STUDIES IN AFRICAN LINGUISTICS

Volume 12, Number 3
December 1981

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LES DIPHTONGUES CACHEES DU VATA*

Jonathan D. Kaye
Université du Québec à Montréal

Dans cet article, j'aborde la question des suites voca-
liques en vata, une langue kru parlée en Côte d'Ivoire.
Je démontre qu'il y en a deux sortes: des séquences vo-
caliques qui impliquent deux syllabes distinctes, et les
diphtongues qui représentent une suite de deux voyelles
au sein d'une seule syllabe. Des facteurs morphologiques,
tonologiques et phonologiques (l'harmonie vocalique) dis-
tinguent ces deux classes de suites vocaliques. Ayant
établi l'existence des diphtongues en vata, je discute la
définition de cette classe d'éléments. Je conclus que
toutes les diphtongues du vata consistent en une suite d'une
voyelle haute suivie d'une voyelle non haute. Etant don-
né le système vocalique de cette langue, cette définition
prévoit l'existence de douze diphtongues. Or, il n'y en
a que dix qui se manifestent en surface. Les diphtongues
uo et ꞷɔ sont exclues des formes phonétiques. Je pré-
sente des évidences pour justifier la présence de ces
deux diphtongues "abstraites" dans l'évantail phonologique
du vata.

1. Introduction: le système vocalique

Dans cet article je me propose de démontrer l'existence de deux diph-
tongues en vata qui n'apparaissent jamais en surface. Cette question me
donnera aussi l'occasion de présenter en détail le système vocalique du
vata.

Le vata possède un système vocalique de dix voyelles. Ce système s'or-
ganise en deux groupes vocaliques: cinq voyelles avancées[1] et cinq voyelles

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[1]La "dixième voyelle", à savoir la voyelle basse avancée ne se prononce

rétractées. Les voyelles avancées et rétractées seront représentées par les traits [+ATR] et [-ATR] respectivement.

(1)   Avancées   Rétractées

        i   u   ı   ʊ

        e   o   ɛ   ɔ

              ʌ   ɑ

(2)   i u e o ʌ   ı ʊ ɛ ɔ ɑ

    ATR   + + + + +   − − − − −

    HAUT   + + − − −   + + − − −

    BAS   − − − − +   − − − − +

    ARRIERE − + − + +   − + − + +

Les morphèmes du vata contiennent des voyelles qui sont du même groupe. Les voyelles d'un morphème sont, ou bien toutes avancées, ou bien toutes ré-tractées,[2] p. ex. kɔ̀lɑ̀ 'tortue', nɔ̄kpì 'ailes', kōlè 'igname', ɓūgbí 'mentons'.

Les suffixes nominaux et verbaux s'harmonisent avec la valeur du trait ATR du radical selon la règle (3).

(3) V → [+ATR] /   V   ] +___
                    +ATR   N,V

Les effets de la règle (3) se voient dans les données en (4).

(4) ıī   'manger'   ıīlē   'manger quelque part'

     zı̀zō   'cacher'   zı̀zōlē   'cacher quelque part'

     gbɔ̀   'crier'   gbɔ̀lɛ̀   'crier quelque part'

     nɑ́nı̄   'marcher'   nɑ́nʊ̀lɛ̄   'marcher quelque part'

     nòvó   'abeilles'   nòvóyè   'une abeille'

     gōlḕ   'kolas'   gōlē̄yè   'une kola'

_____

pas dans le parler de tous les locuteurs de vata. Néanmoins, il y a bien des raisons de supposer que tout dialecte vata ait un système de dix voyelles. Voir Kaye [1980] pour l'argumentation.

[2]Certains mots empruntés et composés font exception à la règle: èlùwà 'chien' du baoulè àluà ; nʌ̄gòzɛ̀ 'arc-en-ciel' nʌ̄gò + zɛ̀ .

gbɔ́   'graines'   gbɔ́yὲ   'une graine'

zɔ́kpɔ̀   'mouches'   zɔ́kpɔ̀yὲ   'une mouche'

A partir des données en (4) il n'est pas évident que la formulation de la
règle (3) soit juste. Il y a deux autres versions possibles de cette règle:

(5) a.   V → [αATR] /   V   ] + ___
                      αATR   N,V

    b.   V → [-ATR] /   V   ] + ___
                      -ATR   N,V

Selon (5a) les formes sous-jacentes des suffixes n'auraient pas de spécifi-
cation pour le trait ATR. Elles la recevraient du radical par le biais de
la règle (5a). Si l'on accepte, par contre, la règle (5b) les formes sous-
jacentes des deux suffixes en (4) seraient lē et yὲ , respectivement.
Enfin selon notre analyse ces formes sont lɛ̄ et yὲ qui sont transformées
en lē et yè après les radicaux +ATR par la règle (3). Il me reste à
justifier cette analyse.

Premièrement, tous les morphèmes grammaticaux pour lesquels nous avons
des renseignements clairs ne possèdent que les voyelles [-ATR]. Il serait
tout à fait naturel d'étendre cette généralisation à tous les morphèmes
grammaticaux. Les morphèmes pour lesquels nous avons des renseignements
clairs sont ceux qui exhibitent une alternance impliquant le maintien ou la
chute d'une consonne sonantique en position initiale. Dans ce dernier cas
la chute aboutit à une séquence vocalique qui subira une règle d'assimila-
tion du trait ATR. Or la forme qui retient la consonne sonantique possède,
invariablement, une voyelle [-ATR] qui doit être considérée comme la forme
sous-jacente de la voyelle. Quelques exemples se trouvent ci-dessous.

(6)   bɔ́ ∿ ɔ́   article défini
        mὲ ∿ ὲ   démonstratif
        mɔ́ ∿ ɔ́   pronom complément
        ɓā ∿ ā   forme d'insistance

Deuxièmement, il y a une règle (facultative) d'harmonie vocalique pro-
gressive impliquant le trait ATR. Cette règle a plusieurs propriétés inté-
ressantes. Ici nous nous contentons de signaler que les voyelles [-ATR]
peuvent subir la règle pour ainsi devenir [+ATR] alors qu'une voyelle [+ATR]

ne peut jamais se transformer en [-ATR]. En (7) nous donnons quelques ex-
emples de ce processus et en (8) l'expression informelle de la règle.[3]

(7) a. ɔ́ zā   ó dlù
        'sa nourriture'   'son pagne'

        ɔ́ ká zā flɔ̀`   ó ké zē pī
        'il va acheter de la   'il va préparer la nourriture'
        nourriture'

    b. ɔ́ká ŋú nlá ∿ *ɔ́ká ŋó nlá
        óké ŋú nlá   'il va boire de l'eau'

        ʌ̀lé gbázà ∿ *ʌ̀lɛ́ gbázà   'je mange un porc-épic'

(8) V → [+ATR] / ___# (#) Co $\begin{bmatrix} V \\ +ATR \end{bmatrix}$

Troisièmement, le traitement des mots empruntés manifeste un comporte-
ment semblable: ces mots peuvent faire exception à la contrainte que tout
morphème vata possède des voyelles qui s'accordent pour le trait ATR. Mais
ces exceptions ont toutes un caractère particulier. Elles ont des voyelles
[-ATR] précédées des voyelles [+ATR]. Par contre, si le mot source possède
une voyelle [+ATR] précédée d'une voyelle [-ATR], cette dernière se trans-
forme en voyelle [+ATR] dans la version vata du mot.

Considérons le mot èlùwà 'chien' emprunté au baoulé àlùà . La pre-
mière voyelle étant [-ATR] et suivie d'une voyelle [+ATR], c'est-à-dire,
u , est changée en e . Par contre la deuxième voyelle est, elle, suivie
d'une voyelle [-ATR] mais elle ne manifeste aucune tendance à se transformer
en ɔ . D'autres examples de ce genre sont donnés en (9).

(9) <u>vata</u>   <u>baoulé</u>

     sìká`   sìkà′   'or'

     èflì   èflì̀   'albinos'

     èflùmú`   àflúmú   'âne'

     kèní`        kànní`   'lampe'

Encore une fois nous voyons que les changements du trait ATR vont toujours

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[3]L'alternance α ∿ e illustrée dans ces exemples est un indice de la
présence d'une dixième voyelle. Voir Kaye [1980].

en sens unique. Les voyelles [-ATR] peuvent changer en voyelles [+ATR] mais jamais le contraire. Nous concluons donc que la formulation de la règle (3) est correcte ainsi que les formes sous-jacentes qui s'ensuivent. Nous sommes prêts à aborder la question des diphtongues en vata.

2. <u>Les diphtongues</u>

Au sein des morphèmes en vata se trouvent des suites vocaliques. Des exemples sont fournis en (10).

| (10) a.		-ATR		+ATR	
		cɩá	'apprendre'	bʊ́miλ	'mouches à fruit'
	-arrière	dɩɛ̀	'couper (imperf.)'	siē	'rire (imperf.)'
		dɩɔ̀	'cesser (imperf.)'	bʊ́miò	'mouche à fruit'
	b.	kɔɑ̀	'hommes'	yuλ	'enfants'
		lɔɛ̄	'éléphant'	zué	'hier'
	+arrière	(ɔɔ)	inexistante	(uo)	inexistante

Le tableau (10) s'organise de la manière suivante: à gauche se trouve toutes les suites vocaliques dont les membres sont [-ATR], à droite, les suites vocaliques [+ATR]. En (10a) le premier membre de la suite est une (semi)voyelle [+haut, -arrière] (i ou ɩ). En (10b) le premier membre est [+haut, +arrière] (u ou ɔ). Il est possible de caractériser les suites vocaliques selon la formule suivante:

(11)   Une suite vocalique en vata consiste en une voyelle [+haut] suivie par une voyelle [-haut]. De plus, les voyelles doivent s'accorder sur le trait ATR.

Si l'on regarde le tableau (1), on voit que la formule (11) prévoit douze suites vocaliques, à savoir pour chaque groupe de cinq voyelles [±ATR] il y a deux voyelles hautes et trois voyelles non-hautes. En (10) on voit que dix sur les douze possibilités logiques se réalisent phonétiquement, ɔɔ et uo n'apparaissant jamais en surface. Dans la section 2.1, je présenterai des évidences montrant que les suites vocaliques en (10) sont bel et bien des diphtongues, c'est-à-dire que du point de vue de la structure syllabique, elles s'analysent comme dans (12a) et non pas comme dans (12b).[4]
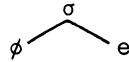

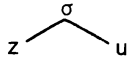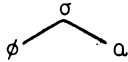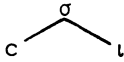[4]Voir Kaye and Lowenstamm [1980] et Vergnaud and Halle [1978] pour le

(12) a.
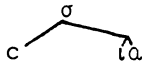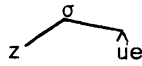
ciá̰   'apprendre'   zué   'hier'

b.

    Deuxièmement, en section 2.2 j'argumenterai pour montrer l'existence de
deux diphtongues cachées: les deux diphtongues manquantes du tableau (10),
uo , ɔɔ .

2.1. <u>Les diphtongues et les séquences vocaliques</u>. En vata, il est impor-
tant de distinguer deux sortes de suites vocaliques: les diphtongues dont
la structure syllabique est comme dans (12a) et les séquences vocaliques qui
ont une structure semblable à celle de (12b). Autrement dit, les séquences
vocaliques forment deux syllabes distinctes alors que les diphtongues ont
une analyse monosyllabique. En (13) ci-dessous, je donne une "paire mini-
male". L'exemple (13a) est une diphtongue et (13b) une séquence vocalique.
Bien que la différence soit subtile, elle est quand même perceptible au ni-
veau phonétique. Quoi qu'il en soit le comportement phonologique ne laisse
aucun doute concernant le statut phonologique respectif de ces deux formes.

(13) a. sɪɔ̄   'escargot'
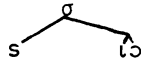
     lɪ̰ɔ̰   'chansons (déf)'
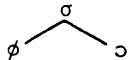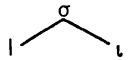
Maintenant je passe aux arguments appuyant une analyse diphtongale pour les
formes de (10).

    En général, le vata ne permet pas de séquences vocaliques au sein d'un
morphème. Les exceptions sont des noms propres, yàɔ̄ , 'Yao' et des mots
empruntés, àɲɑ̀ɔ̀ 'chat'. Le reste des séquences vocaliques apparaissant à
l'intérieur d'un seul morphème, se conforment à la définition (11), à savoir
une voyelle [+haut] suivie par une voyelle [-haut] (voir (10)). Si l'on con-
sidère que ces dernières séquences sont des diphtongues, on peut bien propo-

_____

cadre théorique des structures syllabiques.

ser que le vata possède une contrainte inframorphologique contre les sé-
quences vocaliques.

Du point de vue du ton, les séquences comme celles de (10) se comportent
comme une seule syllabe. Il n'y a qu'un ton pour toute la séquence, et de
plus, si le ton change à cause d'une règle tonologique, le changement touche
toute la séquence.

(14) a. ɲ pá   'je lance'   ǹ pɑ̀   'tu lances'
         ɲ pá̀   'j'ai lancé'   ǹ pɑ̀̀   'tu as lancé'

         ɲ cɪá *ɲ cɪ́ɑ   'j'apprends'   ǹ cɪɑ̀   'tu apprends'
         ɲ cɪá̀ *ɲ cɪ́ɑ̀ 'j'ai appris'   ǹ cɪɑ̀̀   'tu as appris'

    b.   ɲ siέ *ɲ sǀē   'je ris'   ǹ siē   'tu ris'
         ɲ siέ̀ *ɲ sǀè   'j'ai ri'   ǹ siè   'tu as ri'
                *ɲ sǀè

Les exemples de (14a) illustrent une règle qui fait monter un ton mi-
haut à haut après un ton mi-haut. En (14b) nous voyons un règle qui fait
monter un ton moyen à mi-haut après un ton mi-haut, aussi qu'une règle qui
fixe une copie du ton précédant sur un ton bas. Cette dernière règle ne
s'applique pas si la syllabe qui porte le ton bas est suivi immédiatement
par une voyelle. En tous ces cas les diphtongues se comportent exactement
comme des voyelles simples. Ces faits découleront automatiquement si l'on
présume qu'un ton est associé avec chaque syllabe et que les séquences en
(10) constituent une seule syllabe.

Il est à noter qu'il n'y a aucune condition en vata disant qu'une sé-
quence vocalique possède toujours un ton. Les séquences qui franchissent une
frontière morphologique manifestent assez souvent deux tons différents.

       díɔ̌   'villages (déf)'   ɲ lɔ̌ɔ́   'je le mange'
       (dí + ɔ̌)   (lɛ̀   ɔ́)

En outre, les exemples des séquences vocaliques qui ne se conforment pas à
(11) à l'intérieur d'un morphème peuvent avoir aussi deux tons distincts:
yàō 'Yao', ɔ̀ɲɑ́ɔ̀ 'chat'.

Une autre évidence pour le statut diphtongal des séquences en (10) nous
est fournie par la règle d'harmonie vocalique dont j'ai parlé en (7) et (8)

ci-haut. Primo, la règle (8) n'affecte que la dernière syllabe des mots po-
lysyllabiques.

(15) a. ɦ ká zā̄   pῑ̄   'je vais préparer de la nourriture'
         je vais nourriture préparer
         ɦ ké zē̄   pῑ̄

     b. ɦ ká sáká   pῑ̄   'je vais préparer du riz'
         je vais riz   préparer
         ɦ ká sáké   pῑ̄
        *ɦ ká séké   pῑ̄

Alors qu'en (15a) la forme monosyllabique zā̄ est transparente par rapport
au processus (8), la forme bisyllabique sáká en (15b) ne se laisse changer
que sa dernière syllabe.

    Secundo, les séquences intramorphologiques peuvent elles subir la règle
(8), mais elles ne permettent pas que ce processus aille plus loin.

(16) ɦ ká zā̄ā̄   pῑ   'je vais préparer la nourriture'
      je vais nourriture déf. préparer
      ɦ ká zē̄ē̄   pῑ
     *ɦ ké zē̄ē̄   pῑ   (cf. (15a))

Or, les séquences vocaliques en (10) se comportent comme des monosyllabes et
non pas, ni comme des polysyllabes ni comme des suites vocaliques intramor-
phologiques.

(17) ɦ ká ŋʊá dlù ɲέ   'je vais leur donner un pagne'
      je vais eux pagne donner
      ɦ ké ŋué dlù ɲέ

Non seulement la séquence vocalique subit la règle (8) mais aussi elle la dé-
clenche auprès du morphème qui la précède.

    Etant donnée la nature diverse et convergente des preuves que je viens
de présenter je me sens justifié de conférer le statut de diphtongues sur les
séquences vocaliques de (10).

2.2. Les diphtongues "cachées" /ɔo/ et /uo/ . Ayant établi l'existence
des diphtongues en vata il reste à savoir, lesquelles au juste s'y trouvent.
J'ai déjà mentionné que la définition (11) semble bien exprimer la gamme des

possibilités. La seule chose qui gâte la sauce, c'est l'inexistence appa-
rente des diphtongues uo et ɔɔ . Dans le reste de cet article je me pro-
pose de démontrer que cette lacune n'est qu'illusoire.

2.2.1. <u>Evidence des oppositions du singulier/pluriel</u>. L'évidence la plus
importante de l'existence des diphtongues abstraites uo , ɔɔ nous vient
de la morphologie nominale. Travis, Doua et Doua [1980] ont discuté la for-
mation du pluriel. Je ne discuterai pas tous les détails de leur analyse.
Je me contenterai simplement d'exposer les grandes lignes de l'analyse. Ils
ont noté que le pluriel se forme très généralement en remplaçant la dernière
voyelle du nom par une voyelle haute, antérieure qui s'accorde avec le reste
du radical pour le trait ATR [Travis et al. 1980:2]:

(18) <u>Singulier</u>   <u>Pluriel</u>

Singulier	Pluriel	
nĩdè	nĩdì	'marmite'
dĩdʌ́	dĩdí	'piège'
dìù	dìì	'pagne'
gō	gĩ	'queue'
bláblɛ́	blábĺ	'mouton'
gbázà	gbázì	'porc-épic'
gbɔ̀gbɔ̀	gbɔ̀gbì	'cachette'
kplɔ̀	kplì	'panier de pêche'

A part la règle générale citée ci-haut, Travis et al. ont signalé plusieurs
sous-règles impliquées dans la morphologie du pluriel. Par exemple, plu-
sieurs noms se terminant par -ɛ , qui désignent des animaux, prennent -ɑ
au pluriel:

(19) <u>Singulier</u>   <u>Pluriel</u>

Singulier	Pluriel	
blɛ́`	blá`	'buffle'
tlɛ̄	tlā̄	'serpent'
nlɛ̄	nlā̄	'animal'
kpɛ̄	kpā̄	'toucan'

Des noms en -ɑ ou -ɛ précédés d'une labiale prennent -ɔ au pluriel.

(20)   <u>Singulier</u>   <u>Pluriel</u>

    gbɛ̀[5]   gbɔ́   'furoncle'

    vɑ̀[5]   vɔ́   'plaie'

    gbāngbà   gbāngbɔ̀   'fourche'

    èlùwà   èlùwɔ̀   'chien'

La sous-généralisation vue en (20) figurera dans un argument pour la diph-
tongue abstraite. Passons maintenant à la considération d'un autre patron.

(21)   <u>Singulier</u>   <u>Pluriel</u>

    glà'sɩɔ̀   glà'sɩà   'verre'

    ŋɔ́tíŋɔ́tɩɔ̀   ŋɔ́tíŋɔ́tɩà   'moustique'

    nōkɔ̀gbàlɩɔ̀   nōkɔ̀gbàlɩà   'bois de chauffage'

    dɔ́lɩɔ̀   dɔ́lɩà (var.)   'souris'

    dàdɩɔ̀`         dàdɩà`   'couteau'

Sans exception, les noms se terminant en la diphtongue   ɩɔ   au singulier
prennent la diphtongue   ɩɑ   au pluriel. Par contre, les noms qui ont une
monophtongue finale au singulier ne prennent jamais   ɔ   au pluriel.

(22)   <u>Singulier</u>   <u>Pluriel</u>

    kpàngɔ̀`        kpòngɩ̀`   'cheval'

    sɔ̄   sɩ̄   'bras'

    kplɔ̀   kplɩ̀   'panier de pêches'

    glɔ̀   glɩ̀   'palissade'

    Je suis Travis et al. en présumant que les noms en   ɔ   ne manifestent un
pluriel en   ɑ   qu'en contexte diphtongal.

    Considérons maintenant une forme apparemment irrégulière.

(23) kɔ̀`        kɑd`   'homme'

Cette forme nous pose deux questions: je viens de constater que les formes
en   ɔ   prennent   ɑ   au pluriel uniquement dans le contexte d'une diphtongue;
le singulier semble être monophtongal. D'où vient le   ɒ   du pluriel? Autre-

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[5]La sélection de la forme du pluriel implique, parfois, un changement de
ton. Voir Travis et al. [1980] pour les détails.

ment dit, étant donné kɔ̂` au singulier, on s'attendrait à *kĺ` au plu-
riel.

Je peux répondre à ces deux questions à la fois, en postulant une diph-
tongue ɷɔ . La forme sous-jacente de [kɔ̂`] sera donc kɷɔ̂` . Ceci ex-
plique tout de suite pourquoi nous trouvons ɑ au pluriel: le singulier
est bel et bien une diphtongue, et il est la source du ɷ au pluriel; autre-
ment dit, la manifestation en surface du premier élément de la diphtongue.
Il nous faut maintenant une règle de monophtongaison pour rendre compte de
la forme au singulier.

(24)

$$\text{ɷ} \rightarrow \text{ø} \ / \ \underline{\qquad} \overbrace{\qquad}^{\text{Noyau}} \text{ɔ}$$

La règle (24) est l'expression informelle de ce processus. Nous verrons
plus tard qu'une formulation beaucoup plus générale est possible, voire né-
cessaire. La règle contient la structure syllabique dans son contexte car
elle ne s'applique qu'aux cas ou le ɷ et le ɔ font partie de la même
syllabe, autrement dit, qu'à des diphtongues (cf. Iɔ́ 'chanson', Iɔ́ɔ̂ 'la
chanson', *Iɔ̂). Les dérivations pour les formes de (23) sont données ci-
dessous.

