, it can cause damage to electrical installations, etc.

In (3a) on the other hand we have a different interpretation. According to speakers, what (3a) means is that the danger in an electric pole can be very devastating. The quantifier púpò describes the danger in terms of its devastating effect whereas òpòlòpò points to the different types of dangers that can result from an electric pole. These are the interpretations given to these quantifiers in natural speech. Our argument is not that òpòlòpò does not indicate quantity. It certainly does, but it also points to different types of items. In other words, that òpòlòpò indicates ‘large quantity’ is already established, but more than that it also points to variation within the set. It is this additional semantic property that distinguishes òpòlòpò from púpò and òpò.

4. Animacy/Undifferentiated vs. Individual Interpretation

Our final point which Adewole questions is the semantic property “animacy”. Adewole disagrees with our statement that NP’s quantified by òpòlòpò are treated as more animate than those quantified by púpò and òpò. The problem is that Adewole took animacy here in its literal sense, that is, in terms of human > non-
human/animate > inanimate. The linguistic notion of animacy is not concerned with animacy in its literal sense. It involves an extension of the notion of animacy [Comrie 1981:178-193]. For example, some of the examples cited by Comrie are languages that treat first and second person pronouns as more animate than third persons, although, as pointed out by Comrie, strictly speaking, the first person is more animate than the third person.

One of the ways in which animacy is reflected in language is in morphological systems [Comrie 1981:198]. In Yoruba there is a morphological split between òpòlòpò, púpò, and òpò, and we suggest that this split correlates with degree of animacy.

Our claim is strengthened by the fact that the above split tends to correlate with another relevant opposition, viz. number distinction. Entities of higher animacy tend to have number distinction while those of lower animacy tend to be viewed as undifferentiated mass [Comrie 1981]. Such a distinction is manifested in òpòlòpò in terms of “types/kinds” [Lawal 1986]. Of course both òpòlòpò and púpò may be used to quantify human or inanimate entities. Our argument however, is that the choice of one quantifier rather than the other depends on how the entities within the set are viewed. If speakers view the entities within the set in terms of types, i.e. individuals, then òpòlòpò will be used, but if the entities are viewed solely in terms of their number or quantity, i.e. undifferentiated, then púpò or òpò will be used. This would explain why Adewole finds some of our starred examples acceptable.

5. Conclusion

Before a descriptive statement can be applied to whole speech communities must be referable to data beyond the written text. The need for linguists to be fully aware of how the language is actually spoken cannot therefore be over-emphasised.

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These books constitute the fullest documentation to date of Mofu-Gudur, a Chadic language of northern Cameroon. The phonologie begins with an Introduction describing aspects of the culture and history of the Mofu as well as the classification and dialects of the language, the conduct of the research, and efforts at standardization. The first chapter of the phonology proper is on the consonants. There is an articulatory description followed by long sections with minimal pairs for all consonants and statistical tables on frequencies of occurrence and frequencies of combinations in words. The section on vowels is organized similarly. This is followed by sections on tones and syllable structure. With the above data in mind, an analysis is proposed reducing the vocalic system to a single vowel with palatalization and a insertion rule. The final section on phonology discusses word demarcation and phonology of longer strings. Following this is a section on a practical orthography and a folktale in phonological and orthographic transcriptions. The book ends with a bibliography on the Mofu people and their language. The dictionary is described as "preliminary", meant as an illustration of the practical orthography. However, it is fully tone marked. An introduction describes the organization of the dictionary and the forms used as entries. A brief grammatical section gives basic features of nominal and verbal morphology. The Mofu-French section is said to contain about 4000 entries. Definitions are mainly single words or short phrases. There are no illustrations and no grammatical information other than grammatical category, though idioms and compounds include literal as well as free translations, and roots for derived forms are given. There is also a French-Mofu section with considerable semantic cross-referencing. The book ends with 13 maps. Both books are interspersed with black and white photographs of scenes from the Mofu area and the speakers who helped in compiling the materials.


