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Papers in Bantu Grammar and Description

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Introduction

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1 The *Bantu Grammar: Description and Theory* Network

The collection of papers in this volume presents results of a collaborative project between the School of Oriental and African Studies (SOAS) in London, the Zentrum für allgemeine Sprachwissenschaft, Typologie und Universalienforschung (ZAS) in Berlin, and the University of Leiden. All three institutions have a strong interest in the linguistics of Bantu languages, and in 2003 decided to set up a network to compare results and to provide a platform for on-going discussion of different topics on which their research interests converged. The project received funding from the British Academy International Networks Programme, and from 2003 to 2006 seven meetings were held at the institutions involved under the title *Bantu Grammar: Description and Theory*, indicating the shared belief that current research in Bantu is best served by combining the description of new data with theoretically informed analysis. During the life-time of the network, and partly in conjunction with it, larger externally funded Bantu research projects have been set up at all institutions: projects on word-order and morphological marking and on phrasal phonology in Leiden, on pronominal reference, agreement and clitics in Romance and Bantu at SOAS, and on focus in Southern Bantu languages at ZAS. The papers in this volume provide a sampling of the work developed within the network and show, or so we think, how fruitful the sharing of ideas over the last three years has been. While the current British Academy-funded network is coming to an end in 2006, we hope that the cooperative structures we have established will continue to develop - and be expanded - in the future, providing many future opportunities to exchange findings and ideas about Bantu linguistics.

It goes without saying that an international project like the current one only comes alive through many different contributions. We would like to take the opportunity to express our gratitude to all participants in the network meetings, both from the partner institutions and as guests, to SOAS, ZAS, and the University of Leiden for hosting meetings, to the local organisers, to ZAS for inviting us to publish Bantu papers in the *ZAS Papers in Linguistics* series, and to the British Academy for the funding of the network.

2 Issues in Bantu Grammar and Description

The papers in this volume reflect a number of broad themes which have emerged during the meetings of the project as particularly relevant for current Bantu linguistics. The work discussed here largely builds on foundations that have been laid in the 1980s and 1990s, such as work on the expression of focus (Watters 1979) and its interaction with tone (Hyman 1999), and a specific Bantu phenomenon which is now often referred to as the conjoint-disjoint distinction in verb forms (Meeussen 1959, Creissels 1996). Furthermore, work in LFG on the relation between agreement and word order (Bresnan and Mchombo 1987) and, as a special instance of this relation, on locative inversion (Bresnan and Kanerva 1989) provides a point of reference for much of the work reported here. Another aspect of Bantu grammar which has attracted a good deal of attention is the syntactic effect of valency-changing morphology (e.g. several papers in Mchombo 1993). Although this topic is not directly addressed in the papers included here, it provides an important backdrop for several of them.

The papers show that approaches to Bantu linguistics have also developed in new directions since this foundational work. For example, interaction of phonological phrasing with syntax and word order on the one hand, and with information structure on the other, is more prominent in the papers here than in earlier literature. Quite generally, the role of information structure for the understanding of Bantu syntax has become more important, in particular with respect to the expression of topic and focus, but also for the analysis of more central syntactic concerns such as questions and relative clauses. This, of course, relates to a wider development in linguistic theory to incorporate notions of topic and focus into core syntactic analysis, and it is not surprising that work on Bantu languages and on linguistic theory are closely related to each other in this respect. Another noteworthy development is the increasing interest in variation among Bantu languages which reflects the fact that more empirical evidence from more Bantu languages has become available over the last decade or so. The picture that emerges from this research is that morpho-syntactic variation in Bantu is rich and complex, and that there is strong potential to link this research

to research on micro-variation in European (and other) languages, and to the study of morpho-syntactic variables, or parameters, more generally.

Against this background, the papers in this volume can be grouped according to general themes. The papers by Buell, McCormack and van der Wal take a closer look at the distribution of conjoint/disjoint verb forms in three Bantu languages. The conjoint/disjoint distinction refers to verb allomorphy found in some tense-aspect paradigms that is conditioned by the verb's relation to other elements in the clause. The disjoint form is required when the verb is clause-final, while the conjoint form requires some clause-internal constituent to follow the verb. Work like Givón (1975) and, more recently, Güldemann (2003) and Ndayiragije (1999) has argued that the distribution of conjoint/disjoint verb forms is directly related to focus: the disjoint is used when the verb is in focus, the conjoint when the constituent immediately following the verb is in focus. The papers in this volume reflect a range of variation in the relative influence of syntax and focus on the distribution of conjoint/disjoint verb allomorphy. Buell's paper shows that in Zulu the correlation between the choice of verb allomorphy and focus is an imperfect one, as one can find numerous mismatches. Instead, Buell argues that the distribution is syntactically conditioned: the disjoint form is used when the verb is final in the AgrSP constituent, the conjoint when the verb is medial in this constituent. The imperfect correlation with focus can be accounted for by proposing that topics cannot occur within AgrSP. Postverbal focused constituents obviously escape this ban. McCormack's paper reports on preliminary work on the conjoint/disjoint distinction in dialects of Setswana and in contexts not discussed in earlier studies by Creissels (1996) and Chebanne et al. (1997). This paper mostly confirms the findings of the earlier studies, while revealing some dialectal tone variation which warrants further investigation. An interesting new finding is that clause-final position more consistently correlates with the disjoint form than focus. Also highlighted is the need for more work on the phrasal tonology of Setswana, to tease apart general phonological conditions on tone realization from ones that must be attributed to a conjoint/disjoint verbal distinction. In contrast to these two papers, van der Wal's argues that there is a close connection in Makhuwa between the distribution of the conjoint/disjoint verb forms and focus. A constituent immediately following a conjoint verb is in focus; a constituent immediately following a disjoint verb is out of focus. This complementary distribution of postverbal focus and disjoint verb morphology is accounted for in van der Wal's analysis by two syntactic focus projections. When the lower one is filled by a focal object, the higher one is empty (and the verb is conjoint); when the lower one is not filled, the higher one must be, by the disjoint verb morphology.

The syntax of topic and focus is also the theme of the two papers on subject inversion in Bantu languages in this volume, by Marten and Morimoto. Subject inversion refers to constructions where the logical subject occurs in postverbal position, rather than in canonical preverbal position, and the verb shows subject agreement with the preverbal nominal – an object in subject-object reversal constructions or locative in locative inversion constructions – or takes an expletive subject agreement marker. The function of the construction is often to place the subject in the postverbal focus position, reserving preverbal position for topics. Marten's paper provides a thoughtful and much-needed survey of the locative inversion construction. It convincingly demonstrates that there are fewer syntactic restrictions on this construction than is often assumed based on Bresnan and Kanerva's (1989) pioneering study. In fact, one finds a range of variation, from languages like Chichewa which severely restrict the thematic structures of verbs which can participate in the construction to languages like Otjiherero, where there are few restrictions. One also finds striking variation in the function of the subject agreement morphology, from truly locative to merely expletive. More consistent across the languages surveyed is the function of locative inversion: the logical subject has presentational focus, introducing a new discourse topic. Morimoto's paper provides an analysis of subject-object (S-O) reversal constructions found in languages like Kinyarwanda. Like locative inversion, the logical subject occurs in postverbal focus position in this construction, and the preverbal logical object triggers subject agreement. Morimoto demonstrates, however, that the preverbal object is not the grammatical subject. Instead, the preverbal NP is consistently best analyzed as a Topic, and S-O reversal languages distinctively require topic-marking agreement (rather than subject-marking) on the post-topic verb. The cross-Bantu distinction between topic-marking and subject-marking languages is arguably accounted for using a topicality hierarchy familiar from work like Comrie (1981).

The papers by Cheng and Kula, Downing, and Zerbian are concerned with the interaction between phonology and syntax/information structure and show that prosodic information and phonological phrasing are central aspects of Bantu grammatical structure. Cheng and Kula provide an analysis of phonological phrasing in relative clauses in Bemba and identify two marking strategies of Bemba relatives, a segmental one which employs an overt relative marker (derived from a demonstrative pronoun), and a tonal one where the relative clause is marked by a grammatical Low tone on the subject marker of the verb of the relative clause. The tonal strategy is only available for restrictive readings of relatives, and cannot be used for head-less relatives. The authors show that this restriction follows from a constraint which bars the alignment of a Low tone with a left edge of a phonological phrase. Furthermore, they show that

phonological phrasing of the head noun either together with, or separate from the following relative clause correlates with the difference in reading between restrictive and non-restrictive. The authors argue that this provides empirical support for a head-raising analysis of relative clauses as proposed by Kayne (1994), as the left edge of the phonological phrase and the CP, which includes the head in Kayne's analysis, are aligned. Downing's paper shows, based on evidence from Chitumbuka, that focus does not universally correlate with culminative prosodic prominence such as main stress, as is widely argued in the literature. Chitumbuka has two positions of culminative prominence in the intonational phrase, sentence-initial pitch prominence and sentence-final penultimate lengthening ('stress'). However, focus is not necessarily correlated with either of these, but correlates to phonological rephrasing (boundary narrowing): focused constituents are always followed by a phonological phrase boundary. Furthermore, evidence from focus-related morphemes shows that it is these morphemes themselves which trigger boundary narrowing, and not the constituents which are in focus, which do not necessarily attract special prosodic marking. Within an OT analysis, Downing shows that a constraint STRESS-FOCUS, requiring the correlation of a focussed constituent with main stress, is systematically violated in Chitumbuka as ALIGN-FOCUS and ALIGN-FOCUSRELATEDMORPHEME are ranked higher, showing that phonological rephrasing is the consistent correlate of focus. Zerbian's paper provides a detailed overview of question formation in Northern Sotho. She shows that polar questions are marked exclusively by pitch raising and the absence of penultimate lengthening, and that the optional use of question morphemes fulfils pragmatic functions different from clausal typing. In contrast, constituent questions are not marked prosodically, but simply by the presence of a question word. Constituent questions show an asymmetry between subject and non-subject questions, which, as Zerbian shows, is related to the discourse function of subjects as topics, so that they are incompatible with focus, and, hence, in-situ questioning.

Two papers in the volume, those by Mchombo and Thwala, are concerned with clausal syntax and the licensing of (object) noun phrases. Mchombo addresses the question of the licensing and the limits of discontinuity of constituents of the noun phrase in Chichewa. He argues that, even though the presence of an object marker plays a role for discontinuity, there are instances of discontinuous NPs where the object marker is either optional, or, in fact, disallowed. Instead, there are linear order restrictions on the discontinuous NPs in that the head of the NP has to precede the modifiers, in effect preserving the 'base' order of the NP. Conversely, there are cases where even the presence of an object marker does not license discontinuity, for example in relative clauses and in recursive constructions with associative phrases. Mchombo argues that these examples provide a challenge for linguistic models to address the intricate

relation between information structure, constituency and linear order. Thwala's paper is concerned with the notion of 'object' in Bantu grammar. He argues that many object diagnoses proposed for Bantu fail to result in a coherent notion of object and proposes to replace the notion by the notions of inherent complement, derived complement, and free adjunct and derived adjunct. Inherent complements are licensed (subcategorized) by the verb, while derived complements are licensed by the applicative morpheme. Free adjuncts are free modifying elements, while derived adjuncts are extra-clausal phrases licensed by the verb concord. In addition, Thwala argues that syntactic rules make reference to the category types of DPs, PPs and clauses. From these assumptions, Thwala derives a typology of verb-complement relations in Bantu, providing a systematic account of cross-Bantu variation in this area.

Last but not least, the papers by Kipacha and Nurse deal with verbal morphology in Bantu languages from a comparative perspective. They illustrate how the choice of verbal morphemes is determined by tense and aspect or focus. Kipacha's paper describes the variation of the subject markers of the first, second and third person singular found in seven Southern Swahili dialects. The distributional charts that he provides reveal how the allomorphy is determined by tense and aspect in these languages. Nurse's paper presents a comparative view of the morphological expression of focus on the verb. Taking the observations made in the seminal work by Meeussen (1959) and Watters (1979) as a starting point, the paper groups Bantu languages into four groups: those languages that express focus solely by tone, those which show a two-way contrast of verbal focus morphology ('disjoint/conjoint' – see also papers by Buell, McCormack, van der Wal), those with a three-way contrast, and those with a verbal prefix *ni-*. For the binary focus marking strategy, its potential shift in meaning towards the progressive (following Güldemann 2003) as well as an historical explanation are discussed.

We believe that the papers brought together in this volume provide the reader with a good idea about several topics at the centre of current research in Bantu linguistics. They provide new data and new analyses, as well as showing several new avenues for future research, and as such are above all an invitation to everyone to engage further with this rich and complex language group.

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The Zulu Conjoint/Disjoint Verb Alternation: Focus or Constituency?*

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Zulu shows an alternation of conjoint and disjoint (conjunctive/disjunctive, short/long) verb forms. Certain contexts suggest that the distribution of these forms is related to focus. For example, certain adverbial expressions receive a focal interpretation when preceded by a conjoint form but not when preceded by a disjoint form. Similarly, a *wh*-phrase must be preceded by a conjoint form. This has led some researchers to argue or suggest that the alternation encodes focus directly. This paper examines two different focal hypotheses, one in which a disjoint form encodes focus on the verb and another in which the conjoint form encodes focus on the element following the verb. It is shown that both of these hypotheses are inadequate because certain contexts requiring the conjoint form do not display the predicted focal interpretation. Relativization morphology is argued to also support an analysis independent of focus. It is proposed that the alternation is regulated entirely by the position of the verb within the surface constituencies first proposed in Van der Spuy (1993) and that the associated focal interpretations are the result of a range of interpretations permitted within the different constituencies. Elements remaining within the relevant constituent are non-topical, and focus is one of a range of interpretations they can receive.

1 Introduction

Zulu (S40), a Bantu language of the Nguni cluster spoken primarily in South Africa, has a morphological alternation in certain tenses of its verbal paradigm which will here be referred to as the conjoint/disjoint alternation, shown in this paradigm:

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(1) The Zulu conjoint/disjoint alternation

	Conjoint (Conjunctive, Short)	Disjoint (Disjunctive, Long)
Present	*bacula X* "they sing X, they are singing X"	*ba**ya**cula* "they sing, they are singing"
Recent past	*bacul**e** X* "they sang X"	*bacul**ile*** "they sang"

The terms *conjoint* and *disjoint* are due to Meeusen (1959). Other terms for the alternation include *conjunctive* and *disjunctive* (due to Creissels (1996)), and, in the literature on the Nguni languages, the terms *long* and *short* are pervasive. The conjoint form cannot appear clause-finally,[1] while the disjoint form canonically does appear in clause-final position:[2]

(2) a. A- bafana [ba- ya- cul- a.] (disjoint)
DET- 2.boys 2.SBJ- *ya*- sing- FV

b. * A- bafana [ba- cul- a.] (conjoint)
DET- 2.boys 2.SBJ- sing- FV
"The boys are singing."

(3) a. A- bafana [ba- cul- a i- ngoma.] (conjoint)
DET- 2.boys 2.SBJ- sing- FV DET- 9.song

b. * A- bafana [ba- ya- cul- a] i- ngoma. (disjoint)
DET- 2.boys 2.SBJ- *ya*- sing- FV DET- 9.song
"The boys are singing a song."

Certain focal interpretations are associated with the alternation, illustrated with this pair of sentences:

[1] Some, but not all, speakers accept (3b) with what appears to be an assertion of truth value. All speakers use (3a) for the neutral reading. More will be said about this point.

[2] In the glosses, the following conventions are used. Third person subject and object markers appear with a noun class number, such as 2.SBJ- for "noun class 2 subject marker". First and second person markers appear with both person and number, such as 2S.OBJ- for "second person singular object marker". Nominal augments (preprefixes) are glossed as DET- (for "determiner"). All tense/aspect/negation-related verbal suffixes (of which exactly one appears per verb) are glossed as FV (for "final vowel"). Other abbreviations are APPL "applicative", COP "copula", INF "infinitive", NEG "negation", PRO "pronoun", Q "question", and REL "relative".

(4) a. Ba- ya- dlal- a phandle. (disjoint)
1.SBJ- *ya*- play- FV outside
"They're playing outside."

b. Ba- dlal- a phandle. (conjoint)
1.SBJ- play- FV outside
"They're playing OUTSIDE."

In this paper I will argue that the distribution of these two forms is only indirectly related to focus, in contrast with other analyses which assume a direct relation (Hyman and Watters 1984), such as Creissels (1996) whose claim that the element following a conjoint verb form (in Tswana) provides new information could easily be taken to imply that the postverbal element is endowed with "new information focus", or Güldemann (2003), who claims that the disjoint form in Zulu directly encodes predicate focus (a term which he defines to exclude the postverbal element).

Analyses of the first type, where the interpretative contrasts between conjoint and disjoint forms are attributed to a property of an element following the verb (rather than of the verb itself) are of particular interest in light of Ndayiragije's (1999) analysis of Rundi, in which the presence or absence of disjoint morphology depends on whether the specifier of a focus projection below the inflectional domain is empty or filled with a focused phrase. While no such claim has been made in the literature for any of the Nguni languages, Sabel and Zeller (2006) adopt Ndayiragije's low focus projection in their analysis of Zulu *wh*-questions. Given that Zulu in situ *wh*-questions require the conjoint verb form, just as Rundi does, it is important to explore whether the Zulu alternation can be made dependent on the focal property of an element following the verb, which could be analysed structurally in terms of a low focus position.

I will argue that the alternation encodes only constituency (whether the verb is final within a particular constituent) along the line of reasoning put forth by Van der Spuy (1993). Specifically, the claim is that a conjoint form is non-final within a particular syntactic constituent, which I will assume is AgrSP, while the disjoint form is final within that constituent:

(5) a. $[\ V_{conjoint}\ X\ ]_{AgrSP}\ (Y)$
b. $[\ V_{disjoint}\ ]_{AgrSP}\ (X)\ (Y)$

The relation between the alternation and focus will then be examined. Two alternative analyses employing focus will be considered and found inadequate, one in which the alternation encodes the focal properties of an element following the verb, and another in which it encodes the focal properties of the

verb itself. Cases will then be discussed that are problematic for these two conceptions of a direct correlation with focus. These cases will be taken to greatly weaken the argument for an analysis in which focus is encoded directly in the alternation. I will then suggest that the varying focal interpretations are the by-product of surface constituencies rather than of focus or antifocus features associated with the verbal morphology. It will also be argued that the distribution of the relative clitic *-yo*, which in some ways mirrors the alternation, also supports an analysis based on constituency rather than focus.

2 Establishing Constituency

Van der Spuy (1993) identified several different types of evidence showing a correlation between the distribution of the conjoint and disjoint variants and syntactic constituency. Buell (2005) divided this evidence into two classes of syntactic arguments (agreement and insertion) and one class of phonological evidence (phonological phrasing) and provided additional evidence of the two latter types. Let us look briefly at each of these three classes of evidence.

We will first consider agreement evidence (Van der Spuy 1993). We will assume that in Zulu, all verbal agreement comes about by a specifier/head relationship, meaning that for a subject or verb to contain a morpheme agreeing with a subject or other argument, that argument must have raised to the specifier of the agreeing head.[3] Now we note that both a conjoint and disjoint verb must agree with their subject if the subject precedes the verb, as in (6), but when the subject follows the verb, the facts are quite different. In that case, the verb cannot agree with the subject if the verb is in its conjoint form, and instead it takes expletive (class 17) agreement, as in (7). And conversely, if the verb is in its disjoint form, the verb must agree with its following subject, as in (8):

(6) a. A- bafana ba- ya- cul- a.] (disjoint)
DET- 2.boys 2.SBJ- *ya*- sing- FV
"The boys are singing."

b. A- bafana ba- cul- a i- ngoma.] (conjoint)
DET- 2.boys 2.SBJ- sing- FV DET- 9.song
"The boys are singing a song."

[3] In a framework assuming an Agree relationship, this assumption can be restated by saying that all agreeing heads in the verbal complex have a strong EPP feature, forcing the agreeing argument to raise to the head.

Van der Spuy (1993) argues that arguments appearing outside the constituent relevant for the conjoint/disjoint alternation are based-generated in these "dislocated" positions.

(7) a. Ku- cul- a a- bafana.] (conjoint)
17.SBJ- sing- FV DET- 2.boys
a. "The BOYS are singing."
b. "There are boys singing."
b. *Ba- cul- a a- bafana. (conjoint)
17.SBJ- sing- FV DET- 2.boys

(8) a. Ba- ya- cul- a] a- bafana. (disjoint)
2.sbj- *ya*- sing- FV DET- 2.boys
"They're singing, the boys."
b. *Ku- ya- cul- a a- bafana.[4] (disjoint)
17.SBJ- *ya*- sing- FV DET- 2.boys

This pattern is easily explained under an analysis where the conjoint/disjoint alternation is regulated by the verb's position within a constituent, that is, under an analysis in which the conjoint form appears constituent-medially and the disjoint form appears constituent-finally. In both forms in (6), the verb agrees with the subject because the subject occupies (or has moved through) the specifier of AgrSP, triggering agreement. In (7a), the verb fails to agree with the logical subject because the latter has not moved out of its base position, say spec-*v*P, and this leaves the verb non-final in the relevant constituent. The result of this fact is that the verb must appear in its conjoint form. (7b) is ungrammatical because it presents an incoherent picture of the position of the subject. The agreement on the verb indicates that the subject must have passed through spec-AgrS on its way to a right-dislocated position, leaving the verb final in the relevant constituent, while the conjoint form of the verb indicates that the verb is medial within that constituent, meaning that the subject must still be in spec-*v*P. (8a) is grammatical because the verb agreement shows that the subject has passed through spec-AgrS, making the verb final in its constituent, which is consistent with the disjoint form in which it appears.[5] Conversely, (8b) presents another incoherent picture. The expletive agreement on the verb

[4] Doke (1997, §811) claims that such a sentence is grammatical, with contrastive focus on the subject (an interpretation unpredicted by any known analysis). My informants have not found such sentences grammatical, and Doke's grammaticality judgement is specifically refuted in Raaijmakers (1997).

[5] It is assumed that *abafana* in (8a) comes to appear in postverbal position by first moving to a topic position, with lower material subsequently moving around it. In an analysis where such a topic is not the result of movement through the subject position, the subject agreement on the verb in (8a) would be the result of moving a silent pronoun (*pro*) to spec-AgrS, and the presence of the topic becomes irrelevant to the discussion of agreement. Under either analysis, what is relevant is that the subject has raised to spec-AgrS.

indicates that the verb has not moved out of spec-*v*P to spec-AgrS, while the disjoint form in which the verb appears indicates that the verb is final in its constituent, meaning that the subject must indeed have moved out of the relevant constituent.

Arguments for the constituency analysis on the basis of object agreement evidence follow the same line of reasoning as for subject agreement just presented. Consider, for example, these two sentences:

(9) a. A- bafana [ba- ya- yi- cul- a] i- ngoma. (disjoint)
DET- 2.boys 2.SBJ- *ya*- 9.OBJ- sing- FV DET- 9.song
"The boys are singing a song."
b. * A- bafana [ba- ya- cul- a] i- ngoma. (disjoint)
DET- 2.boys 2.SBJ- *ya*- sing- FV DET- 9.song

Sentence (9a) is grammatical because the object *ingoma* has moved through the appropriate agreement projection to trigger the observed object agreement before reaching its dislocated position. Conversely, (9b) is ungrammatical because, while the lack of object agreement on the verb indicates that the object should be inside the relevant constituent, the disjoint verb form that precedes the object indicates that the object should be outside that constituent.

For phonological phrasing evidence, we will consider penultimate lengthening (Van der Spuy 1993), a process in Zulu which lengthens the vowel of the last (polymoraic) word of a certain prosodic constituent. Note how the penult of *incwadi* "book" is lengthened in (10a), while in (10b) it is the penult of *yami* "my" that is lengthened:

(10) a. [Ngi- fund- a i- ncwa:di] pha:ndle. (conjoint)
1S.SBJ- study- FV DET- 9.book outside
"I'm reading a book outside."
b. [Ngi- fund- a i- ncwadi ya:mi] pha:ndle. (conjoint)
1S.SBJ- study- FV DET- 9.book 9.my outside
"I'm reading my book outside."

Now note that the penult of a disjoint verb form can be lengthened (as in (11a)), while the penult of a conjoint form cannot (as in (11b)):

(11) a. A- bafana [ba- ya- si- hlu:ph- a] i- saluka:zi. (disjoint)
DET- 2.boys 2.SBJ- *ya*- 7.OBJ- annoy- FV DET- 7.old.woman
b. A- bafana [ba- hluph- a i- saluka:zi.] (conjoint)
DET- 2.boys 2.SBJ- annoy- FV DET- 7.old.woman
"The boys are annoying the old woman."

It can be concluded, then, that a phonological phrase cannot end in a conjoint verb form, suggesting that a conjoint form must be non-final in some constituent. For additional phonological phrasing evidence, see the brief discussion of tone shifting in Buell (2005).

And finally, for insertion evidence, we will consider question particle insertion (Buell 2005). Zulu has a question particle *na*, which can appear in various positions, as shown in (12):

(12) a. A- bafana ba- ya- dlal- a phandle na? (disjoint)
DET- 2.boys 2.SBJ- *ya*- play- FV outside Q
b. A- bafana ba- ya- dlal- a na phandle? (disjoint)
DET- 2.boys 2.SBJ- *ya*- play- FV Q outside
"Are the boys playing outside?"

Importantly, though, *na* cannot be placed immediately after a conjoint verb form:

(13) *Ba- dlal- a na phandle? (conjoint)
2.SBJ- play FV Q outside
"Are they playing outside?"

Thwala (2005) has argued convincingly that *na* (in closely related Swati) is a Force^0 head in the complementizer field. If this is so, then it appears in non-initial position only by phrases moving to its left. For example, in (12a), *na* is merged to head a ForceP projection dominating the IP *abafana bayadlala phandle*, which must subsequently be moved to a position above *na* to precede it. In (12b), the IP must be split by forming a remnant out of *abafana bayadlala* to move to the left of *na* independently of *phandle* (as in Buell (2005)). This analysis is consistent with the ungrammaticality of (13). *Na* cannot appear after a conjoint verb form because if the phrase which moves to the left of *na* ends in a verb, the verb, being constituent-final, must appear in its disjoint form. For additional insertion evidence, see Van der Spuy's (1993) discussion of vocative insertion.

3 The Focus Hypotheses

Now we will return to the focal properties associated with the conjoint/disjoint alternation, illustrated above in (4). Following the two conceptions under which the conjoint/disjoint alternation has been argued to directly encode focus in the literature, we can posit two different hypotheses, which we can call the Postverbal Term Focus Hypothesis and the Verb Focus Hypothesis:

(14) THE POSTVERBAL TERM FOCUS HYPOTHESIS
The element following a conjoint form is in focus, while the element following a disjoint form is not in focus.

(15) THE VERB FOCUS HYPOTHESIS
The verb appearing in a disjoint form is in focus, while a verb appearing in a conjoint form is not.

Note that both of these hypotheses are conceivably compatible with the constituency correlation just established. Furthermore, for either of these hypotheses to be correct would be highly desirable, because that would constitute a direct correlation between syntax and interpretation. However, we will soon see that the correlation between the conjoint/disjoint alternation and focal interpretations is imperfect, suggesting that neither of the hypotheses is correct.

3.1 The Postverbal Term Focus Hypothesis

To evaluate the Postverbal Term Focus Hypothesis, we will examine some of the contexts in which the conjoint form is used. The hypothesis at first looks promising, because when the verb is followed either by a *wh*-phrase (or *wh*-enclitic, as in (16)), or a phrase answering a *wh*-question, it is the conjoint form of the verb which is required:

(16) Q: A- bafana ba- dlal- a- phi? (conjoint)
DET- 2.boys 2.SBJ- play- FV- where
"Where are the boys playing?"
A: Ba- dlal- a phandle. (conjoint)
2.SBJ- play- FV outside
"They're playing outside."

These thus constitute two contexts in which the predictions of the Postverbal Term Focus Hypothesis are borne out, because in both contexts the element

following the conjoint verb form is clearly in semantic focus. Other contexts in which the predictions of the hypothesis are borne out include expletive constructions of the type seen above in (7a) when the context clearly suggests a subject focus reading, and when the postverbal logical subject is itself a *wh*-phrase, as in (17).[6] More on these expletive constructions will be said below.

(17) Kw- azi bani? (conjoint)
17.SBJ- know 1.who
"Who knows?"

et us now turn to the more difficult cases. The most pervasive problematic case for the Postverbal Term Focus Hypothesis is the (S)VO sentence with a neutral reading, as in (18A), where there is no focus on the object:

(18) Q: Kw- enzek- e- ni? (conjoint)
17.SBJ- happen- FV- what
"What happened?"
A: Ngi- cul- e i- ngoma. (conjoint)
1S.SBJ- sing- FV DET- 9.song
"I sang a song."

Such statements also occur in out-of-the-blue contexts. If there is any focus in the answer in (18), it is on the entire verb phrase rather than on the direct object *ingoma* "song" predicted by the hypothesis.

The next class of problematic contexts for the conjoint form involve resumptives in relative clauses. First we'll consider object relatives. In Zulu, as in many Bantu languages, no more than one object marker can appear on a verb. Additionally, an object marker is required when an object undergoes relativization. This leads to an interesting situation in ditransitive constructions as in (19a), in which we can first pronominalize the first object *uSipho* by expressing it as an object marker, as in (19b).

[6] Another context which could be argued to satisfy the predictions of the hypothesis is where a negative verb is followed by a bare (determinerless) noun, which is interpreted as negatively quantified. For example, given the negative perfect forms *angigqoke/angigqokile* "I'm not wearing (conjoint/disjoint)", the bare noun *sigqoko* "(any) hat" must be preceded by the conjoint verb form: *angigqoke sigqoko* (conjoint) "I'm not wearing any hat.", **angigqokile sigqoko* (disjoint).

(19) a. Ngi- cul- el- e u- Sipho i- ngoma. (conjoint)
1S.SBJ- sing- APPL- FV DET- Sipho DET- 9.song
"I sang Sipho a song."

b. Ngi- m- cul- el- e i- ngoma (conjoint)
1S.SBJ- 2.OBJ- sing- APPL- FV DET- 9.song
"I sang him a song."

c. Yi- ngoma engi- m- cul- el- e yona. (conjoint)
COP:DET- 9.song REL:1S.SBJ- 2.OBJ- sing- APPL- FV 9.PRO
"It's the song that I sang for him."

What happens now when we relativize the second object *ingoma* "a song"? The result is shown in (19c), where the direct object is doubled with the resumptive independent pronoun *yona*. This case is problematic for our hypothesis because the pronoun is merely resumptive and is hence not in semantic focus, even though it is preceded by a conjoint verb form. The second problematic case of this type involves locative and temporal relatives, as illustrated in (20):

(20) a. i- ndawo lapho ngi- cul- e khona (conjoint)
DET- 9.place there 1S.SBJ- sing- FV 17.PRO
"the place where I sang"

b. i- sikhathi engi- cul- e nga- so (conjoint)
DET- 7.time REL:1S.SBJ- sing- FV at- 7.PRO
"the time when I sang"

In the locative relative in (20a), the relativized argument is doubled with the independent pronoun *khona* of locative noun class 17, while in the temporal relative in (20b), the class 7 noun *isikhathi* is doubled with the bound pronoun *-so*. These pronouns are both resumptive and hence unfocused in the same way as in the object relatives, so their appearance after a conjoint verb form is unexpected under the Postverbal Term Focus Hypothesis.