(25) | Singulier | Pluriel | |
|---|---|---|
| kɷɔ̂` | kɷɔ̂` + pl. | |
| | kɷɑ` | règle morphologique (24) |
| kɔ̂` | | |
| kɔ̂` | kɷɑ` | |

Une autre preuve à l'appui de cette analyse est la généralisation que
j'ai mentionnée en (20), à savoir que les noms en ε prennent ɔ au pluriel
après une labiale. Considérons les formes en (26).

(26) | Singulier | Pluriel | |
|---|---|---|
| gɷέ | gɔ́ | 'chimpanzé' |
| Iɷε̄ | Iɔ̄ | 'éléphant' |

Nous voyons au singulier que le premier élément de la diphtongue ɷε peut
bien constituer le contexte labial qui conditionnerait la sélection de la
forme du pluriel. Cela étant le cas on s'attendrait à *gɔ́ɔ et *Iɷɔ̄

comme les formes plurielles de 'chimpanzé' et 'éléphant', respectivement.
Or, je peux rendre compte des formes existantes par le biais de la règle
(24) qui a été justifiée indépendamment de ces données-ci:

(27) <u>Singulier</u>   <u>Pluriel</u>

      gɷɛ̂   gɷɛ̂ + pl.

             gɔ́   règle morphologique (24)

      gɷɛ̂   gɔ́

     Jusqu'à maintenant je n'ai considéré que les diphtongues [-ATR] (ɷɑ ,
ιε , ɷε , ιɔ , ɷɔ) . Il serait intéressant de passer à leurs homologues
[+ATR]. Je commence avec la version [+ATR] ιɔ déjà étudiée en (21) ci-
haut, ιo .

(28) <u>Singulier</u>   <u>Pluriel</u>

     ɓètιɔ̀   ɓètιé̀   'bouteille'

     kɔ́fιɔ̀   kɔ́fιè   'singe'

     vιɛ́vlιɔ́̀   vιɛ́vlιé̀   'guêpe maçonne'

Nous croyons que la forme du pluriel correspondant à -ιo au singulier est
ιe . Je me dois de noter que les données de (28) nous viennent d'un dia-
lecte qui confond e et la dixième voyelle ʌ (voir note 1). Même dans ce
dialecte-ci, nous avons les moyens de déterminer de quelle voyelle (e ou
ʌ) il est question. Il suffira de prendre la forme définie des pluriels de
(28). Si cette forme-là se termine en -εε , il s'agit d'un vrai e . Si,
par contre, la forme définie se termine en -ɔɔ ⌣ ee la voyelle en question
est ʌ .

(29) <u>Indéfini</u>   <u>Défini</u>

   a. ιέ   ιέέ   'lance'

       ɓιέ   ɓιέέ   'boeuf'

       kιè   kιὲὲ   'chapeau'

   b. sιέ   sιέέ ⌣ sιɔ́ɔ́   'maison'

       kpē   kpēē ⌣ kpɔ̄ɔ̄   'chaise'

       gòdè   gòdèè ⌣ gòdɔ̀ɔ̀   'mortier'

   c. ɓètιé̀   ɓètιé̀è ⌣ ɓètιɔ́̀ɔ́   'bouteille'

Indéfini   Défini
kɔ́fiɛ̀   kɔ́fiɛ̀ɛ̀ ∿ kɔ́fiɔ̀ɔ̀   'singe'
vlɛ́vliɛ́ˋ   vlɛ́vliɛ́ˋɛ̀ ∿ vlɛ́vliɔ̀ˋɔ̀   'guêpe maçonne'

Les données en (29) nous montrent que la diphtongue en question est iʌ et non pas ie .[6] Ceci dit, il devient évident que les formes de (28) suivent exactement le même modèle que celles de (21) et de (23).

(30) ιɔ - ιɑ ɔɔ (=[ɔ]) - ɔɑ iɔ - iʌ (=[ie])

Autrement dit, le patron manifesté en (28) n'est que la version [+ATR] du patron en (21).

Jusqu'ici j'ai montré que trois diphtongues subissent le même processus de formation de pluriel: ιɔ , ɔɔ , iɔ . Dans ces trois cas le dernier élément de la diphtongue est remplacé par une voyelle [+bas] dont la valeur du trait ATR est déterminée par la valeur de ce même trait de la diphtongue.

Il nous reste une quatrième possibilité logique de ce genre de diphtongue, à savoir [+ATR] de ɔɔ .

(31) Singulier   Pluriel
     zɔ́yɔ̀   zúyuɛ̀[7]   'oiseau'
     yɔ́   yué   'enfant'
     fɔ́   fué   'mort'

Il est important de noter que la diphtongue [ue] du pluriel est uʌ au niveau sous-jacent. La preuve se trouve encore une fois dans la forme définie de ces pluriels:

(32) zúyuɛ̀   zúyuɛ̀ɛ̀ ∿ zúyuɔ̀ɔ̀
     yué   yuéɛ́ ∿ yuɔ́ɔ́
     fué   fuéɛ́ ∿ fuɔ́ɔ́

Les noms se terminant en -ɔ prennent habituellement -i au pluriel, c'est-à-

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[6]Cette conclusion est confirmée par des locuteurs qui distinguent toujours e et ʌ . Toutes les formes en (29) sont prononcées -iʌ par ces locuteurs.

[7]La question du changement de la première voyelle du nom est abordée en Travis et al. [1980]. Elle ne nous concerne pas ici.

dire, qu'ils suivent la règle de formation du pluriel des monophtongues:

(33) <u>Singulier</u>   <u>Pluriel</u>

    gō   gī   'queue'

    zō   zī   'année'

    blɔ́   blɪ́   'plantation'

    gòlɔ̀   gùlɪ́[7]   'butte'

Nous pouvons rendre compte des formes en (31) en postulant une diphtongue uo comme source du o au singulier. (Les formes de (33) auront un o au niveau sous-jacent). Nous pouvons, donc, expliquer et la présence d'une voyelle basse au pluriel, et l'apparition d'une diphtongue dans ces formes-là. Nous sommes maintenant en mesure de définir la classe des noms prenant une voyelle basse au pluriel.[8]

(34)

Si ⟋⟍[+arrondi]   alors   ⟋⟍[+bas]   au pluriel

La définition (34) exprime la généralisation que toute diphtongue dont le dernier membre est arrondi, prend une voyelle basse au pluriel. Cette définition ainsi que l'éventail des diphtongues en vata (voir (11)) et la contrainte concernant le trait ATR nous donnera les patrons suivants:

(35) <u>Singulier</u>   <u>Pluriel</u>

    ιɔ   ιɑ

    ɷɔ (=[ɔ])   ɷɑ

    io   iʌ (=[ie])

    uo (=[o])   uʌ (=[ue])

Si l'on postule, par exemple yuɔ́ comme la forme sous-jacente de yɔ́ (pluriel yuʌ́), il faudra une règle de monophtongaison pour que l'on se débarrasse de toute instance de uo en surface. En fait, une telle règle a déjà été justifiée dans la phonologie du vata. C'est la règle (24) qui a été présentée informellement ci-haut. En généralisant cette règle, ce que je serais obligé de faire de toute façon pour des raisons théoriques, la diph-

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[8]La définition à suivre sera un critère suffisant mais non pas nécessaire à la sélection d'une voyelle basse au pluriel. Cf. les formes en (19).

tongue uo se transformera automatiquement en o . Je donne la version gé-
nérale de la règle de monophtongaison en (36).

(36) Monophtongaison

Noyau

[+arrondi] → ∅ / _____ [+arrondi]

La règle (36) transformera uo , ɔo en o , ɔ respectivement, le résultat
voulu.

2.2.2. <u>Problèmes résiduels</u>. Je viens de montrer l'existence de deux diph-
tongues dans la phonologie du vata, qui n'apparaissent jamais en surface.
Je poursuivrai cette étude en analysant des problèmes résiduels qui illus-
trent encore une fois le caractère "abstrait" de la langue. Considérons d'a-
bord le cas en (37).

(37) <u>Singulier</u>   <u>Pluriel</u>
      có`          cié`   'père'

Ces formes-ci sont intéressantes pour plusieurs raisons. Primo, on voit une
diphtongue au pluriel, alors que la forme du singulier a une monophtongue.
De plus la sélection de la marque du pluriel s'accorde avec la règle des
diphtongues; le suffixe est ʌ (+[e]) . Secundo, l'occlusive palatale c
apparaît devant une voyelle non palatalisante. Or l'apparition de c se
limite presque toujours à la position devant une voyelle antérieure.[9]

   Il serait inutile d'essayer de dériver có`  à partir de  cuó` par le
biais de la règle (36). Ceci n'expliquerait   ni la forme du pluriel
cié` ni l'occlusive palatale devant une voyelle arrière. Une règle de mo-
nophtongaison de io sans contexte ne marcherait pas non plus, vu que io se
manifeste en surface assez regulièrement (cf. les formes de (28)). Je ne
peux pas prétendre non plus que toute diphtongue devient monophtongue après
une palatale puisqu'au pluriel nous avons cié` . Je dois me contenter de
proposer une règle qui transformera une diphtongue en monophtongue lors-
qu'elle est précédée d'une palatale et lorsque son deuxième élément est
[+arrondi] (cf. aussi cɩú 'apprendre').

_____

[9]Le nom cɔ̌ 'lune' est une des quelques exceptions à cet énoncé.

Cette règle trouve son expression formelle en (38).[10]

(38)
$$[X] \rightarrow \phi \ / \ [+\text{haut}] \underline{\qquad} \overbrace{\qquad\qquad}^{\text{Noyau}} \ [+\text{arrondi}]$$

Cette règle semble être tout à fait ad hoc. En fait, nous verrons tout de suite que son existence est bien justifiée. Si l'on prend la forme définie du pluriel, on peut démontrer une fois de plus que la diphtongue de ció` est bel et bien iʌ` au niveau sous-jacent. Ces formes-là manifestent deux variantes se terminant en -e ou -ɔ . Comme je l'ai dit ci-haut les noms se terminant en e (au niveau sous-jacent) prennent -ɛ comme la dernière voyelle de la forme définie. Considérons maintenant les formes définies de ció` 'pères':

(39) <u>Indéfinie</u>   <u>Définie</u>

ció`              ció`è ∿ cɔ́`ɔ

La première forme ció`è semble tout à fait normale, la voyelle du suffixe étant -e . La deuxième forme maintient la voyelle sous-jacente du suffixe tout en assimilant la dernière voyelle du radical.[11] Mais la voyelle du radical est devenue monophtongue. Ce résultat découle automatiquement de la règle (38) si l'on suppose que cette dernière règle s'applique après celle d'assimilation qui transforme la voyelle du radical. Nous trouvons donc une justification indépendante pour la règle (38). La dérivation est donnée en (40) ci-bas.

(40) ció`   ɓɔ

ció`ɔ   Perte de ɓ et assimilation du ton

ci`ɔ̀ɔ   Assimilation vocalique

cɔ́`ɔ   règle (38)

[cɔ́`ɔ]

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[10]Cette règle est formulée selon la théorie syllabique de Kaye et Lowenstamm. Le X représente un segment quelconque. Dans cette position syllabique il doit être ou bien une voyelle haute arrondie (à effacer de toute façon par la règle (36)) ou bien une voyelle haute antérieure (qui est l'objet de cette règle). Les seuls segments qui peuvent occuper la position [+haut] de (38) sont c et j .

[11]Voir Kaye [1980] pour discussion.

La forme 6ɔ́ est la forme sous-jacente de l'article définie. Il faut
aussi proposer une série de consonnes labialisées en vata. Ces consonnes
sont des vélaires labialisées kʷ et gʷ . Elles ne sont pas à confondre
avec les diphtongues même si elles sont identiques du point de vue phoné-
tique. Considérons les cas suivants:

(41) a. <u>Singulier</u>   <u>Pluriel</u>
         zègwè   zègwì   'agouti'
         tèkwè   tèkwì   'panier'

     b. <u>Imperfectif</u>   <u>Infinitif</u>
         gwɔ̀   gù′   'courir'
         kwō   kwō`   'surveiller'

En (41a) on voit deux noms se terminant en ce qui pourrait être interprété
comme des diphtongues. En fait sur le plan phonétique la séquence finale de
zègwè est identique à celle de fué (/fuʌ́/) . Ces noms ne prennent pas la
désinence normale du pluriel des diphtongues, à savoir -ʌ ∿ -ɑ . Ils
prennent le suffixe qui caractérise les monophtongues: une voyelle haute,
antérieure. De plus les formes de (41a) au pluriel comprennent une suite vo-
calique qui tombe en dehors de notre définition d'une diphtongue en vata
(voir (11)).

    Les verbes de (41b) manifestent une séquence qui, si analysée comme diph-
tongue, constituerait un contre-exemple à notre règle de monophtongaison (36).
Autrement dit, on s'attendrait à gɔ̀ et kō , kō` plutôt qu'aux formes de
(41b). En outre, il y a aussi la forme gù′ à expliquer.

    Il est à noter que toutes les formes qui manifestent un comportement
comme (41a) et (41b) ont une vélaire qui apparaît immédiatement avant la
suite vocalique en question. Alors que nous trouvons des patrons nominaux et
verbaux en (41), ceux de (42) sont impossibles.

(42) a. *bɛ́pwè   *bɛ́pwì
         *mònwè   *mònwì

     b. *swɔ́   *sù′
         *bwō   *bwō`

La manière indiquée pour régler ces problèmes sera de considérer les sé-
quences kw et gw comme des manifestations de deux unités phonémiques:
les vélaires labialisées, kʷ et gʷ . Ainsi les séquences phonétiques
[kʷo] et [gʷo] sont /kʷo/ et /gʷo/ et non pas /kuo/ et /guo/ .
Par conséquent, elles ne subissent pas la règle (36). Enfin, il faut ajouter
une règle de délabialisation des consonnes suivies par la voyelle u .

(43) [+cons] → [−labial] / ___ $\begin{bmatrix} +\text{syll} \\ +\text{haut} \\ +\text{arrondi} \end{bmatrix}$

La forme gù′ est donc dérivée à partir de gʷú .[12] La règle (43) s'ap-
plique, délabialisant la vélaire. La forme de l'imperfectif implique un
abaissement de la voyelle ainsi qu'un changement du ton, tous les deux étant
déclenchés par le contexte morphologique de l'aspect verbal. Le changement
de la voyelle précède la règle (43), règle purement phonologique, tout en
l'asséchant. Nous dérivons donc la forme gʷɔ̀ à l'imperfectif.

3. Conclusion

J'ai tenté, dans cet article, d'offrir des évidences de l'existence de
deux diphtongues "abstraites". Dans la mesure ou ces preuves sont convain-
cantes, nous avons encore une fois, une preuve de la nature abstraite de la
phonologie. Si nos diphtongues se sont cachées, on peut bien dire que les
apprentis de vata sont équipés pour les répérer.

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[12]Le ton montant sur gù′ est dérivé d'un ton haut par une règle qui ne
nous concerne pas ici.

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SHONA VERBAL TONES

Kevin G. Donnelly
SOAS, University of London

This paper presents a conditioned variant analysis of the
tones on 29 of the most common Shona verbal inflections.
After some discussion of perhaps the most detailed pre-
vious analysis of Shona verbal tones, that of Fivaz [1970],
a summary of the verbal morphology is given. The tonal
patterns on the base are then described, followed by those
on the pre-base elements. The interaction between the
base and the pre-base elements is discussed at length,
since it is suggested here that the latter "programme"
certain patterns on the former. The effect of the object
substitute on the verbal patterns is then described, and
some possible advantages of the approach outlined here are
mentioned, not least of which is conciseness of descrip-
tion, seen in the checklist of inflections which ends the
article.

0. Introduction

Shona (Chishona) is the name given to a cluster of Bantu dialects spoken

mostly in Zimbabwe. This paper[1] presents an analysis of the tones on 29 of

the most common Shona verbal inflections, both with and without object sub-

stitute. The dialect from which the main body of data is taken is Zezuru,

spoken around Salisbury, but reference is also made to other dialects, mostly

Manyika, spoken in the east of the country.[2] The method of description

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[1]My greatest debt of thanks goes to Dr. J.H. Carter for her searching,
but always helpful, comments on previous drafts of this paper, which was
originally inspired by Dr. D. Fivaz' thesis on Shona morphophonemics (Fivaz
[1970] - see also Section 1). I must also acknowledge my gratitude to the
Department of Education for Northern Ireland, since it was during the tenure
of one of their postgraduate scholarships that I was able to complete the
writing of this paper. Thanks to my mother as well, for fine typing from a
messy manuscript.

[2]My sources for the data are listed in the bibliography. The basis for
the analysis was the data in the grammar section of Carter and Kahari [1974].

adopted here is a type of conditioned variant analysis, in which certain verbal elements "programme"[3] various rules which determine the tone pattern of the verbal base, and in some cases condition tonal realisations elsewhere in the inflection.

1. Fivaz' Analysis

Several other analyses of Shona tones have been proposed, e.g. van Spaandonck [1967], but perhaps the most detailed is that of Fivaz [1970]. This is a taxonomic constituent structure analysis, i.e. the data is described in terms of morphemes which are related to their phonetic realisations by morphophonemic rules (p. xxi). However, Fivaz himself states that there are several problems in this approach and provides a transformational-generative analysis of verbal tones (Appendix II) by way of contrast. The author emphasizes that the interpretation of tonal patterning is of great importance (p.13), but "the main difficulty is that of determining the morphemes that must be recognized in an utterance .... Are the various different tone sequences 'allos' (i.e. conditioned variants) or 'emes' (i.e. contrastive tonal morphemes)?" (p.14).

1.1. Fivaz' approach. For most of the data he adopts the allomorphic approach, though he notes (fn. p.15) that for some examples "the best way of describing these variations is not in terms of allomorphs but in terms of 'adjustments' to base forms". Where verbal tones are concerned he resorts to the device of "conjugational morphemes", i.e. morphemes whose realisation is purely tonal and to which the base tones are assigned (p.25). He admits that this

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The data in Fortune [in press] and in Fivaz [1970] was used to expand on this, and the dialectal variants described in Stevick [1965] were noted in the analysis where possible, though no sustained attempt was made to work all variants into the analysis as formulated here.

[3]The term "programme" implies that a pre-base element may specify a certain tone-pattern on the base: if there is a change in the status of the pre-base element, e.g. by addition of the features [+third person] or [+participial] (see sections 5.1 and 5.2), or a change in the combination of the pre-base elements, e.g. by addition of an object substitute (see sections 8 and 9), then there is a resultant direct change in the pattern on the base.

is unsatisfactory for three reasons: (a) Eleven ('ten' on p.139) such morphemes must be recognised, but it is impossible to attribute any sort of consistent "meaning" to these forms. There are also no verb forms which contrast solely on the basis of these morphemes. In what sense are they then "morphemic"?... (b) ... there is considerable overlap between the various tonal morphemes ... In what sense are these morphemes 'contrastive'? ... (c) ... If the different tone-sequences are *dependent* on [the tone-class of the radical, the pre-base elements, the mood of the inflection] then they cannot be realisations of various morphemes, which are, by definition, contrastive (pp.34-5).

1.2. <u>Fivaz and autonomous tonal grammar</u>. Fivaz also gives some consideration to "autonomous tonal grammar" (cf. Cole [1969]), i.e. "the possibility of assigning all tonal sequences to morphemes whose realisation is only tonal" (p.16). But in Appendix I he gives reasons against such an approach and concludes that it would be both "theoretically unjustifiable and empirically unsupported".

1.3. <u>Fivaz and conditioned variant analysis</u>. As for conditioned variant analyses, he says that his interpretation of the base tones as tonal replacive morphemes "is clearly the simplest taxonomic treatment, as the alternative analysis, that of treating the different sequences as conditioned variants, requires a morphophonemic statement of extreme complexity" (p.21). He reiterates that this "would require complex distributional statements in terms of morphological and syntactic features" (p.34). Yet on p.35 he admits that base tones seem to be conditioned "in a rather complex and perhaps unusual way" by other features in the verbal inflection. We might note, however, that a conditioned variant analysis would have none of the drawbacks he himself cites with regard to the conjugational morpheme approach. I also hope to demonstrate to some extent in this paper that for at least some areas of the verbal system a conditioned variant analysis is not quite as complex as might appear at first sight. For example, Fivaz believes that conflation of base patterns l/hl/hlh/hhlh and h/hl/hlh/hhlh "would require complex conditioning statements" (fn. 3, p.142), with the same comment as regards conflation of l/lh/lhl/lhhl and h/lh/lhl/lhhl (fn., p.144). But, as I will try to show in section 11, these four variants can be handled by two adjustment rules together with, for the dialect in this paper at least, a fairly

simple statement of distribution.[4]

2. Shona Verbal Inflections

2.1. Outline of inflectional pattern. We may say that Shona verbal inflec-
tions have the following pattern:

$$\left.\begin{array}{l}\pm\text{hort.}\\\pm\text{neg.}\end{array}\right\}\quad +\text{SP} \pm \text{neg.} + \text{TM} \pm \text{neg.} + \text{VI} \pm \text{OS} + \text{R} \pm \text{ext.} + \text{TV}$$

(where hort. = hortative element; neg. = negative element; SP = subject
prefix; TM = tense marker; VI = verbal infix; OS = object substitute; R
= radical; ext. = verbal extension; TV = terminal vowel)

However, the sequence .... + TM is replaced in the infinitive by ku- (the
class 15 nominal prefix), in the imperative by zero, and in the subjunctive
by SP. Overlying this morphological sequence is a tonal pattern, varying
with mood and tense, and quite often also with reference to whether the form
is third person or first/second person. There are seven tenses (future, near
future, present, past of today, past of before today, imperfect, potential)
and eight moods, three tense-linked (indicative, relative, participial), oc-
curring on the tenses listed above, and five independent (infinitive, consec-
utive, imperative, subjunctive, hortative). For glosses and structure of
these inflections see section 14.

2.2. Features. Features required for the description are: third person or
class [+3] (where an inflection is specified as [-3] it will of course auto-
matically mean that it is first or second person), participial [+part], rela-
tive [+rel], subjunctive [+subj], imperative [+imp]. It has been usual to
say that, for example, the tone pattern associated with a verbal inflection
referring to a third person subject, as against the tone pattern associated
with a verbal inflection referring to a first/second person subject, is con-
ditioned by the appearance of a third person morpheme. For the purposes of
this paper, however, I prefer to say that *both* the tone pattern *and* the ap-
pearance of the third person morpheme are the realisation of a more abstract
feature [+3].