[From English abstract, p. 234]: "[The book's] subject matter is a language which is at the same time well known and poorly known. It is Gbe, whose Eve, Gen, Aja and Fon dialects are spoken from Ghana to Nigeria. The book begins with an overview of the present language situation in West Africa, a situation which amounts to a confused and unresolved state. The first part, which follows, is concerned with the identity and history of the Gbe dialect cluster through the location of its speakers and an inventory of its dialects (ch. 1), the glossonym itself (ch. 2), the orthographic reforms that have affected the present written forms (ch. 3), and the factors and agents of the
present crumbling state of the language (ch. 4). The second part (ch. 5-9) lays the foundation for the revival of Gbe and indicates that the objective conditions of this revitalisation are met. The third part deals concretely with questions of standardisation and modernisation of Gbe as a necessary step of its rebirth. Here are discussed not only the standard uniform orthography of Gbe (ch. 10), but also the strategy to adopt in order for this new orthography to gain acceptance (ch. 11). Then are discussed in ch. 12 questions relating to the lexical and syntactic codification of the standard form to be promoted, Common Gbe, and in ch. 13 the characteristics of pronunciation of this supra-dialectal variety. Ch. 14, that ends this part, considers the chances of success of a deliberate and conscious undertaking to standardise and modernise Gbe. Finally, as is the case with the general introduction, the general conclusion deals with West Africa (and not Gbe as such), and it states some of the principles that should sustain a consistent language policy.”


[From the back cover]: “Cette étude, réalisée à la demande de l’Agence de Coopération Culturelle et Technique (Paris), propose un bilan très complet des recherches en science humaines (société, langue et culture) consacrées au Touaregs. Résultant d’une large coopération internationale, l’ouvrage répertorie l’ensemble des activités (enseignement et recherche) et des sources documentaires ayant trait à ce domaine. Il est complété par une bibliographie analytique de 673 titres couvrant la production de la décennie 1977-1987. Instrument de travail d’une ampleur et d’une précision exceptionnelles, réalisé par les meilleurs spécialistes internationaux du domaine, ce sera un outil indispensable et pratique pour tous ceux qui s’intéressent aux Touaregs.” The book contains summaries of research programs on the Tuareg in a number of countries and research in ethnomusicology, audio recording, and films. This is followed by an alphabetical list of researchers, a bibliography arranged alphabetically by author, and an index to the bibliography by subject area.


This is, in effect, an update of Diakonoff’s 1965 *Semito-Hamitic Languages*, the first book, and still the most complete work, to attempt a comparative reconstruction of features of morphology and syntax of proto-Afroasiatic (= Semito-Hamitic = Hamito-Semitic = Afrasian). Diakonoff’s new book takes advantage of research over the past twenty years plus knowledge derived from a large work being compiled in the Soviet Union, the *Comparative-historical Vocabulary of Afrasian*. The introduction of the present book outlines the classification and a few general features of what are now considered the six branches of “Afrasian”: Semitic, Cushitic, Omotic, Egyptian, Berber, and Chadic. The comparative chapters are the following: Chapter 1, Phonology; Chapter 2, Root and Word Structure; Chapter 3, The nominal Categories in Common Afrasian (Gender and nominal classes, Case, Status, Number, “Broken” plural, Mimation (nunation) and the article, Numerals, Prepositions and postpositions); Chapter 4, Pronouns (Personal pronouns, Personal markers in the verb, The nota genitivi, Deictic and other pronouns); Chapter 5, The Verb; Chapter 6, Some Data on the Syntax (Word order, Varieties of attributive phrases, Subordination). There is an Appendix consisting of short texts from languages of each group. A select bibliography completes the book.

This is the posthumous publication of previously unpublished manuscripts by Cheikh Anta Diop in support of his theory of the relation of the languages of Black Africa and Ancient Egyptian. The chapters cover comparison of various Egyptian morphological structures with those of Wolof. The book ends with a bibliographie of the author’s published works.


This is a collection of oral traditions and other information on the histories of peoples in northern and western Cameroon and contiguous areas of Nigeria. The traditions are in French translation. The following peoples are represented: the Bamileke, the Bamoun, peoples of the Bamenda/Banso areas, the Tikar, the Mbum, the Jukun, and peoples of “Kisra”, including many groups of northeastern Nigeria.