Another problematic context in which the conjoint form of the verb is used involves a class of adverbs including *kahle* "well". As shown in (21), a verb preceding *kahle* must be in its conjoint form:

(21) a. Ngi- cul- a kahle. (conjoint)
1S.SBJ- sing- FV well

b. *Ngi- ya- cul- a kahle. (disjoint)
1S.SBJ- *ya-* sing- FV well
"I sing well."

Were the Postverbal Term Focus Hypothesis correct, we would not expect to be able to get contrastive focus on the verb in a clause containing *kahle*, but this is what we see in (22):

(22) A- ngi- dans- i kahle, kodwa ngi- cul- a kahle. (conjoint)
NEG- 1S.SBJ- dance- FV well but 1S.SBJ- sing- FV well
"I don't dance well, but I sing well."

The neutral focus cases, resumptives, and adverbs like *kahle* "well" constitute the most difficult cases for the Postverbal Term Focus Hypothesis. In all three cases the interpretation of the clause lacks the predicted focus on the element following the conjoint verb form, leading us to reject the hypothesis. Let us now consider the alternative hypothesis.

3.2 The Verb Focus Hypothesis

Recall that under the Verb Focus Hypothesis above in (15), it is the verb itself that is in focus when it is in its disjoint form, while the verb is not in focus in its conjoint form. There are two contexts for disjoint verb forms that provide support for this hypothesis. The first is the situation where the verb is in clause-final position, making it the only element following the subject that could possibly be focused.[7] As shown in (2) above, repeated here as (23), the clause-final position requires the disjoint form:

(23) a. A- bafana [ba- ya- cul- a.] (disjoint)
DET- 2.boys 2.SBJ- *ya*- sing- FV
b. * A- bafana [ba- cul- a.] (conjoint)
DET- 2.boys 2.SBJ- sing- FV
"The boys are singing."

The second context supporting the hypothesis is where the disjoint form is followed by an object but the verb has a focused interpretation, as in (24) (modified from (3b)):[8]

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[7] Because the disjoint form is required when the verb is clause-final, it must be assumed under the Verb Focus Hypothesis that in all verbal clauses something following the subject must be in focus.

[8] This sentence can be made grammatical with something very close to the intended interpretation by putting an object marker on the verb. However, it is generally assumed in the literature that an object with an associated object marker is definite, unlike the sentence in (24).

(24) # A- bafana [ba- ya- cul- a] i- ngoma. (disjoint)
DET- 2.boys 2.SBJ- *ya*- sing- FV DET- 9.song
"The boys ARE singing a song."

However, many speakers do not accept (24) as grammatical. Thus, while this case supports the Verb Focus Hypothesis, under that hypothesis, it remains unexplained why many speakers reject (24) and how these same speakers can get contrastive focus on the verb without recourse to the disjoint form. If the disjoint form is the morphological expression of focus on the verb, why is this morphology not obligatory in all contexts where the interpretation would seem to require it?

There are two clear cases which are problematic for the Verb Focus Hypothesis. The first of these involves resumptive pronouns in relative clauses of the type encountered above in (19c). Consider the sentences in (25):

(25) a. Yi- mali engi- m- nik- e yona. (conjoint)
COP:DET- 9.money REL:1S.SBJ- 2.OBJ- give- FV 9.PRO
b. Yi- mali engi- m- nik- ile- yo. (disjoint)
COP:DET- 9.money REL:1S.SBJ- 2.OBJ- give- FV- REL
"It's the money that I gave him."

The conjoint form in (25a) is unexpected under the Verb Focus Hypothesis, because, the pronoun *yona* being resumptive, if anything is in focus, it must be the verb. Another troubling fact for the hypothesis is that the resumptive pronoun is, in fact, not obligatory for some speakers, as shown in (25b). My informant could identify no difference in interpretation or context between the two variants, contrary to the predictions of the Verb Focus Hypothesis. If the alternation encodes a difference in focus, why should either the conjoint or disjoint form be acceptable in such a relative clause?

The other problematic case for the Verb Focus Hypothesis is that of adverbs like *kahle* "well", which was also problematic for the Postverbal Term Focus Hypothesis. It was shown above in (21) that a verb preceding the adverb *kahle* must be in its conjoint form. The problem again is that sometimes it is the verb which is in focus when *kahle* is used, as in (22), repeated here as (26):

(26) A- ngi- dans- i kahle, kodwa ngi- cul- a kahle. (conjoint)
NEG- 1S.SBJ- dance- FV well but 1S.SBJ- sing- FV well
"I don't dance well, but I sing well."

Thus again we have a situation where the focus can be varied within the clause, but the form of the verb does not vary accordingly as predicted.

Because of these problems we are led to abandon the Verb Focus Hypothesis, just as we abandoned the Postverbal Term Focus Hypothesis. We are thus left with the correlation between the conjoint/disjoint alternation and syntactic constituency established earlier, but with no direct correlation with focus.

4 A Weak Correlation Between the Conjoint/Disjoint Alternation and Focus

Having abandoned our two hypotheses relating the conjoint/disjoint alternation directly to focus and having retreated to a purely constituency-based analysis, we are left with the task of explaining the clear focal contrast first seen in (4) and explaining why in many cases use of the disjoint form was accompanied by some sort of focus on the element following the verb, as in the case of *wh*-phrases exemplified in (16Q). Let us consider again the contrast in (4), repeated here as (27):

(27) a. Ba- ya- dlal- a] phandle. (disjoint)
1.SBJ- *ya*- play- FV outside
"They're playing outside."

b. Ba- dlal- a phandle.] (conjoint)
1.SBJ- play- FV outside
"They're playing OUTSIDE."

Rather than thinking of this contrast in terms of *phandle* being in focus in (27b) and out of focus in (27a), let us instead consider the possibility that *phandle* has been topicalized in (27a) but not in (27b) (as in Creissels 1996). The fact that *phandle* cannot be in focus in (27a) then follows from the fact that it is topicalized. The position in which the topicalized element appears is outside the constituent relevant for the conjoint/disjoint alternation. Looking at the contrast in this way, we can see why *kahle* "well" cannot be preceded by a disjoint verb form: it is not the sort of adverb amenable to topicalization, as shown with its English counterpart *well* contrasted with *outside* in (28):

(28) a. I could hear that outside the children were singing.
b. *I could hear that well the children were singing.

We saw above that while *kahle* "well" must be preceded by a conjoint verb form, it does not always receive narrow focus. This fact can be explained by saying that an element in the relevant constituent (assumed above to be AgrSP) has a range of possible interpretations, including a focused one. Thus not every element following the verb in this constituent will necessarily be in semantic focus. This explanation allows the two observed interpretations of a simple SVO sentence with a conjoint verb form as in (29):

(29) A- bafana [ba- cul- a i- ngoma.] (conjoint)
DET- 2.boys 2.SBJ- sing- FV DET- 9.song
a. "The boys are singing a song." (neutral focus)
b. "The boys are singing A SONG."

Ingoma, being inside the relevant constituent, may be focused, but it does not need to be.

The analysis also allows us to account for elements preceded by a conjoint verb form which are either inherently focused or inherently out of focus. A *wh*-phrase, for example, is inherently focused, and its occurrence within the relevant constituent allows it to receive the focused interpretation. Conversely, a resumptive pronoun is inherently not in focus, and this interpretation is also allowed within the relevant constituent.

Is there then no correlation between the conjoint/disjoint alternation and focus? There is, as should be expected, given the observed contrast in (27), but it is weaker than the correlation formulated in our two hypotheses, because it is an indirect one. The hypotheses said that focus was directly encoded in the alternation. In an analysis in which the alternation is dependent entirely on constituency, the correlation between the alternation and focus is mediated by constituency: both the alternation and the focal interpretations are dependent on constituency, but in different ways. The alternation depends blindly on whether anything follows the verb within the relevant constituent. The focal interpretations depend on the range of interpretations (possibly associated with specific syntactic positions) inside and outside the relevant constituent. The strongest correlation it seems possible to make, then, is that no item following a disjoint verb form can be in focus (like the adverb in (27a)).

Let us return briefly to the expletive construction in (7a), repeated here as (30):

(30) Ku- cul- a a- bafana. (conjoint)
17.SBJ- sing- FV DET- 2.boys
a. "The BOYS are singing."
b. "There are boys singing."

In some Bantu languages such inversions have been claimed to entail contrastive focus on the subject (Kimenyi 1978, Ndayiragije 1999), but in Zulu this is not the case, although contrastive focus on the subject is sometimes available (Du Plessis and Visser 1992, p. 131, and here below). In a primary school Zulu reader (Kheswa 1996), 125 instances of such expletive inversions were identified and only one was found to arguably exhibit contrastive focus on the subject. Among the other common uses of such inversions in Zulu are locative relatives, as in (31), and quotative inversions, as in (32):

(31) e- bhikawozi yi- lapho ku- bhak- w- a khona i- zinkwa
LOC:DET- 5.bakery COP- there 17.SBJ- bake- PSV- FV 17.PRO DET- 10.breads
"...a bakery is where bread is baked." (Kheswa 1996)

(32) "U- zo- phek- a- ni?" Ku- buz- a u- Sipho. (conjoint)
2S.SBJ- FUT- cook- F V- what 17.SBJ- ask- FV DET- 1.Sipho
"What will you cook?", asks Sipho.

In line with another frequent claim in the literature that such constructions entail presentational focus (such as in Demuth and Mmusi (1997)), it could be argued that *izinkwa* "bread" is in presentational focus in (31), but its occurrence in this relative can be explained just as easily by the fact that "bread" is new information and not a topic. It is also doubtful that the subject in the quotative inversion construction (32) is focused, given the properties of quotative inversion we observe in other languages. For example, in English, the subject of a quotative inversion does not receive the same type of intonation as a focused postverbal object or adverb, and in French, the subject of a quotative inversion can be a subject clitic, and these clitics are known to be inherently unfocused:

(33) "Salut!", dît- il.
hello said- he
"Hello!", he said.

An analysis more consistent with these cross-linguistic facts, then, is that the subject of a Zulu quotative inversion is simply not topicalized.

No claim is being made to the effect that Zulu quotative inversion is identical to English and French quotative inversion in the structural sense. The English and French constructions show agreement between the subject and the verb, and the subject is thus assumed to have raised to the inflectional domain before inversion takes place, while in the Zulu construction the verb manifests class 17 expletive agreement with the subject remaining below the inflectional domain. However, the inversions seem to be similar in usage, and the Zulu inversions, just like their English and French counterparts, are not restricted to contexts which require either contrastive or presentational focus.

What does the constituency analysis say about the existence of a low focus projection? Nothing except that such a projection or its head cannot be what regulates the conjoint disjoint alternation. Given that certain types of focused elements, such as *wh*-phrases, generally need to immediately follow the verb in Zulu, such a focus projection within the constituent relevant for the conjoint/disjoint alternation may in the end be required. However, the availability of resumptive pronouns (for example) within this constituent shows that it is not the only position in which a postverbal element can appear.

It appears, though, that a single low focus projection would not be able to accommodate both the contrastive focus and presentational focus interpretations discussed in the literature. Let us assume that in the subject inversion construction in (30), the existential interpretation indeed involves something such as a formal feature called "presentational focus", and (disregarding quotative inversion) that such a subject inversion construction requires the subject to be in either contrastive or presentational focus (reflected in the two translations). We will now see that the contrastive focus interpretation and the presentational focus position utilise different positions relative to the adverb *khona* "there" and to certain types of prepositional phrases. First, consider the question in (34), which has only a contrastive subject interpretation, and note that the question is grammatical only if the subject precedes *khona*:

(34) a. Yinindaba[9] ku- hlal- a u- Sipho khona?
why 17.SBJ- stay- FV DET- 1.Sipho there
"Why does SIPHO live there?"

b. *Yinindaba ku- hlal- a khona u- Sipho?
why 17.SBJ- stay- FV there DET- 1.Sipho

Now consider again the locative relative above in (31), which must by hypothesis involve presentational focus (since it does not involve subject focus

[9] *Yinindaba* is a morphologically complex word literally meaning something like "it's what story?"

in the context from which it was taken), and note that the subject now follows *khona*.[10] That this post-adverbial position is used for the subject in clauses that more clearly involve presentational focus of the subject is demonstrated by (35), in which the subject follows the prepositional phrase *kuwe* "from you":

(35) ... ku- ya- ku- vel- a ku- we u- mbusi
17.SBJ-FUT-[11] INF- come.from FV from- 2S.PRO DET- 1.ruler
"...out of thee shall come a Governor" (Matthew 2:6, Bible Society of South Africa (1959))

Assuming that the position of *khona* and prepositional phrases like *kuwe* is constant, there now appear to be two positions in which the subject in an expletive-type inversion can occur: a high position for contrastive focus and a low position for presentational focus. The availability of different positions for the two types of subject focus poses an additional problem for an analysis attempting to encode focus directly into the conjoint/disjoint alternation. Focus is no longer a single feature which can be related to the verbal morphology via a single focus projection.

5 Relative *-yo*

The relative suffix *-yo* provides additional evidence against a focus-based analysis. The Nguni languages all have an invariable suffix which sometimes appears on certain tenses of the verb in "Strategy 1" (Poulos 1982) relative clauses (a type in which the verb has a relative prefix preceding the subject marker). The distribution of this morpheme, which in Zulu and Xhosa is *-yo*, is complicated (Doke 1997, §773), but it mirrors the conjoint/disjoint alternation in several ways. First, in a present tense (Strategy 1) relative clause, *-yo* cannot be omitted if nothing follows the verb, which is a configuration in which the long form is required in matrix clauses:[12]

[10] This is the preferred context for the subject in such an inverted relative, but the subject may also precede *khona*.

[11] This *ya* is that of the remote future and is distinct from the *ya* of the disjoint present tense. There is no segmental conjoint/disjoint distinction in this tense.

[12] Strategy 1 relatives are based on participial verb forms, which do not exhibit a conjoint/disjoint alternation in the present tense.

(36) a. a- bafana aba- cul- a- yo
DET- 2.boys REL:2.SBJ- sing- FV- REL
"the boys who are singing"
b. *a- bafana aba- cul- a
DET- 2.boys REL:2.SBJ- sing- FV

Second, *-yo* can never be affixed to a conjoint verb form, as can be illustrated using the recent past tense, which retains the conjoint/disjoint alternation in participial forms, and hence in relative clauses:

(37) a. i- ncwadi engi- yi- bon- ile- (yo) (disjoint)
DET- 9.book REL:1S.SBJ- 9.OBJ- see- FV- REL
"the book that I saw"
b. i- ncwadi engi- yi- bon- e kahle (conjoint)
DET- 9.book REL:1S.SBJ- 9.OBJ- see- FV well
"the book that I saw well"
c. *i- ncwadi engi- yi- bon- e- yo kahle (conjoint)
DET- 9.book REL:1S.SBJ- 9.OBJ- see- FV- REL well

In this case, then, the appearance of *-yo* appears to correspond directly to the distribution of disjoint verb forms. And further evidence that the presence of *-yo* mirrors disjoint verb forms comes from verbs like *cabanga* "think" that take clausal complements. Consider first that in the relativized recent past clause in (38a), only the conjoint form of *cabanga* is grammatical.

(38) a. Yi- ni o- cabang- e/*ile ukuthi a- bantwana
COP- what REL:2S.SBJ- think- FV that DET 2.children
ba- y- enz- ile?
2.SBJ- 9.OBJ- do- FV
"What did you think the children did?"
(lit. "What is it that you thought the children did?")
b. Yi- ni o- cabang- a- (*yo) ukuthi a- bantwana
COP- what REL:2S.SBJ- think- FV REL that DET 2.children
ba- y- enz- ile?
2.SBJ- 9.OBJ- do- FV
"What do you think the children did?"
(lit. "What is it that you think the children did?")

Now consider the corresponding present tense clause in (38b), and we see that the presence of *-yo* results in ungrammaticality in the same way that the disjoint verb form did in the recent past.

Given the ways in which the presence of *-yo* mirrors disjoint verb forms, while its absence mirrors conjoint verb forms, and assuming a focus-based analysis for the conjoint/disjoint alternation, it would seem plausible to give a focus-based account for *-yo*, as well, similar to the Postverbal Term Focus Hypothesis or Verb Focus Hypothesis we considered for the conjoint/disjoint alternation. However, note the following from Xhosa (Zeller (2004), glosses adapted):[13]

(39) a. i- ndoda a- makhwenkwe a- yi- bon- ile- yo (disjoint)
DET- 9.man DET- 6.boys REL:6.SBJ- 9.OBJ- see- FV- REL

b. i- ndoda a- yi- bon- ile ama- khwenkwe (disjoint)
DET- 9.man REL:6.SBJ- 9.OBJ- see- FV DET- 6.boys
"the man who the boys saw"

If we believe that the distribution of both *-yo* and the conjoint/disjoint forms is driven by focus, we are faced with a paradox in (39). Assuming that the conjoint verb form and the absence of *-yo* are both indicators of postverbal term focus, *amakhwenkwe* "boys" in (39b) is both *out* of focus by virtue of being preceded by a disjoint verb form and *in* focus by virtue of the absence of *-yo*. Conversely, assuming that the disjoint verb form and the presence of *-yo* are both indicators of verb focus, the verb is both *in* focus by virtue of being in the disjoint form and *out* of focus by virtue of lacking the suffix *-yo*. The ∅/*-yo* alternation and the conjoint/disjoint alternation are similar but independent.

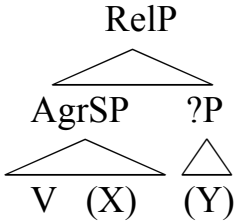
The way out of this paradox is to see that both alternations are in fact regulated by constituency rather than focus, but the constituency to which *-yo* is sensitive is higher than that to which the conjoint/disjoint alternation is sensitive (as should be expected because it is dependent on the clause being relative). The presence of *-yo* encodes constituent-finality in the same way as does the disjoint verb form. Let us assume that the constituent that the conjoint/disjoint alternation is sensitive to (that is, the constituent within which the verb is evaluated as either final or non-final) is AgrSP. Let us also assume that the

[13] Zeller's data does not include an example indicating that the inclusion of *-yo* on (39b) would be ungrammatical, but I take its omission in this example as significant.

The relation between the conjoint/disjoint alternation and *-yo* is difficult to assess directly in Zulu. In Zulu (as in Xhosa and Swati), there is no present tense conjoint/disjoint alternation in this type of relative clause, and some Zulu speakers (including my own informant) strongly disprefer use of *-yo* in the perfect.

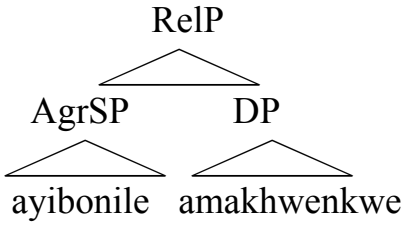
constituent that *-yo* is sensitive to is a complementizer domain projection named RelP. This is pictured in (40):

(40)



This structure explains the similar but imperfect correlation between disjoint forms and *-yo*, that is, why *-yo* does not always appear when the verb is in its disjoint form. A verb non-final in AgrSP, and thus conjoint, will necessarily be non-final in RelP, and thus will appear without *-yo*. But a verb that is final in AgrSP, and thus disjoint in form, will usually, but not always, be final in RelP. *-Yo* will be able to appear only in those cases where the verb is final within RelP. In (39b), the subject *amakhwenkwe* lies outside of AgrSP (as indicated by the disjoint verb form and the subject agreement on the verb) but inside RelP, as in (41):

(41)



The verb is in its disjoint form because it is final in AgrSP, but the verb lacks the relative *-yo* suffix because it is not final in RelP.

6 Conclusion

We have seen that three different classes of evidence show a correlation between the conjoint/disjoint verb alternation and syntactic constituency. Two attempts were made to go beyond this correlation and establish a direct correspondence between the alternation and focus, first by supposing that the element following a conjoint verb form receives focus, and second by supposing that a disjoint verb itself receives focus. These attempts failed because in some contexts the conjoint form of the verb is required even when the observed interpretation should require the disjoint form. A correlation between the conjoint/disjoint alternation and focus remained, but it was deemed weak and indirect. The distribution of the relative suffix *-yo*, whose distribution mirrors

the conjoint/disjoint alternation only imperfectly, also suggested that the alternation was not directly related to focus.

Although it was not possible to maintain that the conjoint/disjoint alternation directly encoded focus, the constituency correlation was found to be adequate if we assume that the sometimes focused, sometimes not focused interpretation of an element following a conjoint verb form follows from the range of interpretations available to non-topicalized elements. Doing so allowed us to account for the interpretation of elements which can be either focused or not focused, such as postverbal objects; of inherently focused elements, such as *wh*-phrases; and of inherently unfocused elements, such as resumptive pronouns. The analysis also allowed us to account for subjects in expletive inversion constructions whose focal nature is dubious or unclear.

The analysis raises questions for further research. The conclusion that the conjoint/disjoint alternation in Zulu can be accounted for without direct reference to focus does not rule out the possibility that a low focus position is available, as discussed. Exploration of this question will require examining word orders and how they correlate to interpretation, rather than just assuming that, say, a subject in an expletive inversion construction is necessarily in focus, and to looking for syntactic differences between different types of supposed focus. The analysis also suggests revisiting other languages, such as Rundi, in which the correlation between the conjoint/disjoint alternation seems more clear-cut, to determine whether their alternations, too, could be accounted for without direct reference to focus.

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Syntactic and phonological phrasing in Bemba Relatives

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Tone as a distinctive feature used to differentiate not only words but also clause types, is a characteristic feature of Bantu languages. In this paper we show that Bemba relatives can be marked with a low tone in place of a segmental relative marker. This low tone strategy of relativization, which imposes a restrictive reading of relatives, manifests a specific phonological phrasing that can be differentiated from that of non-restrictives. The paper shows that the resultant phonological phrasing favours a head-raising analysis of relativization. In this sense, phonology can be shown to inform syntactic analyses.

1 Introduction

Relative clauses in Bantu have been a part of continued research dating back to Meeussen (1971). Various typologies and analyses that aim to capture the dependencies expressed in this clause type have been proposed (Givón 1972, Nsuka 1982, Walusimbi 1996). Despite the fact that there is overwhelming evidence of relative clauses formed by tone in various Bantu languages (Luganda, Kinyarwanda, Nsenga, Chichewa, Umbundu, Luba) hardly any analyses try to associate this fact to the syntactic analyses and generalisations proposed, but see Kamwangamalu (1988) for Luba.

This paper investigates (syntactic) analyses of relative clauses in Bantu, with particular reference to Bemba, that take recourse to phonological phrasing. We begin by outlining the strategies for relative clause formation in Bemba in section 2 for both subject and object relatives. In section 3 we look at the limitations of the tonal marking strategy as opposed to relatives marked with segmental relative markers. In section 4 and 5, we discuss the phonological phrasing in all relative types and its implications for the syntactic analyses of relative clauses. We finally, in section 6, offer some concluding remarks.

2 Strategies for relative clause formation

The formation of relative clauses in Bemba typically uses overt (i.e., segmental) relative markers.[1] Subject relatives differ from object relatives in terms of the shape of the relative marker, the optionality of the relative marker, and the availability of the tonal marking strategy.

2.1 Segmental relative markers

In object relatives, the relative marker takes the shape of two of the four series of demonstratives (the hearer-proximate and the distal), but differs from these in terms of tone. While the two series of demonstratives concerned are both Low-High in tone, the derived relative markers are High-Low. Their independent status is illustrated by the fact that the demonstrative and the relative marker (of the same class) can co-occur, as shown in (1).[2,3]

(1) abántú abó ábo n-a-mwéene maíló...
2people 2DEM 2REL 1SM-TNS-see.PERF yesterday
'those people who/that I saw yesterday...'

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[1] Our data sources are both from informants, for which we thank Fred Kula and Honoria Mutale, and from written sources. Our principal written sources are Sambeek (1955), Sharman (1956), Sharman and Meeusen (1955), Givón (1972) and Oger (1979). Bemba (M42) is spoken in the Northern and Copperbelt provinces of Zambia.

[2] The following abbreviations are used in the glosses (numbers refer to agreement classes):

DEM	demonstrative	PERF	perfective
REL	relative marker	NEG	negative
TNS	tense	SG	singular
SM	subject marker	PPF	pre-prefix
OM	object marker	PFX	noun class prefix
STAT	stative	LOC	locative
COP	copular		

[3] In the remainder of this paper we represent high tone with an acute accent and low tone with no marking. We are committed to saying there is tonal overwriting in Bemba evidenced by various tonal processes. For example, the low-toned verb stem *peela* 'give' has differing tones depending on whether it occurs before a high or a low-toned negative marker. Thus it remains low for the 1st person in the negative future: *n-shà-kù-pèèlè* (SM1SG-NEG.TNS-OM2SG-give.PERF) 'I won't give you'; but is high in the negative past: *n-shá-kú-péélè* (SM1SG-NEG.TNS-OM2SG-give.PERF) 'I didn't give you'. Similarly the floating low tone of the negative marker in the negative future overwrites a following prefixal high tone so that *ta`-bá-léké* 'they won't stop' (NEG-2SM-TNS-stop.PERF) becomes *tà-bà-léké*. For ease of exposition, only inserted (or non-lexical) low tone will be marked with a falling accent while lexical low tone will remain unmarked.

As seen in (1), segmental relative markers in object relatives, function as independent prosodic words on a par with demonstratives, and like the demonstrative pronouns, they agree with the head noun in class.

The segmental relative marker in subject relatives lacks this property of acting as an independent prosodic word. In fact, it is the pre-prefix in nominal agreement that subsumes the role of relative marker in subject relatives. As opposed to various Bantu languages that have lost the use of the pre-prefix, Bemba still utilizes it in the noun class system. Interestingly, the form [pre-prefix + noun class prefix] is identical to that of the proximate series of demonstratives (High-Low) (with a High-High tone pattern for the relative use). Consider the illustration of the pre-prefix as a noun class marker (2a), a relative marker (2b) and part of a demonstrative (2c).

(2) a. ú-lu-kásu
11PPF-11PFX-axe
'An axe'

b. ú-lu-kásu ú-lú-shítílwe léélo…
11PPF-11PFX-axe 11PPF=11REL-11SM-buy.PERF today
'The axe that has been bought today…'

c. ú-lu-kásu úlu
11PPF-11PFX-axe 11DEM
'This axe'

For the remainder of this article the distinction between independent and more clitic-like segmental relative markers, that are also referred to as relative concords in Bantu, can clearly be seen in the morphology but we label all relative markers simply as REL. For object relatives, the relative marker is in most cases optional (see below for exceptions). For subject relatives, the segmental relative marker can be replaced by changing the tone of the subject marker, which we argue to be a separate strategy, the tonal strategy.

2.2 The tonal strategy

Subject relatives have the option of either being marked by a pre-prefix segmental relative marker as illustrated in section 2.1, or by a tonal strategy that places a low tone on the subject marker. We propose to treat this low tone as a tonal morpheme that is functionally equivalent to its segmental counterpart. Consider the illustration of the tonal strategy in the paradigm in (3). (3a) is a

simple sentence, showing that the subject marking/agreement on the verb is *bá*. (3b) illustrates subject relativization with the pre-prefix *á-* as relative marker, while (3c) shows relativization with the low tone morpheme on the subject marker *bà-*.

(3) a. ba-kafúndisha bá-léé-lolesha panse
2PFX-teacher 2SM-TNS-look 16outside
'The teacher is looking outside'

b. ba-kafúndisha á-bá-léé-lolesha pansé ni ba-Mutale
2PFX-teacher 2REL-2SM-TNS-look 16outside COP 2PFX-Mutale
'The teacher who is looking outside is Mr Mutale'

c. ba-kafúndishá bà-léé-lolesha pansé ni ba-Mutale
2PFX-teacher 2REL.2SM-TNS-look 16outside COP 2PFX-Mutale
'The teacher who is looking outside is Mr Mutale'

The fact that the subject agreement in (3a) consists of only the noun class prefix is not due to the fact that the noun also bears no pre-prefix.[4] We get the same result with a noun that has a pre-prefix as in (4).

(4) ú-lu-kásu lú-léé-kóntoka
11PPF-11 PFX-axe 11SM-TNS-break.STAT
'The axe is going to break'

Note that in (3c), the subject agreement marker has a low tone, in contrast with the high tone in (3a), and the relative marker is missing (cf. (2b)). Merely deleting the pre-prefix relative marker does not yield (3c) since the subject agreement marker carries a high tone (as in 3a). Notice further that when the relative clause is marked with a low tone (as in 3c), the final vowel of the head noun surfaces with a high tone (compare 3c to 3a,b). To show that this high tone is not responsible for relativization, consider the sentence in (5) where the head noun has a final high tone but the subject marker in the relative clause remains high.

(5)* ba-kafúndishá bá-léé-lolesha panse ni ba-Mutale
2PFX-teacher 2REL.2SM-TNS-look 16outside COP 2SM-Mutale
Int: 'The teacher who is looking outside is Mr Mutale'

[4] As pointed out to us by Thilo Schadeberg, proper names, honorific terms (such as *teacher)* and kinship terms if they take noun class prefixes at all, never use the pre-prefix, thus **a-ba-kafundisha* is ungrammatical.

The ungrammaticality of (5) confirms that the tonal strategy involves the insertion of a low tone on the subject agreement marker. We will return, in section 4, to the additional final high tone on the head noun in (3c).

As an independent strategy the tonal strategy can be used to distinguish a matrix independent sentence from a subject relative clause as in (6).

(6) a. umúkásháána á-ácí-móna banamayo léélo
1girl 1SM-TNS-see 2woman today
'The girl saw the women today'

b. umúkásháánà à-ací-móna banamayo lééló…
1girl REL.1SM-TNS-see 2woman today
'the girl who saw the women today…'

Here again, as in (3c), we see the high tone of the subject marker being overridden by a low tone, resulting in a relative clause in (6b).

2.3 Optionality and tonal strategy

We have described above the tonal strategy as a strategy involving the insertion of a low tone relative marker when there is no segmental marker marking the relative clause. The discussion above solely concerns subject relative clauses. In object relatives, the picture is a bit different in two respects. First, the segmental relative marker is always optional in object relatives. And second, the use of the tonal strategy is restricted to cases involving disambiguation. Let us consider these in turn. The examples in (7) show the optional nature of the segmental marker in object relatives. (7a) is the non-relative sentence from which the relatives (7b-c) are derived.

(7) a. Chisanga á-mwéene abántu maílo
Chisanga 1SM-see.PERF 2person yesterday
'Chisanga saw people yesterday'

b. abántu ábo Chisanga á-mwéene maíló, na-bá-ya
2person 2REL Chisanga 1SM-see.PERF yesterday TNS-2SM-go
'The people who Chisanga saw yesterday have gone'

c. abántú Chisanga á-mwéene maíló, na-bá-ya
2person Chisanga 1SM-see.PERF yesterday TNS-2SM-go
'The people who Chisanga saw yesterday have gone'

(7c) differs from (7b) only in that the relative marker *ábo* is omitted, and the clause headed by *Chisanga* is still a relative clause modifying the head noun *abántu* 'people'.