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[4]In actual fact, all of Fivaz' data seems to employ the adjustment rule
sequence 10,11,7.

3. Classes of Radical

Shona radicals are divided into two distinct classes. We will account
for this by saying that one class of radicals has a "determiner" (D) on the
first syllable of each radical and will call these D radicals, while the oth-
er class of radicals has no such D and will be called "neutral" (N) radi-
cals.[5] We will then have D radicals such as -d_- 'love', -t_or- 'take',
-t_enges- 'sell', -b_atsir- 'help', and -k_anganis- 'make a mistake' and
N radicals such as -ti 'tell', -bv- 'come from', -end- 'go', -ramb-
'refuse', -taur- 'speak', -takur- 'carry', -nyemwerer- 'smile', and
-rondedzer- 'prepare [things] for'. (Determiners are underlined.)

4. Base Patterns

The sequence R ± ext. + TV is called a "base". A number of differing
tone patterns may occur on this base, programmed, as mentioned above, by ver-
bal elements elsewhere in the inflection. Nevertheless, it is important to
remember that there is a tonological boundary between the base and the other
inflectional elements preceding it, even if one of these elements has pro-
grammed the pattern on the base. The various base patterns will now be ex-
emplified from inflections, the tonological boundary between the base and
the pre-base elements being indicated by a full stop. Tone patterns on
these pre-base elements should be disregarded for the time being.

---

[5]The concept of determinant and neutral elements was developed by Meeus-
sen (see, for example, Meeussen [1963]) and refined by Carter [1971-2]. In
the morphotonemic analysis they proposed, they sought to account for the var-
ious tonal patterns of Tonga by positing an underlying distinction in sylla-
ble status which was not immediately obvious from an examination of the sur-
face patterns. They suggested a two-way distinction: syllables behaving in
a certain way they labelled "determiners" and syllables not behaving in that
way they labelled "neutrals". The underlying sequence of determiners and
neutrals was related to the surface patterns by a series of realisation
rules. There was a broad relationship between surface high tone and underly-
ing determiner, and between surface low tone and underlying neutral, but this
was by no means always the case; a sequence determiner-determiner, for exam-
ple, usually surfaced as high-low. In this article the concept of determin-
er and neutral has been taken over, though the realisation rules proposed
here (see section 6.1) are slightly different from those proposed for Tonga.

4.1. The reference pattern.

Let the reference pattern X be, e.g. consecutive, 'and I loved', etc.

D bases	N bases	D bases	N bases
h	l	ndika.dá	ndika.bva
hh	ll	ndika.tórá	ndika.enda
hhh	lll	ndika.téngésá	ndika.taura
hhhl	llll	ndika.kángánísa	ndika.nyemwerera

(where h is high tone, marked ′ , and l is low tone, unmarked)

The reference pattern occurs automatically on underlying forms.

4.2. Adjustment rules. Other patterns are derived from X by "adjustment rules", and further patterns may be derived from these patterns in turn by the application of other adjustment rules.[6] There seems to be only one instance where the sequence of application of these rules is of importance inside one particular dialect (see section 4.4). However, there is also some evidence that sequence of application may be relevant where dialectal variants are concerned (see the discussion in section 6.5). Otherwise, it seems that the rules should be applied in the order given (with the exception of rules 6 and 7). For a list of the rule sequences actually occurring, see section 14. In the following list of adjustment rules, → is short for "the application of this rule adjusts the pattern on the left to become the pattern on the right", and a number in brackets is short for "the product of the application of the rule with this number to the reference pattern". The words "raise" and "lower" can by definition apply only to syllables which are, respectively, low and high.

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[6]Earlier drafts of this paper described the base patterns in terms of several pairs of patterns occurring respectively on D and N radicals, rather like Fortune's tone conjugations. Although in some ways these were easier to fix in the mind than the present rule sequences, it was felt that deriving the various patterns by rules from one reference pattern would have advantages of descriptive adequacy when comparing data from different dialects, since it is easier to write a new rule or rewrite the existing ones than it is to introduce another tone conjugation, which would in any case probably differ only minimally from the ones already established. See section 14 for examples of dialects applying slightly different rule sequences.

A.R.1: Raise the first syllable of the base.

    X → h   h   e.g. ndichí̱.dá̱   ndichí̱.bvá

        hh   hl   ndichí̱.tó̱rá   ndichí̱.énda

        hhh   hll   ndichí̱.té̱ngésá   ndichí̱.táura

        hhhl   hlll   ndichí̱.kángáni̱sa   ndichí̱.nyémwerera

                        present participial, 'I loving', etc.

                        (some Eastern dialects, according to Stevick [1965])

  (9) → h   h   e.g. nda.dá̱   nda.bvá

        hl   hl   nda.tó̱ra   nda.énda

        hll   hll   nda.té̱ngesa   nda.táura

        hlll   hlll   nda.kánganisa   nda.nyémwerera

                        past of today, 'I loved', etc.

A.R.2: Raise the second syllable of N bases.

  (1) → h   h   e.g. ndichí̱.dá̱   ndichí̱.bvá

        hh   hh   ndichí̱.tó̱rá   ndichí̱.éndá

        hhh   hhl   ndichí̱.té̱ngésá   ndichí̱.táúra

        hhhl   hhll   ndichí̱.kángáni̱sa ndichí̱.nyémwérera

                        present participial, "I loving', etc.

A.R.3: Lower the second syllable of disyllabic N bases.

(1) → 2 → h   h   e.g. kumú̱.dá̱   kumú̱.tí̱

        hh   hl   kumú̱.tó̱rá   kumú̱.rámba

        hhh   hhl   kumú̱.bá̱tsírá   kumú̱.tákúra

        hhhl   hhll   kumú̱.kángáni̱sa   kumú̱.róndédzera

                        infinitive +OS, 'to love him', etc.

A.R.4: Raise all except the first syllable on N bases.

    X → h   l   e.g. plus i.dá̱*   i.bvá*

        hh   lh   A.R.7[7] tó̱rá   endá

---

[7]There are no examples in my data of A.R.'s 4 and 5 without accompanying application of A.R.'s 6 or 7. The inflections given as examples for these

hhh	lhh	téngésá	taúrá
hhhl	lhhh	kángánísa	nyemwérérá

imperative, 'love!' etc.

(* i- is a euphonic vowel prefixed before monosyllabic bases)

A.R.5: Lower the last syllable of 3/4-syllable N bases.

(4) → h	1	e.g. plus	handí.de	handí.bve
hh	lh	A.R.6[7]	handí.tóré	handí.endé
hhh	lhl		handí.téngésé	handí.taúre
hhhl	lhhl		handí.kángáníse	handí.nyemwérére

present negative, 'I do not love', etc.

A.R.6: Lower monosyllabic bases, e.g. see under A.R.5.

A.R.7: Raise monosyllabic bases, e.g. see under A.R's 4 and 11.

A.R.8: Lower last high of D bases.

(1) → 1	h	e.g.	ndí.de	ndí.bvé
hl	hl		ndí.tóre	ndí.énde
hhl	hll		ndí.téngése	ndí.táure
hhll	hlll		ndí.kángánise	ndí.nyémwerere

subjunctive, 'that I may love', etc.

(some dialects - Stevick)

A.R.9: Lower D bases.

X → 1	1	e.g.	ngáa.de	ngáa.bve
ll	ll		ngáa.tore	ngáa.ende
lll	lll		ngáa.tengese	ngáa.taure
llll	llll		ngáa.kanganise	ngáa.nyemwerere

hortative, 'let him love', etc.

---

two rules, therefore, include the later application of rules 6 or 7. The hypothetical form for i.bvá in A.R.4 would be *i.bva , but application of rule 7 makes this i.bvá ; likewise, the hypothetical form for handí.de in A.R.5 would be *handí.dé , but application of rule 6 makes this handí.de .

A.R.10:   Replace X by the pattern lhlh on all bases.

    X → l   l   e.g. ndísingamú.de   ndísingamú.ti

         lh   lh   ndísingamú.toré   ndísingamú.rambé

         lhl   lhl   ndísingamú.batsíre   ndísingamú.takúre

         lhlh   lhlh   ndísingamú.kangánisé ndísingamú.rondédzeré

                       present negative participial +OS, 'I not loving him', etc. (some Eastern dialects - Stevick [1965])

A.R.11:   Bring the first high of A.R.10 into line with the determiner on D bases. Spread the first high over two syllables on 4-syllable bases.

  (10) → h   l   e.g. plus ácha.dá   ácha.bvá

        hl   lh   A.R.7   ácha.tóra   áchá.endá

        hlh lhl   ácha.téngesá   áchá.taúra

        hhlh lhhl   ácha.kángánisá   áchá.nyemwéréra

                       future participial, 'he being about to love', etc.

A.R.12:   Replace the sequence lhhl by lhll, and the sequence lhhh by llhh. (Fivaz' dialect)

    e.g. áchá.nyemwéréra (cf. under A.R.11) → áchá.nyemwérera

          nyemwérérá   (cf. under A.R.4) → nyemwererá

4.3.   <u>Frequency of adjustment rules</u>. Some of these rules, e.g. 4,5, are not all that frequently used, but the others appear in a variety of inflections. Some sequences, such as 1, 2, 3, or 10, 11, 6/7 are very common indeed, the latter occurring on most participials, and both commonly occurring on inflections +OS.

4.4.   <u>Adjustment rules and ordering</u>. There is one interesting instance of rule sequence being correlated with the difference between [-3] and [+3]. This occurs in the indicative of the past of today (recent past, see section 14.6).

[-3] applies the rules 9 and then 1 to give the base pattern (cf. under A.R.1).

```
h        l      →    1      1      →    h      h
                9                  1
hh       ll          ll     ll          hl     hl
hhh      lll         lll    lll         hll    hll
hhhl     llll        llll   llll        hlll   hlll
```

[+3] applies the rules 1 and 9

```
h        l      →    h      h      →    1      h
                1                  9
hh       ll          hh     hl          ll     hl
hhh      lll         hhh    hll         lll    hll
hhhl     llll        hhhl   hlll        llll   hlll
```

For example, *nda.tórá   'I took'   →9 nda.tora →1 ndatóra

               *nda.enda   'I went'   →9 nda.enda →1 ndaénda

               *á.tórá   'he took' →1 á.tórá   →9 átora

               *á.enda   'he went' →1 á.énda   →9 áénda

5. Pre-base Elements

Having dealt with the various possible base patterns, we may now move on to the rather more complex field of the pre-base elements, starting with three general comments and then setting out the behaviour and programming potential of the elements themselves.

5.1. The indicative SP.

An indicative inflection [+3] always has a determiner on the subject prefix syllable, e.g.

ndicháénda 'I will go'   but ácháénda   'he will go'
   [-cha- [+3] → -cha- ; cf. section 7]

ndatóra   'I took [today]'   but átora   'he took [today]'

5.2. The participial SP.

An inflection [+part] always has a determiner on the subject prefix syllable (with the exception of inflections containing the present participial element -chi-), e.g.

ndinóenda   'I go'   but [zva-] ndínóendá '[when] I go'
   [-no- [+part] → -no- ; cf. section 7]

ndakátora   'I took [before today]' but ndákatóra   'I having taken'
   [-a-ka- [+part] → -a-ka- ; cf. section 7]

but

  ndich<u>i</u>́éndá 'I going',   ndich<u>i</u>́t<u>ó</u>rá 'I taking'

5.3. <u>The direct relative</u>. A direct relative inflection having the same morphological structure as the indicative will have the same tone pattern as the indicative [-3] (with the exception of inflections containing the past of today element -<u>a</u>-), e.g.

        nding<u>á</u>t<u>e</u>ngesa   'I would be able to buy'
and <u>á</u>ngat<u>é</u>ng<u>é</u>sá   'he would be able to buy'
but ang<u>á</u>t<u>e</u>ngesa   'he who would be able to buy'

        nda<u>í</u>taura   'I used to speak'
and <u>á</u>itaura   'he used to speak'
but a<u>í</u>taura   'he who used to speak'

With the past of today most dialects have a rule change in the relative: where the indicative [-3] has rule sequence 9,1, the direct relative will have sequence 9,1,2, or sometimes sequence 1,2, e.g. Fivaz. (The cluster of rule sequences associated with this tense is a particularly interesting one, cf. section 4.4).

        ndat<u>ó</u>ra 'I took',   ndaénda 'I went'   – sequence 9,1
but ndat<u>ó</u>ra 'I who took', ndaéndá 'I who went' – sequence 9,1,2
or ndat<u>ó</u>rá 'I who took', ndaéndá 'I who went' – sequence 1,2

Some dialects, however, do retain the indicative [-3] sequence 9,1:

        ndat<u>ó</u>ra 'I [who] took', ndaénda 'I [who] went' – sequence 9,1

6. <u>Status of Pre-base Elements</u>

    As for the elements themselves, we must remember that there is a tonological boundary between them and the base (see section 4); in the following examples, therefore, tone patterns on the base should be disregarded for the time being. Pre-base elements, which are all taken as being monosyllabic, have four different types of status: they may be determiners (symbolised by underlining), neutral (no marking), post-sensitive (marked by subscript ˆ) or radical-sensitive (marked by subscript ↳).

6.1. <u>Realisation of determiners and neutrals</u>. Single elements with a deter-

miner are realised with high tone, whereas single neutral elements are realised with low tone, e.g.

ndí.téngésé   'that I may buy'   but ku.taura   'to speak'

Neutral elements before a determiner are also realised with low tone, as is a succession of neutral elements, e.g.

ndinó.tórá   'I take',   ndikasa.enda   'and I did not go'

In other words, D → h and N → l. However, a determiner following a determiner is realised with low tone unless it is followed by another determiner, and a neutral element following a determiner has a high ("echo") tone unless it is followed by another determiner. A neutral element following two determiners is realised with low tone. In other words, DD(N) → hl(l); DN(N) → hh(l); DDD → hhh; DND → hlh. Or, more formally, DD → hl /__∅,__N; DD → hh /__D; DN → hh /__∅,__N; DN → hl /__D; otherwise D → h, N → l.

áno.tórá   'he takes'
ndísinga.endé   'I not going' [some central dialects]
ásísámu.bátsiré   'he not being about to help him'
ásá.tóré   'that he may not take'
ndísínga.endé   'I not going' [eastern dialects]
ndísisá.taúre   'I not being about to buy'

6.2. The depressor rule. There seem to be two instances of a very restricted "adaptation-rule", which is applied nearer the surface than the other realisation rules described. It occurs only in the imperfect negative and the imperfect participial when they contain an OS and will be referred to as the "depressor-rule", since it states that "the high tone of the element is replaced by low tone when a depressor consonant follows".[8] The elements in question, the OS of the two inflections mentioned, are determiners, but they will be marked with subscript ... to show the application of this rule.

handáimú.tákúra   'I did not use to carry him'

---

[8]Depressors in Shona are as follows (given in the current official orthography): bh, dh, g, vh, mh, nh, z, zh, zv, j, dy, rw, h, or any consonant cluster containing them.

handáiri.dzívúra   'I did not use to unstopper it'
áimú.bátsírá   'he being used to help him'
áimu.bhádhúrá   'he being used to slap him'

6.3. <u>Post-sensitive elements</u>. "Post-sensitive" elements depend on the *fol-
lowing syllable* for their tonal realisation: if that syllable has high tone,
the element has low tone; if it has low tone, the element has high tone.
These unassigned elements occur only immediately before the radical, and
mostly in participials and inflections +OS.

áká.taúra   'he having spoken'
áka.téngesá   'he having bought'

6.4. <u>Radical-sensitive elements</u>. "Radical-sensitive" elements have low
tone when preceding a D radical and high tone when preceding an N radical.
Apart from one or two dialectal variants, they occur in Zezuru only in the
past of before today, future, and potential tenses [+3].

áka.tórá   'he took'
áká.énda   'he went'

6.5. <u>Elements of ambiguous status</u>. We must note that in certain cases there
are only minimal differences in the status of certain elements, i.e. we may
have to decide their status on the basis of only one tone in a whole inflec-
tional paradigm. See, for example, the present tense as used in the indirect
relative:

-ndínodá   '[when] I love'   -ndínobvá   '[when] I come from'
-ndínotóra   '[when] I take'   -ndínóendá   '[when] I go'
-ndínoténgesá   '[when] I buy'   -ndínótaúra   '[when] I speak'
-ndínokángánisá   '[when] I forget'   -ndínónyemwéréra   '[when] I smile'

It is plain that whether we class the element -no- as -no- or as -no-
depends merely on what tone the syllable marked with an asterisk has; if it
is low (as in the dialect from which most of the data here is taken) we will
have -no- , but if it is high (as in Fivaz' dialect - p.133) we will have
-no- . The same phenomenon occurs in other instances.
    What are the implications of this? It could, of course, mean that the

description is at fault, when it seems to magnify this very small difference
by giving two distinct statuses to the -no- element. Both of these stat-
uses are, moreover, 'secondary' to the basic determiner/neutral distinction.
Yet I think we have good reason to welcome such cases as this. Just as base
patterns are due to the application of slightly different rule sequences in
different dialects, we see here that the behaviour of the pre-base elements
likewise depends on very slight differences. This in turn suggests that
with more data we may be able to abstract an underlying form for these var-
ious types of dissimilation or polarity, which on the surface appear so dif-
ficult to reconcile with each other.

In this instance, for example, there is an interesting possibility of
describing the data in terms of a type of ordering in the surfacing of the
various rules and features, so that we need describe the element -no- only
as post-sensitive. The basic adjustment rules applied in this particular in-
flection (see section 14.1) are 10, 11, and 7 (Fivaz' dialect has the addi-
tional rule 12). If we use ps, standing for "post-sensitive", to mean "the
element takes tone opposite to that of the succeeding syllable", and the plus
sign to indicate "application of the following rule", we can very roughly
sketch out two derivations for the -ndinobva form on which the discussion
centres (no attempt has been made to reflect different "levels" by different
orthographic conventions):

ndi̱.no.bva   + (D → h) → ndí̱.no.bva + (10) → ndí̱.no.bva + (11) →

$$
\text{ndí̱.no.bva} \begin{cases} + \ (7) & \to \ \text{ndí̱.no.bvá} + \text{(ps)} \to \text{ndínobvá} \\ + \ \text{(ps)} & \to \ \text{ndí̱.nó.bva} + \text{(7)} \to \text{ndínóbvá (F)} \end{cases}
$$

Thus, where A.R.7 is applied *before* the post-sensitive rule, we have
-no- appearing as -no̬- (post-sensitive) throughout the whole series, but
when A.R.7 is applied *after* the post-sensitive rule, we have -no- appearing
as -no̬- (radical-sensitive) throughout the whole series. It would seem,
from examination of other inflectional formulae, that it is more usual for
all the adjustment rules to be applied at the same stage, but it is interest-
ing that splitting the application into two parts deals so neatly with two
dialectal variants, as well as making a connection between two seemingly dif-

ferent types of element behaviour.

This may be a suitable place to draw attention to another instance of an element having two possible statuses. This is in the past of today [-3] +OS (see section 14.6).

ndamúd̲a̲	'I loved him'	ndamút̲i	'I told him'
ndamút̲ora	'I took him'	ndamúramba ,.	'I refused him'
ndamúba̲tsira	'I helped him'	ndamút̲akura	'I carried him'
ndamúka̲nganisa	'I forgot him'	ndamúrondedzera	'I prepared [things] for him'

Here we have the choice of classifying the OS as a determiner, or as post-sensitive. When we consider the [-3] form for Eastern dialects (OS), and the [+3] forms (OS), we might wish to describe the OS here as a determiner. But looked at from the point of view of concise classification of OS behaviour in the dialect from which the main body of the data here is taken, we might like to class together the behaviour of the OS before "minority" sequences for +OS inflections (9 (as here) and 4, 5, and 6) and describe the OS as post-sensitive (see section 9.1). We thus have a choice here of how to de-scribe the element in question, but again, this does not necessarily mean that the terms of analysis are ill-founded or unjustified, and in fact it is worth noting that this tense is one in which sequence of rule application is of great importance (see section 4.4 and 5.3).

Taking the comments in this section as a whole, we may speculate whether it might be justifiable to posit some sort of connection between rule order-ing and the status of pre-base elements.

7. Programming Potential

It may be useful now, as a summary, to list all the pre-base elements in terms of their "programming potential", that is, the adjustment rule se-quences applied to the verbal base when the element in question is present in the inflection. We may distinguish two "series" of pre-base elements – one in which the element may change its status (and consequently its program-ming potential, i.e. the adjustment rules it programmes) due to the addition of the feature [+3] or [+part], and one in which these features are not add-ed and have therefore no effect on the status of the elements. We may call

the first group Series I and the second group Series II. It should be noted,
though, that a few Series II elements, such as -sa- , do have their status
altered by other features such as [+imp].

In the following table dialectal variants (listed on different lines, or
separated by colons) are given where possible and are noted by a letter in
parentheses after the variant. F refers to Fivaz' dialect, E to eastern dia-
lects in Stevick [1965], and S to southern dialects in Stevick [1965]. Other
variants given are also from Stevick [1965], but he gives no characterisation
of their particular area.

<u>Series I</u>

Citation form	[+3]	[+part]	programmes adjustment rules .... (commonest sequence given first)
-no-			X; 1 (E); 1, 2, 3 (S)
	-no-		X
	-no- (E)		X
	-no- (S)		1, 2, 3
		-no-	10, 11, 7
		-no- (F)	10, 11, 7, 12
-i-			X; 1 (E); 1, 2, 3 (S)
	-i-		X
	-i- (E)		X
	-i- (S)		1, 2, 3
		-i-	X
-cha-			1, 9; 1 (E); 1, 2, 3 (S)
			-cha-/ha-(neg.)___ : 10, 11, 6
	-cha-		1, 2, 3; 1 (F)
	-cha- (E)		X
		-cha-	10, 11, 7
		-cha- (F)	10, 11, 7, 12
			(This behaviour and potential is shared by the elements (-a)-ka- [past of before today] and -nga- [potential])
-a-			9, 1; 1 (E)
			-a- [+rel] : 9, 1, 2; 1, 2 (F) (E)

Citation form	[+3]	[+part]	programmes adjustment rules ....
	-a-		1, 9; 1 (E)
		-a-	10, 11, 6; 10, 11, 7, 12 (F), 10 (some E)
-o-			1, 9; 1 (E) [note: [+3] forms do not differ from [-3] (citation) forms]
		[-o-]	10, 11, 6; 10, 11, 7, 12 (F)

<u>Series II</u>

Citation form	programmes adjustment rules ....
ku-	X
-ka-	X
-chi-	1, 2; 1
nga/ha-	9 + assignment of D to the SP; 1, 8
[+imp]	4, 7; 4, 7, 12 (F)
	[+imp] + -sa- : 1, 2; 1
[+subj]	1, 2 + assignment of D to the SP; 1, 8 + assignment of D to the SP
	[+subj] + -sa- (some dialects) : 1, 2, 3
-sa-	does not programme, i.e. does not alter patterns already programmed by another element
	-sa- [+imp] → -sa-
	-sa- [+subj] → -sa- (some dialects)
ha-	4, 5, 6 + assignment of D to the SP; 4 + assignment of D to the SP
	ha- / ___ -i- : X
	ha- / ___ -cha- : 10, 11, 6; 10, 11, 7, 12 (F)

Most of these elements and sequences have been exemplified in preceding sections, but to clarify what is meant, we can examine two elements, -no- and nga-/ha- , in greater detail, using the trisyllabic bases -tengesa 'buy' and -takura 'carry'.