[From the back cover]: “Le présent ouvrage vise à apporter des éléments fiables de travail de réflexion à un comparatisme oubanguien dont l'ambition s'accordait mal, jusqu'ici, avec les connaissances réduites en ce domaine: a’-t’il été démontré que les langues oubanguiennes sont issues d’un parler commun ancestral, et forment une «famille» linguistique? Tel est le problème soulevé par ce volume, qui, après avoir analysé l'état de recherches, présente un lexique de 204 terms en français avec leurs correspondants dans 34 langues oubanguiennes, dans une transcription scientifique établie à partir d'enquêtes de terrain inédites, et des cartes linguistiques originales.” The first part of the book contains an assessment of the current status of Ubangian research and the following chapters, written by various members of LACITO: Le groupe gbaya-manza-ngabaka, Le groupe ngbandi-sango-kpatiri, Le kpatiri ou gbayi, une nouvelle langue du groupe ngbandi, Le groupe sere-ngbaka-amba, Le groupe banda, Le groupe zande, Le geme ou jémé, une nouvelle langue du groupe zande. The second part is a comparative lexicon of Ubangian languages.


[Résumé from p. 7]: “Tupuri is the language of some 250,000 people living in South-West Chad and North-East Cameroon. This trilingual dictionary presents about 3600 terms in the dialect spoken in and around the village of Mindaoré, in the Fianga sous-préfecture, Chad. The transcription is phonological. Grammatical categories, which are now under study elsewhere in a dissertation on syntax, are noted for each term. Translations are in French ... and English .... Certain dialect varieties from other regions in Chad are reported. Distinctive syntactic use of certain terms is exemplified in sentences and proverbs. The latter also illustrate cultural values attached to the items. Encyclopedic data concerning everyday life is given whenever possible. Drawings evoking non oral communication complete the work to which a French-Tupuri index is added.”


This is a grammar of Tswana with exercises, written entirely in Tswana. It is one of a series of Tswana first language books for use in schools.


This book lays out a practical orthography for the Zjuc’höa language of northwestern Namibia and contiguous areas of Botswana. Not only does it present the sounds, but also comments on word division, which leads to a section including much grammatical information. A Zjuc’höa word list illustrates the orthography. There is a foldout map showing the distribution of Namibian Bushman languages. The description of the orthography is provided in English and Afrikaans, starting at opposite ends of the book.

From Cambridge University Press


[From the back cover]: “This study of reduplication in Afrikaans provides a unified and principled analysis of an unusual and highly complex word formation process, shedding new light on the scope and content of various fundamental lexicalist principles of word formation. Surprisingly, Rudolf Botha concludes that the principles involved in Afrikaans reduplication are not unique to Afrikaans, as has often been thought, and are used by many other languages. Moreover, the interpretation of Afrikaans reduplications depends on principles of conceptual structure that are restricted neither to Afrikaans nor to the interpretation of reduplication, thus supporting recent work on cognition and meaning undertaken by Ray Jackendoff and other scholars. In analysing the data, Professor Botha has also provided a concrete illustration of how the Galilean style of linguistic inquiry can fruitfully be applied in the study of word formation and meaning. The study thus represents an important theoretical and methodological advance which will be of as much interest for its method of inquiry and argumentation as for the fresh insights it provides for scholars and researchers in the fields of morphology, word formation and semantics.”


[From the book jacket]: “This first volume of Holm’s major survey of pidgins and creoles provides an up-to-date and readable introduction to a field of study that has become established only in
the past few decades. Written for both students and general readers with a basic knowledge of linguistics, the book’s original perspective will also attract specialists in the field seeking a broad overview of the linguistic and sociolinguistic relationships between these languages. Restructured versions of English, French, Spanish, Dutch, Protuguese, and other languages arose during European colonial expansion, resulting in such creoles as Jamaican, Haitian, Papiamentu, and some one hundred others, as well as such semi-Creoles as Afrikaans, non-standard Brazilian Portuguese, and American Black English. Scholars have tended to work on particular language varieties in relative isolation rather than undertaking comparative research into the genesis, development, and structure of creoles. In writing this book, however, Holm draws on studies of a broad range of languages to make clear the extent of creoles' differences and similarities and to demonstrate how this challenges current linguistic theory. The core of this volume is a comparative study of creoles based on European languages in Africa and the Caribbean in terms of their lexical semantics, phonology, and syntax.”