Interestingly, as opposed to subject relatives, the tonal strategy cannot be used in these cases (7c), i.e., when the segmental relative marker is absent. If the subject agreement marker has low tone, the sentence becomes ungrammatical (as shown in (8a), compared with (7c)). The tonal strategy is still unacceptable even in subject-inverted object relatives as shown by the contrast between (8b) and (8c).[5]

(8) a. *abántú Chisanga à-mwéénè maíló, na-bá-ya
2people Chisanga 1SM-see.PERF yesterday TNS-2SM-go
Int: 'The people who Chisanga saw yesterday have gone'

b. abántú á-mwéénè Chisanga maíló, na-bá-ya (subj-inv)
2people 1SM-see.PERF Chisanga yesterday TNS-2SM-go
'The people who Chisanga saw yesterday have gone'

c. *abántú à-mwéénè Chisanga maíló, na-bá-ya (subj-inv+low T)
2people 1SM-see.PERF Chisanga yesterday TNS-2SM-go
Int: 'The people who Chisanga saw yesterday have gone'

However, when the two arguments of the verb come from the same noun/agreement class as in (9) (*umúluméndo* and *Chisanga* are both in class 1), the tonal strategy can be used to mark relativization. Consider first the base sentence in (9a). In (9a), the relative marker *úo* is present, marking the clause *á-mwéène Chisanga maílo* as a subordinate clause, modifying the head noun. Note that the relative clause involves subject-verb inversion.

(9) a. umúluméndo úo á-mwéène Chisanga maílo
1boy 1REL 1SM-see.PERF Chisanga yesterday
'the boy who Chisanga saw yesterday'

b. umúluméndo á-mwéène Chisanga maílo
1boy 1SM-see.PERF Chisanga yesterday
'The boy saw Chisanga yesterday'
*'the boy (who) Chisanga saw yesterday'

c. umúluméndó à-mwéène Chisanga maílo
1boy 1REL.1SM-see.PERF Chisanga yesterday
'the boy who Chisanga saw yesterday'

Recall that in object relatives, the segmental relative marker is optional. However, in the case of (9a), if the relative marker is omitted, the sentence can no longer be interpreted as involving a relative clause. Instead, it is interpreted

[5] The typical SV(O) order becomes V(O)S in the inverted case. See Demuth and Harford (1999), Harford and Demuth (1999) for discussion of subject inverted object relatives.

as a simple sentence, as indicated in (9b). To mark such subject-inverted relatives without a relative marker is still possible: we resort to the tonal marking strategy, as in (9c). The tone on the subject agreement marker is no longer high, as in (9a); rather it is low, just as we have seen in subject relatives without a segmental relative marker.[6]

Without subject-verb inversion in the relative clause, the tonal strategy remains unavailable even when the two arguments of the verb are from the same noun/agreement class, as (10) shows.

(10) a. umúluméndó úo Chisanga á-mwééne maíló…
'the boy who Chisanga saw yesterday…'

b. umúluméndó Chisanga á-mwééne maíló…
'the boy (who) Chisanga saw yesterday…'
*'The boy saw Chisanga yesterday'

c. *umúluméndó Chisanga à-mwééne maíló…
Int: 'the boy who Chisanga saw yesterday…'

Thus, we can conclude that in object relatives the tonal strategy is used only as a last resort when subject marking is unable to distinguish the subject from the object because they belong to the same class and moreover when word order can also not be relied upon to make the distinction. The tonal strategy is therefore only used in subject-inverted object relatives whose arguments belong to the same agreement class.

3 Restrictions on the tonal marking strategy

In addition to only being able to mark object relatives as a last resort used for purposes of disambiguation, there are further restrictions on the tonal marking strategy for relatives. The tonal strategy cannot be used to mark non-restrictive relatives or headless relatives. Let us look at this in more detail below.

3.1 Restrictive versus non-restrictive relatives

It turns out that whenever the tonal strategy is used, it necessarily leads to a restrictive reading of the relative clause. In contrast to this, the segmental relative marker strategy can have both non-restrictive and restrictive readings. Compare in this respect (11a) and (11b).

[6] Sentence (9c) is ambiguous between a subject and object relative reading that relies on context for disambiguation. The subject relative interpretation of the sentence would be: 'the boy who saw Chisanga yesterday'.

(11) a. abáBembá bà-shipa beekala muZambia (tonal strategy)
2Bembas 2REL.2SM-brave 2SM.live 18LOCZambia
'Brave Bembas live in Zambia (while those who aren't brave live elsewhere)' (restrictive only)

b. abáBemba á-bá-shipa beekala muZambia (seg REL)
2Bembas 2REL-2SM-brave 2SM.live 18LOCZambia
'Brave Bembas live in Zambia' (restrictive and non-restrictive)

In (11a), the relative clause *bà-shipa* 'that are brave', which is marked by the tonal morpheme (i.e., without a segmental relative marker), must be interpreted as a restrictive relative clause, restricting the reference of the head noun *abáBembá*. In contrast, (11b) with the relative clause *á-bá-shipa* 'that are brave' marked by the segmental relative marker, can be interpreted also as a non-restrictive (in this case, equating Bembas with brave people).

In other words, the segmental relative markers in subject relatives can be used for both restrictive and non-restrictive relatives, but only the restrictive reading is possible when the tonal strategy is used.

When the head noun is a proper name, which in principle cannot be modified by a restrictive relative clause, the tonal marking strategy cannot be used (12b).

(12) a. Chisanga úo Mulenga á-ácí-ípusha á-léé-isa
1Chisanga 1REL 1Mulenga 1SM-TNS-ask 1SM-TNS-come
'Chisanga, who Mulenga invited, is coming' (non-restrictive)

b. *Chisanga à-ácí-ípusha Mulenga á-léé-isa *(tonal strategy) (subj-inv)
1Chisanga 1REL.1SM-TNS-invite 1Mulenga 1SM-TNS-come
Int: 'Chisanga, who Mulenga invited, is coming'

The tonal marking strategy therefore always induces a restrictive reading of the relative, or put differently, the tonal marking strategy cannot be used to mark non-restrictive relatives.

3.2 Headless relatives

Headless relatives in Bemba have the typical definite interpretation of a headless relative (see Grosu and Landman 1998). However, they do not have the free relative interpretation associated with the English counterpart *whoever*.[7]

[7] To express the free relative interpretation, a quantificational element such as *bonse* 'all' has to be used, as shown below:

Headless relatives are formed with segmental relative markers (a pre-prefix in the case of subject relatives and a demonstrative based relative marker in object relatives), as illustrated in (13).

(13) a. á-bá-shipa béékala muZambia
2REL-2SM-brave 2SM.live 18LOCZambia
'those who are brave live in Zambia'

b. úo á-mwéene Chisanga maíló, na-á-fika
1REL 1SM-see.PERF Chisanga yesterday TNS-1SM-arrive
'the one who Chisanga saw yesterday has arrived'

The tonal strategy cannot be used to mark headless relatives in either subject or object relatives as the ungrammaticality of (14a,b) and (15a,b) shows, respectively.

(14) a. *bà-shipa béékala muZambia
2REL.2SM-brave 2SM.live 18Zambia
'Those who are brave live in Zambia'

b. *à-ishílé maíló, ni Mutale
1REL.1SMcome.PERF yesterday COP Mutale
'The one who came yesterday is Mutale'

(15) a. *à-mwéene Chisanga maíló, na-á-fika
1SM-see.PERF Chisanga yesterday TNS-1SM-arrive
'Who Chisanga saw yesterday has arrived'

b. *Chisanga à-mwéene maíló na-á-fika
Int: 'Who Chisanga saw yesterday has arrived'

As seen for subject relatives in (14), it is impossible to omit the pre-prefixing relative marker and use the tonal marking strategy for headless relatives (cf. 13a). The same holds for object relatives, which we have shown to be able to employ the tonal strategy only for subject-inverted object relatives whose arguments belong to the same agreement class. In the inverted (15a), the tonal marking strategy remains unavailable.

(i) na-ali-temwa bonse ábo a-béésa
1SG.SM-TNS-love all 2DEM 2REL-2SM.come
Lit: 'I like all those who come'/ 'I like everyone who comes'
'I like whoever comes'

To summarise thus far, subject relatives can utilize both the segmental relative marker strategy (noun-class pre-prefix) and the tonal strategy (low tone morpheme). Object relatives, on the other hand, primarily use a demonstrative based segmental relative marker that is in principle optional. The tonal strategy is only used as a last resort for disambiguation in subject-inverted object relatives when both the subject and object belong to the same noun class.

Since the low tone morpheme and the segmental relative marker both mark relativization they do not co-occur. The low tone morpheme is realised on the subject agreement marker, which is part of the verbal complex. Further, in both subject and object relatives the tonal marking strategy can only yield a restrictive relative clause interpretation, and it cannot be used at all in non-restrictive relatives and headless relatives.

In the next section, we examine phonological phrasing in relatives involving different strategies. The data with phonological phrasing provide us with further insight into the inner workings of the tonal strategy.

4 Phonological Phrasing

Phonological phrasing in Bemba is generally marked by low tone and/or pause at the end of a phonological phrase.[8] Like in Chichewa (see Kanerva 1990), constituents following the verb can, at least for high-toned verbs, be tonally characterised as not belonging to the same phonological phrase as the verb if the final high tone on the verb retracts. Tone retraction is indicative of a phonological phrase boundary so that when it does not take place (i.e., the verb ends in a high tone) the constituents following the verb phonologically phrase with the verb. This behaviour of disallowing high tone from being realized on a phrase final vowel, seems to be a diagnostic of phonological phrasing in Bemba as well. While the full details of Bemba phrasing and the range of strategies employed remain to be fully specified (Kula, in prep.), the two characteristics above suffice for the present exposition. Consider (16), which illustrates that the same sequence of words may have different phrasings in Bemba. (Phonological phrases (PPhs) will be indicated by parenthesis).

[8] We follow in broad terms the basic assumptions of phrasal phonology as presented in for example Selkirk (1984), Nespor and Vogel (1986), that the largest constituent is the *Utterance* which itself consists of smaller constituents according to a prosodic hierarchy that ends with the prosodic word. Formation of these constituents is subject to the *Strict Layer Hypothesis* that prohibits improper bracketing, recursivity and non-exhaustiveness. We mainly focus here on phonological phrases and only briefly touch on intonational phrases.

(16) a. (n-ali-móna)$_{PPh}$ (umwáána)$_{PPh}$
1SM-TNS-see 1child
'I saw the child' (verb focus)

b. (n-alí-mónóómwáána)$_{PPh}$
'I saw the child' (object focus/VP focus)

c. (n-alí-mónóómwáána)$_{PPh}$ (mucímuti)$_{PPh}$
1SM-TNS-see.1child 18tree
'I saw a child in a tree'

d. (n-alí-móná abáána ba-léé-séka)$_{PPh}$
1SM-TNS-see 2child 2SM-TNS-laugh
'I saw children laughing'

In (16a) with a focused verb, the verb is phrased separately from the object (the disjoint verb form), and as a result does not get final high tone. (16b) phrases the verb with the object (the conjoint verb form) and high tone on the verb final vowel can be seen on the resultant long vowel (underlined in (16b)) after fusion has taken place, indicating no phonological phrase break. This phrasing results in VP or object focus. Similarly, the fact that the [verb + object] complex in (16c) does not phrase with the following phrase is indicated by the low tone on the final syllable in the phonological phrase, in contrast to (16d).

The phrasing in relative clauses reveals that while a tonally marked relative must form a phonological phrase with its head noun (17a), i.e., it is always preceded by a high tone, relatives marked with a segmental relative marker have no such restriction and can be either phrased with the head noun (17c) or not (17d). (17) corresponds to (11): (17a,b) show the tonal marking strategy and (17c,d) the segmental marker strategy.

(17) a. (abáBembá bà-shipa)$_{PPh}$ (beekala muZambia)$_{PPh}$ (tonal REL)

b. *(abáBemba)$_{PPh}$ (bà-shipa)$_{PPh}$ (beekala muZambia)$_{PPh}$ (tonal REL)

c. (abáBembá ábá-shipa)$_{PPh}$ (beekala muZambia)$_{PPh}$ (segmental REL)

d. (abáBemba)$_{PPh}$ (ábá-shipa)$_{PPh}$ (beekala muZambia)$_{PPh}$ (segmental REL)

'Bembas who are brave live in Zambia'

In both (17a) and (17c) the final high tone on the head noun *abáBembá* indicates that the constituent following it is within the same phonological phrase as opposed to (17d) where this is not the case.

As we have indicated in section 3.1, relatives marked by segmental relative markers can be interpreted as restrictive or non-restrictive. The

difference in interpretation also corresponds to a difference in phonological phrasing. (17c) in which the head noun and the relative clause form a phonological phrase yields a restrictive reading while (17d) yields a non-restrictive reading. And note further that the tonal strategy (17a) only has a restrictive reading. In other words, if we consider phonological phrasing together with interpretation, we can conclude that a restrictive relative clause, be it tonally marked or marked by a segmental relative marker, requires that the head noun and the relative clause be in the same phonological phrase. Conversely, a non-restrictive relative clause forms a separate phonological phrase from the head noun.

The same phrasing asymmetries hold for object relatives. (18a) and (18b) differ in reading, though both are marked by a segmental relative marker. The former has a restrictive relative interpretation while the latter a non-restrictive interpretation. (18c) indicates the tonal strategy with phonological phrasing (necessarily for restrictives) and further that if the head noun was not phrased together with the verb the sentence would be ungrammatical.[9]

(18) a. (abántú ábo Chísanga á-mwéene maílo)$_{PPh}$ (na-bá-ya)$_{PPh}$ (=7b)
'The people who Chisanga saw yesterday have gone'

b. (abántu)$_{PPh}$ (ábo Chísanga á-mwéene maílo)$_{PPh}$ (na-bá-ya)$_{PPh}$ (=7b)

'The people, who Chisanga saw yesterday, have gone'

c. (umúluméndó à-mwéené Chisanga maílo)$_{PPh}$ (=9c)
'The boy who Chisanga saw yesterday'

d.* (umúluméndo)$_{PPh}$ (à-mwéené Chisanga maílo)$_{PPh}$

Recall that in object relatives it is possible to optionally omit the segmental relative marker and a relative clause reading still obtains. The phrasings in these cases both with and without subject inversion are given in (19a-b). In both cases, the head noun has to be phrased together with the relative clause, and there is a mandatory restrictive reading of the relative clause. If the head noun and the verb are not phrased together as in (19c) a relative interpretation cannot be obtained.

[9] We have, using PRAAT, phonetically produced sentences where the head noun ends in a low tone and is phrased separately from the verb in tonally marked object relatives. These have all been judged at best as strange and of unclear import.

(19) a. (abántú Chisanga á-mwéene maílo)$_{PPh}$ (na-bá-ya)$_{PPh}$
b. (abántú á-mwéene Chisanga maílo)$_{PPh}$ (na-bá-ya)$_{PPh}$
'The people that Chisanga saw yesterday have gone'
c. (abántu)$_{PPh}$ (Chisanga á-mwéene maílo)$_{PPh}$ (na-bá-ya)$_{PPh}$
'The people Chisanga saw yesterday'
*'The people who Chisanga saw yesterday'

This implies that object relatives without an overt segmental relative marker can never have a non-restrictive reading. This is further confirmed by data such as (20a-c) in which the head noun is a proper name, which forces a non-restrictive reading.

(20) a. Mulénga úo Chísanga á-áci-tuma kumalíkééti na-á-bweela
Mulenga REL Chisanga 1SM-TNS-send 17market TNS-1SM-return
'Mulenga who Chisanga sent to the market has returned'
b. #Muléngá Chísanga á-áci-tuma kumalíkééti na-á-bweela
Int: 'Mulenga, who Chisanga sent to the market, has returned'
Lit: 'The Mulenga Chisanga sent to the market has returned'
c. #Muléngá à-aci-tuma Chísanga kumalíkééti na-á-bweela

Both (20b) and (20c) lack a segmental relative marker. (20c) is marked by the tonal strategy while (20b) is completely unmarked. Note that for both (20b) and (20c), the head noun and the relative clause form one phonological phrase (with the head noun ending with a high tone). Both (20b) and (20c) are judged as odd because they require a restrictive reading of the proper name *Mulenga*.

We can thus conclude from the foregoing discussion that tonally marked relatives must be phrased together with the head noun. Since phrasing together with the head noun induces a restrictive reading of relatives, as can be seen also for segmentally marked relatives, tonally marked relatives always induce a restrictive reading and hence the strategy cannot be used for canonically non-restrictive arguments.

5 Implications for syntactic phrasing

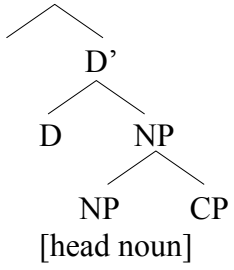
Given what we have seen in terms of phonological phrasing in relative clauses, we explore different analyses of relatives in this section. In particular, we consider the analysis for restrictives versus non-restrictives on the one hand, and headless relatives on the other. We show that phonological phrasing provides insight into which analysis of relative clauses makes the best syntax-phonology

correspondence. Further, based on what we know about the structure of relative clauses, we make certain predictions about how phonological phrasing operates in Bemba.

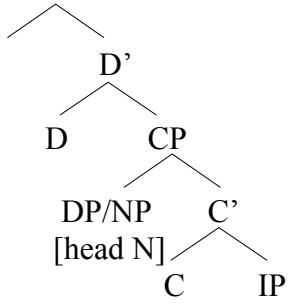
5.1 Restrictive vs. non-restrictive relatives

Let us start by contrasting the standard structure (21a) for restrictive relative clauses with a Kaynian structure (21b) (Kayne 1994).[10] The crucial difference between the two that we would like to draw on is that under the standard view the head noun is outside of the CP (i.e., CP is right-adjoined to the NP), which is the relative clause, while Kayne adopts a head-raising analysis where the head noun of the relative clause remains within the CP (and there is no adjunction structure).[11]

(21) a.



b.



For a Bemba noun phrase such as (22a), the difference between the two analyses of relative clauses is where the CP boundary is.

(22) a. abántú ábo n-a-mwéene maíló…
2people 2REL 1SM-TNS-see.PERF yesterday
'the people who I saw yesterday…'

b. [$_{DP}$ [$_{NP}$ abántú [$_{CP}$ ábo n-a-mwéene maíló…]]] (standard)

c. [$_{DP}$ [$_{CP}$ abántú ábo n-a-mwéene maíló…]] (Kaynian)

As indicated by (22b), within the standard analysis, the CP boundary falls right before the relative marker *ábo* while in the Kaynian analysis, the CP boundary is right before the head noun *abántú*.

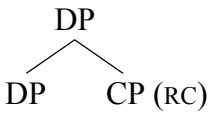
---

[10] There are variations of the Kaynian structure, which we will not discuss in this article. See Bianchi (2000) among others.

[11] It is harder to say where the relative clause begins in a Kaynian analysis. For *wh*-relatives, the relative pronoun is in SpecCP, while for *that*-relatives, the complementizer *that* is still in C^0.

For non-restrictive/appositive relatives, we follow Demirdache (1991) and assume that the CP is adjoined to a DP, as represented in (23).

(23)



What we have learned from the discussion of phonological phrasing in Bemba in section 4 is that in restrictive relative clauses, regardless of whether the tonal strategy or the segmental relative marker is used, the head noun forms a phonological phrase with the relative clause. In contrast, in non-restrictive relative clauses (which necessarily use a segmental relative marker), the head noun does not form a phonological phrase with the relative clause.

The Kaynian analysis of relative clauses can capture this difference much more naturally than the Standard analysis. This can be seen from the schematic comparison in (24) (using English words to illustrate).

(24) a. Standard analysis

(i) $[_{DP}\ [_{NP=PPH}\ [_{NP}$ Bemba's$]\ [_{CP=PPH}$ that are brave $]]]$ (restrictive relative)

(ii) $[_{DP}\ [_{DP=PPH}$ Bemba's$]\ [_{CP=PPH}$ that are brave$]]$ (non-restrictive relative)

b. Kaynian analysis

(i) $[_{DP}\ [_{CP=PPH}$ Bemba's that are brave $]]]$ (restrictive relative)

(ii) $[_{DP}\ [_{DP=PPH}$ Bemba's$]\ [_{CP=PPH}$ that are brave$]]$ (non-restrictive)

Under the assumption that phonological phrasing is based on syntactic structure and that here specifically left edges of a phrase (XP) determine the left edges of phonological phrases, the standard analysis in (24a) would have two phonological phrases for both restrictive and non-restrictive relatives. This is, for restrictive relatives, clearly contrary to the phrasing as we have seen above.

On the other hand, given a Kaynian analysis (24b), we can capture the phonological phrasing without any extra assumption, since the phrasing predicted is exactly as we have seen. More specifically, in both (24bi) and (24bii) the left edge of a CP coincides with the left edge of a phonological phrase. We can thus conclude that a CP must coincide with a phonological phrase. This will capture the phonological phrasing in both restrictive and non-restrictive relatives and clearly allows a better phonology-syntax correspondence: a head noun which is syntactically "internal" (i.e., in CP internal position) forms a phonological phrase with the relative clause, and in contrast, a head noun which is syntactically "external" does not form a phonological phrase with the relative clause.

5.2 Headless relatives

Headless relatives by definition lack an overt head noun and can only be interpreted as restrictive.[12] Given these facts and considering that the Kaynian analysis of restrictive relatives provides us with a better syntax-phonology correspondence, we simply assume a prosodically empty pronoun to be in SpecCP in headless relatives, as illustrated in (25).

(25) a. *ábáshipa na-bá-ya* 'those who are brave have gone'

b. $[_{DP}\ [_{CP}\ pro\ [_{C'}\ \textit{ábáshipa na-bá-ya}]]]$

Given the representation in (25b), the remaining question is why the tonal strategy is unavailable for headless relatives, given that they share the structure of restrictive relatives. In the next section, we provide an answer to this question by taking into consideration the syntax-phonology interface.

5.3 The mapping between phonology and syntax

From the foregoing discussion, we have seen that the tonal strategy of relativization requires a preceding head noun to be phrased together with the low-tone morpheme, so that (26) (repeated from (17b)), which phrases the head noun and the low-tone morpheme separately, is ungrammatical.

(26) *(abáBemba)$_{PPh}$ (bà-shipa)$_{PPh}$ (beekala muZambia)$_{PPh}$ (tonal strategy)

Phonologically this implies that having a phonological phrase boundary immediately preceding the low tone morpheme yields undesirable structures. Following assumptions of Generalized Alignment in Optimality theory (Prince and Smolensky 2004, McCarthy and Prince 1995) this could be formalised as a constraint that bars the relative low tone morpheme from coinciding with a phonological phrase edge. Generalized Alignment is defined in (27).

[12] How headless relatives should be analysed syntactically has been a controversial topic. Note that what we posit here may not extend to free relatives in English since the reading of headless relatives in Bemba is not identical to free relatives.

(27) *Generalized Alignment*
Where Cat_1, Cat_2 are prosodic, morphological, or syntactic categories and $Edge_1$, $Edge_2$ is a member of {Right, Left}:
ALIGN(Cat_1, $Edge_1$; Cat_2, $Edge_2$) iff
For each Cat_1 there is a Cat_2 such that $Edge_1$ of Cat_1 and $Edge_2$ of Cat_2 coincide.

Taking (27) into account, we can formulate a constraint such as (28) that militates against the low tone relative morpheme coinciding with a phonological phrase boundary.

(28) *ALIGN(RELLOW L, PPHR L)
Do not align the relative low tone with the left edge of a phonological phrase.

Working in a framework of ranked and violable constraints this would have to be fairly highly ranked so that its violation results in ungrammaticality. To make this constraint less language specific and hence less ad hoc, we formulate it more generally by referring to low tone in general as in (29).[13]

(29) *ALIGN(LOW L, PPHR L)
Do not align low tone with the left edge of a phonological phrase.

This, in effect, explains why headless relatives can never be marked with the tonal strategy; they would always begin a phonological phrase with a low tone.

Another apparent phonological effect that we saw in the preceding exposition is that if a head noun is phrased with a following CP (i.e., in restrictives), it is able to host a high tone spreading rightwards by a tone doubling rule whose details are not relevant here. In the inverse case (non-restrictives), where the head noun is phrased separately from the head the tone doubling rule is blocked and no high tone is seen on the final syllable of the head noun. See, for example, the contrast between (30a) and (30b) (repeated here from (17)).

[13] Perhaps this constraint will have to be formulated as a constraint on non-lexical low tones (i.e., grammatical low tones) in order to more easily generalise over the phrasal phonology of the whole language. Pending a full characterisation of Bemba phrasal phonology we are committed to the constraint as it stands and assume that other constraints interacting with *ALIGNLL derive low tone in phrasal initial position in cases where it does occur.

(30) a. [abáBémbá ábá-shipa]$_{PPh}$ [beekala muZambia]$_{PPh}$ (segmental REL)

b. [abáBémba]$_{PPh}$ [ábá-shipa]$_{PPh}$ [beekala muZambia]$_{PPh}$ (segmental REL)

'Bembas who are brave live in Zambia'

We will account for these facts as a low tone signaling the right edge of a phonological phrase and use a constraint opposite to the one in (29) to account for the distribution as given in (31).[14]

(31) ALIGN(LOW R, PPHR R)
Align the right edge of a phonological phrase with a low tone

Thus it seems that both right and left edges of phonological phrases are relevant for phrasing in Bemba.

In relating these phonological constraints to syntax we must capture the fact that the relevant left edge that phonology refers to in (29) coincides with a CP in syntax. To achieve this end we can specify the general constraint of Selkirk (1995) in (32) to a more specific constraint that refers to CPs as in (33).

(32) a. ALIGN-XP, R
For each XP there is a P(phonological phrase) such that the right edge of XP coincides with the right edge of P

b. ALIGN-XP, L
For each XP there is a P such that the left edge of XP coincides with the left edge of P

(33) ALIGN-CP, L
For each CP there is a P such that the left edge of that CP coincides with the left edge of P

One caveat with the constraint in (33) is that it violates the Lexical Category Condition (LCC), which bars functional projections like CP and IP from being subject to alignment constraints (Selkirk 1995). One solution would be to formulate the LCC as itself a violable constraint. A second solution, in light of recent proposals in Truckenbrodt (2005), would be to view the relevant left edge

[14] The constraint in (31) will be violated by nouns that end in lexical high tones but these nouns would satisfy a higher ranked faithfulness constraint on retaining lexical tones, which an output candidate changing a final lexical high to low in order to satisfy (31), would violate.

as marking an intonational phrase rather than a phonological phrase.[15] We, in a sense, adopt both of these views (although we do not formally formulate the former) by postulating that the left edge of CP referred to in (33) must coincide both with a phonological phrase and an intonational phrase. The constraint is thus reformulated as in (34).

(34) ALIGN-CP, L
For each CP there is a P such that the left edge of that CP coincides with the left edge of P *iff* that CP also coincides with the left edge of IP (intonational phrase)

In addition we will use the WRAPXP constraint of Truckenbrodt (1999) as a constraint regulating phonological phrasing. The REALMORPH (realize morpheme) constraint will also be relevant and be high ranking so that a relative marker must be realized in relatives. NONRECURSION will also be assumed following Selkirk (1995). These additional constraints are defined in (35).

(35) a. WRAP-XP (Truckenbrodt 1999)
Each XP is contained in a phonological phrase

b. REALMORPH
A relevant morpheme must be realized

c. NONREC (Selkirk 1995)
A P constituent must not contain another P constituent of the same level

*ALIGN-LOW,L is highest ranked so that it is less preferable to begin phonological phrases with low tone. This is crucial in baring the relative low tone morpheme from occurring at the left edges of phonological phrases. ALIGNCP-L is ranked above WRAP-XP to allow some XPs to escape being wrapped in a phonological phrase just in case they occur in a CP whose left edge coincides with both the left edges of an intonational phrase and a phonological phrase. ALIGN-LowR,PR is the lowest ranked constraint in this partial ranking with the role of determining the right phonological phrase boundaries, ensuring that they do not end in a high tone. Consider the interaction of these constraints in tableau (36) for restrictive relatives under the given ranking. (REALMORPH and NONREC are not shown in the tableaus).

[15] Truckenbrodt (2005) regards root clauses, as opposed to embedded clauses, as obligatorily forming intonational phrases. Thus co-ordinated structures with two root clauses are considered as consisting of two intonational phrases. He offers WRAP-CP, which requires each CP to be contained in an intonational phrase, as the constraint ensuring this phrasing.

(36) *ALIGN-LOW, L » ALIGNCP-L »WRAP-XP » ALIGN-LR,PR
Restrictives: ábabémbá ábá-shipa.. 'Bembas who are brave..'
ábabémbá bà-shipa..

ábabémba bá-shipa..	*ALIGN-LL	AL-CPL	WRAP-XP	A-LR,PR
a. ([ábabémba]$_{NP}$)$_{P}$ ([bà-shipa]$_{CP}$)$_{P}$	*!	*		
b. ([ábabémbá]$_{NP}$)$_{P}$ ([bà-shipa]$_{CP}$)$_{P/IP}$	*!			*
c. ([[ábabémbá]$_{NP}$ bà-shipa]$_{CP}$)$_{P}$		*!	*NP	
☞d. ([[ábabémbá]$_{NP}$ bà-shipa]$_{CP}$)$_{P/IP}$			*NP	
☞e. ([[ábabémbá]$_{NP}$ ábá-shipa]$_{CP}$)$_{P/IP}$			*NP	

Candidates (36a-b) represent the phrasing we would get under the standard analysis where the head noun is external to the relative clause CP. With this syntactic structure, the NP and the CP are in different phonological phrases as we have already pointed out, and hence fatally violate the highly ranked *ALIGN-LL. Thus candidate (36b) that escapes violation of ALIGNCPL by phrasing the CP with an intonational phrase, is not better off for it. It also incurs the additional violation of ALIGNLR,PR by having a final high tone on the first phonological phrase. Candidates (36c-d) represent the Kaynian analysis where the head noun is internal to the relative clause CP and therefore results in only one phonological phrase. (36c) escapes violation of the high ranked *ALIGNLL by this phrasing but violates ALIGNCP,L by having the CP in a phonological phrase that does not coincide with an intonational phrase on the left edge. Candidates (36d-e) are the winning candidates representing the tonal relative (36d) and the segmentally marked relative (36e). The phonological phrasing thus seems to favour a syntactic analysis that treats the head noun as internal to the CP. Restrictive object relatives which use the demonstrative based relative marker '*ábo*' are treated in the same fashion.

Recall that in object relatives the relative marker is always optional and we have shown that in cases where it is omitted a restrictive interpretation must hold. In these cases (cf. examples in 7-8) ALIGNLR,PR is crucial in showing that because of the high tone on the final syllable of the head noun, no right phonological phrase boundary is present and therefore one phonological phrase is involved, hence the restrictive reading. In this sense, for segmentally marked, tonally marked and non-overtly marked relatives, restrictives are represented as one phonological phrase reflecting the close relation between the head noun and the relative clause manifested in restrictives.