7.1. <u>The present tense</u>. The present tense element has the [-3] (citation) form -no- , and it programmes the reference pattern X in Zezuru, the dialect from which the main body of data is taken. However, according to data in Stevick [1965], it programmes A.R.1 in eastern dialects and A.R.1,2,3 in

southern dialects. We thus have, for 'I buy' and 'I carry' respectively,

    ndinóténgésá   ndinótakura   Zezuru dialect

    ndinóténgésá   ndinótákura   eastern dialects

    ndinóténgésá   ndinótákúra   southern dialects

When the feature [+3] is present, -no- continues to programme X in Ze-zuru. In the eastern dialects it changes its status from determiner to post-sensitive and programmes X (comparable to Zezuru but differing from its ear-lier programming potential of A.R.1 when [-3]). In the southern dialects -no- changes its status from determiner to radical-sensitive and programmes A.R.1,2,3 (as it did when [-3]). Thus, for 'he buys' and 'he carries',

    ánoténgésá   ánotakura   Zezuru dialects

    ánoténgésá   ánótakura   eastern dialects

    ánoténgésá   ánótákúra   southern dialects

It is to be noted that for the D base -tengesa the surface realisation is the same in all three cases. The realisations for the N base -takura are, however, very different. It was considered best to give a tense formu-lation for both bases in each dialect, in the hope that these formulations can later be related to each other (see section 6.5), rather than give one formulation for D bases throughout the Shona area and another for N bases. Such formulations would, it seems certain, be much more difficult to relate, and would probably make the analysis too complicated.

When the feature [+part] is present, the -no- element changes its stat-us from determiner to post-sensitive in Zezuru and programmes A.R.10,11,7 (a common participial sequence). Insufficient information on the [+part] pat-terns of eastern and southern dialects is given in Stevick [1965], so we can give no formulation here for these dialects. However, Fivaz' dialect, which usually agrees with Zezuru, here diverges; in his dialect the element changes its status from determiner to radical-sensitive and programmes A.R.10,11,7,12. Thus, for '[when] I buy' and '[when] I carry',

    -ndínoténgesá   -ndínótakúra   Zezuru dialect

    -ndínoténgesá   -ndínótakúra   Fivaz' dialect

In this case the two realisations are the same, showing that the differences
are very slight between the two dialects, and that we may be able to reduce
-no̜- and -no̜- to one underlying form (see section 6.5). N bases of a dif-
ferent length do, however, show a difference in realisation:

   -ndi̱no̱bvá   -ndi̱nónyemwéréra   Zezuru dialect

   -ndi̱no̱bvá   -ndi̱nónyemwérera   Fivaz' dialect

   '[when] I come from'   '[when] I smile'

7.2. <u>The hortative</u>. The hortative element has two possible morphological
forms, nga̱- or ha̱- . We will use nga̱- in these examples. In Zezuru,
nga̱- programmes A.R.9 and assigns a determiner to the subject prefix. In
another dialect (unspecified) in Stevick [1965], it programmes A.R.1,8 (and
does not assign a determiner). Thus, for 'let me buy' and 'let me carry',

   ngánditengese   ngánditakure   Zezuru dialect

   ngándíténgése   ngándítákure   other dialects

In Zezuru, the negative hortative is formed by the insertion of the nega-
tive element -sa- , which does not programme, i.e. does not alter patterns
already conditioned. Thus, for 'let me not buy' and 'let me not carry',

   ngándisatengese   ngándisatakure

7.3. <u>Summary</u>. It is hoped that these examples show how useful the analysis
may be in dealing with dialectal variants and how succinctly it may express
the patterns of whole inflections. This section has dealt with inflections
from the point of view of the pre-base elements and their programming poten-
tial. Section 14 gives a fuller listing of inflectional patterns seen as a
whole, including pattern behaviour when the inflection contains an object
substitute. It is to this latter situation that we will now turn our atten-
tion.

8. <u>Base Patterns and Object Substitutes</u>

The insertion of an object substitute into the inflection is accompanied
in most cases by the application of new adjustment rules governing the base
tones:

(1)   X   is replaced by ⎞

       1, 2 (-chi-)   "   "   " ⎟

       1, 9   "   "   " ⎬   1, 2, 3

       1, 2, 3   remains ⎠

(2)   9, 1   is replaced by   9

(3)   9   is replaced by ⎞

       1, 2 ([+subj])   "   "   " ⎟

       4, 7   "   "   " ⎬   10, 11, 6

       10, 11, 7   "   "   " ⎟

       10, 11, 6   remains ⎠

(4)   4, 5, 6   remains   4, 5, 6

(5)   1   "   1

(6)   4   is replaced by   10, 11

The last two are less common patterns given by Stevick. Two examples will be sufficient to show what is meant here. The feature [+imp] programmes adjustment rules 4 and 7; when, however, an object substitute (OS) is present, the adjustment rules 10, 11 and 6 are applied instead (for the tones on the OS itself, see section 9):

<u>D bases</u>

i.dá   'love!'   →   mú.de   'love him!'

tórá   'take!'   →   mú.tóre   'take him!'

bátsírá   'help!'   →   mú.bátsiré 'help him!'

kángánísa 'forget!'   →   mú.kángánisé 'forget him!'

<u>N bases</u>

i.bvá   'come from!'   [→] mú.ti   'tell him!'

rambá   'refuse!'   →   mú.rambé   'refuse him!'

takúrá   'carry!'   →   mú.takúre   'carry him!'

rondédzérá 'prepare things for!' → mú.rondédzére 'prepare things for him!'

Likewise, the element -cha- [-3] programmes A.R.1,9, but when an OS is present, A.R.1,2,3 apply instead. Thus, for D bases:

ndicháda	'I will love'	→	ndichámu.dá	'I will love him'
ndichátora	'I will take'	→	ndichámu.tórá	'I will take him'
ndichábatsira	'I will help'	→	ndichámu.bátsírá	'I will help him'
ndichákanganisa	'I will forget'	→	ndichámu.kángánísa	'I will forget him'

9. Behaviour of the Object Substitute

An OS occurring before the base pattern assembled by the application of these new adjustment rule sequences exhibits the following tonal behaviour.[9]

9.1. Before sequences 9 and 4, 5, 6. An OS occurring with the sequence 9 or with the sequence 4, 5, 6 is post-sensitive, e.g. ndamútakura 'I carried him', ndamúbatsira 'I helped him' [sequence 9]; haámutakúre 'he is not carrying him', haámubátsíré 'he is not helping him' [sequence 4, 5, 6].

9.2. Before sequence 1, 2, 3. An OS occurring with the sequence 1, 2, 3 is a determiner, e.g. ndómubátsírá 'I will soon help him', ndómutákúra 'I will soon carry him'. The depressor rule (see section 6.2) applies (i) when the OS is preceded by the element -į- , i.e. the element -i- with feature [+part] (see sections 7 and 10 (ii)); (ii) when the OS is preceded by the element -i- co-occurring with the negative element ha- (see section 10 (i)). For examples see section 6.2. *But* it is neutral when preceded by the element -no- with feature [-3], e.g. ndinómúbátsírá 'I am helping him', ndinómútákúra 'I am carrying him'.

9.3. Before sequence 10, 11, 6. An OS occurring with the sequence 10, 11, 6 is post-sensitive, e.g. ndímubátsiré 'that I may help him', ndímútakúre 'that I may carry him'. *But* it is a determiner (i) when the feature [+imp] is present, e.g. múbátsiré 'help him!', mútakúre 'carry him!', or (ii) when preceded by the element -no- (i.e. the element -no- with feature [+part]—see also section 10 (ii)), e.g. zva-ndínomúbátsirá 'when - I am helping him', zva-ndínomútakúra 'when - I am carrying him'. (These inflections are in fact indirect relatives, which take participial tone patterns; the entity zva- is a relative prefix of class 8, commonly used to refer to

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[9]Note that the boundary between the base and the pre-base elements (see section 4) still exists.

time.)

9.4. <u>Summary</u>. We may therefore say that the occurrence of an OS in an in-
flection is accompanied by the application of new adjustment rules, and that
these new sequences in turn decide what tonological status the OS syllable
will have.[10]

10. <u>Pre-base Elements and Object Substitutes</u>

But the occurrence of the OS also has repercussions on the status of the
pre-base elements, as was implied several times above. The presence of an OS
neutralises

(i) the second of two preceding determiners (cf. section 9.2 (ii)):

	handáitakura	'I did not use to carry'
but	handáimútákúra	'I did not use to carry him'
	ánotakura	'he is carrying'
but	ánomútákúra	'he is carrying him'

(ii) a preceding post-sensitive element (cf. section 9.3 (ii), 9.2 (i)):

	zva-ndínobátsirá	'when – I am helping'
but	zva-ndínomúbátsirá	'when – I am helping him'
	áibátsírá	'he being used to help'
but	áimúbátsírá	'he being used to help him'

---

[10]No attempt has been made to accommodate in this formulation the dialect-
al variants listed in section 14; this does not seem worthwhile until we have
more information on them. In the meantime, here is a summary of the OS stat-
us in these variants:

before rule sequence... OS status co-occurring with elements...

before rule sequence...	OS status	co-occurring with elements...
10, 11, 6	OS	ha- (C)
	OS	-cha- [+part] (?)
1	OS	-chi- (E), -a- [+3] (E), [+subj] neg. (E)
	OS	-a- [-3] (E), -chi- (C), -a- [+3] (C), [+subj] neg. (C), -ka- (?)
	OS	-no- (C), -i- (C)
4	OS	ha- (E)
1, 9, 6	OS	ku- (C)

      nd<u>í</u>chạbá̱tsirá   'I being about to help'

but nd<u>í</u>chámụbá̱tsirá   'I being about to help him'

(iii) a preceding radical-sensitive element:

      <u>ákạ́tákúra</u>   'he carried'

      <u>á</u>kamútákúra   'he carried him'

11. Rule Distribution and Sequence

    It is, of course, impossible to say *why* a dialect uses a certain rule or
sequence of rules, since the "rules" are not there waiting to be discovered
but are merely abstractions we have made from the body of data. Nevertheless,
it is conceivable that they may be of some use in describing dialect differ-
entiation (see section 13.2); even for individual dialects it may be possible
to make some statements about rule distribution.

    For example, in the dialect from which most of this data is taken the
rule sequence 10, 11 is followed by rule 6 on some occasions and rule 7 in
others. From an examination of these occurrences, we can state that the se-
quence 10, 11, 6 is the usual one, exemplified by such inflections as the
following:

recent past participial

      <u>á</u>da   'he having loved'

      <u>á</u>bva   'he having come from'

subjunctive + OS

      nd<u>í</u>mṹde   'that I may love her'

      nd<u>í</u>mṹti   'that I may tell him'

future participial + OS

      <u>á</u>chámṹ<u>da</u>   'he being about to love her'

      <u>á</u>chámṹti   'he being about to tell him'

However, the sequence 10, 11, 7 occurs in (i) the subjunctive negative +OS
e.g. nd<u>í</u>sámụdé 'that I may not love her', nd<u>í</u>sámụtí 'that I may not tell
him' (contrast second example above); (ii) the future participial -OS, e.g.

áchadá 'he being about to love', áchatí 'he being about to say' (contrast
third example above); (iii) the present participial -OS, e.g. zvandínǫdá
'when I love', zvandínǫbvá 'when I come from'. We might say that where
rule 6 is concerned D radicals are temporarily shifted into the N radical
class and that when rule 7 applies the opposite occurs, i.e. N radicals be-
have as D radicals.

12. Inflections not Described Here

No description is given in this analysis of compound or periphrastic
tenses, nor of negative inflections containing the element -si- . The lat-
ter seem to be the only major area in verbal inflections where this analysis
cannot be so readily applied, mainly because of the complex behaviour of the
element -si- but also because in one case (the present/potential negative
relative +OS) there seems to be a [-3]/[+3] distinction introduced in the in-
flection +OS where none existed in the inflection -OS, which has in other
cases been taken to be the base form. Using the conventions outlined in sec-
tion 14, we can describe the patterns as follows.

present/potential negative

relative: behaviour of elements

F-si-ngạ-10,11,6-e   1. F-si-nga-OS-10,11,6-e   DP → DND

                            3. F-si-nga-OS-10,11,6-e   ↘ DDD

F-si-nga-10,11,7,12-e (F)   (where D = determiner,
                                                         N = neutral, P = post-
F-si-nga-10,11-e (C)   sensitive)

F-si-nga-4-e (E)

participial:

F-si-nga-10,11,6-e   F-si-nga-OS-10,11,6-e   ND → DDP

F-si-nga-4-e (C)   F-si-nga-OS-10,11,6-e (C)   DN → DND

F-si-nga-10,11-e (E)   F-si-nga-OS-10-e (E)   NN → DND

future negative

relative:

F-si-sa-10,11,6-e   F-si-sa-OS-10,11,6-e   DP → NDP

F-si-sạ-10,11,7,12-e (F)

participial:

F-si-sạ-10,11,6-e   F-si-sa-OS-10,11,6-e   ND → DDP

Although some patterns can be discerned here, e.g. the sequence of ele-
ments neutral-determiner in the inflection -OS being replaced by the sequence
determiner-determiner-post-sensitive in the inflection +OS, we can make hard-
ly any generalisations, since we have opposing cases,(e.g. the sequence de-
terminer-post-sensitive replaced by determiner-neutral-determiner *or* deter-
miner-determiner-determiner *or* neutral-determiner-post-sensitive) which are
too complex to permit formulation of useful rules. In the meantime, I mere-
ly list the information.

In an earlier draft of this paper it was attempted to derive the negative
inflections from the affirmative inflections, e.g. the negative inflections
+OS being derived from the affirmative inflections +OS and not from the neg-
ative inflections -OS. However, the formulations were still a great deal
more complex than those required in the rest of the analysis.

13. Advantages of the Analysis

In the final part of the article I would like to mention what I feel are
some of the advantages of the approach outlined above, farrago though it is
of TG-type rules, the determiner/neutral distinction developed for Tonga in
Meeussen [1963] and employed to good effect in Carter [1971,1972], and condi-
tioned variant theory. There are, of course, areas where the present ap-
proach is difficult to apply (see section 12), but I believe that on balance
it is fairly useful.

13.1. Predictive power and descriptive adequacy. Apart from the general
comments we can make about person and mood (see section 5), we can give some
idea of recurrences of behaviour in elements, so that the various types of
dissimilation (i.e. tone polar to the preceding syllable, tone polar to the
succeeding syllable, tone polar to the class of the verb radical) exhibited
by some elements can be discussed, related, and worked into the general de-
scription. Since some attempt is made to state when and where this behaviour
occurs, we achieve something more than a listing of the data; since the em-
phasis is on the relationships between the various inflectional elements, we
can emphasise the interaction of these elements in the verbal system. More-
over, the approach is fairly easy to state and describe as opposed to some
rule-based analyses, and the end result (see section 14) is very concise,

since a whole inflectional pattern can be described in one line. This might conceivably have some pedagogical value, but in any event, it makes inflections much easier to compare; it means, for example, that it is possible to state fairly succinctly the variant features of a particular inflectional cluster (see sections 4.4 and 5.3). Further, an explicit relationship is drawn between the tonal features of inflections without object substitute and those with object substitute. I do not, of course, mean to imply that no other approach has these features, but merely that the one I have outlined treats them, I believe, in a reasonably concise and elegant way.

13.2. <u>Rule maps</u>. Lastly, since the approach can be applied to various dialects, it might be possible to build up "rule maps" giving the areas in which a certain sequence is used for a particular inflection. Likewise, since the status of elements sometimes depends on what are rather minimal differences (see section 6.5), mapping of the behaviour of elements in several dialects could give more information both on this behaviour and also the relationship between the various statuses. All this would mean that the tonal aspects of verbal inflections could be fully discussed in dialect comparison in the way that the segmental features are. With a number of maps, it may be that certain patterns in sequence or status distribution would become apparent and that these in turn might help us gain a clearer picture of inter-dialectal relationships, i.e. degrees of relatedness, influence of one dialect on another, overlapping or infringement of one dialectal area by another dialect, and so on.

14. <u>Checklist of Inflections</u>

A checklist of the inflections the analysis was applied to now follows. This shows the patterns of a much wider range of inflections than it was possible to exemplify in the article. It is, I believe, the most concise direct representation yet formulated of so many Shona tenses and dialectal variants, and forms a good basis for further study and comparison of Shona verbal patterns.

Abbreviations are as follows: ind. (indicative), rel. (relative), part. (participial), aff. (affirmative), neg. (negative), F (full subject prefix), C (contracted subject prefix), OS (object substitute), 1. (first/second per-

son), 3. (third person), (F) (Fivaz' dialect), (E) (Stevick, eastern dia-
lects), (C) (Stevick, central dialects), (S) (Stevick, southern dialects).
Other variants not so marked are from Stevick as well, but he does not char-
acterise them as belonging to any particular dialect. General tense glosses
are given in the aff. ind. 3, using the verb 'go'. The rule sequences are
placed in the position occupied by the radical in the inflection.

(1) Present: 'he goes/will go'

aff. ind.
1. F-no-X-a   F-no-OS-1,2,3-a
    F-no-1-a (E)   F-no-OS-1-a (C)
    F-no-1,2,3-a (S)

3. F-no-X-a   F-no-OS-1,2,3-a
    F-no-X-a (E)
    F-no-1,2,3-a (S)

part.
    F-chi-1,2-a   F-chi-OS-1,2,3-a
    F-chi-1-a   F-chi-OS-1-a (C)
                               F-chi-OS-1-a (E)
    -F-no-10,11,7-a   -F-no-OS-10,11,6-a [as used in the
    -F-no-10,11,7,12-a (F)   indirect relative]

neg. ind.
    ha-F-4,5,6-e   ha-F-OS-4,5,6-e
    ha-F-4-e   ha-F-OS-10,11-e (C)
                               ha-F-OS-4-e (E)

(2) Imperfect: 'he used to go/would go'

aff. ind.
1. Ca-i-X-a   Ca-i-OS-1,2,3-a
    Ca-i-1-a (E)   Ca-i-OS-1-a (C)
    Ca-i-1,2,3-a (S)

3. Ca-i-X-a   Ca-i-OS-1,2,3-a
    Ca-i-X-a (E)
    Ca-i-1,2,3-a (S)

    part.

       Ca-i-X-a   Ca-i-OS-1,2,3-a

    neg. ind.

       ha-Ca-i-X-a   ha-Ca-i-OS-1,2,3-a

(3) Future: 'he will go'

    aff. ind.

    1. F-cha-1,9-a   F-cha-OS-1,2,3-a

       F-cha-1-a (E)

       F-cha-1,2,3-a (S)

    3. F-cha-1,2,3-a   F-cha-OS-1,2,3-a

       F-cha-1-a (F)

       F-cha-X-a (E)

    part.

       F-cha-10,11,7-a   F-cha-OS-10,11,6-a

       F-cha-10,11,7,12-a (F)

                           F-cha-OS-10,11-a

    neg. ind.

       ha-F-cha-10,11,6-a   ha-F-cha-OS-10,11,6-a

       ha-F-cha-10,11,7,12-a (F)

(4) Remote Past: 'he went (before today)'

    as for (3) aff., replacing the sequence F-cha- with Ca-ka-

(5) Potential: 'he can go/may go'

    as for (3), replacing -cha- with -nga-

(6) Recent Past: 'he went (today)'

    aff. ind.

    1. Ca-9,1-a   Ca-OS-9-a

       Ca-1-a (E)   Ca-OS-1-a (E)

    3. Ca-1,9-a   Ca-OS-1,2,3-a

       Ca-1-a (E)   Ca-OS-1-a (E)

                           Ca-OS-1-a (C)

rel.

    Ca-9,1,2-a

    Ca-1,2-a (F) (E)

part.

    Ca̲-10,11,6-a   Ca̲-OŜ-10,11,6

    Ca̲-10,11,7,12-a (F)

    Ca̲-10-a (some E)

(7) Near Future: 'he will soon go/is about to go'

    aff. ind.

        Co̲-1,9-a   Co̲-O̲S̲-1,2,3-a

        Co̲-1-a (E)

    part.

        Co̲-10,11,6-a   Co̲-OŜ-10,11,6-a

        Co̲-10,11,7,12-a (F)

(8) Infinitive: 'to go'

    aff.

        ku-X-a   ku-O̲S̲-1,2,3-a

                                ku-O̲S̲-1,9,6-a (C)

    neg.

        ku-sa-X-a   ku-sa-O̲S̲-1,2,3-a

(9) Consecutive: 'and he went'

    aff.

        F-ka-X-a   F-ka-O̲S̲-1,2,3-a

                                 F-ka-O̲S̲-1-a

    neg.

        F-ka-sa-X-a   F-ka-sa-O̲S̲-1,2,3-a

(10) Imperative: 'go!'

    aff.

        4,7-a   O̲S̲-10,11,6-a

4,7,12-a (F)

neg.

    F-s<u>a</u>-1,2-e   F-s<u>a</u>-O<u>S</u>-1,2,3-e

    F-s<u>a</u>-1-e

(11) <u>Subjunctive: 'that he may go'</u>

aff.

    <u>F</u>-1,2-e   <u>F</u>-O$\hat{S}$-10,11,6-e

    <u>F</u>-1,8-e

neg.