[From the book jacket]: “This second volume of John Holm's *Pidgins and Creoles* provides an overview of the socio-historical development of each of some one hundred known pidgins and creoles. Each variety is grouped according to the language from which it drew its lexicon--Portuguese, Spanish, Dutch, French, English, African and other languages. John Holm convincingly demonstrates the historical and linguistic reasons for this organization, which also enables the reader to perceive with ease the interrelationship of all varieties within each group. The section devoted to each variety provides a discussion of its salient linguistic features and presents a brief text, usually of connected discourse, with a morpheme-by-morpheme translation. Readers thus have access to data from all known pidgins and creoles in the world, and the volume provides possibly the most comprehensive reference source on pidginization and creolization yet available.”

*From MRM, Inc. Language Research Center (published by Dunwoody Press)*


This dictionary is described as a “preliminary edition”. It contains approximately 18,500 entries, based on *Qaamuuska Af-Soomaaliga* by Yaasiin C. Keenadiid. The introduction indicates some spelling variations based on dialect differences and the basic phonological alternations. Nominal gender is shown by the masculine (-ka) or feminine (-ta) “definitives”. Verbal entries consist of the singular imperative and the third masculine singular past, which allow prediction of all other verb forms. An appendix contains conjugations of irregular verbs.


This is the first grammar of Somali in English. The author's intention is to provide a description of Somali which is accessible to non-linguists. The Introduction briefly defines “Standard Somali”, which the book describes. The lexical categories necessary for the description are laid out, and this is followed by a discussion of grammatical functions and syntactic roles, necessary for an understanding of the focus system. Titles of the descriptive chapters are as follows: Sounds and...
Orthography, Verbs, Nouns and Simple Noun Phrases, Adjectives, Prepositions, Simple Sentences, Subordinate Clauses, Coordination, and Time Expressions. The book ends with a bibliography of works on Somali and an index of grammatical terms.

From SELAF


[Abstract provided at beginning of book]: “This is the first dictionary dealing with the Berber language spoken at Ouargla and Ngoussa, two oases in the north of the Algerian Sahara. It is intended primarily for the Berber-speaking people of those two oases, as well as for other Berber-speaking people of the Maghreb. These will be made aware once more of the basic unity of their tongue, notwithstanding dialectal and regional variants. ... This dictionary is illustrated with a stock of current examples, idioms, proverbs, and sayings, and follows the modern way of classifying words according to their roots. ...” The entries are thus organized according to consonantal root structure. A French-Ouargli index provides the basic Ouargli word to translate the French as well as the root under which to look for the word.


This is a collection of ethnographic texts with French translation. [Abstract from the beginning of the book]: “Wargla is well-known: it is the largest oasis in Northern Sahara and the main centre for the production of Algerian petrol. But who knows of its inhabitants, especially the city-dwellers, whose ancestors peopled the oases in ancient times? A fraction of them, the thousands only, still keep using their ancient Berber language, and live by their traditional customs. The texts presented here, Living and Dying at Wargla, make us know the oasis, the old city and its inhabitants. They give us an insight into the mentality of the Warglis, their approach to religion, their practices, their patterns of behaviour both at social and individual level. These texts, rich as they are, were received under dictation from the Warglis themselves, and through them we discover many surprising and interesting features of their life. ... The French translation, with some notes added, follows closely the Berber text.”
The Welmers and Welmers Igbo books, originally published in 1968, were written as pedagogical texts for learners of Igbo, but serve as general reference works on "Central Igbo" as well. The dictionary has both Igbo-English and English-Igbo sections. Entries in the Igbo section are alphabetized by initial root consonant rather than by prefix. The Learner's Manual has extensive information on syntax and in particular, on tonal alternations which play a part in the syntax.

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