Tableau (37) illustrates non-restrictives, which, as we have shown in earlier discussion, involve separate phrasing of the head noun and the relative

clause. The winning candidate (37a) avoids the violation of WRAPXP by phrasing the DP in a separate phonological phrase. In addition, unlike candidate (37b) the winning candidate avoids the violation of ALIGNCPL by ensuring that the CP also coincides with an intonational phrase. Candidate (37c) loses for having a phonological phrase that ends in a high tone. Of course a candidate with no boundary after the head noun is possible but would result in a restrictive interpretation as seen in (36) above.

(37) *ALIGN-LOW, L » ALIGNCP-L »WRAP-XP » ALIGN-LR,PR
Non-restrictives: ábabémba ábá-shipa.. 'Bembas who are brave..'

ábabémba ábá-shipa..	*ALIGN-LL	AL-CPL	WRAP-XP	A-LR,PR
☞a. ([ábabémba]$_{DP}$)$_{P}$ ([ábá-shipa]$_{CP}$)$_{P/IP}$				
b ([ábabémba]$_{DP}$)$_{P}$ (ábá-shipa..[$_{CP}$)$_{P}$]		*!	*	
c. ([ábabémbá]$_{DP}$)$_{P}$ ([ábá-shipa]$_{CP}$)$_{P/IP}$				*

For non-restrictives then, an appositive structure where the DP is a sister to the relative clause CP (as in Demirdache 1991), provides an analysis that is compatible with phonological phrasing.

Compared to the analysis of restrictive and non-restrictive relatives, headless relatives are different because they lack an overt head. In terms of syntactic structure, we have treated headless relatives on a par with restrictives under a Kaynian analysis. However, recall that they share a crucial similarity with non-restrictive relatives, namely, they cannot be formed using the tonal strategy. This results from the fact that they have an empty head which though syntactically active is phonologically empty. With this assumption, the analysis of headless relatives follows straightforwardly from the given constraint ranking, as illustrated in tableau (38).

(38) *ALIGN-LOW, L » ALIGNCP-L »WRAP-XP » ALIGN-LR,PR
Headless relatives: ábáishilé maíló.. '(the people) who came yesterday..'

ábáishile mailo..	*ALIGN-LL	AL-CPL	WRAP-XP	A-LR,PR
a. ([bàishile..]$_{CP}$)$_{P}$	*!	*		
☞b. ([ábáishile..]$_{CP}$)$_{P/IP}$				
c. ([ábáishile..]$_{CP}$)$_{P}$		*!		

As we have already pointed out, the tonal morpheme and the segmental relative marker cannot be used simultaneously. Candidate (38a) that uses the tonal morpheme fatally violates high ranked *ALIGNLL for having a low tone at the

left edge of a phonological phrase. It also violates ALIGNCPL for phrasing a CP into a phonological phrase without an intonational phrase boundary on the left edge. Candidate (38c) suffers this same violation and hence loses despite using the segmental marker and avoiding violation of high ranked *ALIGNLL. Candidate (38b) is the winning candidate because unlike (38c) it avoids violation of ALIGNCPL. The winning candidate is as such contained in one phonological phrase and gets a restrictive interpretation. From this we can conclude that it is the phonological phrasing, rather than the use of the tonal morpheme that induces a restrictive versus non-restrictive interpretation of relatives. Furthermore, we can now understand why headless relatives pattern with non-restrictives in being unable to use the tonal marking strategy; both produce phonological phrases that violate *ALIGN-LL.

We can thus conclude that for the mapping between phonology and syntax for restrictive relatives, the Kaynian analysis makes the best phonological predictions. For non-restrictive relatives an appositive structure as in Demirdache (1991) coincides with phonological phrasing. Finally for headless relatives we see that they structurally pattern with restrictives under a Kaynian analysis and hence also get the phonological phrasing of restrictives; however, due to an empty head, they pattern with non-restrictives in being unable to utilise the tonal marking strategy.

6 Conclusion

In this paper, we have shown that along side a segmental marking strategy in relativization, a tonal marking strategy is also available in Bemba. Further, based on the contrast between the tonal marking strategy and the segmental marking strategy, we argue that the raising analysis of relativization allows a better syntax-phonology correspondence. In addition, based on the raising analysis, we can also offer an explanation as to why non-restrictive relatives and headless relatives share the property that they do not allow the tonal marking strategy, namely that the low tone morpheme cannot be at the left edge of a phonological phrase aligned with a CP. We therefore show that not only can phonological phrasing be informed by syntactic structure but syntactic analyses can also be informed by phonological phrasing information.

We leave a cross-linguistic comparison and the assessment of whether the constraints here formulated can be seen to be actively operative in other languages, to a future occasion.

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The Prosody and Syntax of Focus in Chitumbuka*

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This paper presents a sketch of the prosodic, syntactic and morphological means of expressing focus in Chitumbuka, an underdescribed Bantu language of Malawi. The chief prosodic correlate of focus is boundary narrowing – rephrasing conditioned by focus – which is used not only to signal in situ focus but also in syntactic and morphological focus constructions. Of theoretical importance is the fact that rephrasing does not lend culminative prominence to the focused constituent. Although Chitumbuka has culminative sentential stress, its position remains fixed at the right edge of the clause, independent of the position of focus. This makes Chitumbuka a challenge for theories of focus prosody which claim that the focused constituent must have culminative sentential prominence.

1 Introduction

Much recent work on the interaction of prosody and focus has assumed that there is a necessary cross-linguistic correlation between main sentence stress and focus. The constraint in (1) which formalizes this requirement is cited from Samek-Lodovici (2005: 697), but similar principles can be found in work like Gussenhoven (1984, 1996, 1999), Reinhart (1995), Selkirk (1984, 1995, 2004), Rooth (1992, 1996), Szendröi (2003), Truckenbrodt (1995):

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(1) STRESS-FOCUS (SF):
For any XP_f and YP in the focus domain of XP_f, XP_f is prosodically more prominent than YP.

This principle is mainly supported by European stress languages where cues for stress – like culminative pitch movement and duration – co-occur on the syllable with main sentential stress, lending it unambiguous salience in the Intonational Phrase (roughly equivalent to a sentence (Truckenbrodt 1995)). Relatively little work has been done on the prosody of focus in languages where focused constituents condition non-culminative prosody, and culminative prosody is independent of focus.

In this paper, I discuss the prosody of three different focus constructions in Chitumbuka, a Bantu language spoken in Malawi: in situ focus, ex situ focus and focus related morphemes. I argue that Chitumbuka shows that the STRESS-FOCUS constraint, in its strong form, does not hold cross-linguistically. The paper is organized as follows. After presenting some background in Chitumbuka tone in section 2, I will show in section 3 that phonological rephrasing – unaccompanied by culminative sentential prosody – is the most consistent correlate of focus. Although the two syntactic positions favored for ex situ focus – sentence-initial and immediately after the verb (IAV) – are ones that prosody highlights, focus does not necessarily correlate with culminative prominence in either position. I will show in section 4 that focus-related morphemes, rather than the constituent they place in focus, are made salient by phonological rephrasing, creating a further mismatch between prosody and focus.

The overall conclusion I will draw is that while culminative prosodies play some role in defining the syntactic positions favored for focus, neither pitch nor sentential stress nor rephrasing provide the unambiguous syntagmatic cues to focus in Chitumbuka that are defined by the STRESS-FOCUS constraint.

2 Background on Chitumbuka tone

Chitumbuka (Bantu N20) is one of the three major languages of Malawi (with Chichewa and Yao). The data presented comes from my fieldwork on the language. (There is no grammar as far as I know.) The sketch of Chitumbuka tone presented in this section provides the background information needed to follow the discussion of the prosody of focus in the remainder of the paper.

2.1 Words in isolation

As shown by the data in (2) and (3), there are no lexical or grammatical tonal contrasts in Chitumbuka. The penult of every word in isolation is lengthened and bears a falling tone:

(2) No tonal contrasts in nouns

Singular	*Gloss*	*Plural*
múu-nthu	'person'	[β]áa-nthu
m-líimi	'farmer'	[β]a-líimi
m-zíinga	'bee hive'	mi-zíinga
m-síika	'market'	mi-síika
khúuni	'tree'	ma-kúuni
báanja	'family'	ma-báanja
ci-páaso	'fruit'	vi-páaso
ci-ndíindi	'secret'	vi-ndíindi
nyáama	'meat, animal'	nyáama
mbúuzi	'goat'	mbúuzi

(3) No tonal contrasts in verbs or verb paradigms

(a)	ku-líima	'to farm'	líima!	'farm!'
	ti-ku-líima	'we farm'	ti-ku-líma yáaye	'we do not farm'
	ti-ka-líima	'we farmed'	ti-ka-líma yáaye	'we did not farm'
	t-angu-líima	'we recently farmed'		
	n-a-[β]a-limíira	'I have farmed for them'		
	[β]-a-líima	'they have farmed'		
	wa-zamu-líima	's/he will farm'	wa-zamu-limilíira	's/he will weed'

(b)	ku-zéenga	'to build'	zéenga!	'build!'
	ti-ku-zéenga	'we build'		
	nyúumba yi-ku-zengéeka	'the house is being built'		
	[β]a-ka-zéenga	'they built'		
	[β]a-ka-ku-zengéera	'they built for you sg.'		
	[β]a-ka-mu-zengeráa-ni	'they built for you pl.'		
	n-a-zéenga	'I have built'		
	wa-zamu-zéenga	's/he will build'		
	[β]a-zamu-zengeráana	'they will build for each other'		

To put these Chitumbuka prosodic patterns into a wider perspective, penult lengthening (especially phrase-penult) associated with stress is very common cross-Bantu (see, e.g., Doke 1954; Downing, to appear; Philippson 1998). It is also very common cross-Bantu for the High tone of a word to be attracted to the

penult (see, e.g., Kisseberth & Odden 2003; Philippson 1998). And it is attested (though it is not clear how widespread this is) for other languages of the region (roughly, northern Lake Malawi) to have what have been called restricted or predictable tone systems: all words must have a High tone (see Odden 1988, 1999; Schadeberg 1973 for discussion).

In sum, the word-level tone system of Chitumbuka has many defining properties of a pitch-accent language (Downing 2003, to appear; Hyman 1977; Odden 1999): *obligatoriness* and *culminativity*: every word has one and only one High tone; *positional restrictions*: only the penult can bear a High tone; and *tone-stress interaction*: the High tone aligns with the stressed penult.[1] As we shall see in the next sections, however, there is no evidence for tonal accent at the phrase or utterance level.

2.2 Prosody at the phrase and utterance level

Words have the isolation pronunciation in (2) and (3) only when they are final in the Phonological Phrase. Evidence for the Phonological Phrase is that phrase-medial words undergo prosodic reduction processes: there is no penult lengthening, and the tone on the penult is a (fleeting) level High. As shown in (4), the entire clause does not form a single Phonological Phrase, rather each of the major subconstituents of the clause – the subject NP and the maximal VP – forms a single, separate phrase:

(4)

(a) (nyúumba) (i-ku-wonéeka) ‘The house is visible.’
9-house 9-TAM-be visible

(b) (ti-ku-phíka síima) ‘We are cooking porridge.’
we-TAM-cook porridge

(c) ([β]-áana) ([β]a-ku-[β]a-vwíra [β]a-bwéezi)
2-child 2-TAM-2.OM-help 2-friend
‘The children help the friends.’

[1] For these reasons Kisseberth & Odden (2003) classify Chitumbuka as a stress language. However, as work like Hellmuth (2006) argues, it is typologically unusual for stress languages to have a single tone melody associated with the accented syllable and for every lexical word to be accentable. This makes Chitumbuka’s pitch system more tone-like than stress-like.

(d) ([β]a-líimi) ([β]a-lúta ku-múunda)
2-farmer 2-go LOC-fields
'The farmers have gone to the fields.'

(e) (ti-ka-wóna mu-nkhúngu ku-msíika).
we-TAM-see 1-thief LOC-market
'We saw a thief at the market.'

(f) (mwanakáazi) (wa-ku-sonéra mu-nyákhe láaya).
1-woman 1-TAM-sew for 1-her [friend] dress
'The woman is sewing a dress for her friend.'

Clauses are parsed into Intonational Phrases, the level in the Prosodic Hierarchy which immediately dominates the Phonological Phrase (see, e.g., Selkirk 1984; Truckenbrodt 1995). Two types of prosody signal Intonational Phrase (I) boundaries. First, there is extra-lengthening on the penult vowel of an I-final Phonological Phrase. Also, downdrift/downstep has the result that the initial High tone in the Intonational Phrase has the culminative pitch, while each successive High tone is realized at a lower pitch. As a result, there are two positions of culminative prosodic prominence within the Intonational Phrase:[2] sentence-initial pitch prominence, due to downstep, and sentence-final 'stress,' due to extra penult lengthening. (This extra lengthening is traditionally interpreted as sentential stress in Bantu languages (Doke 1954).)

3 Syntax and prosody of focus

3.1 In situ focus

In many stress languages, like English or Italian, focused elements can be made prominent in situ, by assigning them culminative sentential accent. This observation – the basis of the STRESS-FOCUS constraint (1) – is illustrated in (5):

(5) Sentence-final stress and focus (Samek-Lodovici 2005: 688)
(a) English: [John has LAUGHED.]$_f$ Context: What happened?
(b) Italian: [Gianni ha RISO.]$_f$ Context: What happened?

As shown in (6), if the subject is focused stress moves in English and the focused element remains in situ. In Italian, the subject is right-dislocated, as shown by work like Zubizarreta (1998) and Samek-Lodovici (2005), and stress remains 'in situ':[3]

[2] See Downing et al. (2005) for discussion of identical culminative prosody in Chichewa.
[3] See Szendröi (2003) for discussion of stress-motivated focus movement in Hungarian.

(6) Subject focus (Samek-Lodovici 2005: 688)

(a)	English:	JOHN$_f$ has laughed.	Context: Who has laughed?
(b)	Italian:	Ha riso GIANNI$_f$.	Context: Who has laughed?
		Has laughed John.	

In Chitumbuka, *Wh*-words and the answers to *Wh*-questions – both assumed to be in focus – can occur in situ. (This section concentrates on focus in statements; section 4 takes up the prosody of *Wh*-morphemes.) As shown in (7), there is no special prosody for a subject NP focused in situ.

(7) *Questioning the subject*

Q (Njáani) (wa-ku-bwatísya máji ya mpúunga)?
Who 1-TAM-boil water for rice?
Who is boiling water for rice?

A (Mwanalúume) (wa-ku-bwatísya máji ya mpúunga).
A man is boiling water for rice.

However, as shown in (8), in situ focus within the VP does trigger special prosody. Recall from (4), above, that under wide focus the entire VP forms a single Phonological Phrase. In contrast, a focused object NP is obligatorily followed by a phonological phrase boundary, and any following element is noticeably downstepped.[4] A verb cannot be focused in situ, rather one must use the focus morpheme *wáaka* 'only' discussed in section 4.1.2, below.

(8) *Questioning the object* ('!' indicates noticeable downstep.)

Q (Namachéero) (mu-zamu-limiliráa-chi)?
Tomorrow you - TAM- weed – what
'What are you weeding tomorrow?'

A (Ti-zamu-limilíra ngóoma) ! (namachéero).
'We will weed MAIZE tomorrow.'

What is important prosodically is that we do not find the equivalent of culminative sentence accent assigned to the focused constituent. The highest pitch is consistently on the first High tone of the Intonational Phrase, while the longest vowel is the Intonational Phrase-penult. Neither position necessarily correlates with focus. Instead, what Hyman (1999) calls 'boundary narrowing' is used to highlight the in situ focused element within the VP: the focused element

[4] In all the data, small caps are used to help the reader quickly identify the constituent in focus. They do not indicate that the highlighted words have the equivalent of main stress.

must be followed by a phrase boundary.[5] While boundary narrowing is accompanied by distinctive prosody – lengthening of the phrase penult vowel and post-focus lowering (downstep) – this prosody does not lend culminative prominence to the focused element. This result confirms proposals by Downing (2003), Féry (2001), Hayes & Lahiri (1991), Ladd (1996) and Samek-Lodovici (2005) that phrasing, rather than accent, is the more universal cue to focus, as culminative prominence does not consistently correlate with focus; phrasing does.

3.2 Syntax and prosody of ex situ focus

Word order in Bantu languages is canonically (S) V (O) (see, e.g., Heine 1976, Bearth 2003). The inflected Verb is the only obligatory element of an utterance. When Subject and Object NPs are present, the subject (agent) canonically precedes the verb, while the object NP(s) and/or other complements follow the verb. If there is more than one object, the Indirect Object precedes the Direct Object.

In Chitumbuka – as in many Bantu languages – the basic SVO word order is flexible, with information structure one factor favoring alternative word orders.[6] There are two preferred positions for ex situ focus constituents to occur in Chitumbuka: sentence-initial (9) and immediate post-verbal (10), (11).

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[5] 'Boundary narrowing' is found in other Bantu languages, like Chichewa (Kanerva 1990; Truckenbrodt 1995, 1999; Downing et al. 2005), Haya (Byarushengo et al. 1976, Downing 2002) and Xhosa (Jokweni 1995; Downing 2002, 2003). See Hock (1998) and Selkirk & Shen (1990) for discussion of post-focus lowering in Indo-European languages and Chinese, respectively.

[6] See, e.g., Bearth (2003) for a recent overview of the influence of information structure on syntax in Bantu languages.

The Chitumbuka data illustrating ex situ focus were elicited using two strategies. Asking a *Wh*-question, considered a traditional test for focus (Kanerva 1990), as *Wh*-morphemes have inherent focus, and the answers have new information focus. The second strategy was to ask the consultant if alternative word orders were possible, and, if so, what context they would be used in. All contexts indicated in square brackets are the ones provided by the language consultant.

(9) *Sentence-initial focus*

(a) (ma-búuku) ([β]a-ka-pása [β]-áana)
6-book 2-TAM-give 2-child
'They gave the children BOOKS.'
[Answers, *'What did they give to the children?'*]

(b) (Pa-mu-páanda) (zi-ka-dúka mbúuzi).
LOC-3- wall 10-TAM-jump 10-goat
'THE GOATS jumped OVER THE WALL.'
[And something else jumped over something else.]

(c) Q (Namachéero) (mu-zamu-limiliráa-chi)?
Tomorrow you - TAM - weed – what
'What are you weeding tomorrow?'

A (Ngóoma) (ti-zamu-limilíra namachéero).
Maize we - TAM - weed tomorrow
'We will weed maize tomorrow.'
[Maize is being contrasted with some other possible crop.]

(d) (kwa [β]a-léendo) ([β]a-ka-wonésya mínda yáawo).
to 2-visitor 2-TAM- show fields their
'TO THE VISITORS they showed THEIR FIELDS.'
[Context: 2 sets of people were to be shown the fields, but only the visitors were shown the fields and the other people were shown something else.]

(10) *Post-verbal focus*

(a)
Q (Kási [β]a-léendo) (ku-Lilóongwe) ([β]a-ku-lúta namachèérô)?[7]
Q 2-visitor Loc- Lilongwe 2-TAM-leave tomorrow
'Are the visitors leaving for LILONGWE tomorrow?'

A (Yáaye)(namachéero) ([β]a-ku-lúta kuZóomba).
'No, tomorrow they are leaving for ZOMBA.'

(b) (Njáani) (wa-ka-zi-yeyéra ku-nyúumba) (m-bohóole)?
Who 1-TAM-10.OM-carry LOC-house 10-potato
'Who carried them TO THE HOUSE, the potatoes?'

[7] Yes-no questions (and sometimes *Wh*-questions) begin with a question morpheme, *kási*, and have a falling-rising tone pattern over the final two syllables.

(11) 'They gave children books.'

(a) ([β]-áana) ([β]a-ka-pása ma-búuku)
2-child 2-TAM- give 6-book
[Answers, *'What did they give to the children?'*]

OR

(b) ([β]a-ka- pása [β]-áana) ! (ma-búuku).
2-TAM- give 2-child 6-book
[Context: CHILDREN, not elders, got books.]

OR

(c) ([β]a-ka-pása ma-búuku) ! ([β]-áana).
2-TAM- give 6-book 2-child
'They gave BOOKS [not something else] to the children.'

The question arises whether the two syntactic focus positions can lead to ambiguity. If an NP precedes and follows the verb, how can one tell which is in focus? The answer is that only the context can tell you which NP is in focus.[8] This is shown by (12), identical to (9d), where we see that the same utterance is appropriate both in a context where the sentence-initial NP is contrastive (9d), and in a context where only the postverbal NP is contrastive (12). As we can see, there is no prosodic or syntactic distinction between the two utterances.

(12) (kwa [β]a-léendo) ([β]a-ka-wonésya mínda yáawo).
to 2-visitor 2-TAM-show fields their
'To the visitors they showed THEIR FIELDS.'
[Context: Several things to be shown the visitors, in this case they were shown the fields.]

As the alert reader will have noticed, a further source of ambiguity is that the syntactic focus positions are also the canonical positions for the subject (sentence-initial) and the object (immediate postverbal). While it is true that in a pro-drop language like Chitumbuka an overt subject NP only occurs if it is discourse new or salient, and an overt object is also often discourse new (Morimoto 2000), the overlap between canonical and focus positions emphasizes that syntax does not single out the focus constituent.

Before concluding this section, I would like to highlight an interesting morpho-syntactic property of the ex situ focus data. Mchombo (2004), Bresnan & Mchombo (1987) have argued that flexible word order is tolerated in Bantu

[8] Ambiguity in scope of focus is not unique to Chitumbuka. See Gussenhoven (1999), for example, for recent discussion of ambiguities in determining scope of focus from culminative accent placement in English.

languages because an obligatory Object Prefix, agreeing and co-occurring with a dislocated Object NP, helps keep track of the grammatical role of NPs when they are not in their canonical position. However, as shown in data like (12), for example, the Object Prefix is not required in Chitumbuka when the Object NP occurs ex situ.[9] When the Object Prefix and Object NP co-occur, my consultant says the best translation is a definite reading for the Object NP:

(13) Object prefix (underlined) and definiteness

(a)	(n-khu-wóna ma-kúuni).	'I see trees.'
vs.	(n-khu-<u>ya</u>-wóna ma-kúuni).	'I see the trees.'
(b)	(ku-wóna phíirí)?	'Do you see a mountain?'
vs.	(ku-<u>li</u>-wóna phíirí)?	'Do you see the mountain?'

Mchombo (2004) and Mchombo & Morimoto (2003) have argued further that an obligatory Object Prefix is what licenses more unusual forms of non-canonical word order, like discontinuous constituents. However, even in sentences with discontinuous constituents volunteered by my Chitumbuka language consultant, no Object Prefix is required. As in the other data in this section, the motivation for discontinuous realization of the constituent appears to be to use sentence-initial and postverbal position to indicate differences in discourse prominence.[10]

(14) 'S/he cannot carry the big bundle of firewood.'

(a)	(wa-nga-nyamúla	yáaye)	(mzíwu u-kúlu	wa-nkhúuni).
	1-TAM carry	not	3-bundle 3-big	of-firewood

OR

(b)	(mzíwu wa-nkhúuni)	(wa-nga-nyamúla	yáaye)	(u-kúulu).
	3-bundle of firewood	1-TAM carry	not	3-big

[S/he can carry firewood, yes, but not a big one.]

(15) 'We broke the farmer's old hoe.'

(a)	(ti-ka-phyóla	jémbe	li-dála	la-mulíimi).
	We-TAM-broke	5- hoe	5-old	of farmer

OR

(b)	(jémbe la mulíimi)	(ti-ka-phyóla	lidáala)
	5-hoe of farmer	we-TAM-broke	5-old

[The farmer has several hoes; it is the old one that we broke.]

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[9] See Bearth (2003) for discussion of other Bantu languages which do not require an OP when the object is dislocated.

[10] In (14), note that the inherently focused negative morpheme, *yáaye*, is followed by a Phonological Phrase break. We return to this point in section 4.

To sum up this section, the Chitumbuka data confirm work like Morimoto (2000) showing that sentence-initial and post-verbal positions are, cross-linguistically, typical ones for focus. Prosodically, there are no differences between ex situ focus and in situ focus. We continue to find boundary narrowing – a focused element within the VP must be followed by a phrase boundary – and postfocal lowering – a postfocal element in the VP is strikingly downstepped. Because there are two positions of syntactic prominence and no culminative sentential prosody correlates with focus, many sentences have ambiguous focus out of context.

3.3 Clefts and right dislocation

For the sake of completeness, I present in this section data illustrating two other non-canonical word orders which have an effect on information structure in Chitumbuka: clefting and right dislocation.

Clefting – signaled by the clefting morpheme '*ni*' – is an additional ex situ focus strategy.[11] Clefting emphasizes that the NP in the cleft is being chosen from a known list of possibilities; it cannot present new information (unlike the simple sentence-initial focus position illustrated in the previous section). That is, clefting has the identificational focus function which É. Kiss (1998) argues is often expressed by clefts. As shown in (16b), 'which X' questions – but not their answers – require clefts, in my data.

(16)
(a)
Q (Ni njáani) (wa-ku-bwatísya máji ya mpúunga)?
CLEFT who 1-TAM-boil water for rice?
'WHO is boiling water for rice?'
A (Ni mwanalúume) (wa-ku-bwatísya máji ya mpúunga).
'The man [not someone else previously mentioned] is boiling water for rice.'

[11] I did not systematically elicit clefts, and so the generalizations here are based on only a few examples. More work obviously needs to be done on this topic. The non-clefted version of (16a) is given in (7), above.

(b)

Q (Ni mu-lónga úuli) (wa-ka-[β]ejáa-mo)?
CLEFT 3-river which 1-TAM-fish-in
'Which river did he fish in?'

A (wa-ka-[β]éja mu-mulónga wa pa-fúpi na mzíinda).
1-TAM-fish in river of close to town
'He fished in the river close to town.'

In contrast to the other non-canonical word orders discussed in this section, right-dislocated constituents do not fulfill a contrastive or emphasizing function. The data in (17), repeated from (11), above, illustrates this point. The immediate postverbal NP is in focus, while the downstepped, post-focal constituent is out of focus:

(17) 'They gave children books.'

(a) ([β]a-ka-pása [β]-áana) ! (ma-búuku)
2-TAM-give 2-child 6-books.
'They gave CHILDREN [not someone else] books.

OR

(b) ([β]a-ka-pása ma-búuku) ! ([β]-áana)
2-TAM-give 6-books 2-child
'They gave BOOKS [not something else] to the children.'

There is, then, a striking parallel between discourse prominence and pitch prominence. Sentence-initial position – where pitch prominence is highest – is favored for elements with high discourse prominence. Downstepped sentence-final position – where pitch prominence is lowest – is a favored position for elements with low discourse prominence.

3.4 Prosodic phrasing and focus

3.4.1 Discussion

To conclude this section, let us return to our central questions: How well does Chitumbuka focus phrasing satisfy the STRESS-FOCUS constraint (1)? Does the focused constituent have the highest prosodic prominence in its domain? As we have seen, focus position does not consistently correlate with positions of culminative prominence. The two positions of prosodic prominence – sentence initial pitch prominence and sentence penult lengthening – remain fixed. They do not shift to the focused constituent, as in English.

However, if we take another look at the phrasal prosody discussed in this section, we can see that syntactic position and prosody together often conspire to give some prosodic prominence to the focused element in an utterance. Sentence-initial focus position is passively highlighted, as it is the position of culminative pitch, due to downstep after each High tone within the Intonational Phrase. Post-verbal focus position is also passively highlighted, as the post-verbal NP is often the final word of the sentence, receiving sentence stress. Further, any postfocus element in the VP is significantly downstepped, lending the focused element non-culminative pitch prominence. In both focus positions, the Phonological Phrase break which follows the focused constituent lends it phrasal stress in the form of phrase penult lengthening. In sum, the Chitumbuka in situ and ex situ focus prosody data discussed so far provide evidence for the weaker version of the STRESS-FOCUS constraint in (1) proposed by Samek-Lodovici (2005): focus constituents must have *some* prosodic prominence.

3.4.2 OT analysis

The formal OT analysis developed in this section makes these observations explicit. The Alignment constraints in (18a-c) – adapted from work by Truckenbrodt (1995, 1999) – define the correlation between syntactic and phonological phrasing. Constraints (18b,c) optimize a match between a syntactic XP and a Phonological Phrase, while high-ranked ALIGNFOCUS (18a) optimizes 'boundary narrowing' by requiring a Phonological Phrase break following a focused element, lending a degree of stress to the focused element. The constraints in (18e, f) define the two culminative prominences in the Intonational Phrase (I): the I-penult bears main stress (18e), while I-initial position bears the highest pitch (18f). As these two constraints are never violated, they are high-ranked. STRESS-FOCUS (18c), in contrast, is low-ranked in Chitumbuka – in contrast to languages like English and Italian – as it is frequently violated.

(18)
Alignment constraints (Truckenbrodt 1995, 1999; Selkirk 2000; Samek-Lodovici 2005)

(a) ALIGNFOC: AlignR(Foc, P)
Align the Right edge of a focused element with the right edge of P.

(b) WRAP XP: Each lexically-headed XP is contained in a (single) P.
(That is, XP – including a verb and all its complements – is coextensive with P[honological phrase].)

(c) ALIGNR(XP, P): Align the right edge of XP with the right edge of a P[honological phrase].

Prosodic constraints (Samek-Lodovici 2005)

(d) STRESS-FOCUS (SF): For any XP_f and YP in the focus domain of XP_f, XP_f is prosodically more prominent than YP.

(e) HEAD I (HI): Align the right edge of every I with its head. [I=Intonational Phrase]

Pitch realization

(f) DOWNSTEP: H1> H2 > H…
The pitch of each High tone within I is lower than the immediately preceding High tone.

The constraint ranking for Chitumbuka focus prosody is given in (19). Notice that the high rank of ALIGNFOCUS with respect to STRESSFOCUS (SF) makes explicit that phrasing, not stress, is the prosodic correlate of focus.

(19)
HI (18e), DOWNSTEP (18f), ALIGNFOCUS (18a) >> WRAPXP (18b) >> ALIGNXP(18c) >> SF (18d)

The analysis is exemplified in the tableau in (20), below, where the optimal candidates correspond to (17b) and (9a). In the tableau, 'x' indicates degrees of stress, while the bolded vowel is the one with the highest pitch in the Intonational Phrase:

(20)

/[β]a-ka-pása [β]ána ma-búku$_F$ /	HI	DOWN-STEP	ALIGN-FOCUS	WRAP	ALIGN-XP	SF
☞a. ([β]a-ka-p**á**sa ma-búuku)$_F$ ([β]áana) x x x						*
b. ([β]a-ka-p**á**sa ma-búku$_F$ [β]áana) x			*!		*	*
☞c. (ma-b**ú**uku)$_F$ ([β]a-ka-pása [β]áana) x x x						*

The first and third candidates are optimal given this set of constraints, as the focused constituent ends a Phonological Phrase, and the entire VP is parsed into a single Phonological Phrase, satisfying WRAP. (I am assuming in the first candidate that the indirect object is outside the maximal VP when it is not in its canonical postverbal position. And following work like Truckenbrodt (1995, 1999), Selkirk (2000) and Samek-Lodovici (2005), I assume that WRAP is

satisfied maximally: the entire VP, not each of XP complement to the verb, is optimally parsed into a single Phonological Phrase.)[12] The second candidate is non-optimal, as the focused NP is not at the right edge of a Phonological Phrase, and receives no prominence.