    <u>F</u>-sa-1,2-e   <u>F</u>-sa-O$\hat{S}$-10,11,7-e

    F-s<u>a</u>-1,2,3-e   F-s<u>a</u>-OS-1-e (C)

                              F-s<u>a</u>-OS-1-e (E)

(12) <u>Hortative: 'let him go!'</u>

aff.

    ng<u>a</u>-/h<u>a</u>-<u>F</u>-9-e   ng<u>a</u>-/h<u>a</u>-<u>F</u>-O$\hat{S}$-10,11,6-e

    ng<u>a</u>-F-1,8-e

neg.

    ng<u>a</u>/h<u>a</u>-<u>F</u>-sa-9-e

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PRONOUNS IN AKɔɔSE*

Robert Hedinger
Summer Institute of Linguistics

The pronouns of Akɔɔse, both simple and complex, are
described. The subject markers with which they co-
occur have also been presented. Venn diagrams have
been used to show the relationships of the different
grammatical persons expressed by the complex pronoun
set. These complex pronouns combine references to
the speaker (first person), addressee (second person)
and the spoken about (third persons) in a way not
always apparent from their surface forms.

1. Introduction

    All languages, in spite of occasional neutralizations, grammaticalize at
least the following semantic distinctions: "person" divided into first, sec-
ond and third, and "number" divided into singular and plural. The resulting
pronominal systems thus reflect the basic human need to distinguish both "my-
self" (the speaker) and "yourself" (the hearer) from other subjects being
spoken about. They also show the need to be able to distinguish between a
specific individual and a group of individuals.

    The long recognized categories of "person" and "number" can be illustrat-
ed with English in the following table:

Table 1: English subject pronouns

	1st	2nd	3rd
sg	I	you	he, she, it
pl	we	you	they

Table 1 illustrates a simple system of the intersection of the two cate-
gories of "person" and "number". Note that in English in the second person
the distinction between singular and plural is neutralized whereas in the
third person singular, the intersection with a further category "gender" re-
sults in three forms in that box.

2.   The Simple Pronouns of Akɔɔse

Looking at the pronouns in Akɔɔse, a Bantu language belonging to the so-
called "Mbo cluster" (Guthrie's A.15), a similar basic system is found, but
the total pronominal system is much more elaborate. In Table 2 below the
basic set of pronouns is presented.

Table 2:   Akɔɔse subject/object pronouns

	1st	2nd	3rd	class
sg	mè	wὲ	mə́	1
pl	sə́	nyí	bə́	2

Like any other Bantu language, Akɔɔse has a noun class system character-
ized by distinctions in the noun prefixes as well as by concording elements
on various other word classes (demonstratives, possessives, verbs, numerals,
etc.). As indicated, Table 2 above gives the pronouns corresponding to
classes 1 and 2 which are typically in Bantu the classes containing human
nouns. The pronouns for the other classes, where there is no first, second,
and third person distinction, are given in Table 3:

Table 3:   The pronouns for classes 3 to 19

pronoun	class
mə́	3, 4, 6
də́	5, 13
čə́	7, 9, 10
bə́	8, 14, 19

The classes grouped together in this table are further distinguished by differences in the noun prefixes and other word classes. For a full description of the Akɔɔse noun class system, see Hedinger [1980].

The following two examples illustrate the use of simple pronouns in object position:

(1) àwêd mwǎnyàŋ à-hèdὲ <u>mè</u> à-nyén čǎn
    our brother he-wants me to-see tomorrow

   'our brother wants to see me tomorrow'

(2) mɛ̌-'húd[1]   bə́   á ǹjòŋ
    I will remove <u>it</u>(cl.14) in planting-season

   'I will take it (honey) out in the planting season'

Having briefly presented the simple pronouns, the complex pronouns can now be discussed.

3. <u>The Complex Pronouns of Akɔɔse</u>

   Already in 1900, Dorsch [1910/11:250] recognized the presence of complex pronouns in Akɔɔse which are not found in European languages, though complex pronouns are also common in Grassfields Bantu languages [Hyman 1979, Voorhoeve 1967]. In Akɔɔse, there are pronouns like the following: sú'mə́ 'we two' or 'I and he'. In form, this appears to be a juxtaposition of a first person *plural* plus a third person singular pronoun, but semantically it combines a first person *singular* and a third person singular human. Another example is syá'bə́ . This pronoun appears in form to be a fusion of a first person plural with a third person plural pronoun. Semantically, however, it can express any of the following: first singular plus third plural, first plural plus third singular, or first plural plus third plural.

   These two examples above show that besides the simple pronouns, Akɔɔse has pronouns expressing different combinations of first, second, and third persons.

   To set out all the theoretically possible intersections of person and number, it has proved fruitful to use Venn diagrams,[2] as in Table 4 below.

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[1]The symbol ' indicates downstep.

[2]I am indebted to Stephen C. Anderson for suggesting the usefulness of

Table 4: <u>A Venn diagram showing the intersection of persons and number</u>
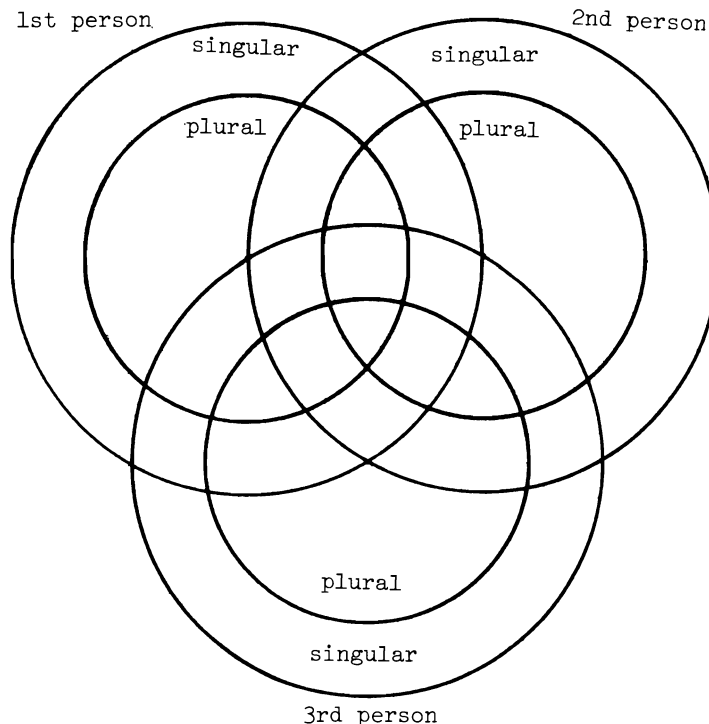
The three sets of two concentric circles each represent one "person". The larger circle stands for the category singular, the inner circle for plural. Each intersection of circle with circle represents a combination of two or more categories. In Table 5 on the next page all the theoretically possible combinations are indicated.

In each field, the resulting combinations have been indicated. There is, however, one limitation to the chart: at the centre of the diagram we find the intersection of first, second and third person plural. In the fields adjacent to it, six combinations of *three* persons are found. However, one possible combination—the intersection of first, second, and third person *singular*—is excluded due to the fact that double (concentric) circles have been

---

Venn diagrams in pronoun display.

Table 5: <u>The theoretically possible combinations of persons and number</u>

1st person   2nd person

1s   2s

1s   2s

1p 2s   1s 2p

1p 2p

1p   1p   1s   2p
            2s   3s   1p 2p 3s   2p 3s

1p 2p
1p 3s   1p   2s   3p   1s   2p   2p 3s
            3p   3p

1p 3p   1s   2p 3p
            2s   3p

1s 3s   1s 3p   2s   3p   2s 3s

3p

3s
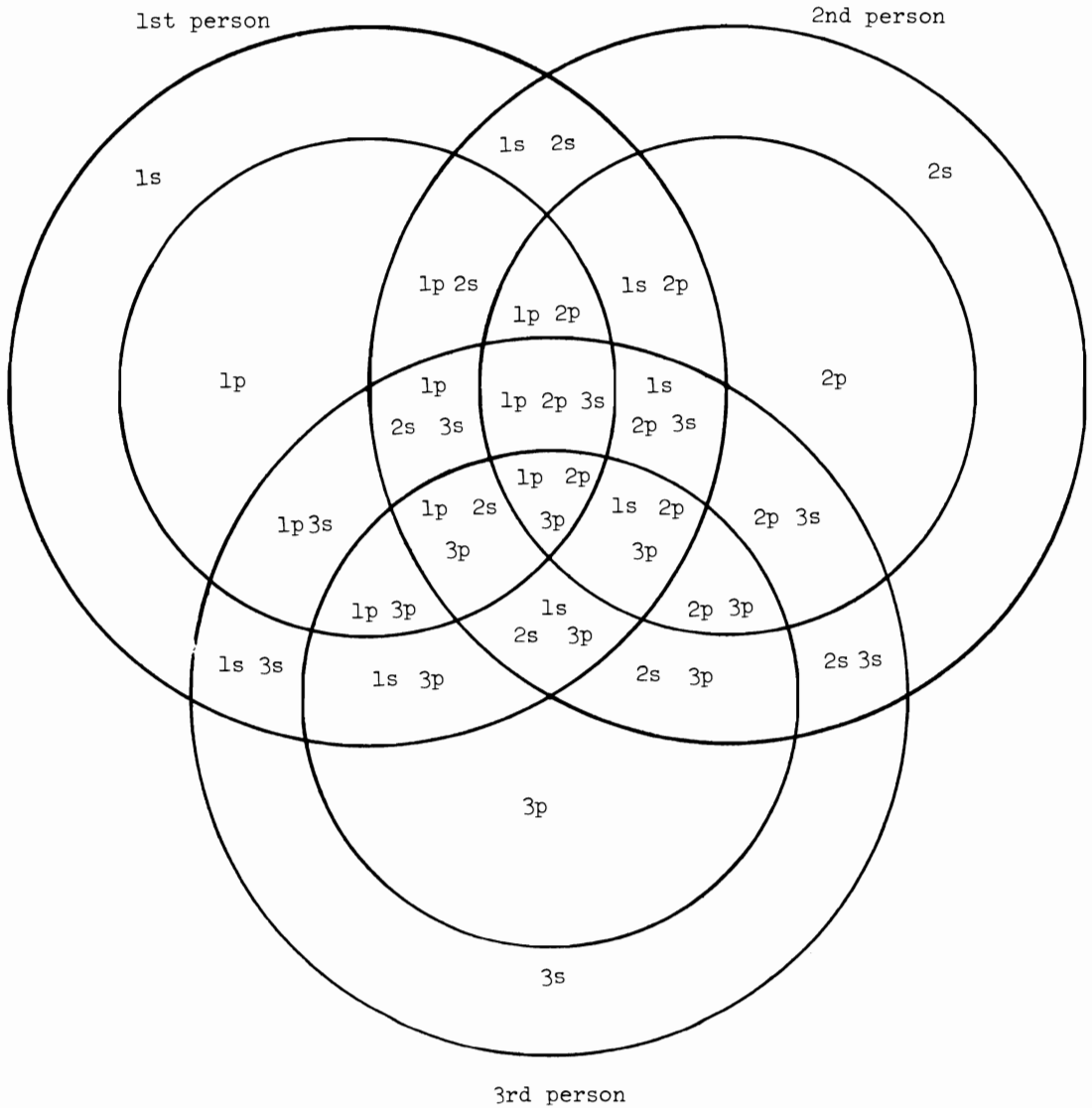
3rd person

s = singular, p = plural, 1 = first person, 2 = second person,
3 = third person

used.[3]

This limitation is not serious for Akɔɔse, since there are no pronouns expressing 1st plus 2nd plus 3rd persons. However, it is inadequate for a language where such forms do exist such as the nearby Bamileke-Dschang language (Ouamba Fabian, personal communication).

The Venn diagram given in Table 5, however, needs further modification to account for examples in Akɔɔse such as bú'mə́ 'the two of them' or 'he and he'. This is a pronoun which includes two third singular persons. To account for such forms, a second circle for third person has to be added.[4]

In Table 6, a Venn diagram is presented showing which Akɔɔse pronouns signal the specific categories of person and number. The simple pronouns can be seen in the parts of the circles which do not intersect with any other.

At the intersection of two singular persons, we find what is usually labelled as the "dual" person. *Dual*, it appears, does not need to be set up as a basic category on the same level as singular and plural, but is simply a derivation from two singular persons combined. The dual pronouns are summarized in Table 7 below:

Table 7:   The "dual" pronouns

persons	pronoun	
1s + 2s	sóò	(< sə́ + ʔ + wὲ)
1s + 3s	sú'mə́	(< sə́ + ʔ + mə́)
2s + 3s	nyú'mə́	(< nyí + ʔ + mə́)
3s + 3s	bú'mə́	(< bə́ + ʔ + mə́)

Note that the pronouns involving a third person always have a mə́ as the second syllable. This corresponds to the third person singular pronoun. The two pronouns involving a first person singular begin with an s- , pointing

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[3]By making the outer circles plural and the inner ones singular, 1p 2p 3p at the centre are simply replaced by 1s 2s 3s, all other combinations being retained.

[4]Some linguists might prefer to call this second third person a fourth person. We have chosen to call it a third person because it doesn't occur independently as a simple pronoun with a distinct form.

Table 6: <u>Venn diagram with Akɔɔse pronouns</u>

1st person
mè
1s

2nd person
wè
2s

sóò
1s2s

sé
1p

syá(ˈné)
1p2s   1p2p   1s2p

nyí
2p

1p3s
syáˈbê
1p3p

2p3s
nyáˈbê
2p3p

súˈmá
1s3s   1s3p

nyúˈmá
2s3p   2s3s

3rd person

má
3s

bá   3p

3s3p

búˈmá
3s3s

báˈbê
3p3p

3s 3p

3rd person
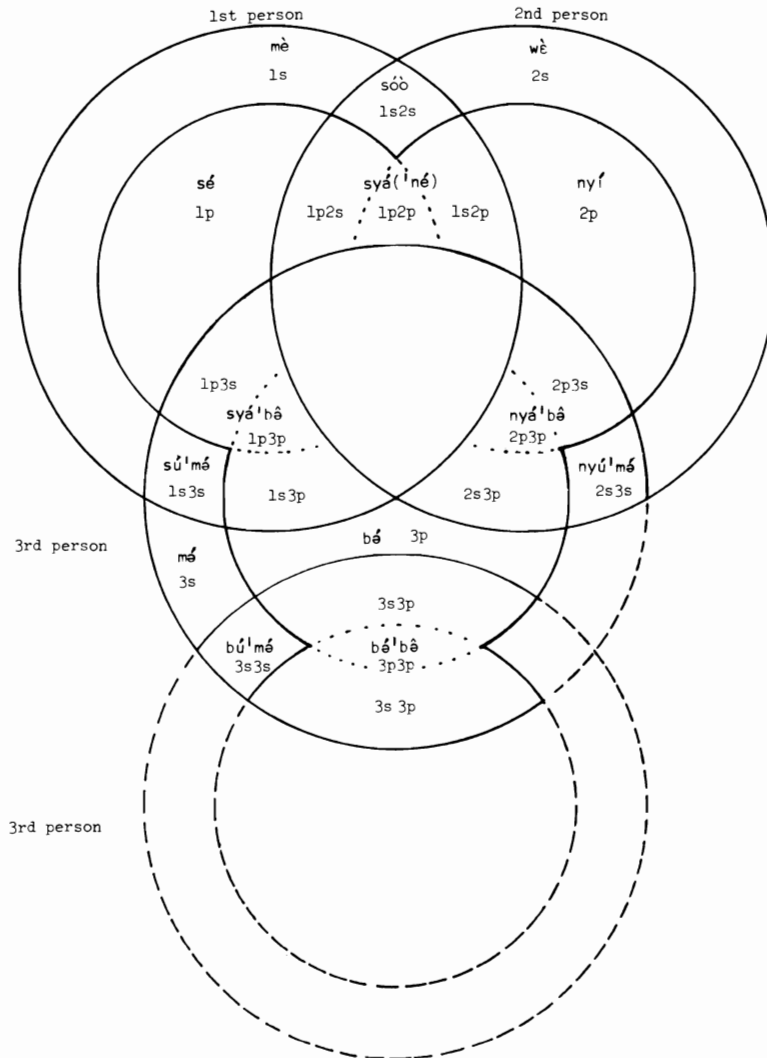
to a first person *plural* form as found in the pronoun sé 'first person plu-
ral' (cf. Table 2).

An example illustrating the use of a dual pronoun follows:

(3) bɛ́-ˈčámé   <u>sɔ́ò</u>   ŋgùn   'they will cook corn for us'
they-will-cook-for 1s + 2s corn

Looking now at the remaining pronouns where two grammatical persons in-
tersect, we observe that each pronoun covers three sections. Each section
involves at least one plural person. These pronouns are therefore labelled
"plural" and are shown in the following table:

Table 8:   The "plural" pronouns

persons	pronoun	
1 + 2	syá(ˈné)	(< sɛ́ + à + nyí)
1 + 3	syáˈbə̂	(< sɛ́ + à + bə́)
2 + 3	nyáˈbə̂	(< nyí + à + bə́)
3 + 3	bə́ˈbə̂	(< bə̂ + ? + bə́)

The brackets around the ˈné indicate that it is not always present. As
with their dual counterparts, there is an s- where a first person is in-
volved. In the second syllable, bə̂ , a reflex of the third person plural
rather than mə́ occurs when a third person is present.

Example (4) illustrates the use of a "plural" pronoun:

(4) ...bwɛ̌m   ábè   é?-bàgè   <u>syáˈné</u> mɔ̀nɛ́
things which they(cl.14)-give 1 + 2 money

'... the things which produce money for us'

There is a clear dichotomy between pronouns which involve two singulars
and those which involve at least one plural person. Any of the forms in Ta-
ble 8 can express three different underlying realities: for example,
syá(ˈné) expresses 1s + 2p, 1p + 2s, and 1p + 2p. For this reason, refer-
ence to the singularity and plurality of the persons was omitted from the ta-
ble.

As has been pointed out above, the first syllable of a complex pronoun is
a reflex of a plural pronoun, and the second syllable is either a reflex of a
singular form in the "dual" pronouns or a reflex of a plural form in the "plu-

ral" pronouns. The following generalization can be made about the number of
participants referred to by the complex pronouns: the first part of a com-
plex pronoun signals the totality of participants referred to, that is, more
than one person is involved. The second part of the complex pronoun indi-
cates the number of individual participants: when it is singular, then there
are only two singular persons involved; when it is plural, then at least one
of the two persons involved, or both, is plural.

Table 9: Participant number in complex pronouns

		I	II	examples
Complex	"Dual"	(pl)	(sg)	sú'mə́
pronouns	"Plural"	(pl)	(pl)	syá'bə̂

I = Total participants, II = Individual participants

4.   The Subject Markers

In sections 2 and 3 above, the simple and complex pronouns have been pre-
sented. These pronouns may function as object, as in the examples already
presented, or as subject. When functioning as subject, they are obligatorily
followed by a subject marker (SM), as are all subjects, pronominal or nominal.
The SM is prefixed to the verb and its form is determined by the person, num-
ber, and noun class of the subject. If the subject is of any of classes 3 to
19, then the SM is of that particular class. The following table illustrates
the pronouns and SM's for classes 3 to 19.

Table 10:   The pronouns and subject markers for classes 3 to 19

pronoun	SM	class
mə́	mé-/Ń-	3,4
də́	dé-/á-	5,13
mə́	mé-	6
čə́	é-	7,10
bə́	bé-/é?-	8,14,19
čə́	è-	9

It should be noted that there are more distinctions in the SM's than in
the simple pronouns (cf. Table 3). Where there are two forms of the prefix

for the same class(es), the two forms are in complementary distribution:
the one with the CV structure occurs before vowels and syllabic ᶰC sequences,
the other forms occur elsewhere. An example of subject pronoun plus its SM
follows below:

(5) sàá   dɛ́   á-nyɛ́nnédɛ́ɛ̀   nɛ́n bɔ̀ɔ̀b ɛ̀
     is-not it(cl.5) SM(cl.5)-is-seen this now Q-marker

     'isn't that proved now?'

Having presented the SM's for classes 3-19, the SM's for classes 1 and 2
(which occur with both the simple and the complex pronouns) will now be in-
troduced.

In Table 11, a Venn diagram for the SM's is given covering the same se-
mantic area as the one given in Table 6 for the pronouns. Each SM covers the
semantic area enclosed by solid lines. That means that if a pronoun given in
Table 6 functions as subject of a clause, the verb takes the prefix from Ta-
ble 11 which covers the same semantic area. If, for example, mè̩ is the
subject, then the verb takes the mè̩-/ᶰ- prefix, as in the following example
where pronoun and SM are underlined:

(6) mwê   kúl-ɛ̀ɛ́   mè ḿ-pémé[5]   è
     friend tortoise-focus I I-carried Q-marker

     'is it my friend the tortoise that I have carried?'

If either nyí , nyú'mə́ or nyá'bə̂ are subject, then the verb is pre-
fixed by nyî- , as in the following example:

(7) nyú'mə́ nyí-súè? wê   dyàd á-díí
     2s + 3s you-return where town it(cl.5)-is

     'you two return to the town!'

(8) ê-nyénnɛ́   wê   nyá'bə̂ nyɛ́-pòŋgɛ́[6]
     he-will-not-see where 2 + 3 you-will-pass-through

     'he will not see where you will pass through'

_____

   [5]The low tone of ᶰ- '1st sg' is raised to high in this focussed construc-
tion.

   [6]Nyɛ́- is underlyingly nyí- 'second person' plus à- 'future marker'.
No attempt has been made to give precise information as to tense, aspect, etc.
in the examples. A paper on the verb tense-aspect system is in preparation.

Table 11:　The subject markers (SM) of classes 1 and 2

1st person

2nd person

mè-/N�̀-

wè-/è-

dè-

sê-

nyî-

3rd person

à-

bé-

3rd person
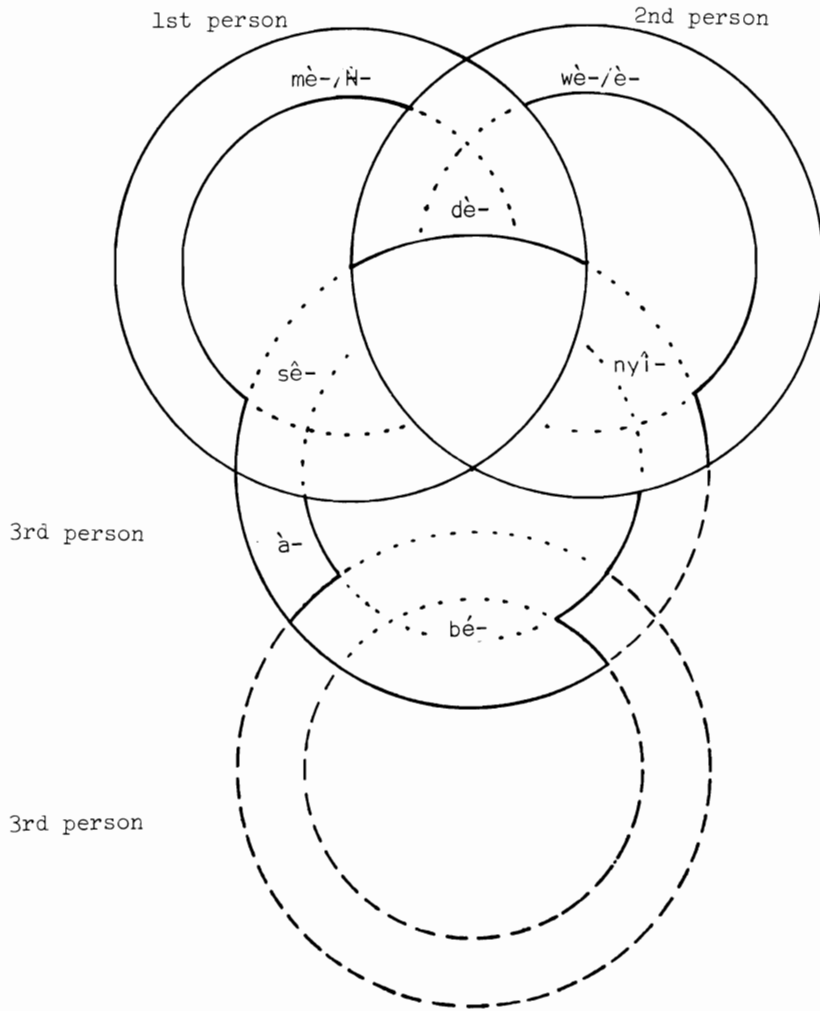
If sé , sú'mə́ , or syá'bə̂ are subject, then sê- is the SM used:

(9) <u>sú'mə́</u> <u>sê</u>-pèdé áwèm ndáb tè
    1s + 3s we-arrived loc-my house in

   'we (I and he) arrived at my house'

All the pronouns and the corresponding SM's for classes 1 and 2 are sum-
marized in Table 12:

Table 12: <u>Summary of class 1 and 2 pronouns and SM's in Akɔɔse</u>

	person(s)	singular and dual		plural	
		pronoun	SM	pronoun	SM
	1	mè	mè-/Ǹ-	sé	sê-
simple	2	wè	wè-/è-	nyí	nyî-
	3	mə́	à-	bə́	bə́-
	1 + 2	sóò	dè-	syá('nə́)	dè-
	1 + 3	sú'mə́	sê-	syá'bə̂	sê-
complex	2 + 3	nyú'mə́	nyî-	nyá'bə̂	nyî-
	3 + 3	bú'mə́	bə́-	bə́'bə̂	bə́-

It should be noted that the grammatical distinction between dual and plu-
ral is neutralized in the set of SM's.

One co-occurrence of pronoun and SM which has been observed in natural
texts is not included in the above table. Both sú'mə́ and syá'bə̂ are
shown in Table 12 to take sê- as SM. However, instances have been observed
where the same pronouns are followed by the dè- SM. This is puzzling since
dè- is the "inclusive" SM when it occurs without a pronoun. This is con-
firmed by the fact that it occurs normally with the 1 + 2 pronouns.

The hypothesis that the 1 + 3 pronoun when co-occurring with the dè- ,
which is 1 + 2, yields a combination of 1 + 2 + 3 has been rejected by native
speakers, and so no plausible explanation has been found to account for
sú'mə́ sê- versus sú'mə́ dè- . Perhaps there is a historical change in pro-
gress leading to a neutralization between sê- and dè- .

An example of this still unresolved co-occurrence of 1 + 3 pronoun with
the dè- SM is example (10):

(10) ànén m̀mwàád <u>sú'mə́</u> <u>dè-hìté</u>   wínìí bɔ̀b
      that woman   1s + 3s we-have-left there now

      'the woman and I left the place'

Earlier it was stated that the SM is obligatorily prefixed to the verb.
The only exceptions observed have been when a complex pronoun is subject. In
this case, the SM may be deleted, as in example (11):

(11) sú'mə́   kàg   'we are going'
      1s + 3s are-going

Since many languages have separate logophoric pronouns, a note here is in
order. Akɔɔse does not have a full set of logophoric pronouns but has only
one form, namely a logophoric SM mə̂- which occurs in indirect speech. This
one prefix is described in a forthcoming paper on direct and indirect speech.

5. <u>Conclusion</u>

In addition to the simple pronouns, an analysis of the complex pronouns
has been presented. Since complex pronouns are also found in Grassfields
Bantu languages [Hyman 1979, Voorhoeve 1967], the following questions should
be investigated: What is the geographical distribution of complex pronouns?
How did the languages from different sub-families acquire these pronouns,
i.e. is there a genetic link or are they calques from some other language,
and if so, from which?   What is the morphological composition of these com-
plex pronouns?

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SOME KWA-LIKE FEATURES OF DJUKA SYNTAX

George L. Huttar
University of Texas at Arlington
Summer Institute of Linguistics

The frequent claim that creole languages on both sides of the
Atlantic derive many of their syntactic features from a Kwa
source is examined for three construction types in Djuka of
Suriname: serial verb constructions, clefting for contrastive
focus, and comparative constructions. The Djuka constructions
are compared with analogous constructions in Kwa, Voltaic,
Benue-Congo, Mande, and Chadic languages, Krio and West Afri-
can Pidgin English, and non-African languages, both creole and
non-creole. The hypothesis of a Kwa source for the clefting
constructions in Djuka (and Atlantic creoles generally) is
supported in particular by the data on clefting of predicates.
The evidence for a Kwa source is much less clear for the ser-
ial verb constructions, while that for the comparative con-
structions falls in between these two. The influence of lan-
guages from other families, as well as universals, must still
be taken into account, as the data from the non-African lan-
guages demonstrate.

0. Introduction

When I presented an earlier version of this paper at the 1975 Internation-
al Conference on Pidgins and Creoles in Honolulu,[1] I described myself as in
some ways a "Cartesian linguist," in that I was advocating a methodological
skepticism. My skepticism was specifically aimed at claims in the literature
for some specific West African source for particular syntactic features of
West Atlantic creoles. I do welcome any attempts to narrow down the range of
possible languages from which a particular feature, be it syntactic, lexical,
phonological, or semantic, may have come into a particular West Atlantic cre-
ole. But I often have had the uneasy feeling that a particular West African
source is claimed simply because we have more information about that West Af-

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rican language available than we do about other languages that might turn out
to be equally good or better candidates as sources of the feature in question.

Study of creole languages on both sides of the Atlantic has uncovered a
number of surface syntactic features reminiscent of specific non-creole lan-
guages of West Africa. In the literature it has been most frequently the Kwa
languages that have been mentioned as resembling the creole languages with
regard to these features, e.g. Bendix [1970], Williams [1971], Givón [1979b].
And it may well be that it is indeed the Kwa language group that was the
source of particular syntactic features in West Atlantic creoles. But such a
conclusion should be based on an examination of languages of other families
in West Africa for the same features. To control for the factor of language
universals, languages from other parts of the world should also be examined
for these features.

This paper is a contribution to the discussion of the origin of three
syntactic features of West Atlantic creoles: serial verb constructions (SVC),
cleft-focus constructions, and comparative constructions. At the same time,
the paper will make available data on Djuka, a creole language of Suriname
which has been relatively little described in the literature, for in discus-
sions comparing Atlantic creoles with non-creole languages of West Africa, it
has been Krio of Sierra Leone which has received the most attention. Data
have also been presented by Bendix [1970] on Papiamentu and San Andrés Creole
English, but only in connection with serial verb constructions. And in the
more general literature describing the creoles of Suriname, or of the Carib-
bean generally, Djuka has usually been mentioned briefly in comparison to
more extensive descriptions of Sranan and Saramaccan, e.g. Alleyne [1980].

In section 1, two types of SVC found in Djuka are described; a third type
common among the Kwa languages but marginal to Djuka is also discussed. Cleft-
focus constructions are described in section 2 and comparative constructions
in section 3. In each section the Djuka constructions are explicitly compared
with the corresponding constructions in languages of West Africa. In addition,
in section 1 SVC's are also discussed with regard to other languages, namely a
West African creole (Krio), a Pacific pidgin (Tok Pisin), and a non-creole
(Chrau of Viet Nam). Data from Sranan and Saramaccan are also included in

section 1.

1. Serial Verb Constructions

My starting point is the Djuka form of SVC, namely a sequence of verb phrases (VP) immediately juxtaposed in surface structure, and in particular with no subject or conjoining particle intervening. Following Lord [1977: 145], I am further restricting the definition of SVC to only those constructions "in which verbs after the first have no special marker (as in Yoruba)." Givón [1975] admits constructions with subjects and conjoining particles between successive VP's as SVC's. For the purposes of searching out possible African sources of Djuka SVC's, Givón's approach is historically the sounder one, as it is likely that in many languages SVC's as I am defining them have arisen from earlier constructions in which such material did intervene between successive VP's. Nevertheless, in order to limit the scope of this paper, I am omitting here any examination of constructions that conform to Givón's definition of SVC's but not to mine.

We begin with the use of three verbs of motion postposed to another VP and indicating direction.[2] In Djuka these verbs are kon , go , and gwe . In (1-3) these three verbs are used as independent verbs. Parallel examples are given for Djuka (DJ), Sranan (SN), and Saramaccan (SM).[3]

(1) DJ   a kon   'he came'

     SN   a kon

     SM   a ko

          he come

---

[2]See Alleyne [1980:91] for further examples. The use of verbs of motion kon and go before the main VP is dealt with in this paper only briefly, in section 1.4.

[3]Djuka data are from my own field work, in consultation with James Park. The Sranan data are also from my own field work, although I have benefited from discussion with Ch. H. Eersel. The Saramaccan data are from Naomi Glock and Catherine Rountree (see especially Glock [1972]). Tone and stress are left unmarked in all DJ, SN, and SM material except where necessary to distinguish otherwise homophonous forms.

```
(2)  DJ  a  go a  osu              'he went home'
     SN  a  go na oso
     SM  a  go a  wosu
         he go at house

(3)  DJ  a  gwe                    'he left'
     SN  a  gwe
     SM  ------
         he leave
```

The gap in (3) indicates that SM uses only two verbs in this position, as op-
posed to the three used in DJ and SN.

In (4-6) the same verbs are postposed to an intransitive VP.

```
(4)  DJ  a  waka kon               'he walked (to point of reference)'
     SN  a  waka kon
     SM  a  waka ko
         he walk come

(5)  DJ  a  waka go a  osu         'he walked home (away from point of
     SN  a  waka go na oso          reference)'
     SM  a  waka go a  wosu
         he walk go at house

(6)  DJ  a  waka gwe               'he walked away'
     SN  a  waka gwe
     SM  -----------
         he walk leave
```

In (7-9) they are postposed to transitive VP.

```
(7)  DJ  a  tyai  den fisi kon     'he brought the fish'
     SN  a  tyari den fisi kon
     SM  a  tya   dee fisi ko
         he carry pl. fish come

(8)  DJ  a  tyai  den fisi go a  osu  'he took the fish home'
     SN  a  tyari den fisi go na oso
     SM  a  tya   dee fisi go a  wosu
         he carry pl. fish go at house
```

(9) DJ a tyai den fisi gwe   'he took the fish away'

    SN a tyari den fisi gwe

    SM ---------------------

        he carry pl. fish leave

Parallel constructions occur in Krio, as shown in (10) (gowe after in-
transitive VP) and (11-13) (three verbs of motion after transitive VP). Krio
data are from Ian Hancock [personal communication].

(10) i waka gowe wantem   'he walked away at once'
      he walk leave at once

(11) i ker   am gowe   'he took it away'
      he carry it leave

(12) i ker   am kam[4]   'he brought it'
      he carry it come

(13) i ker   am go   'he took it'
      he carry it go

The same postposing of verbs of motion occurs in many Kwa languages, il-
lustrated in (14) by Yoruba data with transitive VP [Lord 1973:276].

(14) mō mú iwè wá Ìlé   'I brought a book home'
      I take book come house

Similar data have been presented in the literature for other Kwa lan-
guages, e.g. Givón ⌊1975⌋. On the basis of the resemblance between Kwa lan-
guages and the Suriname creoles and Krio (as well as Papiamentu and West Afri-
can Pidgin English—see Bendix [1970] and Dwyer [n.d.:348], respectively),
and on the basis of what we know of the history of the Atlantic creoles, it
is tempting to infer some substratal influence here. It would seem reason-
able to conclude that the source of these constructions in these Atlantic
creoles is a Kwa substratum.

Before jumping to such a conclusion, however, we must look at languages
from other language families. The existence of the same construction, VP +
verb of motion, is illustrated for Jukun, a Benue-Congo language, in (15) and
for Vagala, a Gur language, in (16). Jukun data are from Welmers [1968b];

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[4]In the variant i briŋ am kam , the notion of direction-toward is ex-
pressed by the main verb briŋ as well as by the postposed kam .

Vagala data are from Pike [1970].[5]

(15) kú sǒ   súra yà   'he carried away some yams'
      he carry yams go

(16) ù kyìgó nií bà   'she brought water'
      she carried water came

    Such data suggest caution with regard to assuming a specifically Kwa in-
fluence on Atlantic creole syntax. If we look even farther afield, to Chrau,
a language of Viet Nam not known to be a creole, we find again the same post-
posing of verbs of motion to VP, as illustrated in (17-19). Chrau data are
from David and Dorothy Thomas [personal communication].

(17) něh vǎt sirǎq tât   'he brought the book'
      he carry book come/arrive

(18) něh vǎt sirǎq sǐq   'he took the book back'
      he carry book return

(19) něh vǎt sirǎq saq   'he took the book away'
      he carry book go

    In the face of such data, it may still be valid to assume some West Afri-
can (not necessarily Kwa but very likely Niger-Congo) origin of these SVC's
in the Atlantic creoles. But more research into a variety of West African
(especially non-Kwa and even non-Niger-Congo) languages is needed before a
more specific source can be identified. And, as the Chrau data show us, the
possibilitiy of concomitant operation of language universals cannot yet be
discounted.[6]

1.2. Dative/benefactive and 'give'. Turning now to a SVC more specifically
associated with West African languages, and in the literature with Kwa lan-
guages in particular, let us examine the use of 'give' between a VP and a fol-

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    [5]Givón [1975] presents data from some constructions in the Gur language
Moore which he terms SVC (although with the conjoining particle between the
constituent VP they do not fit the definition of SVC used here). He does not
give any examples of the VP + verb of motion construction for any Gur lan-
guage.

    [6]Mandarin constructions similar to the SVC's discussed in this paper,
some treated as SVC's and some as "co-verb sentences", are described in Li
and Thompson [1973].

lowing dative or benefactive NP. The verb 'give' appears as an independent
verb in the Suriname creoles in (20), preceding a dative (indirect object) NP
in (21), and preceding a benefactive NP in (22).

```
(20)  DJ  a gi   mi den    fisi              'he gave me the fish'
      SN  a gi   mi den    fisi
      SM  a da   mi dee    fisi
          he give me the-pl. fish

(21)  DJ  a tyai   den    fisi kon gi   mi   'he brought me the fish'
      SN  a tyari  den    fisi kon gi   mi
      SM  a tya    dee    fisi ko  da   mi
          he carry the-pl. fish come give me

(22)  DJ  a go a  foto gi   mi              'he went to town for me'
      SN  a go na foto gi   mi
      SM  a go a  foto da   mi
          he go at town give me
```

An ambiguous case of VP + 'give' + NP, with both benefactive and dative
readings, is given in (23).

```
(23)  DJ  a kisi   den    fisi gi  mi      'he caught the fish for me'
      SN  a kisi   den    fisi gi  mi      or
      SM  a kisi   dee    fisi da  mi      'he caught me the fish (i.e.
          he catch the-pl. fish give me     caught and gave them to me)'
```

Some Kwa languages exhibit the same ambiguity as in the Suriname creoles,
while others use different constructions for dative and benefactive. In
Yatyẹ, for example, this ambiguity is present, as in (24) [Stahlke 1970:63].

```
(24)  àmì awá ínyahwẹ̀ ibí akà     àwǫ̀      'I brought you a book'
      I   took book    came for    you      or
                            (give?)
                                             'I brought a book on your be-
                                             half'
```

In Yoruba, on the other hand, the corresponding construction with 'give'
serves only for the dative (25), while a different construction expresses the
benefactive (26) [Stahlke 1970:63].

(25) mo mú ìwé wá fún ẹ   'I brought you a book'
    I took book came gave you

(26) mo bá   àbúrò   mi mú ìwé wé
    I on-behalf-of younger-brother my took book come [sic]
    'I brought a book on behalf of my younger brother'

It is instructive to note at this point that Krio resembles Yoruba in us-
ing contrastive constructions for dative and benefactive, unlike the ambigu-
ous expression of these two deep structure notions in the surface of Yatyẹ
and the Suriname creoles. Below are the Krio forms with 'give' as indepen-
dent verb (27), VP + 'give' + dative NP (28), and contrasting construction
for benefactive (29).

(27) a gi am di kɔpɔ   'I gave him the money'
    I give him the money

(28) i kɛr dis kɔpɔ go gi am   'he took this money to him'
    he carry this money go give him

(29) i go tɔŋ fɔ ram   'he went to town for him'
    he go town for him

The force of these data is that, at least in the modern forms, even such
similar languages as Krio and the Suriname creoles differ in the use of SVC's.
This difference may indicate a different origin within West Africa for the
Krio construction and the Suriname constructions, which would not be surpris-
ing given the very different history of the Krio society and the Suriname so-
cieties. But the difference could equally well be due to subsequent develop-
ment from a common source. Krio has, after all, been exposed to post-creoliz-
ation influences from English in a way that the Suriname creoles have not.
If it does turn out that we could discover that Krio never has used the gi
construction to express benefactive, then the benefactive use of this con-
struction would probably be neither a language universal nor a pidgin-creole
universal. That it is not found, even in the dative use, in all pidgins and
creoles is suggested by the Tok Pisin data below with 'give' as independent
verb (30), 'give' in single clause but not SVC (31), and dative and benefac-
tive without 'give' (32-33).[7] Tok Pisin data are from Ellis Deibler [personal

_____

[7]The discussion of clauses with 'give' in Mauritian Creole in Corne [1970:

communication].

(30) em i givim ol dispela pis long mi
      he   give pl. this   fish at   me

      'he gave me the fish'

(31) em i hukim ol dispela pis na givim (long) mi
      he   catch pl. this   fish and give (at)   me

      'he caught the fish and gave them to me'

(32) em i kisim ol dispela pis i kam long mi
      he   take pl. this   fish   come at   me

      'he caught the fish and brought them to me'

(33) em i go long taun na baim rais bilong mi
      he   go at   town and buy rice of   me

      'he went to town and bought rice for me'

In (34) and (35) we see a similar construction, i.e. verb serialization
with 'give', in Chrau, but not a precisely parallel one (VP + 'give' + NP +
'have' rather than simply VP + 'give' + NP).

(34) něh văt ca sĭq   an ǎnh iun   'he brought me a fish'
      he carry fish return give me   have

(35) něh văt an ca ǎnh iun   'he carried a fish for me'
      he carry give fish me have   or
                                          'he brought me a fish'

Finally, with reference to the West African data, it should again be
pointed out that Gur languages such as Vagala also have SVC's with 'give'
parallel to the Kwa usage. Two examples of its use for benefactive are given
in (36-37). I do not have data to indicate whether this SVC is also used for
the dative. (Note that in another Gur language, Mooré, the construction with
kố 'give' following a VP to introduce indirect object must have the connec-
tive n between the preceding VP and kố and thus is not a SVC in the sense
used here [Lehr et al. 1966:56].)

(36) ù wà sá !ígyò   tè ù bówl
      he came danced igyo-dance give his village

      'he danced the igyo-dance for his village'

19] also makes no allusion to a SVC with don 'give' between a VP and a fol-
lowing dative NP.

(37) ù é ù té ń   'he did it for me'
       he did it gave me

The dative use of 'give' in the Benue-Congo language Jukun is illustrated
in (38).

(38) bé ze yá yá kuru yô ka   'they carried it to the chief
       they take go give chief inside town wall   of the town'

The occurrence of SVC's with 'give' in Kwa, other African, and non-Afri-
can languages supports the supposition that such a syntactic feature could
arise in different areas independently, perhaps as a result of some natural
semantax (see Bickerton [1974]). Whether or not this is true, the African
data prevent us from assigning a specifically Kwa source to the Djuka con-
struction. Not only is it unlikely that we will, with further historical re-
search, be able to find a specific source for such a construction, it is also
doubtful whether there ever was such a specific single-language source, rath-
er than a more general areal source.

1.3. _Instrumental and 'take'_. The third sort of SVC to be discussed here is
dealt with not in order to describe Djuka syntax directly, but to highlight a
significant difference between Djuka on the one hand and the Kwa languages
and Krio (as well as Papiamentu, although it is not illustrated here) on the
other.

For Kwa data, we use examples from Yoruba [Lord 1973:291]. In (39), a VP
consisting of 'take' + NP precedes another VP and denotes an instrument.

(39) ó fT ɔ̀bɛ̄ gé ɛ̄rã̄   'he cut the meat with a knife'
       he take knife cut meat

The same construction is used to express manner in Yoruba, as in (40).

(40) ó fT èsɔ̀ gé ɛ̄rã̄   'he cut the meat with care'
       he take care cut meat

The Gur language Vagala uses the same pattern for instrument, as in (41).
I do not know whether manner is also expressed using this construction in Va-
gala.[8]

---

[8]See Bendix [1970] for examples of this type of SVC for instrumental in
Papiamentu and Ijo.