Notice in the tableau that STRESS-FOCUS (SF) is systematically violated, as the focused element is not in I-final position – the position of sentential stress – in either of the optimal candidates. Due to high-ranked ALIGNFOCUS, it is phonological rephrasing, with phrasal stress as a side effect, which is the consistent prosodic correlate of focus. Finally, note that fronting the focused element, as in (20c), not only improves the phrasing (by satisfying WRAP), it also gives the focused element extra prominence, as its High tone has the highest pitch in the Intonational Phrase. As work like Féry (2001), Szendröi (2003) and Samek-Lodovici (2005) shows, movement is motivated in other languages as a way of improving the prosodic phrasing and/or salience of a focused constituent.

4 Focus related morphemes

The final section of the paper is concerned with one final focus construction in Chitumbuka, namely, morphemes which have inherent focus or association with focus, like those illustrated in (21):

(21)
Inherent focus: wh-*enclitic*
(a) ([β]-analúume) ([β]a-ku-zengáa-*chi*)?
2-man 2-TAM-build-what
'What did the men build?'
Focus related morpheme
(b) (Ku-limiliráa-*so*) (ngóomá)?
You/TAM-weed-also maize
'Are you also weeding the maize?'

These morphemes are of theoretical interest, as recent work on the prosody of focus like Rooth (1992), Selkirk (2004) and Truckenbrodt (1995, 1999) leads us to expect that the focused argument of a focus-related morpheme should be made prominent either phonologically, by having the same focus prosody as other focus constructions; or morphologically, by adjacency of the focusing

[12] The optimal candidates in (20) obviously violate syntactic constraints, omitted here, as the verbal complements are not in their canonical order – given in the input – in either candidate. See work like Samek-Lodovici (2005) for discussion of what syntactic constraints might be involved.

morpheme and its argument. For example, in English, sentential accent marks all types of focus, including focus on the italicized argument of 'also' in (22c):

(22)
(a) Where are you going to eat dinner on Friday?
We are going to *an Italian restaurant* for dinner on Friday.
(b) We are going to an *Italian* restaurant, not a *Thai* restaurant.
(c) We are <u>also</u> going to an Italian restaurant on *Saturday* night.

What I will show is that focus particles in Chitumbuka do not conform to this proposal, as the position of the particle and/or prosody do not always highlight the focused argument. This makes them problematic even for a version of STRESS-FOCUS (1), expanded to allow focus morphology to lend culminative prominence to a focused constituent.

4.1 The data

Chitumbuka has two types of focus-related morphemes: verbal enclitics and free morphemes. As we shall see in the next section, both types of focus morphemes – but not their arguments – consistently trigger boundary narrowing (Hyman 1999): the phonological rephrasing which correlates with the distribution of long vowels and falling contour tones illustrated in the preceding section.

4.1.1 Wh-*verbal enclitics*

The data in (23) – (24) shows that *Wh*-particles and words in Chitumbuka are always followed by a phonological phrase break, whether they are final in their VP – where a break would be expected – or not. Notice, this is different from English, where *Wh*-words, when fronted, are not made phonologically prominent through sentential stress, the usual prosodic cue to focus in English. Only the answers to *Wh*-questions must have sentential stress in English.

(23)
-*chi*: object interrogative enclitic 'what?'
(a) ([β]analúume) ([β]a-ku-zengáa-*chi*)?
OR ([β]-analúume) ([β]a-ku-zénga *víichi*)?
2-man 2-TAM-build-what
'What did the men build?'
(b) ([β]a-ku-chitáa-*chi*) (na-chi-páaso)?
2-TAM -do-what with-7-fruit
OR (chi-páaso) ([β]a-ku-chíta ná-cho *víichi*)?
7 - fruit 2-TAM-do with-7 what
'What are they doing with the fruit?'

(24)
-*nkhu*: 'where?'
(a) ([β]a-líimi) ([β]a-lutáa-*nkhu*)? OR ([β]a-líimi) ([β]a-lúta *kóochi*)?
2-farmers 2-TAM-go-where
'Where did the farmers go?'
(b) (mu-líimi) (wa-ka-yeyáa-*nkhu*) (ngóoma)?
1-farmer 1-TAM-carry-where maize
OR (mu-líimi) (wa-ka-yéya *kóochi*) (ngóoma)?
'Where did the farmer carry the maize?'

Note that other *Wh*-question morphemes – like *njáani* 'who' – cannot be realized as *Wh*-enclitic particles; they only have full word variants:

(25)
(a) (ku-múunda) (kw-a-lúta *njáani*)?
LOC-fields LOC-TAM-went who
'Who went to the fields?'
(b) ([β]-áana) ([β]a-ku-vwíra *njáani*)?
2-child 2-TAM-help who
'Who did the children help?'
(c) ((Ni) *njáani*)(wa-ku-vwíra [β]-áana)?
(CLEFT) who 1-TAM-help 2-child
'Who is helping the children?'

The association-with-focus verbal enclitic, -*so* 'also; again' follows the same pattern. It attaches only to verbs and is followed by a phonological phrase boundary. Notice, the verb is not always the argument of this clitic even though it is always the host, as shown in (26b). Further, boundary narrowing is

consistently triggered by the clitic, not by its argument – the constituent in focus. This leads to ambiguity about what is in focus, as shown in (28b), where either the verb or the object could be the argument of *-so*.

(26)
(a) (n-khu-limilíra ma-púuno).
I-TAM-weed 6- tomatoes
'I am weeding tomatoes.'
(b) (Ku-limiliráa-*so*) (ngóomá)?
You/TAM-weed-also maize
'Are you also weeding the maize?'

(27) ([_]-áana) ([_]a-ku-séka péerá)? (Yáaye) ([_]a-kw-imbáa-*so*).
2-child 2-TAM-laugh only No 2-TAM-sing-also
'Do the children laugh only?' 'No, they also sing.'

(28)
(a) (ngáanga) (yi-ku-vwíra msambíizi).
9/doctor 9-TAM-help teacher
'The doctor is helping a teacher.'
(b) (ngáanga) (yi-ku-vwiráa-*so*) (msambíizi).
9/ doctor 9-TAM-help-also teacher
'The doctor is also helping a teacher.'

(29) ([_]a-mbwéengu) ([_]a-ku-lyáa-*so*) (ma-gwáfya m-ma-kúuni).
2-monkey 2-TAM-eat-again 6- guavas in- 6-trees
'The monkeys are eating again the guavas in the trees.'

4.1.2 Free focus morphemes, 'only' and 'not'

The data below show that the free focus morphemes – unlike the enclitics – are immediately adjacent to, and follow, their argument (i.e., the constituent they place in focus).[13] Like the enclitics, they are consistently followed by a phrase break, while the focused argument has no special prosody.

[13] When *yáaye* follows a verb, as in (30c), it ambiguously negates either the verb alone or the entire predicate. When it follows a verb complement, it negates only the complement.

(30) Chitumbuka focus particles

yáaye 'not'

(a) ([β]a-ku-zénga sukúlu *yáaye*) (kwéni nyúumba).
2-TAM-build school not rather house
'They are not building a school, rather a house.'

(b) (tu-ku-phikíra [β]-ána *yáaye*) (kwéni [β]a-léendo).
we-TAM-cook for 2-child not rather 2-visitor
'We are not cooking for the children, rather the visitors.'

(c) (m-bwéengu)(wa-ka- lísya *yáaye*)(mwáana).
1-monkey 1-TAM-make cry not child
'The monkey did not make the child cry.'

péera, wáaka 'only'

(d) ([β]a-léndo *péera*)([β]a-ka-[β]onésya pamúzi páawo)
2-visitor only 2-TAM-show homes their
'They showed their homes only to the visitors.'

(e) Q (Kási mbúuzi) (zi-ka-kwéra pa-mu-pàándâ)?
Q 10- goat 10-TAM-climb LOC-3-fence
'Did the goats CLIMB over the fence?'

A (Yáaye) (mbúuzi) (zi-ka-dúka *wáaka*) (pa-mu-páanda).
no 10-goat 10-TAM-jump only LOC-3-wall
'No, the goats JUMPED over the fence.'

To sum up this section, syntactically, free focus-related morphemes are always adjacent to their argument. However, enclitics attach only to the verb – most plausibly because it is the head of the VP – even though this is not the position that would fall out from either syntax or discourse function. Prosodically, both types of focus morpheme are systematically followed by a phonological phrase break, even if they themselves are not in focus.

4.2 Discussion

Work by Rooth (1992) on focus-related morphemes has argued that they are morphologically and phonologically uninteresting. The focused argument of these morphemes should be made prominent either phonologically, by having the same focus prosody as other focus constructions, like Q/A pairs and in situ contrastive focus; or morphologically, by adjacency of the focusing morpheme and its argument. The proposal that all focus constructions – including focus-

related morphemes – should have the same prosody is also at least implicit in phonological theories of focus prosody, like Selkirk (2004) and Truckenbrodt (1995, 1999), and it is also implicit in the STRESS-FOCUS constraint (1).

The Chitumbuka data clearly raises problems for these proposals, as the focus argument of enclitics is not always made prominent by either phonology or morphology. Free focus morphemes are adjacent to their arguments. However, data like (28b) shows that *-so* is cliticized to the verb even if the complement is focused. As a result, this particle does not make its focused argument morphologically prominent. A further problem is that the phonological phrasing found with focus-related morphemes does not always match the phonological phrasing found in other focus constructions, as work like Rooth (1992) and Truckenbrodt (1995, 1999) predicts. As we saw in the preceding section, phonological rephrasing is the most consistent cue to focus on answers to *Wh*-questions that fall within the VP: the focus constituent is always followed by a Phonological Phrase break. In contrast, it is the focus-related morphemes themselves which trigger phonological rephrasing. Their focused arguments are not consistently highlighted by any special prosody.

To sum up this section, the phonological rephrasing found with focusing morphemes is specific to these morphemes, not generalized from focus constructions which lack a focusing morpheme. It is the focus morpheme – not necessarily the focused argument – that triggers boundary narrowing. This result contradicts Rooth's (1992) proposal that the phonology of focusing morphemes should match the phonology of other focus constructions. Rather, it confirms the findings of Lahiri & Fitzpatrick-Cole (1999) for Bengali, who show that focus particles in that language have a distinct prosody from in situ focus constructions. The verbal enclitic *-so* 'also' presents an additional problem. It contradicts Rooth's (1992) claim that either phonology or morphology should consistently highlight the argument of a focusing morpheme.

4.3 OT analysis

As we have seen in the preceding section, boundary narrowing is the most consistent correlate of focus in Chitumbuka, and it is also triggered by the focus-related morphemes. We can more clearly see the interaction of syntax, morphology and phrasing in highlighting focus-related morphemes by extending the OT analysis developed in section 3.4.2, above, for ex situ focus to the focus-related morphemes. To account for the special properties of the focus-related morphemes, we need two additional alignment constraints – (31a) and (31b), high-ranked, as shown in (31c):

(31)

(a) ALIGN-FM: AlignR(FM; P)
Each focus-related morpheme (FM) is right-aligned with a P[honological Phrase]-boundary.

(b) *ALIGNL: *AlignL(FM, P)
A focus-related morpheme (FM) cannot be separated from its host or focused argument by a P-boundary; that is, it is prosodically dependent on its 'host' or focused argument.

(c) ALIGN-FM, *ALIGNL, HI (18e), DOWNSTEP (18f) >> ALIGNFOCUS (18a) >> WRAPXP (18b) >> ALIGNXP(18c) >> SF (18d)

The constraints in (31) must be ranked above ALIGN-FOCUS (18a). This accounts for the generalization that it is the focusing morpheme – not its argument – which is consistently followed by a Phonological Phrase boundary.

The tableau in (32) shows how these constraints optimize the correct phrasing for sentences with a free focus-related morpheme, like (30c), repeated below:[14]

(30c) (mbwéengu)(wa-ka- lísya *yáaye*)(mwáana).
'The monkey did not make the child cry.'

(32)

/mbwéngu wa-ka-lísya$_F$ *yáye* mwána /	ALIGN-FM	*ALIGNL	ALIGN-FOCUS	WRAP	ALIGN-XP	SF
☞a. (mbw**é**engu)(wa-ka- lísya$_F$ *yáaye*) (mwáana) x x x x			*	*		*
b. (mbw**é**engu) (wa-ka-lísya$_F$ *yáye* mwáana) x x x	*!		*			*
c. (mbw**é**engu) (wa-ka-líisya)$_F$ (*yáaye*) (mwáana) x x x x x		*!		*		*

[14] In this section, the constraints HI and DOWNSTEP are omitted, as they are never violated by an optimal candidate. The 'x' and bold font in the tableaux indicate stress and highest pitch, respectively, as in the tableau in the preceding section.

The first candidate is optimal, as the right edge of the focusing morpheme *yáaye* is aligned with a Phonological Phrase and immediately follows its focus argument, satisfying ALIGN-FM and *ALIGNL, respectively. Candidate (32b) satisfies the default Phonological Phrasing constraints, but is non-optimal as it violates two high-ranked focus phrasing constraints. Candidate (32c) is non-optimal, as the focusing morpheme is not included in the same Phonological Phrase as the focused constituent which defines its position in the sentence.

This tableau highlights the contradictions embodied in the focus-related morphemes. They make a focused constituent prominent by their position: immediately adjacent to the focused constituent. However, they attract the usual focus prosody – boundary narrowing – away from their focused argument. (Notice that the optimal candidate (32a) violates ALIGNFOCUS (18a).) As a result, the focused constituent itself is not stressed at all in this construction.

A final tableau makes explicit the prosody-focus mismatches incurred by the enclitic *-so*, illustrated in data like (28b), repeated below:

(28b) (ngáanga) (yi-ku-vwiráa-*so*) (msambíizi).
The doctor is also helping a teacher.

(33)

/ ngánga yi-ku-vwirá-*so* msambízi /	ALIGN-FM	*ALIGNL	ALIGN-FOC	WRAP	ALIGN-XP	SF
☞a. (ng**á**anga) (yi-ku-vwiráa-*so*) (msambíizi) x x x x			?	*		?
b. (ng**á**anga) (yi-ku-vwirá-*so* msambíizi) x x x	*!		?			?

The first candidate is optimal, as the right edge of the focusing morpheme *-so* is aligned with a Phonological Phrase (P-phrase), satisfying all of the high-ranked alignment constraints. Candidate (33b) satisfies the default Phonological Phrasing constraints (WRAP and ALIGN-XP), but is non-optimal as the focusing morpheme is not followed by a P-phrase boundary, violating ALIGNFM.

The question marks in the tableau emphasize that the phrasing in (33a) is optimal whether the verb is in focus – and so ALIGNFOCUS is actively satisfied – or the verbal complement is in focus – and so ALIGNFOCUS and SF are passively

satisfied, as a result of also satisfying ALIGNXP. Neither the position of the focus-related morpheme nor the prosody unambiguously highlights what is in focus, since *-so* requires a verb as its host whether it places the verb or a complement in focus.

5 Conclusion

To sum up, I have shown that Chitumbuka uses a combination of prosodic, morphological and syntactic means to highlight focused constituents. Prosodically, a Phonological Phrase (P-phrase) boundary follows a focused constituent or focus-related morpheme. Syntactically, focused constituents tend to occur in sentence-initial position or immediately after the verb, where they are highlighted by rephrasing and, potentially, other prosody. Focus-related morphemes also trigger phonological rephrasing. As we have seen, while focused morphemes or focused constituents often come to be in a position (P-phrase-final) to receive phrasal stress, they are seldom in a position – sentence-final – where they would have sentential prominence. This result challenges the claim embodied in the strong form of the STRESS-FOCUS constraint in (1), that cross-linguistically the focused constituent should have prosodic (or morphological) prominence in the sentential domain. And it confirms work like that of Downing (2003), Ladd (1996), de Swart & de Hoop (2000), and Samek-Lodovici (2005) which shows that focus prosody often lends relative prominence, rather than culminative prominence, to focused constituents.

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The Impact of the Morphological Alternation of Subject Markers on Tense/Aspect: The Case of Swahili

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Subject markers for the first, second and third person singular in Southern Swahili dialects display morphological variation in that specific forms are chosen with different tense-aspect markers. This paper documents this variation in the different dialects and presents a distributional chart which reveals the symmetric patterns between these subject markers and their corresponding tense-aspect formatives. The study corroborates earlier work in the manifestation of variant morphological tense-aspect formatives of the regional dialects of Swahili by Mazrui (1983).

1 Introduction

Affirmative finite verbs in the Swahili Southern Dialects (SD), which include the dialects of Pemba, Tumbatu, Vumba, Makunduchi, Nungwi, Ngome, Mtang'ata and (partly) Unguja, have been observed to display two to three different paradigmatic representations for 1st person singular (1sg), 2nd person singular (2sg) and 3rd person singular (3sg) or Class 1 subject markers. The relevant subject markers in SD generally appear as follow:

(1)

	Singular			Plural	
	1st	*ni-, si-*[1]	'I'	*tu-*	'we'
	2nd	*u-, ku-*	'you'	*mu-*	'you'
	cl.1	*yu-, a-, ka-*	's/he'	*wa-*	'they'

As can be seen in (1), there are variant sets of the subject agreement marker of 1sg, 2sg and class 1. The distribution of alternating forms in the 1st person as well as the form */yu-/* for class 1 is limited to few dialects, and hence we will exclude them in the present analysis. The main concern of the paper will be the alternations *u-/ku-* and *a-/ka-*, which have so far received little attention of descriptive Swahilists. There are two reasons why we need to further explore in depth the case of the variant forms *u-/ku-* (2sg) and *a-/ka-* (3sg): First, the set *u-*

[1] This alternation is confined in Mtang'ata and Vumba dialects in SD (see Temu 1980: 22 and Nurse and Hinnebusch 1993: 400-1).

/a- (henceforth Set A) is often reported to be in a morphological complementary distribution to the set *ku-/ka-* (henceforth Set B) (see Maganga 1990: 161, Nurse and Hinnebusch 1993: 365). Secondly, the relation between subject and tense-aspect (TA) formatives has been drawn from a survey of only few SD members. Now that more monographic studies of SD are available, an attempt is made here to collect samples from numerous SD members to account for the relationship between subject and TA formatives. It is hoped that such a systematic survey will provide a clearer representation of the facts, on which then generalizations and analyses might be based. Data for this study (see appendices Table 1-7) have been collected from the following SD members: Pemba, Tumbatu, Vumba, Makunduchi, Nungwi, Ngome, Mtang'ata and Unguja. Interestingly, no single Northern Swahili dialect (ND) as spoken along the Kenyan and Southern Somali coastline exhibits such myriad shapes of subject or TA formatives (except the *ile-/ndo-* formatives as noted by Mazrui (1983: 18-20)).

The organization of the paper is as follows: In section 2, I present the distribution of the grammatical alternation of 2sg and 3sg subject markers in previous works. In section 3, I present the distribution of variant affirmative TA formatives in SD. In section 4, I present the matrix showing the co-occurrence of 2sg/3sg subject markers with different TA markers in SD. In section 5, I offer some clues on conditions that govern co-occurrence restrictions of subject markers and their respective TA formatives in SD. In section 6 I present a brief conclusion.

This short descriptive paper does not intend to rely on any specific theoretical underpinnings, however, some terminology and the matrix based approach have been influenced by Carstairs-McCarthy (2001) and Nurse (2003).

2 The grammatical alternation of 2sg and 3sg person subject markers in SD

Previous analyses of Set A and Set B in Southern Swahili dialects appear intermittently in works of Nurse (1982, 1984/85), Maganga (1990), Nurse and Hinnebusch (1993) and Riedel (2001/2002). It is fair to say that, perhaps, 'a tip of the iceberg' began to appear in Maganga's (1990: 33) analysis of the form *a-* versus *ka-* in the Unguja dialect :

(2) (a) mwalimu **a-**me-sema
1teacher 3sg-ANT-say
'The teacher has said'
(b) mwalimu **ka-**∅-sema
1teacher 3sg-ANT-say
'The teacher has said'

Two opposing paradigmatic verb 'slots' emerge in (2a) and (2b). There is a complementary set of *a-* and *ka-* that stand for the 3sg, along with *me-* versus ∅- that expresses anteriority. Maganga explains that the choice between *a-* and *ka-* is determined by the morphosyntactic category of the perfective aspect (anterior) *me-*. The *ka-* shape is chosen whenever overt *me-* is dropped, otherwise in normal circumstance, we should expect a default *a-* to be followed by *me-*.

However, he (ibid: 108) admits that the *ka-* marker which contrasts with *a-* has a very restrictive usage in Pemba, but a wider application in Tumbatu and Makunduchi. Furthermore, the shape of anterior marker in Pemba is *na-* instead of *me-*. We can observe here that when dealing with subject person variation in SD, we do not only have to consider the opposition between Set A and Set B subject markers, but also the difference between variant TA formatives, such as *me-* and *na-* that may express the same semantic meaning. Riedel (2001/2002:13) in her study of the tense and aspect system of the Northern Unguja Kinungwi dialect (akin to Tumbatu) organizes the singular animate markers into Set A and Set B as follows:

(3)

	Set A	Set B	
1st	*ni-*	*ni-*	'I'
2nd	*u-*	*ku-*	'you'
3rd	*a-*	*ka-*	's/he'

In fact, what Riedel demarcates for Nungwi in (3) is somewhat similar to the analyses of Lambert (1953: 15) for Vumba and Nurse (1982:175) for SD respectively. Riedel (ibid.) explains that Set B in Nungwi is used primarily in the past, anterior, future, completive and progressive, while Set A is used primarily in the conditional, subjunctive and in relatives. Maganga (1990: 228-9) makes a similar observation for Makunduchi in which he analyses Set A as mainly found in the subjunctive, the negative, conditional and situative.

Nurse and Hinnebusch (1993: 365-6) also note that Set B, as derived from Common Bantu/Proto Sabaki **ku-/*ka-,* co-occurs with certain positive tense/aspects in Pokomo, SD, Mwani and Comorian.

The proposal by Mazrui (1983: 20) to account for variation in aspect marking in the four major Swahili dialects of Mvita, Bajuni, Amu and Unguja only mentions *me-/ka-* and *ile/ndo* as variant TA formatives. Within his sample, the variation *me-/ka-* appears only in Unguja (as indeed in SD). However, Mazrui did not reach a conclusion whether the alternation between *me-* and *ka-* is free or is contextually bound, and he appeals for more empirical investigation of the matter. However, to obtain data to adequately demonstrate the 'complementary distribution' between sets of 2sg and 3sg subject formatives versus variant TA markers is not an easy task. Examples of Set A and Set B subject markers found in SD are scattered in different sources, and are collated and reorganized in the form of distributional charts. As variation in subject formatives is sensitive to variation in TA formatives, I present first the distribution of the variant TA formatives in SD.

3 The distribution of variant TA formatives in SD

It should be borne in mind that TA formatives among SD members are not entirely homogeneous. The following table presents a summary of the situation:

(4) Variant TA formatives (affirmative) in SD

	Mak	Tu	Pe	Vu	Ngw	Mt	Ng	Ung
na-, a-, hu- (Present)	na-	n a - , a - / hu-	a-		na-, a-	a-	na(ku)-, a-	na-, a-
na-, a- me-, ma- ∅..(VC) (Anterior)	me- ∅..(VC)	ma- ∅..(VC)	na- ∅..(VC)	na-, a- ∅..(VC)	ma- ∅..(VC)	na- me- ∅..(VC)	∅..(VC)	me- ∅?
(me)sha-, ma- (Completive)	(me)sa-	sha-		sha-	sha-	sha-	sha-	(me)sha-
li-/e-/, ∅..(VC) (Past)	li- ∅..(VC)	li, ∅..(VC)	e-, ∅..(VC)	li-	**li?**		ri-, ∅..(VC)	li-
ta-, cha- nda- (Future)	cha-	ta-	ta-	cha-	ta- nda-	ta-	ta-	ta-
nga-, nge- (Conditional)	nge-	nge-	nga-	nga-	nge-	nga-	nga-	nge-
ki-, ka- (Situative)	ka-	ka-	ki-	ka-	ki-	ka-	ki-	ki-

Key: Mak= Makunduchi; Tu= Tumbatu; Ngw= Nungwi; Pe= Pemba; Vu= Vumba; Mt= Mtang'ata; Ng= Ngome, Ung= Unguja

Note that all TA formatives have variant shapes in SD. With the exception of the future markers *ta-/cha-,* whose variation is phonological, all variants forms are morphologoical, rather than phonologically motivated. Some alternations, such

as *nge-/nga-*, *me-/ma-* and *ki-/ka-* represent different stages of grammaticalization.

We evidently see anterior with various morphological formatives such as *na-, a-/me-, ma-/∅..(VC)*. We shall see later how they interact with the choice of subject formatives. Clearly noticeable alternations are rare cases of TA formatives for future tense *nda-/ta-/cha-*.

We also see in for the expression of past tense the occurrence of the alternation *li-/e-* against *∅..(VC)*. Several gaps may be interpreted as lack of recorded data or suspicious occurrence of form (e.g. loans). Our data also provide us with clear evidence that in all SD members, as well as in Standard Swahili, there is no anterior (perfective) alternation between the formatives *-ile*/*ndo-* as found the Northern Swahili dialects of Mvita, Amu and Bajuni (see Mazrui 1983: 18). The data also indicate that Mazrui (1983: 20) has wrongly interpreted 3sg *ka-* as a perfective maker (in cases like *Juma ka-∅-fika* 'Juma has arrived') alternating with *me-* formatives in Unguja. Rather, *ka-* functions as a 3sg marker in Unguja as well as in SD in general.

4 The co-occurrence of 2/3 sg subject marker with TA markers in SD

I present the distributional chart of Set A and Set B subject markers against TA formatives based on data that represent examples from seven SD members (see Tables 1-7 in the Appendix which present a fuller picture).

(5) Co-occurrence of 2/3 sg subject markers with TA markers in SD

	Mak		Tu		Pe		Vu		Ngw		Mt		Ng	
SET	A	B	A	B	A	B	A	B	A	B	A	B	A	B
na-, a- (PRES)	√	√	√	√	√					√	√		√	
na- a- me-, ma- ∅...(VC) (ANT)		 √ √		 √		√ √		√ √ √		 √ ?		√ √		 √
(me)sha- ma- (COMP)	√	√	√	√ √				√	√	√		√	√	√
li-, e- ∅...(VC) (PST)	√	 √	√	 √	√	 √	√						√	 √
ta-, cha- nda (FUT)	√	√	√		√		√		√	√ √	√		√	
nga ,nge- (COND)	√		√		√		√		√		√		√	
ki-, ka- (SIT)	√		√		√		√		√		√		√	

key: √ 'present'**;** gap= absent or not found

For typographical convenience, Unguja data is excluded from the chart although it has 3sg *ka-* representing 'marked' Set B. The Unguja anterior form ∅...(VC) occurs with this 3sg *ka-* formative. Set A is used in the conditional and the situative, and it appears in almost all future cases. But only Nungwi and Makunduchi have both Set A and B followed by a future marker. Completive is free to choose both Set A and Set B. The anterior/past in the form of ∅...(VC) selects always Set B subject markers.

There is no redundancy in the of shape *na-* as anterior/present in Makunduchi, Tumbatu, Nungwi and Ngome on the one hand, and Pemba, Vumba and Mtang'ata on the other. This is an example of 'substitution' of the *na-*shape. If *na-* is chosen as anterior then it will not appear as present/progressive and vice versa. Interestingly, *na-* as anterior occurs exclusively with Set B. This is an area we can confidently talk of 'mutual exclusiveness'. There are 'rare' cases such as *a-* present in Tumbatu and *ma-* anterior in Nungwi that are reported to co-occur exclusively with Set B. This may be regarded as isolated cases pending further cross-linguistic data.

Exclusivity strictly applies when Set A is chosen in the conditional, and situative. Set B is exclusively used when ∅..(VC) appears in anterior/past.

5 Discussion

The following are my proposals based on the general properties of co-occurrence restrictions between TA and subject marker sets in (5) above.

There are three scenarios in (5) that characterize the selection of sets in SD finite verbs: Firstly, TA formatives such as *na-* (present), *cha-* (future) and *mesha-* (completive) in Makunduchi, *na-* (present) in Tumbatu and *sha-* (completive) in Nungwi and Ngome may agree with both Set A and Set B. These can be regarded as free forms and they are not bound by any particular subject formatives.

Secondly, TA formatives such as ∅..(VC) that stand for anterior/past tend to select Set B only. Others that also appear exclusively with Set B are *ma-* (completive) and *me-* (anterior) in Tumbatu, *nda-* (future) and *me-* (anterior) in Nungwi, and *na-* (anterior) in Pemba, Vumba and Mtangata. These are clear cases of exclusivity.

Thirdly, the last scenario is marked by the exclusive selection of Set A in *nge-*, *nga-* (conditional), *ki-/ka-* (situative), and *li-*, *e-* (past). It is an open question whether any of these scenarios is in some sense more basic or unmarked than the others. I will not attempt to answer this question here, but it might help to address this question by separating the TA formatives involved in the alternations into those which occur with Set A and those which occur with Set B. In the following table, TA markers which occur with subject markers of Set A are found in the top row, while those occurring with subject markers of Set B are found in the bottom row:

(6)

	present	past	anterior	completive	future	conditional	situative
Cell A	na-, a-	li-, e-	me-, ma-	(me)sha-	ta-, cha-	nge-, nga-	ki-, ka-
Cell B	na-, a	∅..(VC)	na-, a-, ∅..(VC)	-sha, ma-	nda-, ta		

TA markers in the top row, occurring with Set A subject markers, includes TA markers which cut across the whole of Swahili spectrum and Sabaki in general. In contrast, TA markers occurring with Set B subject markers, are limited to SD, and other peripheral Sabaki members such as Comoro, Pokomo (Nurse p.c.) and Mwani. By virtue of being less common within Swahili dialects, these markers might be called 'marked TA' or constituting a 'subparadigm'.

Why should the TA markers which occur with Set B subject markers be limited to SD and other peripheral Sabaki members only? The answer is not

clear-cut. One possibility seems to be that two or three variant paradigm structures may be present in the grammatical system of these dialects, as speakers may well have borrowed a grammatical structure of the neighbouring dialects or languages.

(7) (a) a-ri-rim-a
3sg-PAST-cultivate-FV
'S/he cultivated'

(b) ka-∅-rim-a
3sg-PAST-cultivate-FV
'S/he cultivated'

To many coastal Standard Swahili speakers, the choice of *a-/ri-* versus *ka-/∅-* is not strange. These are two paradigmatic structures representing the expression 'S/he cultivated'. The format (7b) is disappearing fast in formal settings. This implies that over time it will cease to exist and thus the language will remain with only one format which we can regard as the general format. We have no evidence of crisscrossing of forms from one paradigm to another.

6 Conclusion

Illustration of co-occurrence restrictions of SM over TA formatives in the affirmative finite verbs from SD is clear evidence that more research is to be done to uncover the hidden phenomenon of morphologically conditioned allomorphy in Bantu. In addition to the questions raised here, further research is needed to ascertain whether subject markers are selected on the basis of TA markers, or whether, contrarily, specific TA markers are selected on the basis of subject markers. This short article has only raised these questions, but at least I hope it has pinpointed areas for further scrutiny.