(41) ù kpá kíyzèé mòng ówl   'he cut the meat with a knife'
      he took knife   cut   meat

For the instrumental usage, Krio uses the same construction, given in
(42), although another construction given in (43), considered Anglicized Krio,
is also used.

(42) i tek nɛf čɛčɛ di bif   'he cut the meat with a knife'
      he take knife cut   the meat

(43) i čɛčɛ di bif wit nɛf   "   "   "   "   "   "   "
      he cut   the meat with knife

Krio does not use a SVC with 'take' for manner, however.

In Djuka, such a SVC is rare for expressing instrument and does not occur
at all for manner. Thus (44) is possible but very infrequent. A Djuka speak-
er is more likely to use either the simple clause construction given in (45)
or two overtly conjoined clauses as in (46). I believe the same can be said
of Sranan and Saramaccan, although I do not have enough experience with those
languages to support this hypothesis.

(44) a teke nefi koti a   meti   'he cut the meat with a knife'
      he take knife cut   the meat

(45) a koti a   meti anga nefi   "   "   "   "   "   "   "
      he cut   the meat with knife

(46) a teke nefi, ne a koti a   meti   "   "   "   "   "   "   "
      he take knife then he cut   the meat

The resemblance between the usual Djuka construction in (45) and English
is evident (cf. the Krio example (43)). Does this mean that this particular
construction was borrowed into Djuka from English? Not necessarily, for Kwa
languages also have a parallel construction using 'with' for expressing in-
strument. We again limit our data to a Yoruba example, given in (47) [Lord
1973:281].

(47) ó gé ɛ̄rā̄ kpɛ̀lú ɔ̀bɛ̄   'he cut the meat with a knife'
      he cut meat with knife

Further, it should be remembered that many languages, including the Suri-
name creoles, English, and Kwa languages (but not Krio) use the same preposi-
tional construction for instrumental, manner, and comitative, as in (48-59).

English

(48)   he cut the meat WITH a knife

(49)   he cut the meat WITH pleasure

(50)   he cut the meat WITH Kofi

Suriname creoles

(51)   DJ   a   koti a   meti   ANGA nefi   'he cut the meat with a knife'

        SN   a   koti a   meti   NANGA nefi

        SM   a   koti di   gbamba KU   faka

              he cut the meat   with knife

(52)   DJ   a   koti a   meti   ANGA piisii   'he cut the meat with pleasure'

        SN   a   koti a   meti   NANGA prisiri

        SM   a   koti di   gbamba KU   piizii

              he cut the meat   with pleasure

(53)   DJ   a   koti a   meti   ANGA kofi   'he cut the meat with Kofi'

        SN   a   koti a   meti   NANGA kofi

        SM   a   koti di   gbamba KU   kofi

              he cut the meat   with Kofi

(For (53), a much more common construction, in Djuka at least, would be kofi
anga en koti a meti 'Kofi and he cut the meat'; cf. 59.)

Kwa[9] (Yoruba [Lord 1973:281-282])

(54)   ó gé ɛ̄rã̄ KPɛ̀LÚ ɔ̀bɛ̄   'he cut the meat with a knife'
        he cut meat with knife

(55)   ó gé ɛ̄rã̄ KPɛ̀LÚ ɛ̀sɔ̀   'he cut the meat with care'
        he cut meat with care

(56)   ó gé ɛ̄rã̄ KPɛ̀LÚ ākĩ̄   'he cut the meat with Akin'
        he cut meat with Akin

Krio

(57)   i čɛčɛ di bif WIT nɛf   'he cut the meat with a knife'
        he cut the meat with knife

---

[9]Note, however, that this alternative method of expressing instrument is
apparently not found in all Kwa languages; see Stewart [1963] and discussion
by Pike [1970:2-3] on Twi.

(58) i čɛčɛ di bif WIT gladi   'he cut the meat with pleasure'
      he cut the meat with pleasure

but (59) i en kofi čɛčɛ di bif   'he cut the meat with Kofi'
      he and Kofi cut the meat

We note in passing, without citing examples, that Tok Pisin does not use
a SVC with 'take' for expressing instrument; it uses the general preposition
long to introduce an instrument, but a different preposition, wantaim , to
introduce comitative. On the other hand, Vietnamese does express instrument
with a SVC, e.g. 'he use knife cut meat' = 'he cut meat with a knife', but
does not express manner in this way.[10]

1.4. <u>Other serial verb constructions</u>. We mention briefly here some other
SVC's attested in Djuka, without discussion. For description of parallel
SVC's in Saramaccan, see Glock [1972:56-61].

    (1) The verbs of motion postposed to VP as discussed in section 1.1 can
also be preposed, as in (60-61). (Cf. Eze [1980:69-73] for a more detailed
description of a similar construction in Nigerian Pidgin English.)

(60) a go luku   'he went and looked'
      he go look

(61) a gwe   go luku   'he left to go look'
      he leave go look

    (2) Certain verbs that occur in transitive clauses are preposed to VP,
taking then the same position as other forms that are clearly modals. In (62)
wani 'want' appears in a transitive clause. In (63) it appears preposed to
a VP in the same position as the modal musu in (64). The verb sabi 'know'
has a similar distribution.

(62) a wani den   fisi   'he wants the fish'
      he want the-pl. fish

(63) a wani go   'he wants to go'
      he want go

(64) a musu   go   'he has to go'
      he oblig. go

---

[10]Much of sections 1.1-1.3 appeared in a somewhat different version in
Huttar [1974].

(3) Successive clauses having the same subject (and optionally other common constituents as well) are juxtaposed with common elements deleted. Example (65) may be viewed as the surface representation of a sutu a bofoo 'he shot the tapir' and a kii a bofoo 'he killed the tapir', with identical subject a and object a bofoo deleted from the second clause.[11]

(65) a sutu a   bofoo kii   'he shot the tapir dead'
      he shoot the tapir kill

This type of SVC differs from the others described or mentioned in that the class of verbs occurring in each VP of such a SVC is open.

(4) The comparative constructions discussed in section 3 are another type of SVC.

2. Cleft-focus Construction[12]

A neutral (non-emphatic) declarative Djuka sentence with one constituent clause is illustrated in (66).

(66) mi dda   kii tu pakila anga goni a busi   tide
      my father kill two peccary with gun at jungle today
      Subject   Pred Object   Adjunct   Adjunct   Adjunct
      'my father killed two peccaries with a gun in the jungle today'

To give contrastive focus to any one of the surface constituents of the sentence (that is, to explicitly contrast that constituent with other items in paradigmatic relationship with it), the constituent is copied in initial position in the sentence and preceded by na 'be'. In all cases except focus of Predicate, the copied constituent is deleted from its position in the neutral sentence, so that we may describe the result as a clefting of the constituent out of its original position. Such clefting, or copying and deleting, is vac-

---

[11]See the similar analysis of such SVC's in Twi by Stewart [1963:145]. On Nigerian Pidgin English, see Eze [1980:74ff.]; on Guyana, Jamaica, and Surinam creoles, see Alleyne [1980:93]. Constructions parallel to (65) are described by Thompson [1973] for Mandarin as "resultative verb compounds", in which the 2nd VP indicates a result of the first.

[12]I am especially indebted to James Park for his detailed help on sections 2 and 3 of this paper and to Franklin Velanti of Drietabbetje for his suggestions and reactions as a native speaker of Djuka.

uous in the case of the Subject, which occurs initially in the neutral sen-
tence. Contrastive focus for Subject is marked only by the preceding na .
Focus of the six constituents of (66) results in sentences (67-72). Note
that in (68) the predicate appears twice, both in copied (front) position and
in neutral position. The focused nominal constituents in (67) and (69-72)
occur only in copied position.[13]

(67) Subject Focus

> na   <u>mi dda</u>   kii tu pakila anga goni a busi   tide
> it-is my father kill 2 peccary with gun at jungle today
>
> 'it's my father that killed two peccaries with a gun in the jungle
> today'

(68) Predicate Focus

> na <u>kii</u> mi dda kii tu pakila anga goni a busi tide
>
> 'it's killed my father killed two peccaries with a gun in the jungle
> today' (i.e. in contrast to merely hitting or wounding them, he spe-
> cifically killed them)

(69) Object Focus

> na <u>tu pakila</u> mi dda kii anga goni a busi tide
>
> 'it's two pecarries that my father killed with a gun in the jungle
> today'

(70) Instrumental Adjunct Focus

> na <u>anga goni</u> mi dda kii tu pakila a busi tide
>
> 'it's with a gun that my father killed two peccaries in the jungle
> today'

(71) Locative Adjunct Focus

> na <u>a busi</u> mi dda kii tu pakila anga goni tide
>
> 'it's in the jungle that my father killed two peccaries with a gun
> today'

(72) Temporal Adjunct Focus

> na <u>tide</u> mi dda kii tu pakila anga goni a busi
>
> 'it's today that my father killed two peccaries with a gun in the
> jungle'

---

[13]While (66-72) are grammatical, they are rather unusual because of

When receiving contrastive focus, the third singular subject pronoun is en ,
the form also used for all oblique cases; a occurs only as a non-focused
subject. Compare (73) and (74).

(73) a   go   'he went'
      he go

(74) na   en go   'it's he who went'
      it-is him go

Besides receiving positive contrastive focus as just illustrated in (67-72),
a constituent can also receive negative contrastive focus, whereby it alone
(as opposed to the whole sentence) is negativized. Negative focus is accom-
plished by the same process as positive focus except that the preposed par-
ticle is ná 'not; not be' rather than na 'be'. Examples (75) and (76)
illustrate negative focus of Predicate and Object respectively.[14]

(75) ná   <u>kii</u> mi dda   kii tu pakila anga goni a busi tide
      (it-is)not kill my father kill 2 peccary with gun at jungle today

      'it's not killed my father killed two peccaries with a gun in the jun-
      gle today' (i.e. whatever he may have done to them, he specifically
      did not kill them)

(76) ná <u>tu pakila</u> mi dda kii anga goni a busi tide

      'it's not two peccaries that my father killed with a gun in the jungle
      today'

Compare (77) in which the whole sentence is negativized, i.e. the entire
proposition is denied.

(77) mi dda ná kii tu pakila anga goni a busi tide

      'my father did not kill two peccaries with a gun in the jungle today'

---

their length and number of constituents. This is particularly true of (67-
72), where clefting   to emphasize one constituent would ordinarily pre-
clude explicit mention of so many other elements.

   [14]Chris Corne [personal communication] reports that in Mauritian Creole,
a sentence with fronted negative marker similar to (75) and (76) does not
have the negative meaning of the Djuka construction, but rather an emphatic
positive meaning. By contrast, see Eze [1980:87-88] on front-shifted verb
preceded by negative 'be' in Nigerian Pidgin English with the same meaning
as in Djuka.

The negative element ná in (77) cannot receive focus through clefting nor can the unstressed particles be 'completive', sa 'irrealis', o 'future', or e 'continuative':

```
     Neutral                        Focus
(78) a  be      go   'he had gone'  na go a be go   'it's gone he had gone
     he comple- go                  *na be a be go
        tive
(79) a  sa      go   'he will go'   na go a sa go   'it's go he will go'
     he irreal- go                  *na sa a sa go
        is
(80) a  o       go   'he will go'   na go a o go    'it's go he will go'
     he future  go                  *na o  a o go
(81) a  e       go   'he's going'   na go a e go    'it's going he is go-
     he contin- go                  *na e  a e go   ing'
        uative
```

On the other hand, stressed modals musu 'must' (but not its unstressed alternate mu), wani 'want', and poi 'be able' can be clefted for emphasis, either positive or negative. This usage is illustrated in the exchange in (82):

```
(82) Na    wani ju wani go?       'Is it that you want to go?'
     it-is want you want go

     Nono. Ná          wani mi wani.  Na    musu mi musu.
     no    (it-is)not want I  want    it-is must I  must

     'No, it's not that I want to go, but that I have to go.'
```

In sentences with more than one verb, be it in one clause or more than one, i.e. sentences with SVC's, not all elements can be clefted with equal ease. Sentence (83) has one constituent clause with a main verb and a postposed directional verb kon . While the main verb can undergo clefting as in (84), the directional kon can neither be clefted as shown in (85) nor clefted in the manner of nominal constituents as in (86).

```
(83) a iti  a   patu kon              'he threw the pot to me'
     he throw the pot  come
(84) na    iti  a  iti  a   patu kon  'it's threw he threw the pot to
     it-is throw he throw the pot come  me'
(85) *na kon a iti a patu kon
```

(86) *na kon a iti a patu

Sentence (87) has two constituent clauses, the first with verbal elements tyai and kon , the second with poti . Clefting of tyai (88) is normal, while that of kon (89) and of poti (90) is unacceptable:

(87) a tyai a   patu kon poti a osu
      he carry the pot come put at house

      'he brought the pot and put it in his house'

(88) na   tyai a tyai a   patu kon poti a osu
      it-is carry he carry the pot come put at house

      'it's brought he brought the pot and put it in his house'

(89) *na kon a tyai a patu kon poti a osu

(90) *na poti a tyai a patu kon poti a osu

The adjunct in the second clause can also undergo clefting, as in (91).

(91) na a osu a tyai a patu kon poti

      'it's at his house that he brought the pot and put it'

Similarly, the object may be clefted, as in (92) or as in (94) (cf. 93).

(92) na a patu a tyai kon poti a osu

      'it's the pot that he brought home'

(93) a go teke a   patu tyai kon poti a osu
      he go take the pot carry come put at house

      'he went and got the pot and brought it home'

(94) na   a   patu a go teke tyai kon poti a osu
      it-is the pot he go take carry come put at house

      'it's the pot that he went and got and brought home'

Further, the verb teke in (93), which I assume to be more lexically salient than the directional verb go preceding it, can be copied in ini-tial position under clefting, as in (95). The directional verb go , al-though more "grammatical" and less "lexical" than teke , is still the first verb in the sentence and can similarly undergo clefting, as in (96).

(95) na teke a go teke a patu tyai kon poti a osu

      'it's got he went and got the pot and brought it home'

(96) na go a go teke a patu tyai kon poti a osu

       'it's went he went and got the pot and brought it home'

I leave aside here the interesting question of whether the fact that both
go and teke can undergo clefting is due to diachronic development in Dju-
ku of go and other verbs of motion in this position from fully lexical
items to partly grammatical ones. Both Givón's [1975] argument for such a
development in Niger-Congo and Pike's [1967] more general comments on fully
lexical verbs developing into grammatical morphemes have their force. But I
do not here assume such a development in Djuka, not having examined the
available evidence on earlier stages of Djuka.

In summary, it appears that the following elements in a sentence can un-
dergo clefting for contrastive focus:

   i.   subject
   ii.   object
   iii. adjuncts of first or second clauses of sentences[15]
   iv.   stressed modals
   v.   first verb of sentence
   vi.   first lexical verb of sentence if preceded by directional verb

The following elements cannot be front-shifted:

   i.   unstressed particles be , sa , o , e
   ii.   adjuncts of clauses other than in iii above
   iii. the negative particle ná
   iv.   verbs other than in v and vi above

Among languages of West Africa, clear examples of constructions parallel
to the Djuka cleft-focus construction are found in West African Pidgin Eng-
lish (WAPE). Compare the neutral sentence (97) with (98), where the subject
Jɔn , already in front position, is preceded by na 'be' and thereby marked
for emphasis [Dwyer, n.d.].

---

[15]The constraints on clefting of objects and adjuncts from non-
initial clauses are not clear.

(97) Jòn dè   cóp fùfu   'John is eating foo-foo'
      John cont. eat foo-foo

(98) na   Jòn dè   cóp fùfu   'it's John who is eating foo-foo'
      it-is John cont. eat foo-foo

Cleft-focus of the object is illustrated in (99) (cf. 97). Unlike the
Djuka construction, however, the WAPE construction does not delete the object
NP from neutral position after copying it in front, but replaces it by a pro-
noun (am in (99)).

(99) nà fùfu Jón dè cóp àm   'it's foo-foo that John is eating'
                           it

Cleft-focus of a locative element is illustrated by (100-101), and of a
temporal element by (102-103). Here the emphasized elements are deleted,
not replaced by pro forms, in their neutral positions, exactly parallel to
the Djuka construction.

(100) à dón   lúk àm fò   dé   'I found it there'
       I completive find it (prep.) there

(101) nà   fò   dé à dón   lúk àm
       it-is (prep.) there I completive find it

       'it's there that I found it'

(102) à kám tudé   'I came today'
       I come today

(103) nà   tudé à kám   'it's today that I came'
       it-is today I come

The expression of contrastive focus by clefting with some form of 'be'
is also found in non-creole languages of West Africa. In the Kwa language
Igbo, for example, the subject (already in front position) is preceded by
'it is' when emphasized [Carrell 1970].[16]

(104) nwókó hèrè ákwékwɔ́   'the man saw the book'
       man   see book

(105) ɔ́ bè nwókó hèrè ákwékwɔ́   'it's the man who saw the book'
       it is man   see book

---

[16]See Givón [1979:246-248] for a reconstruction of the historical devel-
opment of these "cleft-focus" constructions.

This construction exactly parallels the Djuka cleft-focus construction with focused subject. For the post-verbal object, however, Igbo differs from Djuka by inserting the relative marker kà after the object, as in (106) (cf. 104).

(106) ɔ́ bè ákwékwɔ́ kà   nwókó hὲrὲ   'it's the book that the man saw'
      it is book   that man   see

In another Kwa language, Yoruba, the added form of 'be' follows, rather than precedes, the focused element, as (107-108) show for subject, (109-110) for object, and (111-112) for locative [Bamgboṣe 1966:56-57].

(107) ìyẹn   ò da   'that's not good'
      that-one not good

(108) ìyẹn   ni ò da   'it's that one that's not good'
      that-one is not good

(109) wón raṣo   'they bought a dress'
      they bought-dress

(110) aṣo ni wón rà   'it's a dress that they bought'
      dress is they bought

(111) ó bὲrὲ   lé.kó   'it started in Lagos'
      it started in-Lagos

(112) (ní) èkó ló ti bὲrὲ   'it's in Lagos that it started'
      (in) Lagos is it started

The situation appears to be similar for two other Kwa languages, Ewe as described by Warburton et al. [1968] and Twi as described by Redden et al. [1963], both for focused subject. In Twi an additional difference from Djuka is evident, in that the subject occurs both before and after the particle na in the latter position as a verb prefix. Christaller [1875:§247] gives numerous examples for both subject and post-verbal elements undergoing clefting in Twi.

In Efik[17] the particle (ké) follows the focused element as in Yoruba. In Efik, however, the particle is no longer a form of 'be', though it may

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[17]Efik is classified by Greenberg [1966] as a non-Bantoid member of Benue-Congo, a subdivision, like Kwa, of Niger-Congo. Givón [1975] tentatively follows Greenberg. Welmers [1971:763], however, is "convinced that Efik and certain other languages in Eastern Nigeria are more clearly related

well have been earlier.[18]   Clefting of object is illustrated by (113-114)
and of locative by (115-116) [Welmers 1968a:41-42]. The particle ké is
homophonous with a locative preposition [Welmers 1968a:40], a homophony
which Lord [1973] has argued has arisen in Kwa languages through the develop-
ment of locative prepositions from locative verbs. In Djuka, the form na
occurring at the beginning of cleft-focus constructions has been treated here
as the copula na 'be', because of the occurrence of ná 'not, not be' in
the corresponding position for negative focus. Unlike the situation in Kwa
(and Efik), the Djuka locative preposition na is homophonous with this cop-
ula, but not with the locative/existential verb de .

(113) ŋkedèp   m̀boró   'I bought bananas'
       I-bought bananas

(114) m̀boró   ké   ŋkedép   'it's bananas that I bought'
       bananas (part)I-bought

(115) ŋkakà   íkɔt Ékpené   'I went to Ikɔt Ekpene'
       I-went

(116) Íkɔt Èkpené ké   ŋkakǎ   'it's Ikɔt Ekpene that I went to'
                   (part) I-went

For focused subject, no particle occurs at all. The emphatic status of
the subject is marked only by the tone of the verb (cf. the different tones
on the verb in (113-114) and (115-116))and, in the case of pronominal sub-
jects, by different pronouns.[19]

     Turning to the Gur family, we find in Mooré a special particle (ya for
positive, ka for negative) occurring before the focused element. In addi-
tion, the particle la occurs after it in the same position as Igbo rela-

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to Igbo than to the Bantu languages, and these are therefore classed as Kwa
rather than Benue-Congo. Indeed the whole question of a boundary between
Kwa and Benue-Congo, and of the integrity of each of these branches of the
Niger-Congo family, is open for further investigation." This same position
is assumed in Welmers [1973].

     [18]I owe this diachronic observation to Talmy Givón [personal communica-
tion]. Cf. Givón [1974].

     [19]Cf. (73) and (74) for Djuka emphatic pronoun en .

tive marker kà . Both preposed ya and postposed la are identical or
homophonous with forms of two verbs 'be'. The cleft-focus construction is
illustrated for object in (117-118) and for locative in (119-120) [Lehr et
al. 1966:107-108].[20]

(117) m díkdà   móbilì   'I'm taking the car'
       I am-taking car

(118) yá   móbil la   m díkdà   'it's the car that I'm taking'
       it-is car it-is I am-taking

(119) ub wáa   Dákad   'they arrived in Dakar'
       they arrived Dakar

(120) ya   Dákad la   ub wáẽ   'it's in Dakar that they arrived'
       it-is Dakar it-is they arrived

The Moore data (and, depending on whose classification scheme you fol-
low, Efik data as well) indicate that contrastive focus is signalled by
clefting in other African languages than Kwa languages. However, the par-
ticular pattern of copying the verb but not deleting it from its original
position, leaving a full verb in both positions, seems to be peculiar to
Kwa.[21]

Before too quickly assuming a Kwa, or even an African, substratum as the
source of the Djuka construction, we should consider the possibility of in-
fluence from the European languages. We note first of all that English also
expresses contrastive focus, among other ways, by moving the elements in fo-
cus to initial position and preposing the appropriate tense of 'it is' as in
(121) for object, (122) for locative, and (123) for subject.

(121) It was two peccaries (that) my father killed in the jungle.

---

[20]The construction appears to be used for focus of post-verbal elements
only, not of (pre-verbal) subject (cf. Efik).

[21]Givón [personal communication]. Jaggar [1978:80] does report for Hausa
a device for marking a VP with contrastive focus, but he goes on to say that
the verb "may not be repeated in full when marked (+F) but simply leaves the
substitutive yi ." Until we have examined more closely earlier stages of
Djuka or other Suriname or West Atlantic creoles, we cannot press too far the
differences among various Kwa languages. It may be, for example, that the
Djuka cleft-focus construction earlier had a relative marker as Igbo still
does.

(122) It was in the jungle (that) my father killed two peccaries.

(123) It was my father (that/who) killed two peccaries.[22]

Such a construction is found in Portuguese (é ___ que...), French (c'est ___ qui/que...) and other European languages as well. But as Chris Corne has pointed out to me [personal communication], the peculiar pattern of copying the verb in initial position as in Djuka and other West Atlantic creoles does not occur in these languages except in some varieties in post-creole communities. We can thus be relatively assured of a Kwa source for this particular cleft-focus construction in Djuka and in the Atlantic creoles generally.[23] If that is indeed the case, then it is reasonable to assume Kwa influence in cases where both Kwa and other West African language families exhibit a particular construction under consideration, such as SVC's.

3. Comparative Constructions[24]

    Comparison is expressed in Djuka by the use of either of two morphemes, moo (< Eng. more) and pasa (< Port. pasar). (Cf. Hall [1966:82] for the similar usage of moro and pasa in Sranan comparative constructions.)

    Sentences (124-128) illustrate the use of moo as transitive verb, i.e., followed by NP as object.

(124)   angii moo mi   'I'm hungry'
        hunger   me

(125)   wataa moo mi   'I'm thirsty'
        water   me

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[22]In my idiolect, (123) sounds archaic without *that* or *who* after the subject. But we are concerned with the English of the 16th/17th centuries, not the 20th, when dealing with Djuka origins.

[23]It may be helpful to briefly note the following about the corresponding constructions in two other pidgins or creoles of Africa: (1) in Sango [Samarin 1967], both subject and other elements are clefted for focus, and are followed by either laá or sí ; (2) for Crioulo of Guiné, Wilson [1962:33] reports clefting of subject, object, and temporal adjunct for focus with no morpheme corresponding to 'is' or 'it is', but in some cases with a postposed relative marker.

[24]The discussion in this section is limited to comparison of superiority ('more...than') and includes neither comparison of inferiority ('less...than') nor of equality ('as...as').

(126) a   wooko ja, a   moo mi   'this job is too much for me'
       the work here it   me

(127) ne   a   sani kon moo en   'then the thing began to be too
       then the thing came   him   much for him'

(128) Baa   Kujaku moo Baa   Bubu 'Brer Deer beat (won over) Brer
       brother   deer   brother jaguar Jaguar'

From these examples we may gloss this sense of moo as 'surpass, be too
much for'.

    The morpheme moo also occurs following a VP with no following NP. In
this usage it occurs in negative (129), interrogative (130), and imperative
(131) sentences, but not in positive declarative sentences except in the
context of another sentence with moo , as in (132).

(129) mi á   sabi en moo.   'I don't know him any more.'
       I not know him

(130) ju sa   sabi en moo?   'Do you possibly still know him?'
       you irrealis know him

(131) iti go moo   'Pour some more.'
       throw go

(132) "Mi sa   subi go moo?"   '"Shall I climb further?"
       I irrealis climb to

       "Ai, subi go moo."   "Yes, climb further."
       yes climb go   ·

       Ne   a subi go moo.   Then he climbed further.'
       then he climb go

    In (133-136), moo precedes a stative verb/adjective in attributive
(133-134) and predicative (135-136) position, expressing comparative (in-
cluding superlative) degree.

(133) a   moo langa wan na mi dda   'the taller one is my father'
       the   tall one be my father

(134) ondi na a   moo koni   man?   'who is the cleverest one?'
       which be the   clever person

(135) dati moo langa   'that one is taller'
       that   tall

(136) a   sisa   moo koni   'the sister is the cleverest'
       the sister   clever

    In (137-139), moo follows intransitive (137), transitive (138), and

stative (139) VP and precedes a NP serving as a standard of comparison. Ex-
amples (137b-139b) illustrate an alternative construction with moo also
preceding the VP.

(137) a. a e   waka   moo mi   'he travels more than I do'
          he cont. travel   I

      b. a e   moo waka   moo mi
          he cont.   travel   I

(138) a. a e   sutu meti moo mi   'he shoots more game than I do'
          he cont. shoot game   I

      b. a e   moo sutu meti moo mi
          he cont.   shoot game   I

(139) a. a langa moo mi   'he's taller than I am'
          he tall   I

      b. a moo langa moo mi
          he   tall   I

     Finally, moo is used in expressions of proportional comparison as in
(140), which is similar to English 'the longer the better'. In (141), moo
occurs not only nominalized (preceded by on 'which, whatever'), but also
within the VP of each clause, a situation not paralleled in English.

(140) a   moo a langa, a   moo a bun   'the longer it is, the better'
       the   it long   the   it good

(141) on   moo mi e   moo bali a pikin, on   moo a e   moo du en
       which   I cont.   call the child which   he cont.   do it
       'the more I call the child, the more he does it'

     The morpheme pasa   is also used transitively as in (142-143) and in-
transitively as in (144-145).

(142) a kon pasa mi   'he overtook me'
       he come   me

(143) a pasa a   taa   boto   'he overtook the other boat'
       he   the other boat

(144) san pasa?   'what happened?'
       what

(145) wan sani pasa anga mi   'something happened to me'
       a   thing   with me

In the transitive usage, the sense of pasa may be glossed as 'pass, over-

take' and in the intransitive as 'happen'.

    While moo precedes VP to express comparison, pasa follows them to
express intensification, as for a stative in (146) and an intransitive in
(147).

(146) a langa pasa   'it's very long'
       it long

(147) a fᴜfuu pasa   'he steals a lot'
       he steal

Other morphemes occur in the same position, expressing various degrees of
intensification. Some of these are given in (148-149), illustrated for sta-
tive VP only.

(148) a langa fu toko   'it's really long'
       it long of war

(149) a langa tumisi   'it's very long/it's too long'
       it long very

The expression (transitive VP?) pasa maiki also occurs in this position:

(150) a ˈlanga pasa maiki   'it's very long (long beyond
       it long   mark   measure)'

    The use of pasa + NP after VP is illustrated with intransitive verbs
(151-152) and a stative verb, where it is marginally acceptable (153).

(151) a o   goo pasa ju   'he'll grow bigger than you'
       he fut. grow   you

(152) a waka pasa mi   'he overtook me'
       he walk   I   NOT *he walked more than I did

(153) ?a langa pasa mi   'he's taller than I am'
       he tall   I

Transitive VP + pasa + NP (154) is ungrammatical.

(154) *a sutu meti pasa ala sama   ('he shoots more game than anyone')
       he shoot game   all person

    The use of a verb meaning '(sur)pass' as a comparative marker is a
fairly well known feature of the West African language area. An example
from Efik is given in (155) [Welmers 1968a:72]; its structure corresponds
exactly to that of the Djuka equivalent given in (139), repeated here, if

moo in (139) is taken as a verb on the basis of sentences like (124-128).
(As Russell Schuh has pointed out to me, however, moo in (139) could be
construed adverbially on the basis of examples like (129-136), suggesting a
parallel between moo in (139) and -er in English 'he (is) tall-er (than)
me'.)

(155) ɛ̃ỹé ɔ́nyɔ́ŋ   ákàn   mî̃   'he's taller than I am'
       he (is)-tall surpass me

(139) a   langa   moo   mi

For the Kwa language Gwari, Hyman and Magaji [1970:72-73] gloss the verb
du as 'to pass by' when used as an independent verb, as in (156), but as
'surpass' in comparative constructions, as in the three alternative forms in
(157-159).

(156) wó lá   dù   ya   'he has passed by'
       he comp. pass-by release

(157) wo du   mi ó kpâ   'he's taller than I am'
       he surpass me at height

(158) wokpá   dū̄   · mikpá   "   "   " " "
       his-height surpass my-height

(159) wokpá   dū̄   minyá   ,"   "   " " "
       his-height surpass mine

None of (157-159) parallels the Djuka-Efik pattern of NP + VP + 'surpass' +
NP. Igbo appears to follow the Gwari pattern as well (see Carrell [1970:64-
65] and Swift et al. [1962:358ff.]).

    Other Kwa languages, however, do have a comparative construction paral-
lel to that of Djuka and Efik. For Twi, the verb 'surpass' occurs with (160)
and without (161) a following NP [Redden et al. 1963:50].

(160) ɔwárẹ   sɛ̃ñ   nĩ́ ñṹa   'he is taller than his brother'
       he-is-tall surpass his sibling

(161) ɔwárẹ   sɛ̃ñ   'he is taller'

(In the corresponding Djuka sentences, moo and pasa are both used in the
first case, although moo is much more usual; cf. (139) and (153). In the
second case, only pasa occurs; cf. (146), but also (129-132).

    The verb wú 'surpass' in the Kwa language Ewe is used as a comparative
marker both with (162) and without (163) a following NP, just as in Twi

[Warburton et al. 1968:182-183].

(162) xɔsia   lolo   wú   éma   'this room is bigger than that
      room-this (is)-big surpass that-one   one'

(163) esia   lolo- wú   'this is bigger'
      this-one (is)-big surpass

For Yoruba, the comparative marker ju (with various tones) is glossed
as 'too' [de Gaye and Beecroft 1922] or 'to be excessive' [Stevick and
Aremu 1963]. The use of ju without a NP is illustrated in (164) and (165)
and with a NP in (166). Besides ju preceding the NP, the comparative con-
struction also includes a post-NP lò , as in (166), so that the Yoruba pat-
tern differs in this respect from the pattern found in Djuka, Efik, Twi, and
Ewe [Stevick and Aremu 1963:285-286].

(164) ó gbóná   jû   'it is too hot'
      it (is-)hot excessive

(165) tíì yì lē   jù   'this tea is very strong'
      tea this strong excessive

(166) ōsàn yì dûn jū   èyūn꞉ lò
      orange this sweet be excessive that go

      'this orange is sweeter than that'

In the Mande language Kpelle, the VP tɛɛ...mà 'pass by on top' is used
in comparative constructions, as in (167) [Gay and Welmers 1971:89].

(167) bɛ́rɛi ŋí kɛ́têi é tɛ́ɛ nyíti mà   'this house is larger than that
      house this large it   that-   one'
                        (?)   one

The (non-Niger-Congo) Chadic language Hausa uses a verb glossed as 'ex-
ceed' in comparative constructions, as in (168) [Kraft and Kraft 1973:187].

(168) yā fĪ   shì ƙwārĪ   'it is stronger than the other
      it exceed it strength   one'

Of the languages for which examples are given here, Efik, Twi, and Ewe
appear to resemble Djuka in regard to comparative constructions with '(sur)-
pass' more than do the other languages cited: Gwari and Yoruba (Kwa),
Kpelle (Mande), and Hausa (Chadic). If Efik is indeed a Kwa language as
Welmers insists, then the hypothesis is supported that a Kwa substratum was
an important source of this construction in Atlantic creoles. (The resem-

blance between Krio and Kwa languages on this point is mentioned, but not il-
lustrated, by Williams [1971:63]. The use of pas as a post-VP intensifier
and of pas + NP in a comparative construction in WAPE is illustrated in Dwy-
er [n.d.:329].) We may even note particular groups of languages within the
Kwa family that are more likely sources of this construction than others.[25]
If, on the other hand, Efik is best considered not to be Kwa, then we must be
more cautious in asserting a Kwa origin for this construction. Given the
general disagreement among specialists regarding the details of classifica-
tion of Kwa languages with regard to Gur or Voltaic, or Benue-Cross (see Mukarovsky
[1977]), and other language groupings of this area, there is no point in pur-
suing these matters further here.

In any event, the hypothesis of a Kwa origin seems more certain for this
comparative construction than for the SVC's discussed in Section 1. It
should be noted, however, that we have not in this section dealt with data
bearing on the role of English or Portuguese influence or of creole or lan-
guage universals. With regard to the role of universals, it is noteworthy
that the description of comparative constructions in Mauritian Creole in Corne
[1970:45] makes no mention of any use of a form of '(sur)pass'.

4. Conclusion

Data have been presented from various languages, from both West Africa
and elsewhere, both creoles and non-creoles, in comparison with a more de-
tailed account of selected syntactic features of Djuka, a creole of Suriname.
The data are most extensive for serial verb constructions, somewhat less ex-
tensive for cleft-focus constructions, and even more scanty, at some points
merely suggestive, for comparative constructions. The general conclusion,
however, seems clear enough: that statements identifying the source of SVC's
with a specific language family of West Africa, e.g. Kwa, should be regarded
with some scepticism until data from a wider sampling of languages are con-
sidered. There is likewise room for some similar scepticism with regard to
statements regarding Kwa origins for cleft-focus and comparative construc-

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[25]Greenberg [1966] does in fact group Ewe and Twi together in his sub-
classification of Kwa languages.

tions, although the evidence for Kwa origins in these cases is clearer than for SVC's. Even so, the possibility of language universals and universals of creolization being partly responsible for such constructions means that we must continue to examine evidence from creole, post-creole, and non-creole languages from other parts of the world, as well as from earlier stages of West African languages, creoles on both sides of the Atlantic, and the European contact languages.

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INTERNATIONAL COLLOQUIUM ON THE CHADIC LANGUAGE FAMILY

Universität Hamburg
15-18 September 1981

SYMPOSIUM: "Chadic and Afroasiatic"

Tuesday, September 15

Discussants: R. Hetzron, H. Jungraithmayr, P. Newman, Ch. Rabin, R.G. Schuh,
    A. Zaborski

P. Newman, "Introduction"

Ch. Rabin, "Problems of inter-branch etymological comparison"

H. Jungraithmayr, "Problems of comparative verb morphology"

R. Schuh, "Change in functions of determiners in Chadic and Afroasiatic"

A. Zaborski, "Chadic stratification"

D. Cohen, "A Hamito-Semiticist poses questions for the Chadicists"

COLLOQUIUM

Wednesday, September 16

Morning

C. Hodge, "Relationship of Afroasiatic to Indo-European"

H. Mukarovsky, "Pronouns and prefix conjugation in Chadic and Hamito-Semitic"

A. Dolgopolsky, "Chadic and Hamito-Semitic etymologies: analysis of person-
    al pronouns"

H. Fleming, "Chadic external relations"

Afternoon

W. Möhlig, "Principles of the Prosodology in Hausa"

G. Furniss, "Some observations on the Verbal System in Hausa"

J. McIntyre, "Hierarchical contexts of Hausa imperative/subjunctive"

Thursday, September 17

Morning

H. Tourneux, "Les emprunts en musgu"

Th. Schumann, "Gender Markers in Masa"

G. Böhm, "Zwei Typen "ergativsprachlicher" Prädikation in tschadischen
    Sprachen"

F. Frajzyngier, "Marking syntactic relations in Proto-Chadic"

Afternoon

L. Gerhardt, "Linguistic Interferences in the Chadic/Benue-Congo border-
    area"

A. Rufa'i, "Defining and non-defining relative clauses in Hausa"

N. Skinner, "Polysemy in Afroasiatic"

P. Newman, "Causatives in Hausa"

Friday, September 18

D. Barreteau, "Phonémique et prosodie in Higi"

E. Wolff, "Reconstructing Vowels in Wandala-Lamang"

E. Jarvis, "Podoko verbal directionals"

Ch. Fluckiger, "Discourse structure of Mandara"

C. Hoffmann, "Group-internal sound correspondences of the Bura-Margi group"

PUBLICATIONS RECEIVED

Claessens, A. and H. Vinck (eds.). *Recueil d'études offert au R.P.G. Hulstaert m.s.c. à l'occasion de son 80e anniversaire*. Annales Aequatoria, Tome 1, Volume II. Mbandaka, Zaire: Imprimerie Mission Catholique, B.P. 1064, 1980. (no price indicated)

This is a collection of papers divided into three groups. ETUDES D'ANTHROPOLOGIE CULTURELLE ET SOCIALE contains Th. Aerts, "The Melanesian Gods"; Bolomba wa Ngboka, "La religion traditionnelle des Bomboma". ETUDES SUR LES PYGMEES DE L'EQUATEUR (ZAIRE) contains P. Lootens, "Vocabulaire comparé de noms d'animaux: Lonkundo - Lɔtɔa - Lolubɛ - Lokonda"; E. Sulzmann, "Ein Jagdbericht im Dialekt der Batswa von Ebungu (Ekonda)"; H. Vinck, "Bibliographie sur les Batswa de l'Equateur"; G. Wauters, "Magiciens et écoles de magiciens chez les Batswa de l'Equateur." ETUDES DE LITTERATURE, LINGUISTIQUE, ART contains M. Bokula, "Les prédicats non-verbaux en Mba"; Fr. Bontinck, "Le Vocabularium Latinum, Hispanicum et Congense. Nouvelles notes marginales"; S. Carbonnelle, "Dieu, l'homme et la femme dans l'épopée Nsong'a Lianja"; A. Coupez, "Aspects de la phonologie historique rwanda"; J. Daeleman, "Fréquence des préfixes dans des anthroponymes et des toponymes bantu"; K. Kilumba et M. Mbuya, "Adresse et réponse dans un système de parenté bantu. Petite introduction à l'étude pragmatique du système de parenté des Luba (Shaba)"; Maalu Bungi, "Observations sur le thème du langage des animaux dans les contes zaïrois"; Mokɔbɛ Njɔku, "Quelques chants et noms pour les jumeaux en Lingɔmbɛ"; F. Van Linden, "L'oeuvre artistique de J. Moeyens."

Guarisma, Gladys and Suzy Platiel (eds.). *Dialectologie et Comparatisme en Afrique noire*. Oralité—Documents, 2. Paris: SELAF, 1980. (no price indicated)

This is a collection of papers presented at l'Atelier International de Dialectologie Africaine (Ivry, 2-5 join 1980), including discussion which followed the papers. The papers are grouped into five sections. I. PRINCIPES METHODOLOGIQUES: W. Möhlig, "La dialectométrie: une méthode de classification en Afrique"; M. Dieu, "Calcul automatique des distances lexicales. Eléments d'une recherche en cours"; Y. Monino, "Dialectologie et parenté génétique des langues. Applications méthodologiques à un groupe homogène de langues"; T. Bearth, "Mesure du degré d'intelligibilité entre dialectes." II. LANGUES BANTOUES: L. Polak, "Note sur la filiation génétique des langues du nord-ouest bantou"; P. Elias et J. Voorhoeve, "La diffusion lexicale en Mbam-Nkam"; J.C. Winter, "International Classification of Kilimanjaro Bantu compared: towards an East African Dialectometry"; G. Philippson, "Comparatisme entre de différentes méthodes lexicostatistiques pour la classification des langues bantoues." III. LANGUES MANDE: D. Creis-

sels, "Variations dialectales dans les systèmes de marques prédicatives des parlers manding"; M.-J. Derive, "Correspondances phonétiques dans les parlers manding"; C. Grégoire, "Les structures relatives en mandé"; V. de Colombel, "Essai de confrontation de points de vue synchronique et diachronique dans la classification de 10 parlers tchadiques du Nord-Cameroun." IV. LANGUES DIVERSES: H. Tourneux, "Les dialects du Musgu (Nord-Cameroun)"; A. Rialland, "Les marques de l'aspect en gurma du Nord et du Sud." V. ANNEXE: Rapport du groupe de travail Bantou Nord-Est: W. Möhlig, G. Philippson, M.F. Rombi, and J.C. Winter, "Classification dialectométrique de quelques parlers swahilis (swahili du Nord et swahili comorien)."

Hutchison, John P. *The Kanuri Language: a Reference Grammar*. Madison, Wisconsin: University of Wisconsin African Studies Program, 1981. (no price indicated)

This is a comprehensive reference grammar of Kanuri, a member of the Saharan Branch of the Nilo-Saharan family. Kanuri is the major language of northeastern Nigeria. The grammar "... is designed to present in a readily accessible fashion, all of the intricacies of the Kanuri language and its grammar. The plethora of Kanuri language material presented in the book is organized in such a way as to be useful to students of the Kanuri language, to linguists and other academics, and to Kanuri people interested in the grammar of their language. The material is organized in pedagogical order throughout the book, and it is hoped that this arrangement will readily lend itself to use in the language teaching classroom." (Introduction, p.5). Hutchison brings **fourteen years'** study of Kanuri and related dialects to bear in this thorough and detailed grammar.

Hyman, Larry M. *Noni Grammatical Structure*. Southern California Occasional Papers in Linguistics, 9. Los Angeles: Linguistics Department, University of Southern California, 1981. ($4.00 + 20% postage)

"The present volume...is the third in a series of SCOPIL publications stemming from work on the languages of the Grassfields Bantu region of Cameroon. Though not a complete grammar, this work attempts to present the major grammatical structures of an important language, which although not properly Grassfields Bantu, belongs to the closely related "Beboid" group ..."(p. *v*) The grammr is divided into 22 chapters organized into five parts: I. Phonology, II. The Noun Phrase, III. VERB STRUCTURE, IV. BASIC SENTENCE STRUCTURE, V. COMPLEX SENTENCES. It concludes with a fairly extensive English-Noni word list and an index.

Nissim, Gabriel, M. *Le Bamiléké-Ghomálá' (Parler de Bandjoun, Cameroun)*. Langues et Civilisations à Tradition Orale, 45. Paris: SELAF, 1981. (no price indicated)

Ghomálá' Bamileke belongs to the Mbam-Nkan group of Grassfields Bantu

languages. The present work contains an introductory chapter on the
geographical and linguistic situation. The remainder consists of ap-
proximately equal parts devoted to phonology and nominal morphology,
the latter describing not only the noun class system, but also the
structure of the noun phrase.

UNESCO. *African Languages: Proceedings of the Meeting of Experts on the
Transcription and Harmonization of African Languages.* Niamey (Niger),
17-21 July 1978. Paris: UNESCO, 1981. (no price indicated)

A collection of seventeen papers on standardization of orthographies
in languages from a number of African countries and on use of modern
orthographies in African language literacy.

UNESCO. *African Languages: Proceedings of the Meeting of Experts on the Use
of the Regional or Subregional African Languages as Media of Culture
and Communication with the Continent.* Bamako (Mali), 18-22 June 1979.
Paris: UNESCO, 1981. (no price indicated)

A collection of sixteen papers on African languages as regional vehicu-
lar languages in a number of African countries.