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Appendices

Table 1: Makunduchi

TA	SET A	SET B
/na-/ 'Present'	(a) *chukua u-na-cho-chak-a* take 2sg-PRS-REL-want-FV 'Take anything you want' (Whiteley 1959: 64)	(a) *Ama ku-na-kuf-a fwa!* if 2sg-PROG-die-FV die 'If you are dying die' (Chum 1995: 10) (b) *ka-na-ngi-a* 3sg-PROG-enter-FV 'S/he is entering' (Sengo 1995: 32)
/me-, ma-, ∅...(VC)/ 'Anterior'		(a) *ku-me-imb-a* 2sg-ANT-sing-FV 'You have sung' (Maganga 1990: 228-9) (b) *ke-me-law-a* 3sg-ANT-come-FV 'S/he has come' (Chum 1995: 11) (c) *ku-∅-und-u* 2sg-ANT-make-VC 'You have made' (Whiteley 1959: 65)
/(me)sha-, ma-/ 'Completive'		(a) *ke-mesa-i-bwes-a* 3sg-COMP-OM-torn-FV 'S/he has torn it' (Chum 1995: 10) (b) *ku-she-choge-a kulya?* 2sg-COMP-push_over-FV here 'Have you finished pushing over here' (Whiteley 1959: 59)
/li-, e-, ∅...(VC)/ 'Past'	(a) *a-∅-vyo-kwis-a* 3sg-PST-REL-finish-FV 'When he finished' (Whiteley 1959: 204)	(a) *ku-∅-sumk-a* 3sg-PST-sell-FV 'You ran' (Maganga 1990: 228-9) (b) *ka-∅-uz-a* 3sg-PST-sell-FV 'S/he sold' (Maganga 1990: 228-9)
/ cha-, nda-/ 'Future'		(a) *ka-cha-vat-a* 3sg-FUT-get-FV 'S/he will get' (Maganga 1990: 228-9)
/nga-, nge/ 'Conditional'	(a) *u-nge-m-on-a* 2sg-COND-2OM-see-FV 'You would have seen' (Whiteley 1959: 61)	
/ki-, ka-/ 'Situative'	(a) *u-ka-fik-a kuchamona* 2sg-SIT-arrive-FV 'If you arrive you will find him' (Whiteley 1959: 60)	

Table 2: Tumbatu

TA	SET A	SET B
/na-, a-/ 'Present'		(a) *ku-na-zi-uz-a?* 2sg-PROG-OM-sell-FV 'Are you selling it?' (N & H 1993: 408) (a) *kw-a-lamuk-a* 2sg-PRST-wake_up-FV 'You wake up' (Maganga 1990: 160)
/na-,a-, me-, ma-, ∅...(VC) 'Anterior'		
/(me)sha-, ma-/ 'Completive'		(a) *ku-sha-kwimb-a* 2sg-COMP-sing-FV 'You have sung' (Maganga 1990: 155) (b) *ke-sha-kwembilw-a* 3sg-COMP-tell-FV 'S/he has been told' (Maganga 1990: 190)
/li-, e-, ∅...(VC)/ 'Past'		(a) *k-∅-og-o* 2sg-PST-bath-VC 'You bathed' (Maganga 1990: 160) (b) *kw-∅-ambil-i watu* 3sg-PST-tell-VC 'S/he told people' (Maganga 1990: 160)
/ta-, ca-, nda-/ 'Future'		
/nga-, nge/ 'Conditional'		
/ki-, ka-/ 'Situative'		

Table 3: Nungwi

TA	SET A	SET B
/na-/ 'Present'		(a) *ku-na-kwend-a ku-m-on-a* 2sg-PROG-go-FV to-OM-see-FV 'You are going to see him' (Riedel 2002: 28)
/me-, ma-/ 'Anterior'	(a) *u-ma-jafyagiy-a?* 2sg-ANT-sweep-FV 'Have you swept?' (Riedel 2002: 19)	(a) *ka-ma-vay-a kanga* 3sg-ANT-dress-FV kanga 'S/he is wearing a kanga' (Riedel 2002: 19)
/(me)sha-, ma-/ 'Completive'	(a) *u-ma-kuly-a?* 2sg-ma-eat-FV 'Have you eaten?' (Riedel 2002: 22)	(a) *ku-sha-kuly-a* 2sg-COMPL-eat-FV 'Have you eaten?' (Riedel 2002: 28)
/li-, e-, ∅...(VC)/ 'Past'	(a) *a-∅-po-fik-a* 3sg-PST-REL-arrive-FV 'When s/he arrived' (Riedel 2002: 17)	(a) *ka-∅-j-a* 3sg-PST-come-FV 'S/he came' (Riedel 2002: 28) (b) *ke-∅-nd-e* 3sg-PST-go-VC 'S/he went' (Riedel 2002: 16)
/ta-, ca-, nda-/ 'Future'	(a) *a-ta-ye-sha-rudi* 3sg-FUT-REL-COMP-return 'Each person who will have returned' (Riedel 2002: 28)	(a) *ka-ta-ye-ja uka veye* 3sg-FUT-REL-come-FV 'S/he is the one who will leave' (Riedel 2002: 27) (b) *ka-ta-som-a* 3sg-FUT-read-FV 'S/he will read' (Riedel 2002: 26) (c) *ka-nda-fika* 3sg-FUT-arrive-FV 'S/he is going to arrive' (Riedel 2002: 28) (d) *ku-nda-mon-a* 3sg-FUT-see-FV 'You are going to see him' (Riedel 2002: 28)
/nga(li)-, nge(li)/ 'Conditional'	(a) *a-ngali a-ka-som-a* 3sg-COND 3sg-ka-read-FV 'I was still reading' (Riedel 2002: 25)	
/ki-, ka-/ 'Situative'	(a) *a-ka-ja ka-ta-kuka vitu* 3sg-SIT-come 3sg-FUT-give food 'If s/he comes, she will give you food' (Riedel 2002: 25)	

Table 4: Pemba

TA	SET A	SET B
/na(ku)-, a-/ 'Simple Present'	(a) *w-a-ank-a* 2sg-PRS-wake_up-FV 'You wake up' (Maganga 1990: 112)	
/na-/ 'Anterior'		(a) *ka-na-uk-a* 3sg-ANT-return-FV 'S/he has returned' (N & H 1993: 420)
/(me)sha-, ma-/ 'Completive'		
/li-, e-, ∅...(VC)/ 'Past'	(a) *w-e-ank-a* 2sg-PST-wake_up-FV 'You woke up' Maganga (1990: 112)	(a) *ku-∅-pik-i leo* 2sg-PST-cook-VC today 'Did you cook today?' (Whiteley 1959: 15) (b) *kw-∅-end-e jana?* 2sg-PST-go-VC 'Did you go today?' (Whiteley 1959: 15)
/ta-, cha-, nda-/ 'Future'	(a) *a-ta-kwend-a* 3sg-FUT-go 'S/he will go' (Whiteley 1959: 15)	
/nga-, nge/ 'Conditional'		
/ki-, ka-/ 'Situative'		

Table 5: Vumba

TA	SET A	SET B
/na-/ 'Anterior'		(a) *ku-na-fyom-a* 2sg-ANT-read-FV 'You have read' (N & H 1993: 422) (b) *ka-na-kufw-a* 3sg-ANT-die-FV 'S/he has died' (N & H 1993: 376)
/a-/ 'Immed. Anterior'		(a) *kw-a-kubw-a* 2sg-Imm.ANT-fall-FV 'You have just fallen' (N & H 1993: 422) (b) *k(a)-a-fik-a* 3sg-Imm.ANT-arrive-FV 'S/he has just arrived' (N & H 1993: 366)
/(me)sha-, ma-/ 'Completive'		(a) *kwa-sha-injik-a* 2sg-COMP-write-FV 'You have written' (Lambert 1953: 30) (b) *ka-sha-kuj-a* 3sg-COMP-arrive-FV 'S/he has arrived' (Lambert 1953: 30)
/li-, e-, ∅...(VC)/ 'Past'	(a) *u-∅-vivi* 2sg-PST-be-how 'What sort of person are you?' (Lambert 1953: 30) (b) *a-li-vo-ondok-a...* 3sg-PST-REL-go-FV 'As s/he went …' (Lambert 1953: 38)	(a) *ka-∅-fu* 3sg-PST-die 'S/he died' (N & H 1993: 366) (b) *ka-∅-wa-shind-i* 3sg-PST-OM-win-VC 'S/he won them' (Whiteley 1953: 35) (c) *ku-∅-rer-e* 2sg-PST-bring-CV 'You brought' (Lambert 1953: 18)
/ta-, ca-, nda-/ 'Future'	(a) *u-ca-fung-a* 2sg-FUT-tie-FV 'You will tie/ will be tying' (N & H 1993: 422)	
/nga-, nge/ 'Conditional'	(a) *a-nga-wa-je* ... 3sg-COND-be-how 'Whatever he is…' (Lambert 1953: 33)	
/ki-, ka-/ 'Situative'	(a) *kavu a-ka-rwanga* 'S/he used to clean grain' (N & H 1993: 420)	

Table 6: Mtang'ata

TA	SET A	SET B
/∅, a-, na-/ 'Present'	(a) *a-∅-aw-a* 3sg-PRST-go-FV 'She is going' (Temu 1980: 27) (b) *a-∅-geuk-a* 3sg-PRST-turn-FV 'She is turning' (Temu 1980: 23) (c) *u-na-ko-ka-a* 2sg-PROG-LOC-stay-FV 'Where you stay' (Shihabudin & Mnyampala 1977: 34)	
/na-/ 'Anterior'		(a) *ku-na-ya-bun-u* 2sg-ANT-6OM-create-VC 'You have created them' (Temu 1980: 20) (b) *ka-na-bak-a* 3sg-ANT-give_out-FV 'She has given out' (Temu 1980:23)
/∅...(VC)/ 'Anterior'		(a) *ku-∅-on-o wanihadaa* (Shihabudin & Mnyampala 1977: 34)
/(me)sha-, ma-/ 'Completive'		
/li-, e-, ∅...(VC)/ 'Past'	(a) *u-li-cho-kuj-i-a* 3sg-PST-REL-come-APPL-FV 'That which you came for' (Temu 1980: 26)	
/ta-, ca-, nda-/ 'Future'	(a) *a-ta-twig-ish-w-a* 3sg-FUT-pull-CAUS-PASS-FV 'She will be pulled' (Temu 1980: 26)	
/nga-, nge/ 'Conditional'	(a) *a-nge-ni-p-a* 3sg-COND-1OM-give-FV 'S/he could have given me' (Temu 1980: 17)	
/ki-, ka-/ 'Situative'	(a) *u-ka-pik-a* 2sg-SIT-cook-FV 'If you cook' (N & H 1993: 420)	

Table 7: Ngome

TA	SET A	SET B
/na(ku)-, a-/ 'Present'	(a) *u-na-rim-a faya* 2sg-PROG-cultivate-FV faya 'Are you cultivating faya?'	(a) *ko-∅-ki-tak-a kiswahili kyangu* 2sg-∅-7OM-want-FV 7-Swahili my 'Do you want my Swahili?'
/∅...(VC)/ 'Anterior'		(a) *ku-∅-mw-on-o* 2sg-ANT-2OM-see-VC 'Have you seen him?' (b) *ka-∅-fanz-a-je-ko* 3sg-ANT-do-FV-how-17-Loc 'What has s/he done there?'
/(me)sha-, ma-/ 'Completive'	(a) *a-sha-rim-a* 3sg-COMP-cultivate-FV 'S/he has already cultivated'	(a) *ku-sha-rim-a weye?* 2sg-COMP-cultivate you 'Have you cultivated already?' (b) *ka-sha-gundumk-a?* 3sg-COMP-wake_up-FV 'Has she woken up already?'
/li-, e-, ∅...(VC)/ 'Past'	(a) *a-ri-rim-a* 3sg-PST-cultivate-FV 'S/he cultivated'	(a) *ku-∅-zarik-a-je ?* 2sg-PST-be_born-ST-FV-how 'How were you born?' (b) *ka-∅-pit-i pa* 3sg-PST-pass-VC here 'S/he passed here'
/ta-, ca-, nda-/ 'Future'	(a) *a-ta-rim-a* 3sg-PST-cultivate-FV 'S/he cultivated'	
/nga-, nge/ 'Conditional'	(a) *a-nga-rim-a* 3sg-COND-cultivate-FV 'S/he could have cultivated'	
/ki-, ka-/ 'Situative'	(a) *a-ki-rim-a* 3sg-SIT-cultivate-FV 'If s/he cultivates'	

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Locative Inversion in Otjiherero: More on morpho-syntactic variation in Bantu*

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This paper discusses locative inversion constructions in Otjiherero against the background of previous work by Bresnan and Kanerva (1989) on the construction in Chichewa, and Demuth and Mmusi (1997) on Setswana and related languages. Locative inversion in Otjiherero is structurally similar to locative inversion in Chichewa and Setswana, but differs from these languages in that there are fewer thematic restrictions on predicates undergoing locative inversion. As Otjiherero has a three-way morphological distinction of locative subject markers, this shows that there is no relation between agreement morphology and thematic restrictions in locative inversion, confirming the result of Demuth and Mmusi. The availability of transitive predicates to participate in locative inversion in Otjiherero furthermore raises questions about the relation between locative inversion, valency, and applicative marking, and these are addressed in the paper, although further research is needed for a full analysis. In terms of function of the locative subject markers, Otjiherero presents, like Chishona, a split system where all markers support locative readings, but where one of them is also used in expletive contexts. In contrast to Chishona, though, this is the class 16, rather than the class 17 marker.

1 Introduction

Locative inversion in many Bantu languages is characterised by a locative NP functioning as grammatical subject, while the logical or thematic subject appears in the position immediately after the verb and is presentationally focused, as the

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contrast between the transitive clause in (1a) and the example of locative inversion in (1b) from Otjiherero shows: [1]

(1) a. òvà-ndù v-á-hìtí mó↓-ngándá [Otjiherero]
2-people SC2-PAST-enter 18-9.house
'The guests entered the house/home'

b. mò-ngàndá mw-á-hìtí òvá-ndù
18-9.house SC18-PAST-enter 2-people
'Into the house/home entered (the) guests'

In (1a), the verb agrees with the class 2 subject *òvàndù* which precedes the verb, and the locative NP *mó↓ngándá* follows the verb. In contrast, in (1b), the locative precedes the verb, and *òvándù* follows it, and the verb shows subject agreement with the locative NP.[2] Both sentences express the same semantic relation, i.e. that guests are entering the house, but differ in their grammatical characteristics and pragmatic felicity, as will be discussed in more detail below.

Locative inversion constructions such as illustrated in (1b) have been subject to some discussion in the Bantu linguistics literature. In an influential paper, Bresnan and Kanerva (1989) provide a detailed analysis of locative inversion in Chichewa and identify several morpho-syntactic characteristics. The construction is brought into a comparative context by Demuth and Mmusi (1997), who draw primarily on data from Setswana, but also on data from Kichaga, Chishona and Sesotho. The analyses by Bresnan and Kanerva, and by Demuth and Mmusi are summarized in sections 2 and 3. In the main section of this paper, section 4, I present a description of locative inversion in Otjiherero (R30), spoken in Namibia and Botswana, and show how the evidence from Otjiherero further enriches the picture of variation in locative inversion in Bantu.

2 Locative inversion in Chichewa

Bresnan and Kanerva (1989) establish a number of structural characteristics of locative inversion in Chichewa, summarized below:

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[1] The following abbreviations are used in this paper: 1, 2, 3, … = Noun Class, APPL = Applicative, CC = Complement Case, DC = Default Case, DM = Demonstrative, FV = Final Vowel, HAB = Habitual, LOC = Locative, Narr = Narrative, OC = Object Concord, PASS = Passive, REL = Relative, RemImpv = Remote Imperfective, SC = Subject Concord. Acute accent = high tone, grave accent = low tone, down arrow = downstep.

[2] The different tonal patterns of *òvàndù* and *mòngàndá* in (1a) and (1b) indicate their different 'tone cases' in these examples. See Section 4.1, below.

- The locative NP is the grammatical subject
- The post-verbal NP expresses the logical subject and cannot be omitted or separated from the verb
- The post-verbal NP is presentationally focused
- The verb and the post-verbal NP are phonologically phrased together
- No object marker referring to the post-verbal logical subject is permitted in locative inversion
- Locative inversion is only possible with unaccusative predicates

These observations are briefly illustrated with examples in what follows. Examples (2) to (4) show locative inversion with the unaccusative predicates *-li*, 'be', *-bwéra*, 'come', and *-khala*, 'sit'. In these examples, the locative NP precedes the verb and the verb shows subject agreement with the locative NP (all Chichewa examples are from Bresnan and Kanerva 1989):

(2) ku-mu-dzi ku-li chi-tsîme [Chichewa]
17-3-village SC17-be 7-well
'In the village is a well'

(3) ku-mu-dzi ku-na-bwér-á a-lendô-wo
17-3-village SC17-PAST-come-FV 2-visitors-those
'To the village came those visitors'

(4) m-mi-têngo mw-a-khal-a a-nyăni
18-4-tree SC18-PERF-sit-FV 2-baboons
'In the trees are sitting baboons'

Further tests, such as subject relatives and other cases of subject extraction, confirm the impression conveyed by the agreement morphology, namely that the locative NP is the grammatical subject. Like other grammatical subjects, locative subjects in locative inversion can be omitted, or be post-posed (5a), but the locative NP cannot intervene between the verb and logical subject (5b), showing that the logical subject has to follow the verb immediately:

(5) a. mw-a-khal-a a-nyăni m-mi-têngo
SC18-PERF-sit-FV 2-baboons 18-4-trees
'In the trees are sitting baboons'

b. *mw-a-khal-a m-mi-têngo a-nyăni
SC18-PERF-sit-FV 18-4-trees 2-baboons
Intd.: 'In the trees are sitting baboons'

Bresnan and Kanerva propose that, while the locative NP is the grammatical subject and fulfils the function of discourse topic, the post-verbal NP is the thematic subject, but syntactically an (ergative) object, and that it is presentationally focused.[3] This explains why the post-verbal NP cannot be omitted or displaced. Further evidence for this analysis comes from phonological phrasing which shows that the post-verbal NP, like objects in transitive clauses, forms a single phonological phrase with the preceding verb (6a) and cannot be phrased separately (6b), indicating that the post-verbal NP is not a topic, as topics tend to be phrased separately (cf. Downing et al. 2005):

(6) a. (ku-muu-dzi) (ku-na-bwér-á a-lendó átáàtu)
17-3-village SC17-PAST-come-FV 2-visitors three
'To the village came three visitors'

b. *(ku-muu-dzi) (ku-na-bwéèr-a) (a-lendó átáàtu)
17-3-village SC17-PAST-come-FV 2-visitors three
Intd.: 'To the village came three visitors'

The examples in (6) show right edges of phonological phrases (indicated by bracketing) marked by the lengthening of the pen-ultimate vowel, and by the tonal alternation of the final vowel of the verb (H in (6a) and L in (6b)). The contrast between (6a) and (6b) shows that the post-verbal NP in locative inversion is phrased with the preceding verb, like a transitive object.

Another, related piece of evidence comes from the fact that the post-verbal NP cannot be expressed by an object marker:

[3] Part of Bresnan and Kanerva's theoretical argument is that locative inversion provides evidence against derivational models of syntax, but supports models like Lexical Functional Grammar (LFG) with distinct levels of representation for constituent, thematic and discourse structure, where the post-verbal NP can be analysed as fulfilling different functions at different levels. Since the aim of this paper is descriptive, I will not go into the details of the argument.

(7) *ku-mu-dzi ku-na-wá-bwér-a a-lendô-wo
17-3-village SC17-PAST-OC2-come-FV 2-visitors-those
Intd.: 'To the village came they, those visitors'

As the contrast between (7) and (3), above, shows, the post-verbal NP cannot be cross-referenced with an object marker. This can be explained by assuming that the object marker itself cannot be focused, and that lexical objects cross-referenced with an object marker are always topics (cf. Bresnan and Mchombo 1987), thus further confirming the view that the post-verbal NP is focused.

A final observation Bresnan and Kanerva make is that locative inversion is not possible with any kind of predicate, but only with predicates whose highest thematic role is <theme>. This analysis of the restriction on predicates available for locative inversion is based on the thematic classification of verbs developed in LFG and summarized in Table 1, below:

Table 1: Verb types and thematic roles (from Demuth and Mmusi 1997)

Verb Type	**Active**	**Passive**
Unergatives	<ag, loc>	<(ag), loc>
Unaccusatives	<th, loc>	<(th), loc>
Transitives	<ag, th, loc>	<(ag), th, loc>
Ditransitives	<ag, th, pat, loc>	<(ag), th, pat, loc>

The table shows how different predicate types are derived from a classification of their thematic information. According to Bresnan and Kanerva's analysis, only active unaccusatives and passivised transitives and ditransitives (i.e. those predicates with <theme> as their highest role) can be found in locative inversion. A relevant Chichewa example is given in (8):

(8) *m-mi-têngo mu-kú-imb-á a-nyăni
18-4-tree SC18-PROGR-sing-FV 2-baboons
Intd.: 'In the trees are singing baboons'

The ungrammaticality of (8) results, according to Bresnan and Kanerva, from the fact that the verb *-imba*, 'sing', is an unergative predicate, whose highest thematic role is <agent>, and which thus cannot be used in locative inversion.[4]

[4] My own (brief) Chichewa fieldwork indicates that thematic restrictions on locative inversion are not as strict as stated above; (8) improves if the predicate used is 'make

Bresnan and Kanerva raise the possibility that this restriction is a universal quality of locative inversion, but subsequent work, discussed in the next section, shows that it does not hold in all Bantu languages.

To summarize, Bresnan and Kanerva argue that in locative inversion in Chichewa the locative NP is structurally a topical subject, and is therefore in agreement with the subject marker of the verb, while the logical subject is expressed by the post-verbal NP which is focused. This analysis explains the phonological phrasing of the post-verbal NP together with the verb, the obligatory immediate post-verbal position of the post-verbal NP, and the unavailability of object marking. In addition, Bresnan and Kanerva argue that locative inversion is restricted to unaccusative predicates, whose highest thematic role is <theme>. Comparative work on Bantu locative inversion, reported in Demuth and Mmusi (1997) and discussed in more detail in the next section, has shown that many structural and pragmatic characteristics of Chichewa locative inversion are also found in related Bantu languages. However, variation exists with respect to the function of locative subject markers, and to the thematic restrictions on predicates which can be used in locative inversion, where it is found that not all Bantu languages restrict locative inversion to unaccusative predicates.

3 Variation in locative inversion

Demuth and Mmusi (1997) present an analysis of locative inversion and presentational focus constructions in Setswana, and compare the Setswana facts with locative inversion structures in Chichewa, Kichaga, Sesotho and Chishona. They show that locative inversion in Setswana is in some respects identical to locative inversion in Chichewa, but that, in contrast to Chichewa, locative inversion clauses in Setswana have a presentational, but not a locative interpretation under pro-drop, and that, furthermore, locative inversion is possible with all predicates except active transitive ones. To add to this, Demuth and Mmusi point out differences between Chichewa and Setswana with respect to the morphological expression of locative classes. The similarities and differences between locative inversion in Chichewa and in Setswana can be summarized as follows:

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noise' (as baboons don't sing), and even examples with transitive (object drop) predicates are acceptable (Al Mtenje, p.c.; for applicatives in locative inversion, cf. Section 4.5):

(i) kù-nyùmbà kù-nà-pík-ír-á à-lèndó
17-house SC17-PRES-cook-APPL-FV 2-guests
'At the house are cooking guests'

Like in Chichewa,

- the locative NP is the grammatical subject
- the post-verbal NP is the logical subject and cannot be omitted or separated from the verb
- the post-verbal NP is presentationally focused

However, unlike Chichewa,

- Setswana has only one locative SC, class 17, and not, like Chichewa, a three-way distinction between classes 16, 17, and 18
- in the absence of a full locative NP subject (i.e. in 'pro-drop'), no locative reading results, but only a presentational focus reading
- locative inversion in Setswana is possible with any predicate, except for active transitives and active ditransitives

The first difference between Chichewa and Setswana mentioned above, i.e. the absence of a three-way distinction of locative subject markers, is illustrated by the following examples (all examples in this section are from Demuth and Mmusi 1997):

(9) Fá-se-tlharé-ng gó-émé ba-símané [Setswana]
16-7-tree-LOC SC17-stand/PRF 2-boys
'By the tree stand the boys'

(10) Kó-Maúng gó-tlá-ya roná maríga
17-Maung SC17-FUT-go 1plDM winter
'To Maung we shall go in winter'

(11) Mó-le-fátshé-ng gó-fúla di-kgomo
18-5-country SC17-graze 10-cattle
'In the country are grazing the cattle'

The examples in (9) to (11) show that the locative NP precedes the verb, and that the logical subject follows in immediate post-verbal position. However, in Setswana, in contrast to Chichewa, there is a mismatch between the noun class marking of the locative NP and the subject marker on the verb. While the three locative NPs show different locative marking – class 16 *fá-* (9), class 17 *kó-* (10)

and class 18 *mó-* (11) – the subject marker in all three examples is class 17 *gó-*. In other words, while in the domain of nominal morphology, Setswana retains the full three-way distinction of locative (classes 16-18) marking, in the domain of verbal agreement morphology, only one subject marker, class 17, is used for agreement with any of the locative classes. Demuth and Mmusi argue that this difference in agreement marking is related to the interpretive range of locative inversion in different Bantu languages, that is, the second difference between Chichewa and Setswana mentioned above.

As already pointed out in relation to Chichewa, locative inversion is related to pragmatic information in that the post-verbal NP is presentationally focused and typically introduces new information. Demuth and Mmusi further observe that the contribution of the locative NP is to locate the event or state expressed by the verb as holding or taking place at a specific location. However, they argue that in Setswana, but not in Chichewa, there is a further, more fine-grained distinction to be made. In Setswana, a locative reading of a locative inversion clause is only available if the locative NP is expressed lexically. If the locative NP is dropped ('pro-drop'), the locative reading is no longer available, and only a presentational focus reading results. This is illustrated by the difference in interpretation of (11), above, with an overt locative NP subject, and (12), where no locative NP is present:

(12) Gó-fúla di-kgomo
SC17-graze 10-cattle
'It's cattle that are grazing/There are cattle grazing'

According to Demuth and Mmusi, the difference between the two readings is the absence of any locational sense in (12), which is present in (11). Both (11) and (12) are presentational focus constructions, but only (11) has locative reference. Since the subject marker in (12) does not make any semantic contribution to the sentence, examples like (12) are also sometimes called 'impersonal constructions', and they can be seen as constructions in which the logical subject is brought out of the topic position before, and into the focus position after the verb, as the logical subject presents new information (cf. Zerbian, this volume). Demuth and Mmusi analyse the difference in reading as resulting from the semantics of the subject maker *gó-*, which, according to Demuth and Mmusi's analysis, does not itself contain any locative information (i.e., no locative, or indeed any other, phi-features) and thus functions as an expletive, fulfilling only syntactic requirements. The locative interpretation of examples like (11), then, results solely from the presence of an overt lexical locative subject. The situation in Setswana contrasts with the locative subject markers of Chichewa,

where subject markers for all three locative classes are distinguished, and which, possibly because of this, include locative meaning. Thus, in Chichewa, a locative interpretation results from the information of the subject markers, and is hence available even without an overt lexical locative NP. The difference between Chichewa, where, according to Demuth and Mmusi's analysis, locative inversion always has a locative meaning component, and Setswana, where a locative reading only arises in the presence of a full lexical locative NP subject, can thus be related to the morphological differentiation of locative subject markers.

The third difference between locative inversion in Chichewa and Setswana observed by Demuth and Mmusi is that, in contrast to Chichewa, Setswana allows locative inversion also with predicates which do have an <agent> role, as, for example, the unergative predicates *-léma*, 'plough', and *-bíná*, 'sing':

(13) Gó-léma ba-nna
SC17-plough 2-men
'There are men ploughing'

(14) Gó-bíná ba-sádi
SC17-sing 2-women
'There are women singing'

As the examples in (13) and (14) show, Setswana is more liberal than Chichewa with respect to which predicates can be used in locative inversion. However, Setswana does impose restrictions on locative inversion, namely that it is not possible with transitive predicates:[5]

(15) *Gó-ét-ela ba-símané kokó
SC17-visit-APPL 2-boys 1a.grandmother
'There are boys visiting the grandmother'

[5] There is some indication that there is dialectal variation with these examples. In contrast to the Rolong dialect examples from Demuth and Mmusi, (i) is grammatical in Sengwato and Sekgatla. The example has a transitive predicate, but note that there is no applicative morpheme, in contrast to (16). Examples corresponding to (15), with or without applicative, seem to be ungrammatical in Sengwato and Sekgatla as well (cf. McCormack in prep.):

(i) Gó-kwálá ńkùkù lè-kwálò
17-write 1a. grandmother 5-letter
'There is writing the grandmother a letter'

(16) *Gó-kwál-éla kokó lo-kwálo
SC17-write-APPL 1a.grandmother 5-letter
'There is writing the grandmother a letter'

In terms of thematic roles, locative inversion in Setswana appears to be licensed except with those verbs which have both an <agent> and a <theme> role. Based on these findings, and drawing on further data from Sesotho and Chishona, Demuth and Mmusi provide an overview of the availability of locative inversion with different predicate types, which is summarized in Table 2.

Table 2: Verb classes found in locative inversion/presentational focus constructions (adapted from D&M 1997)

Verb Type		Chichewa	Chishona	Sesotho	Setswana
unergatives	active	*	*	OK	OK
	passive	*	OK	OK	OK
unaccusative	active	OK	OK	OK	OK
	passive	*	OK	OK	OK
transitive	active	*	*	*	*
	passive	OK	OK	OK	OK
ditransitives	active	*	*	*	*
	passive	OK	OK	OK	OK

Table 2 shows that locative inversion is most restricted in Chichewa, where only unaccusative and passivised transitives and ditransitives are possible. In contrast, in Setswana and Sesotho, only active transitives and ditransitives are disallowed. Chishona constitutes yet another type, in that in addition to transitives, also active unergatives are barred from locative inversion, or, in terms of thematic roles, any predicate with an <agent> thematic role.

Taking all this together, Demuth and Mmusi show that while locative inversion constructions in Bantu have several structural characteristics in common, they differ in terms of their pragmatic and semantic properties: in Chichewa, locative inversion always has a locative reading, while in Setswana the availability of locative reading depends on the presence of an overt lexical locative NP. Furthermore, while in Chichewa locative inversion is restricted to unaccusative verbs, in Setswana locative inversion is possible with any verb except for those which have both an <agent> and a <theme> role. In addition,

variation exists in the morphological expression of locatives: Chichewa has three locative subject markers, while Setswana has only one. Demuth and Mmusi propose that this variation in morphological forms is related to the availability of locative and expletive readings. In languages with a morphological distinction of locative markers, locative readings are always available, while in languages with only one subject marker, the absence of a full locative NP leads to an expletive reading. Consideration of further languages makes this picture even more clear. Demuth and Mmusi draw on additional evidence from Kichaga, Chishona, and Sesotho (based on work by Demuth (1990), Harford (1990) and Machobane (1995)), and show how these languages fit into the analysis of locative inversion they propose. Their findings are summarized in Table 3, which details differences between the five languages with respect to locative morphology (nominal and verbal), to the grammatical function of the locative subject marker as giving rise to a locative reading or not, and to the thematic structure of verbs participating in locative inversion.

Table 3: Variation in Locative Inversion (1) (adapted from D&M 1997)

	Constituent Structure			*Thematic Structure*	
Language	*Locative Morphology*	*SM Morphology*	*Gramm. Function of SM*	*Highest Thematic Role*	*Verb Type*
Chichewa	16/17/18	16/17/18	locative	theme	unaccusative
Kichaga	-	17/18	locative	theme	unaccusative
Chishona	16/17/18	16/17/18	locative	– agent	all except agent actives
		17	expletive		
Setswana	16/17/18	17	expletive	*(agent + theme)	all except active transitives
Sesotho	-	17	expletive	*(agent + theme)	all except active transitives

Table 3 shows that the grammatical function of the subject marker depends on the morphology of subject markers in a given language. Evidence from Kichaga shows that even a two-way distinction (between classes 17 and 18) is sufficient to give rise to locative readings, and it also shows that locative nominal morphology (i.e. the presence of locative noun class prefixes) is not relevant for the distinction between locative and expletive readings (as does the evidence

from Sesotho). Chishona provides an intermediate case, in that the class 17 marker is ambiguous. Under pro-drop, an expletive reading may result only with the class 17 subject marker, which is thus ambiguous between being specified for locative information or not, whereas the Chishona class 16 and 18 subject marker are fully specified for locative information and thus always result in a locative reading, even if no overt locative NP is present. The Chishona system can thus be seen to provide an intermediate stage in a grammaticalization process which leads to the loss of locative information of one locative subject marker, which ultimately becomes an expletive marker.[6] Demuth and Mmusi discuss this historical approach, and then provide an analysis in terms of partial information, where the lexical content of subject markers can be either specified for locative information or not. While the relation between the loss of agreement morphology and the bleaching of the (remaining) subject marker is analysed by Demuth and Mmusi as being inter-dependent, there is another question arising from the summary in Table 3, and that is whether there is a causal relation between reduced agreement morphology (and concomitant change in semantic function) and the thematic restrictions on verbs in locative inversion. While the picture is not entirely clear, it seems that the two languages with only a class 17 subject marker (Setswana and Sesotho) impose the least restrictions on the thematic structure of locative inversion predicates. Conversely, the three languages with a morphological contrast between locative subject markers – Chichewa, Kichaga and Chishona – impose more restrictions. However, the match is not perfect: Chichewa and Chishona pattern together with respect to subject marker morphology, but differ in terms of thematic restriction, while Chichewa and Kichaga impose the same thematic restrictions but differ in subject marker morphology. Yet, it is still worth wondering whether there is a relation between subject agreement morphology and function, and thematic structure. Demuth and Mmusi, after considering this possibility, tentatively reject it and leave it for further research. As we will see in the next section, evidence from Otjiherero supports this decision.

In summary, Demuth and Mmusi provide a typology of locative inversion in different Bantu languages and point out the relation between the function and the morphological inventory of locative subject markers. In languages with only one locative subject marker, the subject marker is semantically bleached and does not independently encode locative meaning. Furthermore, variation exists as to the thematic restrictions imposed on locative inversion, and three different types are found in the data considered by Demuth and Mmusi: Chichewa and Kichaga allow only unaccusatives, Chishona allows any predicate except those with an <agent> thematic role, and in Setswana and Sesotho locative inversion

[6] See below for a more grammaticalised subject marker of class 16, as opposed to class 17.

is possible except with predicates with both an <agent> and a <theme> role. As will be seen below, Otjiherero provides yet another type of language.

4 Locative inversion in Otjiherero

In this section, I discuss locative inversion in Otjiherero in some detail, against the background of the preceding sections. Locative inversion in Otjiherero shows many parallels with the locative inversion constructions discussed above. However, there are a number of differences which further complete the typology of locative inversion discussed in the preceding sections. Locative inversion in Otjiherero can be contrasted with Chichewa and Setswana as summarized below:

Like in Chichewa and Setswana,

- the locative NP is the grammatical subject
- the post-verbal NP is the logical subject and cannot (easily) be omitted or separated from the verb
- the post-verbal NP is presentationally focused

Like Chichewa (but unlike Setswana),

- Otjiherero has a three-way contrast of locative (class 16, 17, 18) subject markers

Unlike in Chichewa and Setswana,

- locative inversion is permitted with any type of predicate except ditransitives
- all locative subject markers support a locative reading, but the class 16 marker can also be used in expletive contexts (similar to Chishona)
- post-verbal object clitics are permitted in locative inversion

Otjiherero is like Chichewa and Setswana with respect to the grammatical status of the locative and the post-verbal NPs. However, unlike in the languages discussed so far, locative inversion in Otjiherero is also possible with transitive predicates, and only disallowed for ditransitives. As Otjiherero has a three-way distinction in its locative agreement morphology, this can be seen as evidence

that there is no relation between rich morphology and thematic restrictions in locative inversion. Furthermore, the possibility of having transitives in locative inversions results in interesting interactions between locative inversion, valency, and word-order. In terms of function of the locative subject markers, Otjiherero presents, like Chishona, a split system where all markers support locative readings, but where one of them is also used in expletive contexts. In contrast to Chishona, though, this is the class 16, rather than the class 17 marker. Another relevant feature of Otjiherero locative inversion structures is that, while object markers are not allowed in locative inversion, post-verbal object clitics are. Aspects of Otjiherero locative inversion are discussed in detail below.

4.1 Grammatical status of locative and post-verbal NPs

Like in Chichewa and Setswana, the locative NP in Otjiherero can be analysed as grammatical subject of locative inversion constructions. In (17), the locative NP agrees with the verb in a simple locative inversion structure, while (18) shows that the locative NP can be raised to subject position of a raising verb like *-múníká*, 'be visible, seem'. Both the matrix verb and the lower verb show agreement with the locative NP. Finally in (19), the locative NP is the head of a subject relative construction. All these constructions indicate that the locative NP behaves as a grammatical subject:

(17) mò-ngàndá mw-á-hìtí òvá-ndù [Otjiherero]
18-9.house SC18-PAST-enter 2-people
'Into the house entered people'

(18) mò-ngàndá má↓-mú-múníká ààyó mw-á-hìtí òvá-ndù
18-9.house PRES-SC18-seem as_if SC18-PAST-enter 2-people
'Into the house there seems as if there entered people'

(19) mò-ngàndá mú-mw-à-hìtí òvà-ndù y-á-pì
18-9.house REL18-SC18-PAST-enter 2-people SC9-PAST-burn
'The house into which people entered burnt'

With respect to the last example, it has to be added that the head of the relative here does not have to be marked as locative, as (20) shows:

(20) òngàndá mù-mw-á-hìtí òvà-ndù y-á-pì
9.house REL18-SC18-PAST-enter 2-people SC9-PAST-burn
'The house into which people entered burnt'

The example in (20) is identical to (19) except for the absence of locative marking of the head. The example is an illustration of the ambiguous status of locative morphology observed also elsewhere. Thus, in nominal morphology, the locative noun class prefix precedes the prefix of the locativised noun, but does not replace it (cf. Möhlig et al. 2002). In verbal morphology, as can be seen in (20), both the class 18 relative concord, and the class 18 subject marker can 'agree' with the class 9 noun *òngàndá*, which is the head of the relative. Space does not permit to discuss the structure of agreement in relative clauses in Otjiherero, but I take the examples in (19) and (20) to indicate that, on the one hand, the locative NP in locative inversion structures can be analysed as subject (or topic, cf. Bresnan and Mchombo 1987), and that, on the other, the lexical information of Otjiherero subject and relative locative markers includes fully specified locative information, which accounts for the locative interpretation in (20). Thus, I assume that the locative NP in locative inversion in Otjiherero functions, like in Chichewa and Setswana, as subject or topic.

The status of the post-verbal NP in Otjiherero is, like the locative NP, similar to the post-verbal NP in Chichewa and Setswana. In most circumstances, the post-verbal NP cannot be omitted (21), although examples with a generic or impersonal interpretation like (22) are acceptable, in which case focus falls on the predicate.[7]

(21) *mò-ngàndà mw-á-hìt-í
18-9.house SC18-PAST-enter-FV

(22) pò-ngàndá pé-térék-à
16-9.house SC16.HAB-cook-FV
'At home there is usually cooking going on/being cooked'

Furthermore, like in Chichewa, there is phonological evidence for the close relation between the verb and the post-verbal NP. Otjiherero has a system of tonal nominal inflection, or 'tone cases', which is functionally similar to the conjoint/disjoint system of, for example, Setswana (cf. Marten and Kavari, in prep.). Complement case (CC) is found on nouns (and other constituents)

[7] The final sequence *-ek-* of the verb in (22) looks like a stative suffix, although synchronically this is not easy to prove, as there is no base *-*ter-*.

immediately following the verb, including objects, which usually introduce new information, as well as the post-verbal NP in locative inversion (23), but not on 'dislocated' NPs, for example post-posed topics, which show default case (DC) (24):

(23) p-á-hìtí òvá-ndù
SC16-PAST-enter 2CC-people
'There entered (some) people'

(24) v-á-hìtì, òvà-nâtjé
SC2-PAST-enter 2DC-children
'They entered, the children (did)'

The contrast between (23) and (24) shows that the post-verbal NP in (23) takes complement case, signalling a close relation with the verb, while a post-posed topic as in (24) takes default case. This indicates that post-verbal NPs in locative inversion are part of new information, and not topics.

Finally, locative inversion constructions are often found in contexts where they present new information, for example at the beginning of stories (example from Möhlig et al. 2002: 105):

(25) Pà rí òmú-rúmèndŭ wà t-íré
SC16.RemImpv be 1CC-man SC1.RemPerf die-PERF
ná péndúkà
and.Narr.SC1 resurrect
'There was a man, he had died and then he resurrected'

Uses like in (25) confirm the view that locative inversion is used to express presentational focus. It is not quite so clear, however, to what extent (25) has truly locative reference, unless by metaphorical extension to a time in the past. I will return to this point in the next section.

The structural status of the locative NP and the post-verbal logical subject in Otjiherero is thus parallel to locative inversion in Chichewa and Setswana.

4.2 Morphology and function of locative subject markers

Another shared feature of Otjiherero and Chichewa, but one not shared by Setswana, is the three-way morphological contrast of locative subject markers:

(26) pò-ndjúwó p-á-rárá é-rúngá
16-9.house SC16-PAST-sleep 5-thief
'At the house slept a/the thief'

(27) kò-mù-tí kw-á-pósé òzó-ndjìmá
17-3-tree SC17-PAST-make_noise 10-baboons
'In the tree made noise (the) baboons'

(28) mò-ndùndú mw-á-váz-éw-á ómu-àtjé
18-9.mountain SC18-PAST-find-PASS-FV 1-child
'On the mountain was found a/the child'

The examples in (26) to (28) show that the verb agrees with the locative subjects of classes 16, 17, and 18.

In terms of function, Otjiherero resembles Chishona in that locative subject markers are specified for locative features, but that one locative subject maker can be used in expletive constructions. In Otjiherero, this is the class 16 marker *pa-*, rather than the class 17 marker as in Chishona. Evidence for the locative specification of *pa-* comes from the following examples:

(29) a. pò-ngàndá p-á-rár-á òvá-ndù
16-9.house SC16-PAST-sleep-FV 2-people
'The house/home slept people'

b. p-á-rár-á òvá-ndù
SC16-PAST-sleep-FV 2-people
'There (that place) slept people'

In (29a), the locative subject provides the place where the people slept. However, the locative interpretation is also available in (29b), even though the overt locative subject has been dropped, and it thus results from the lexical specification of the subject marker. On the other hand, as pointed out above, in examples like (25), there does not seem to be any clear locative sense implied. Similarly, the locative subject marker *pa-* can be used in questions like (30) without a specific locative sense:

(30) p-á-tjít-w-á-yé?
SC16-PAST-do-PASS-FV-what
'What happened (lit. it/there happened what)?'

In (30), *pa-* functions more like a 'dummy subject' than a locative pronominal-like element. Furthermore, *pa-* can be used as an expletive subject in raising constructions (32):

(31) òvà-èndá v-á-múník-á kútjà v-á-rì mó↓-ngándá
2-guests SC16-PAST-be.seen-FV that SC2-PAST-be 18-9.house
'The guests were seen (seemed) to be (lit.: that they were) at home'

(32) p-á-múník-á kútjà òvà-èndá v-á-rì mó↓-ngándá
SC16-PAST-be.seen-FV that 2-guests SC2-PAST-be 18-9.house
'It was seen (seemed) that the guests were at home'

The example in (31) shows that the lower subject *òvàèndá* has been raised to the subject position of the matrix clause. In contrast, in (32), *òvàèndá* remains in the lower clause, and the matrix verb takes *pa-* as subject marker. In this case, *pa-* seems to function purely as an explicit element, indicating that the form does not have locative features. Like in Chishona, then, Otjiherero has developed an ambiguous form of locative subject marker, which can be used without locative reference. However, Otjiherero differs from Chishona, as well as from Setswana and Sesotho, in that the more grammaticalised form is the class 16 marker *pa-*, and not the class 17 marker *ku-*. As will be shown in the following section, Otjiherero also differs from the languages discussed so far in terms of thematic restrictions on locative inversion.

4.3 Thematic structure

Otjiherero imposes fewer restrictions on the thematic structure of predicates participating in locative inversion than the languages discussed so far. The examples in the preceding section illustrating the morphological differentiation of subject markers also show that locative inversion is possible with unaccusatives, unergatives, and passivised transitives: *-rárá* in (26) is an unaccusative, while *-vázéwá* in (28) is a passivised transitive; both of these predicate types are also found in Chichewa and Setswana. However, *-pósé* in (27) is an active unergative predicate, as found in Setswana, but not in Chichewa.

Locative inversion in Otjiherero is also possible with transitives, as (33) with the predicate *-rísá*, 'feed' (a causativised form of *-ryá*, 'eat'), shows. As with locative inversion with intransitive predicates, the logical subject has to follow the verb immediately, as shown by the ungrammaticality of (34). The

example in (35) contrasts with the ungrammatical Setswana example (15), above, showing that *-kávàrùrìrà*, 'visit', can be used in Otjiherero locative inversion.

(33) pé-rísá òvá-èndá òzò-ngòmbè
SC16.HAB-feed 2-guests 10-cows
'There feed guests cattle'

(34) *pé-rísá òzó-ngòmbè òvà-èndá
SC16.HAB-feed 10-cows 2-guests
Intd.: 'There feed guests cattle'

(35) pò-ngàndá pé-kávàrùrìrà òvá-nàtjè òvà-èndá
16-9.house SC16.HAB-visit 2-children 2-guests
'At home visit (the) children (the) guests'

Furthermore, locative inversion in Otjiherero is also possible with transitive predicates with an applicative morpheme:

(36) pò-ndjúwó pé-tjáng-èr-à òvá-nàtjè ò-mbàpírà
16-9.house SC16.HAB-write-APPL-FV 2-children 9-letter
'At the house write (the) children a letter'

In (36), the transitive verb *-tjángà*, 'write', takes the applicative morpheme, although no beneficiary is expressed (or implied), and so the applicative has to be analysed as introducing the locative NP which becomes the grammatical subject. The interaction between locative inversion and applicatives will be further discussed in Section 4.5, below. In any event, the examples in this section show that locative inversion in Otjiherero is possible with transitive predicates as well as intransitive ones. In terms of thematic roles, it seems that in Otjiherero the only restriction on locative inversion is on predicates which have <agent>, <theme> and <beneficiary> roles. This means that in Bantu at least four types of languages can be distinguished with respect to the thematic restrictions found in locative inversion: Languages where locative inversion is restricted to unaccusatives (Chichewa), languages where locative inversion is allowed for all predicates except unergatives and transitives (Chishona), languages where it is found with all predicates except transitives (Setswana), and languages where it is found with all predicates except ditransitives (Otjiherero).

4.4 Summary

The Otjiherero data discussed so far can be contextualized within the typology developed by Demuth and Mmusi as in Table 4:

Table 4: Variation in Locative Inversion including Otjiherero

	Constituent Structure			*Thematic Structure*	
Language	*Locative Morphology*	*SM Morphology*	*Gramm. Function of SM*	*Highest Thematic Role*	*Verb Type*
Chichewa	16/17/18	16/17/18	locative	theme	unaccusative
Kichaga	-	17/18	locative	theme	unaccusative
Chishona	16/17/18	16/17/18	locative	– agent	all except agent actives
		17	expletive		
Setswana	16/17/18	17	expletive	*(agent + theme)	all except active transitives
Sesotho	-	17	expletive	*(agent + theme)	all except active transitives
Otjiherero	16/17/18	16/17/18	locative	*(agent + theme + ben)	all except ditransitives
		16	expletive		

The addition of Otjiherero to the table shows that there is no correlation between agreement morphology and thematic structure: In terms of agreement morphology Otjiherero patterns with Chichewa and Chishona, but with respect to thematic structure Otjiherero constitutes a type of its own, and furthermore presents the most liberal system, while Chichewa presents the least liberal system. This strongly indicates that any variation in thematic structure in locative inversion is independent of constituent structure. In terms of the more important correlation observed by Demuth and Mmusi, that is, the correlation between morphology and function of locative subject markers, Otjiherero confirms the hypothesis of this correlation. Otjiherero is like Chishona in that all locative subject markers support a locative interpretation in the absence of an overt locative subject, and that, in addition, one member of the locative markers

– class 16 in Otjiherero, class 17 in Chishona – can be used in expletive contexts, indicating the loss of locative information. Evidence from Otjiherero thus confirms both of Demuth and Mmusi's hypotheses about locative inversion in Bantu, and it furthermore provides two more details of the typological variation observed with the construction: the use of the class 16, rather than class 17, as expletive subject marker, and yet another set of thematic restrictions on predicates in locative inversion.

4.5 Further points

Before concluding, I briefly discuss two further points of Otjiherero locative inversion, which are, however, at the present stage not fully developed, as more work in the areas is necessary.

As already pointed out above, the applicative morpheme contributes in specific ways to locative inversion constructions. It can be used with transitive predicates, but is optional: Both (37), without applicative morpheme, and (38), with applicative morpheme, are acceptable:

(37) pò-ngàndá pé-térék-à òmú$^{\downarrow}$-kázéndú ònyàmà
16-9.house SC16.HAB-cook-FV 1-woman 9.meat
'At home cooks a/the woman meat'

(38) pò-ngàndá pé-térék-èr-à òmú$^{\downarrow}$-kázéndú ònyàmà
16-9.house SC16.HAB-cook-APPL-FV 1-woman 9.meat
'At home cooks a/the woman meat'

This optionality corresponds to an optionality also observed with locative applicatives without locative inversion:

(39) òmù-kázéndú ú-térék-à ò-nyàmà (pò-ngàndá)
1-woman SC1.HAB-cook-FV 9-meat 16-9.house
'The woman cooks meat at home'

(40) òmù-kázéndú ú-térék-èr-à ò-nyàmà pò-ngàndá
1-woman SC1.HAB-cook-APPL-FV 9-meat 16-9.house
'The woman cooks meat at home'

In (39), the locative NP fulfils adverbial function and can be omitted, or placed at the beginning of the sentence. In contrast, in (40), the locative NP is an

argument of the applicative verb and cannot be omitted or fronted (see e.g. Creissels (2004), Marten (2003) for discussion of these 'non-canonical' applicatives). From these data, it is clear that locative inversion is possible in both cases: if the locative NP is an adjunct (37) or an applicative argument (38). However, what is not possible is to have a locative inversion structure in which the applicative licenses a benefactive argument such as *òvàèndá* in (41):

(41)	*pò-ngàndá	pé-térék-èr-à	òmú$^{\downarrow}$-kázéndú	ò-nyàmà	òvà-èndá
	16-9.house	SC16.HAB-cook-APPL-FV	1-woman	9-meat	2-guests

Intd.: 'At home cooks a/the woman meat for the guests'

In terms of thematic roles, this corresponds to a bar on the inclusion of a <beneficiary> role in locative inversion, as indicated in Table 4, above. However, one might wonder if an account in terms of thematic roles captures the restrictions on locative inversion in Otjiherero correctly. The use of thematic roles for the explanation of locative inversion originates from Bresnan and Kanerva's (1989) analysis of Chichewa, where, as discussed above, they analyse locative inversion as being restricted to unaccusative predicates. This restriction, as Bresnan and Kanerva argue, can be straightforwardly expressed as licensing locative inversion only if the highest thematic role encoded by the predicate is <theme>. However, as Demuth and Mmusi (1997) observe, once comparative evidence is taken into account, the characterisation of locative inversion in terms of thematic roles becomes more difficult and less intuitive. For example, in the case of Otjiherero, it seems unclear how the bar of the <beneficiary> role can be motivated: Since the <beneficiary> role is usually assumed to be lower than <agent> in the thematic hierarchy, but higher than <theme> (cf. e.g. Bresnan and Kanerva 1989: 23), it is unclear why a language which allows both <agent> and <theme>, separately and jointly, to be present in predicates participating in locative inversion would not allow the intermediate <beneficiary> role. In view of this, an alternative analysis could possibly be proposed along the following lines. First, as shown above, the logical subject follows the verb immediately, also in locative inversion with transitive predicates. However, in benefactive applicative constructions, this is also the preferred position for the benefactive object – in both cases, this presumably results from the relevance of the position immediately after the verb for the expression of focus. Thus, locative inversion constructions with benefactive applicatives are ruled out because both the logical subject and the applied, benefactive object need access to the same position. A slightly different way of looking at this is to take into account the licensing potential of the applicative morpheme. As was shown above, locative NPs in locative inversion constructions need not be licensed by the applicative.

However, on the assumption that if the applicative morpheme is present in locative inversion constructions, it will license the locative NP, and assuming that the applicative in general licenses only one NP, then locative inversion constructions with benefactive NPs are not possible because the benefactive NP cannot be licensed. Both these explanations need to be worked out in detail, but the outlines given here are meant to show that the Otjiherero data discussed in this paper provide evidence for critically assessing previous analyses of locative inversion in Bantu.

A second point worth mentioning relates to the unavailability of the object marker in locative inversion. As Bresnan and Kanerva (1989) observe, the object marker cannot occur in locative inversion clauses, and this is also true for Otjiherero, as the contrast between (42) and (43) shows:

(42) mò-ngàndá mw-á-hìtí òvá-ndù
18-9.house SC18-PAST-enter 2-people
'Into the house entered people'

(43) *mò-ngàndá mw-é-vè-hìtí
18-9.house SC18-PAST-OC2-enter
Intd.: 'Into the house entered they'

However, Otjiherero has, in addition to pre-verbal object markers, a series of post-verbal object pronominal clitics which are reduced forms of full pronouns and occur in complement case. As (44) shows, post-verbal object clitics can be used in locative inversion:

(44) mò-ngàndá mw-á-hìtí↓-vó
18-9.house SC18-PAST-enter-OBJCL2
'Into the house entered they'

In many contexts, object marker and object clitics are interchangeable, and they cannot occur together (with the same reference). However, as these examples show, they behave differently with respect to locative inversion. It remains to be seen whether a fuller analysis of the structural and semantic properties of object marker and object clitics can explain this difference, and what this means for the analysis of locative inversion in Otjiherero. However, further research is needed to address this question fully.

5 Conclusions

The study of locative inversion in Bantu has shown several aspects in which the construction is uniform across many Bantu languages. Locative inversion can be characterized by the locative NP which functions as grammatical subject and discourse topic, and with which the verb shows subject agreement. The logical subject is expressed by an NP in immediate post-verbal position. It is, like grammatical objects, in close relation to the verb, as shown by phonological evidence, and cannot in general be omitted. Furthermore, the post-verbal NP is presentationally focused.

However, variation exists with respect to the semantic information encoded in locative subject markers, and with respect to the thematic restrictions imposed on predicates available for locative inversion. Demuth and Mmusi (1997) show that differences in the semantic information encoded in locative subject markers are related to their morphological differentiation, and data from Otjiherero confirm their claim that languages with a three-way contrast in locative agreement morphology support a locative reading of locative inversion structures even if no overt locative subject is present. Otjiherero also provides an example of a Bantu language where the class 16 subject marker, as opposed to the class 17 marker like in Chishona and Setswana, can be used in expletive constructions. Furthermore, the evidence from Otjiherero in this paper shows that there is no relation between agreement morphology and thematic structure, as Otjiherero patterns with Chichewa in terms of morphology, but differs maximally from Chichewa with respect to thematic restrictions. While the languages discussed by Demuth and Mmusi show that locative inversion is restricted to different kinds of intransitive predicates, this is not the case in Otjiherero where locative inversion is also possible with active transitives. Evidence from Otjiherero thus shows that thematic restrictions provide an independent parameter of variation in Bantu, and that at least four different types of thematic restrictions have to be postulated.

Locative inversion in Otjiherero interacts in complex ways with valency and applicative marking. While this is probably true of all Bantu languages, this interaction is more pronounced in Otjiherero since the language allows transitive predicates in locative inversion. The applicative morpheme in Otjiherero locative inversion optionally licenses the locative NP, but it cannot license a benefactive NP. I have suggested that, while this can be stated in terms of thematic roles (essentially by imposing a restriction on the <beneficiary> role), a better motivated analysis might relate the absence of benefactive applicatives in locative inversion to the specific word-order requirements of the logical subject and the applied object, or to the licensing potential of the applicative morpheme. However, no explicit analysis of these examples has been given here, and further

research on the structure and function of locative inversion with applicative verbs is needed.

A final point noteworthy in relation to locative inversion in Otjiherero is that while Otjiherero supports the generalization that object marking with pre-verbal object markers is not possible in locative inversion, post-verbal object clitics can be used. Again, further research into the function of these post-verbal object clitics is needed in order to develop a full analysis.

The evidence presented in this paper has further illustrated the extent of variation of locative inversion constructions in Bantu. As in other areas, variation found in Bantu languages provides important evidence for understanding morpho-syntactic micro-variation more generally and for the development of theoretical models of language. Furthermore, locative inversion is not an isolated phenomenon, but is embedded in the wider structure of the language, and further research will show in more detail the interaction between locative inversion and Bantu clause structure, and with other structures related to inversion and focus.

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A Further Look at Conjunctive and Disjunctive Forms in Setswana

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Setswana distinguishes between conjunctive and disjunctive verb forms in the present positive tense. Creissels (1996) shows that this is also true of a number of other tenses (present negative, future positive and perfect positive). This work is used as a starting point to investigate the conjunctive/disjunctive distinction in my own Setswana data. Further to those presented in Creissels, there is data on the past and past progressive tenses, and environments such as relatives and subordinates. Creissels' analysis is supported by different examples, including those that do not utilise a frame intended to limit boundary effects. The are also examples not within this frame that raise questions about how flexible the conjunctive/disjunctive system can be. This paper is a work in progress.

1 Introduction

In this paper I will be following on from Creissels' (1996, 1998, and 1999) and others' (Chebanne et al. 1997) work on the occurrence of conjunctive and disjunctive verb forms in Setswana. I have taken these as a starting point to look again at various forms in my own Setswana data.

Setswana (Guthrie S31, part of the Sotho-Tswana group, S30) is the national and majority language of Botswana where it is spoken by approximately 1 million people. Worldwide there are approximately 4 million speakers. It is one of the 11 national languages of South Africa with approximately 3,300,000 speakers and it also spoken in Zimbabwe (30,000 speakers) and Namibia (6,000 speakers).

Section 2 summarises Creissels' 1996 paper, looking at some of the Setswana data that he works with and his explanation of conjunctive and disjunctive forms in different tenses. In section 3 I replicate some of Creissels' data, elicited from informants I worked with. Section 4 looks at some other examples in order to investigate some environments (that are not in Creissels'

work) for conjunctive and disjunctive forms. In section 5 I conclude by showing how my data supports that of Creissels.

This paper is a work in progress and as such there is still much that needs to be done. Aside from not having enough examples to substantiate the conjunctive/disjunctive claims on my own data, another problem with the examples in sections 3 and 4 is that they are presented as conjunctive or disjunctive according to the intended meaning and/or the linear structure of the phrase, then taking tone into account. Better would be to look first at the conjunctive and disjunctive examples, and then at the linear structure, but this would require more space than available here. Furthermore, the data would need to be available in all of the dialects used here in order to fully account for the dialectal differences. This is a matter for future research.

2 Summary of Creissels

Creissels finds that there are several tenses in Setswana in which a distinction between conjunctive and disjunctive verb forms can be found and that they are realised only through tonal differences, apart from one exception (the present positive) where the distinction is also expressed by a segmental morpheme *a*. The "conjunctive" form is the equivalent to Meeussen's (1959) *conjoint* verb in Kirundi, or the "strong" link as found in Sharman (1956). Its use suggests that the verb is not in clause final position and anything following is "new" information. The "disjunctive" verb form is equivalent to Meeussen's *disjoint* verb, or Sharman's "weak" link. The disjunctive verb form occurs when the verb *is* in clause final position and anything that may follow it is a 'postclausal topic' (Creissels 1996, 109).

All of the examples in this section (section 2) are from Creissels 1996.[1]

[1] At this stage it is important to make a mention of the issue of orthography. The standard orthography of Setswana is not a disjunctive system, making clause boundaries difficult to identify. Tonal variations do not only effect individual elements or words but necessitate looking at an entire verb form or clause. Creissels represents the verb forms as one word (for example: *difula, diafula* – see examples (1) and (2) for contrast with this). I have chosen to illustrate the verb forms and clauses in question through the use of **bold** type. In the relevant paper (1996), Creissels presents his examples without a morphological gloss, but with a full phonetic transcription. I have chosen not to follow in his example and have omitted the phonetic transcription from my presentation of Creissels' data, but have provided a morphological gloss. These glosses are my own, even for those of Creissels' data and any mistakes in the glossing are my own also. Furthermore, only the surface tones have been marked in this paper. This is due to time and space constraints limiting discussion of phonological processes.

2.1 Present positive

I will begin with the present positive tense because the conjunctive/disjunctive distinction can be seen easily – without having to look at tone markings – as the disjunctive is marked by *a*.

In this tense the distinction between conjunctive and disjunctive can be seen through the use of the disjunctive marker *a* between the subject marker (SM) and the verb, as can be seen in example (2).[2] It is important to note that the disjunctive marker is found only in disjunctive examples. However, disjunctive examples are not only marked through the use of the disjunctive marker, but also through distinct tonal patterns – we will come to these examples later on.

Short form – conjunctive:[3]

(1) dî-kgòmó **dî** **fúlà** kwá nòké-ǹg
CL10-cow SM10 graze LOC river-LOC
'The cows graze/are grazing at the river' Creissels 1996, 109, ex. (2)

Long form – disjunctive:

(2) dî-kgòmó **dî** **á** **fúlà**
CL10-cow SM10 DISJ graze
'The cows graze/are grazing' Creissels 1996, 109, ex. (1)

In these first two examples we can see that the short form of the verb does not occur in sentence final position whereas the long form does. In terms of the conjunctive/disjunctive distinction, in sentence final or prepausal position only the disjunctive form can be used, whereas both the conjunctive and disjunctive forms can be used in the non-prepausal position (though the conjunctive form is found here more often).

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[2] Creissels calls this a 'formative [a]'. It should not be confused with a Subject Marker. An [a] is found in examples both as a disjunctive marker (in which case it will be glossed 'DISJ') and as a subject marker (in which case it will be glossed 'SM').

[3] The glosses used in this paper are as follows:

1SG	=	1st Person Singular	DISJ	=	Disjunctive Marker
2SG	=	2nd Person Singular	FUT	=	Future
2PL	=	2nd Person Plural	LOC	=	Locative
3SG	=	3rd Person Singular	NEG	=	Negative
3PL	=	3rd Person Plural	OM	=	Object Marker
CL	=	Class	PFT	=	Perfect
CONS	=	Consecutive	PST	=	Past
CONJ	=	Conjunction	REL	=	Relative
COP	=	Copula	SM	=	Subject Marker

(1) and (2) illustrate the disjunctive and conjunctive forms in cases where the verb either is or is not followed by a complement. (4) and (5), and the others which follow in this section, are within a frame used to eliminate the effects of the prepausal position on the basic tonal melody. The frame is: the subject marker preceding the verbal base, and the conjunction and full pronoun following the verb. It is illustrated in (3):

(3) kè bîná lé èné
Subject Marker Verb-'dance' Conjunction Full Pronoun-3SG
'I dance/am dancing with him/her' Creissels 1996, 110, ex. (4)

Short form – conjunctive:

(4) **bá** **bînà** lé bòné
SM3PL dance CONJ 3PL
'They dance/are dancing with them' Creissels 1996, 110, ex. (6)

Long form – disjunctive:

(5) **bá** **à** **bîná** lé bòné
SM3PL DISJ dance CONJ 3PL
'They too dance/are dancing' Creissels 1996, 110, ex. (5)

With (4) and (5) we can see that it is purely the context of the sentence (what it actually means) that determines whether the short or long, or conjunctive or disjunctive, form is used. Furthermore, due to the conjunction *lé* introducing a pronoun that can either refer to the subject or not, the actual intended meaning can only be seen through the use of the conjunctive or disjunctive form: when the pronoun introduced by *lé* does not refer to the subject, the verb is in the conjunctive but when the pronoun introduced by *lé* does refer to the subject, the verb is in the disjunctive.

Creissels argues that, syntactic differences aside, the tonal differences in these last two examples must reflect the conjunctive/disjunctive distinction (rather than the postverbal boundary) because otherwise the long form would have the same tonal melody in all contexts (which would be with a low (L) final tone, the same as if immediately followed by a pause), whether followed by a pause or not, and that the melody found in the long (disjunctive) form (with two final high (H) tones) should actually represent the short (conjunctive) form.

2.2 Present negative

The present negative tense supports the arguments raised in section 2.1 (that context determines whether the verb form is conjunctive or disjunctive and that differences in the tonal melody reflect the conjunctive/disjunctive distinction), the only difference being that the distinction between the conjunctive and

disjunctive forms can *only* be seen through the tonal differences. These examples do not have a disjunctive marker.

Conjunctive:

(6) **gà** **bá** **bîné** lé bòné
NEG SM3PL dance CONJ 3PL
'They do not dance/are not dancing with them'
Creissels 1996, 110, ex. (14)

Disjunctive:

(7) **gà** **bá** **bînè** lé bòné
NEG SM3PL dance CONJ 3PL
'They do not dance/are not dancing either' Creissels 1996, 110, ex. (13)

Conjunctive:

(8) **gà** **ké** **bîné** lé èné
NEG SM1SG dance CONJ 3SG
'I do not dance/am not dancing with him/her'
Creissels, 1996, 110, ex. (12)

Disjunctive:

(9) **gà** **ké** **bînè** lé ǹná
NEG SM1SG dance CONJ 1SG
'I do not dance/am not dancing either' Creissels, 1996, 110, ex. (11)

(6) and (8) are in the conjunctive form. The verb forms have a final H tone. Compare these with (7) and (9), which are in the disjunctive form and have a final L tone. All other tones within these examples are the same, it is the final tone of the verb form that distinguishes between conjunctive and disjunctive.

2.3 Future positive

The tonal differences between pairs of examples across tenses are not always the same. This supports the earlier case for tonal differences being related to the conjunctive/disjunctive distinction.

Compare the pairs of examples in the present negative tense (section 2.2) with the ones below. In the present negative the conjunctive/disjunctive pairs show the same tonal variation in the different forms: conjunctive has two final high tones (…HH) on the verb, disjunctive has final high-low tones (…HL). In the future positive tense the example pairs show that the conjunctive form has …HL tones and the disjunctive form has …HH tones – the reverse of what is found in the present negative.

Conjunctive:

(10) **kè** **tlàà** **bînà** lé èné
SM1SG shall dance CONJ 3SG
'I shall dance with him/her' Creissels 1996, 110, ex. (8)

Disjunctive:

(11) **kè** **tlàà** **bîná** lé ǹná
SM1SG shall dance CONJ 1SG
'I too shall dance' Creissels 1996, 110 , ex (7)

Conjunctive:

(12) **bá** **tláà** **bînà** lé bòné
SM3PL shall dance CONJ 3PL
'They will dance with them' Creissels 1996, 110, ex. (10)

Disjunctive:

(13) **bá** **tláà** **bîná** lé bòné
SM3PL shall dance CONJ 3PL
'They too will dance' Creissels 1996, 110, ex. (9)

(10) and (12) are in the conjunctive as is illustrated by the verb forms having final …HL tones, as compared with (11) and (13) which are both in the disjunctive and have final …HH tones on the verb forms.

Within the example pairs in this section both have the same tones, apart from verb finally. Between the pairs, however, looking at the relevant verb form (in bold), we can see that the pairs have very different tone markings. The H tones on the second syllable in (12) and (13) are due to H tone spread from the (H toned) SM *bá* on to an underlyingly L-toned syllable immediately following the SM. We can tell that there is H tone spread rather than the second syllable having an underlying H tone, by comparing (12) and (13) (which both have a H tone SM) with (10) and (11). Both (10) and (11) have a L-toned SM. H tones in Setswana are "active" and L tones are "inert" (Creissels 1998, 136), this means that an underlying L tone will become H if there is any H tone that can extend its domain to cover that L tone. Because of the L tones following the SM in (10) and (11) we know that the H tone following the SM in (12) and (13) are due to H tone spread. This is the reason for the tonal variation between these example pairs.[4]

[4] There is not enough space here to discuss H tone spread, but Creissels (1998) has a full discussion and description of this.

2.4 Perfect positive

So far in the examples we have looked at, where the conjunctive/disjunctive distinction can be seen tonally, the distinctive tone can be found on the final syllable of the verb, meaning that the different examples still look similar.

In the perfect positive tense the distinction is found on syllables towards the end of the verb stem and on the syllable immediately following the SM. Therefore the conjunctive and disjunctive forms have very different tonal realisations.

Conjunctive:

(14) **bá** **jélè** lé bòné
SM3PL eat.PFT CONJ 3PL
'They have eaten with them' Creissels 1996, 111, ex. (22)

Disjunctive:

(15) **bá** **jèlé** lé bòné
SM3PL eat.PFT CONJ 3PL
'They too have eaten' Creissels 1996, 111, ex. (21)

(14) is in the conjunctive and has HL tones on the (short) verb form. Compared with (15), the tonal realisations are very different. (15) is in the disjunctive and has LH tones on the verb form.

Contrary to the examples found in the future positive tense, the tonal differences on the verb form are not to do with H tone spread. We can see this by looking at the tone immediately following the SM in (15). If H tone spread were involved in these examples we would not find a L tone in the second syllable of (15), due to the reasons given at the end of section 2.3 above.

Conjunctive:

(16) **bá** **tsàmáílè** lé bòné
SM3PL go.PFT CONJ 3PL
'They have gone with them' Creissels 1996, 111, ex. (26)

Disjunctive:

(17) **bá** **tsámàìlè** lé bòné
SM3PL go.PFT CONJ 3PL
'They too have gone' Creissels 1996, 111, ex. (25)

Unlike in other tenses, the verb final syllables of (16) and (17) are the same in both examples, but we can see that it is the syllables immediately following the SMs and the penultimate and antepenultimate syllables of the verb forms which carry the conjunctive/disjunctive distinction in this tense. (16) is conjunctive

and has LHHL tones on the verb form while (17) has HLLL tones on the verb form (with the final L tones not being distinctive).

3 Further Data

I elicited Creissels' data from my own Setswana speaking informants. I elicited language samples that were as spontaneous as possible to see what would happen without using Creissels' frame (example (3) in section 2.1). Therefore I did not ask informants what they understood by the sentences presented in section 2, but rather elicited data as close in the conjunctive/disjunctive interpretation as possible to that presented in section 2. The examples here are from a Sekgatla dialect speaker. The informant from which Creissels' data was elicited spoke a different dialect, Sengwaketse. I mention this to account for any lexical differences between Creissels' data and my own.

3.1 Present positive

In this tense it is a disjunctive marker that distinguishes between the conjunctive and the disjunctive (section 2.1).

Short form – conjunctive:

(18) dǐ-kgòmó **dǐ** **fúlà** kó nòké-ǹg
CL10-cow SM10 graze LOC river-LOC
'The cows graze at the river' Sekgatla

Long form – disjunctive:

(19) dǐ-kgòmó **dǐ** **á** **fúlà**
CL10-cow SM10 DISJ graze
'The cows graze' Sekgatla

The conjunctive form is not phrase final and has no disjunctive marker, while the disjunctive form *is* phrase final and has a disjunctive marker.

Conjunctive:

(20) **kè** **bînà** lé èné
SM1SG dance CONJ 3SG
'I am dancing with him' Sekgatla

Disjunctive:

(21) lé ǹná **ké** **à** **bînà**
CONJ 1SG SM1SG DISJ dance
'I too dance' Sekgatla

In (20) we find the exact same tone markings for the present positive conjunctive as found by Creissels (example (3)). (21), however, is not as expected. It is a disjunctive example, primarily because it has the disjunctive marker. It is also in phrase final position, which, though different from Creissels (see example (5)), is perfectly acceptable (see example (2)). However, the tones are not what is expected. Firstly, the SM has a H tone where it is ordinarily L-toned. I believe this to be due to H tone spread from the preceding pronoun. Secondly, the verb has a final L tone where we would expect a final H tone in the disjunctive. I do not believe this to be a great problem, however, because the disjunctive marker and the clause being in phrase final position are enough for the example to be disjunctive (in this tense) and the final L tone may be to do with the fact that the verb is in clause final position and is subject to the tonal effects brought about by that (and which Creissels was avoiding through his use of a frame for the verb form).

What is also interesting, and illustrated by (21), is that my informants preferentially fronted the conjunction *lé* + pronoun in disjunctive examples.

3.1.1 Postverbal NPs

The following postverbal NP examples are all in the present positive tense and so should show the conjunctive/disjunctive distinction through a disjunctive marker, as well as tonally.

Conjunctive:

(22) **kè** **rátá** Mphó
SM1SG like Mpho
'I like Mpho' Sengwato

Disjunctive:

(23) **kè** **à** **mó-rátà**
SM1SG DISJ OM1-like
'I like him' Sengwato

(22) is conjunctive. The verb is not phrase final and there is no disjunctive marker. However, the tones are not the same as those that have been found by Creissels (whose conjunctive example has a final L tone, see example (4)). (23) is disjunctive. The verb form is phrase final and there is a disjunctive marker. However, the tones are not the same as those found by Creissels (whose disjunctive example has a final H tone, see example (5)), but this verb is in phrase final position (unlike in example (5)) and so subject to the tonal effects that come from that.

(In the following example 'I.B.' stands for Intonation Break.)

Disjunctive:

(24) **kè** **à** **mó-rátà** (I.B.) Mphó
SM1SG DISJ OM1-like Mpho
'I like him Mpho' Sengwato

(24) is disjunctive. The verb is phrase final and there is a disjunctive marker. In spite of the verb being followed by a noun, the reading is still disjunctive due to the intonation break between the verb form and the noun, making *Mpho* an after-thought topic and thus not changing the disjunctive reading.

3.2 Present negative

In this tense the conjunctive/disjunctive distinction can only be seen through tonal variation, conjunctive forms have a final H tone while disjunctive forms have a final L tone (section 2.2).

Conjunctive:

(25) **gà** **bá** **bînné** lé bòné
NEG SM3PL dance CONJ 3PL
'They are not dancing with them' Sekgatla

Disjunctive:

(26) **gà** **bá** **bînnè** lé bòné
NEG SM3PL dance CONJ 3PL
'They too are not dancing' Sekgatla

(26) corresponds to the sentence elicited by Creissels. It is interesting in terms of my data, however, because the relevant verb form is not phrase final, which I have found to be the predominant structure of disjunctive examples.

Conjunctive:

(27) **gà** **ké** **bînné** lé ènné
NEG SM1SG dance CONJ 3SG
'I am not dancing with him' Sekgatla

Disjunctive:

(28) lé ǹná **gà** **ké** **bînnè**
CONJ 1SG NEG SM1SG dance
'I too do not dance' Sekgatla

(25) and (27) correspond with what Creissels found in example (6). The conjunctive verb form is not phrase final and has a final H tone. (28) also

corresponds, tonally, with what Creissels found, although the relevant clause is phrase final whereas in his corresponding example (see (7)) it is not phrase final. I do not see this as being a problem as the disjunctive form is comfortably used phrase finally (unlike the conjunctive form). The only issue raised with this example is whether the verb final (and also phrase final) L tone is due to the example being disjunctive or due to the verb being phrase final and the resulting tonal effects.

3.3 Future positive

In this tense conjunctive verb forms have a final …HL tonal melody on the verb, while the disjunctive forms have a …HH tonal melody (section 2.3).

Conjunctive:

(29) **kè** **tlà** **bînà** lé èné
SM1SG FUT dance CONJ 3SG
'I shall dance with him' Sekgatla

Disjunctive (?):

(30) lé ǹná **ké** **tlà** **bînà**
CONJ 1SG SM1SG FUT dance
'I too shall dance' Sekgatla

(29) corresponds to what Creissels found (example (10)), the relevant verb form is not phrase final and has a …HL tonal melody on the verb.

Structurally (30) is fine, especially with my informants, because it is in the disjunctive position, but the tones are not what is expected here. Disjunctive forms in the future positive tense should have a …HH tonal melody, but here we find a …HL – the same as in the conjunctive form. This could be because the verb is in phrase final position in addition to being clause final. The SM is H toned where a L tone is expected, possibly due to H tone spread from the preceding pronoun as in example (21).

Conjunctive:

(31) **bá** **tlà** **bînà** lé bòné
SM3SG FUT dance CONJ 3PL
'They will dance with them' Sekgatla

Disjunctive (?):

(32) lé bòné **bá** **tlà** **bînà**
CONJ 3PL SM3SG FUT dance
'They too shall dance' Sekgatla

(31) corresponds with what Creissels found (see example (12)). The conjunctive verb form is not phrase final and has a final …HL tonal melody.

Both (30) and (32) have a disjunctive interpretation though the tones do not reflect this. If we are looking purely tonally then this is not a disjunctive form, but if we allow for the distinction to be seen structurally in other tenses as it is in the present positive, and also take into account the possibility of phrase boundary tonal effects, I pose the question of whether these examples could still be in the disjunctive?

3.4 Perfect positive

In this tense Creissels says the tonal difference is found on the syllable immediately following the SM and on the syllables towards the end of the verb stem (section 2.4). While my examples are like Creissels' in terms of tone on the verb form, they differ with respect to the tone of the SM. In these examples the SM itself has a different tone depending on whether it is conjunctive or disjunctive.

Conjunctive:

(33) **bà** **jélè** lé bòné
SM3PL eat.PFT CONJ 3PL
'They have eaten with them' Sekgatla

Disjunctive:

(34) **bá** **jèlé** lé bòné
SM3PL eat.PFT CONJ 3PL
'They too have eaten' Sekgatla

(34) corresponds to the disjunctive form found by Creissels. It also has the expected H tone on the SM.

In the following examples the SMs, again, have different tones in the conjunctive and disjunctive. My Sekgatla speaking informant was consistent in the SM tones. In both conjunctive examples in this tense the SM has a L tone and in both disjunctive examples the SM has a H tone. Example (35), apart from the wayward SM, corresponds to the conjunctive as found by Creissels. The syllable immediately following the SM is L toned and the penultimate and antepenultimate syllables are both H toned.

Conjunctive:

(35) **bà** **tsàmáílè** lé bòné
SM3PL go.PFT CONJ 3PL
'They have gone with them' Sekgatla

Disjunctive (?):

(36) **bá** **tsámáílè** lé bòné
SM3PL go.PFT CONJ 3PL
'They too have gone' Sekgatla

The only tonal variation in (36) is on the syllable immediately following the SM (compare with example (17)). The sentence elicited should have a disjunctive reading as is clear from the syntactic context and the interpretation. The tone immediately following the SM is fine and is as expected (see example (17)) but the rest of the verb is the same as the conjunctive form in (16) and (35). The final L tone cannot result from phrase finality effects because it is not phrase final, it could be due to dialectal differences.

I do not believe that the L toned SM is a dialectal difference because (34) and (36) have a H toned SM, with (33) and (35) in the conjunctive also having a L toned SM. These data suggest the SM may be part of the conjunctive marking in the perfect positive tense, which differs from the data described by Creissels (section 2.4, examples (14) – (17)) where the conjunctive/disjunctive marking occurs only on the verbal base and does not extend to the SM.

3.4.1 Presentational/locative

The examples in this section are all postverbal NPs but are to do with presentational or locative in the perfect positive tense.

Conjunctive:

(37) **gó** **tsílé** Mphó
LOC.SM[5] come.PFT Mpho
'There came Mpho' Sekgatla

Disjunctive:

(38) Mphó **ó** **tsílè**
Mpho SM2SG come.PFT
'Mpho came' Sekgatla

(37) appears to be in the conjunctive because the verb is not phrase final. In (38) the verb is in phrase final position and has a markedly different tone melody from (37), this would suggest a tonally marked conjunctive/disjunctive

[5] [gó] fulfils different functions in Setswana. For example it is the class 15 infinitival marker as in 'to write a letter…' – *go kwala lekwalo*. Here it is used as a locative subject marker.

distinction. However, there is a problem with the perfect positive in that the tones are subject to phonological rules within Setswana, making any predictions about tonal distinctions difficult without further research. There is further, though brief, discussion of this tense in section 4.2.

Disjunctive:

(39) **ó** **tsîlè** Mphó
SM2SG come.PFT Mpho
'He came, Mpho' Sengwato

(39) would appear to be a contradiction to what has already been said in this section because I have ascribed a disjunctive interpretation even though the verb form is immediately followed by the noun, making it, structurally, conjunctive. However, the translation has a comma between the verb form and the noun and my informant was very insistent that it was there. Therefore *Mpho* is analysed as an after-thought topic (even though there is no clearly realised intonation break) and the example is disjunctive, showing the conjunctive/disjunctive distinction is sensitive to syntactic context.

This section has shown it is largely the case that the replicated data matches the original data from Creissels. The differences that are evident could be attributed to the replicated data not making use of Creissels' frame and thus being open to phonological boundary effects, or could be due to dialectal differences between speakers. There would need to be more extensive work done on this matter.

4 Other Environments

The following are environments not in the data presented by Creissels in the referenced works. I look briefly at them here to see if there *is* a conjunctive/disjunctive distinction and whether it fits in with Creissels' generalisations regarding which tonal melodies are expected within tenses to show a conjunctive/disjunctive distinction. The data in this section are from speakers of the Sekgatla and Sengwato dialects of Setswana. I mention this in order to account for any lexical differences between Creissels' data and my own, and also within my data.

In the following data it is difficult to asses the phonological evidence for a conjunctive/disjunctive distinction because a full tonal paradigm and systematic analysis using the tonal processes operating in Setswana would be required and there is neither time nor space to include such in this paper. Looking at the data presented so far, and that from Creissels, there is a syntactic correlation between the conjunctive and the disjunctive which can be formulated as saying that a

conjunctive is followed by a complement, or at least is never phrase final, while the disjunctive predominantly occurs phrase finally but not always.[6] Taking this into account I have assigned labels to examples (either conjunctive or disjunctive) within this section based on the syntactic interpretation of the sentence and then looked at the tonal melody.

4.1 Relatives

Setswana has a specific relative marker that occurs on the verb form: *-ńg*,[7] which always carries a H tone. This H tone means that relative forms "have no tonal alternation" (Chebanne et al. 1997:199), excepting phonological rules that are to do with H tone domains. Furthermore, Chebanne et al. (1997: 199) say that there is no conjunctive/disjunctive distinction with the relative, and this is what I hope to discover with my own data.

The following examples are in the past (as can be seen from the past tense marker) and there is no mention of the past tense with the relative clause in the referenced works. I was hoping to see what would happen in the past and there does seem to be a difference with the relative.

Conjunctive (?):

(40) kókò é Mphó á nè-ńg **á** **é**
chicken REL9 Mpho SM1 PST-REL SM1 OM9
àpéílé **màábánè** énè é lé tónà
cook.PFT yesterday 3SG SM9 COP big
'The chicken which Mpho cooked yesterday was big' Sekgatla

In (40), the relative clause could be conjunctive because the verb is not final within the clause (being followed by *maabane*, 'yesterday') and the verb form has a final H tone, which contrasts with (41).

Disjunctive (?):

(41) kókò é Mphó á nè-ńg **á** **é**
chicken REL9 Mpho SM1 PST-REL SM1 OM9
àpéílè énè é lé tónà
cook.PFT 3SG SM9 COP big
'The chicken which Mpho cooked was big' Sekgatla

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[6] For the present purposes there is no full syntactic analysis of this as it is a matter for further investigation.

[7] This marker is not to be confused with the locative marker found earlier on. The difference between the two is found tonally. The locative marker has a low tone *-ǹg* while the relative marker has a high tone *-ńg*.

In (41), the relative clause could be disjunctive because, within the clause, nothing follows the verb and the verb form has a final low tone (which contrasts with (40)). However, there is no disjunctive marker between the SM and the verb form. In this instance the tonal differences are most likely due to postverbal boundary effects, rather than a conjunctive/disjunctive distinction.

4.2 Subordination

This section looks at the effects of subordinate clauses on the preceding verb form in two contexts. Firstly, when the subordinate clause is fronted in two different tenses and, secondly, when the verb form is not immediately followed by the subordinate clause.

The two following examples are in the future positive. In (42) the subordinate clause follows the main clause, but in (43) it is fronted.

Conjunctive:

(42) **ó** **tá** **m̀-phîthélà** fá ó-tà
SM2SG FUT OM1SG-find if SM2SG-come
'You will find me if you come' Sengwato

Disjunctive (?):

(43) fá ó-tá **ò** **tà** **m̀-phîthèlà**
if SM2SG-come SM2SG FUT OM1SG-find
'If you come you will find me' Sengwato

According to Creissels, the conjunctive form in the future positive tense has a verb final tonal melody …HL, see section 2.3. That is what we find in (42). Structurally (43) is disjunctive but this is not supported by the tonal melody. The disjunctive form in the future positive tense should have a verb final tonal melody …HH. The final L tone could be L instead of H because the verb is phrase final and subject to the effects of that position, but the penultimate syllable of the verb form is also L which is different from what is predicted.

In the following two examples, the clause that we are looking at is in the perfect positive (the *bò* in both changes the interpretation of the entire sentence, but we are looking at a specific clause which is in the perfect positive):[8]

[8] I am not sure how to gloss the *bò* in the following example (44). It provides the meaning of 'would' to the sentence and so that is how I have glossed it.

Conjunctive (?):

(44)	ò	ká	bò	**ó**	**ḿ-phîthétsé**	
	SM2SG	TNS	would	SM2SG	OM1SG-find.PFT	
	fá	ó	né	ó-tsȉlé		
	if	SM2SG	PST	SM-come.PFT		
	'You would have found me if you had come'					Sengwato

Disjunctive (?):

(45)	fá	ó	né	ó-tsȉlé		
	if	SM2SG	PST	SM2SG-come.PFT		
	ò	ká	bò	**ó**	**ḿ-phîthétsè**	
	SM2SG	TNS	would	SM2SG	OM1SG-find.PFT	
	'If you had come you would have found me'					Sengwato

(44) is structurally conjunctive. (45) is structurally disjunctive. It is difficult with this tense to know what tonal melodies show a conjunctive/disjunctive distinction. The examples cited by Creissels (see examples (14)-(17)) all have different tonal melodies. There does not seem to be an obvious pattern as to which tones correspond to a conjunctive form and which to a disjunctive form and so I believe that the tones are subject to the phonological rules that already exist in Setswana.[9] These examples require more research and investigation.

The following examples are in the past progressive. There is no mention of the past progressive tense interacting with subordinates in the referenced works and so the interpretation of the examples below is still sketchy.

Conjunctive:

(46)	**kè**	**nè**	**ké**	**àpéílè**	kókó	fá	á	góròga
	SM1SG	PST	SM1SG	cook.PFT	chicken	when	SM1	arrive
	'I was cooking chicken when he arrived'							Sengwato

(46) is conjunctive because the verb form is not clause final within the relevant clause. The present positive tense (as well as having a disjunctive marker) and the present negative tense both show the conjunctive/disjunctive distinction on the final syllable of the verb form (see examples (4) and (5) for the present positive), so it can be suggested that the verb form in (46) is in the conjunctive because it has a final L tone, which differs to that found in (47) which is in the disjunctive and has a final H tone.

[9] Which I do not have the space to discuss in this paper, but see Creissels (1998) and (1999).

Disjunctive:

(47)	**kè**	**nè**	**ké**	**àpéílé**	fá	á	góròga	
	SM1SG	PST	SM1SG	cook.PFT	when	SM1	arrive	
	'I was cooking when he arrived'							Sengwato

(47) is in the disjunctive because the verb form is clause final within the relevant clause. Furthermore, compared with (46), there is a tonal distinction on the final syllable of the verb form.

There are two issues that come out of this section. Firstly there is the question of whether there actually is a conjunctive/disjunctive distinction with subordinates, and secondly, whether subordinate clauses count as being relevant postverbal material and so have an effect on the conjunctive/disjunctive distinction in the first place. Within this last point there are further questions that arise as to the nature of the different subordinate clauses and whether this may make a difference. At the beginning of this section (examples (42)-(45)) we find the subordinate clause is an 'if' clause. The differing tonal melodies could indicate that 'if' clauses do count as following the verb, especially if we compare with (46) and (47) which have 'when' clauses in the subordinate clause. These data seem to show that 'when' clauses do not count as postverbal material in the relevant sense. These are matters that require more data and investigation in order to come to a conclusion.

5 Conclusion

The data found in section 3, on the whole, shows the same results as presented in Creissels' referenced works – though it does raise questions about the possible conclusions to be drawn from examples that do not fit his model, especially without the use of the frame that he utilises to ensure there is no boundary effects on the tonal melody (for instance, examples (45) and (47)). One such question we could ask at this stage is whether the generalization presented by Creissels can be extended to 'almost examples', such as those in (41) and (44)?

In terms of the 'other environments' (section 4), these require a lot more investigation and analysis. At this stage it is difficult to say what is happening with these examples because they are so few and not enough to build a full picture. Particularly interesting is what is happening with relatives and subordinates but these require a lot more time and study.

To sum up: My data fully supports Creissels' observation. It does seem to me that there is a lot more going on tonally in Setswana than simply the effects of phonological boundaries. However, the different, and sometimes conflicting, data raises more questions than it answers and opens doors for future research.

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Linear Order Constraints on Split NPs in Chichewa*

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This paper focuses on restrictions on the ordering of internal constituents of noun phrases in Chichewa, especially when those constituents are discontinuous. The motivation for discontinuity of the NP constituents will be given, together with discussion of constructions that can be subsumed under this rubric but that do not really involve discontinuity in the canonical sense. These are constructions where a topic NP in a left periphery position is either linked anaphorically with a modifier "remnant" or semantically with its hyponym in post-verbal position. According to Guthrie's classification of Bantu languages, Chichewa is placed in zone N unit N31. It is regarded as a dialect of Nyanja, classified as belonging to unit N30 (Guthrie 1967-71).

1 Introduction

Recent work on the interaction of discourse structure and morphosyntax in Chichewa has brought to light the fact that the language is partially non-configurational (Mchombo 2002, 2003).[1] Chichewa has the verbal morphology that is standard for Bantu languages where the verb comprises, *inter alia*, the

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[1] According to Greenberg (1963) the languages of Africa are classified into four families: Niger-Kordofanian, Nilo-Saharan, Afroasiatic and, Khoisan. Niger-Kordofanian is the family to which the vast majority of the languages of sub-Saharan Africa belong. One large subdivision of the Niger-Kordofanian language family is the Niger-Congo. The major language group in this subgroup, to which the majority of the languages spoken in the southern half of the African land mass belong, is the Bantu language group. Bantu languages are spoken by nearly a third of Africa's total population.

subject marker (SM) and object marker (OM) that cross-reference nominals that are essentially internal topic (I-TOP) and external topic (E-TOP) respectively (Baker 2003; Morimoto 2000). This is illustrated by sentence 1 below:

(1) Mkángo u-da-wá-ómb-án-íts-a alenje ndí asodzi
3lion 3SM-pst-2OM-hit-recip-caus-fv 2hunters and 2fishermen
'The lion made them hit each other, the hunters and the fishermen'[2]

To the verb root **-omb-** 'hit' is attached the SM **u-** and OM **-wa-** that agree with the NPs **mkángo** 'lion' and the coordinate **NP alenje ndí asodzi** 'hunters and fishermen' respectively.

The subject marker (SM) and object marker (OM) have received sustained attention in recent studies. In Chichewa, the OM has been analyzed as an incorporated pronominal argument whereas the SM has been claimed to be functionally ambiguous between agreement marker and incorporated pronominal (cf. Bresnan & Mchombo 1987; Mchombo 2004). The presence of especially the OM has been correlated with free word order of the constituents of the sentence. Further, it is correlated with discontinuity of the constituents of the TOPIC nominals when those are internally complex (Mchombo & Morimoto 2004). This paper will focus on constraints on the linear order of such discontinuous constituents in Chichewa.

2 Discontinuity of constituents of the NPs

A significant aspect of the presence of the SM and, especially, of the OM in the verbal morphology is the discontinuity of the constituents of an internally complex dislocated Topic NP. This points at the possibility of Chichewa being partially non-configurational. Consider the examples below:

[2] The following abbreviations are used here:

appl	applicative
assoc	associative marker
caus	causative
fv	final vowel
hab	habitual
perf	perfective marker
pres	present tense
proxdem	proximal demonstrative
pst	past tense
recip	reciprocal
relpro	relative pronoun

(2) a. *Njuchí* *izi* *zi*-ná-**wá**-lúm-á **álenje** awa
10bees 10prox.dem 10SM-pst-2OM-bite-fv 2hunter 2prox.dem
ópúsa
2SMfoolish
'These bees bit these foolish hunters.'

b. **Awa** *njuchí* *izi* *zi*-ná-**wá**-lum-a **alenje**
2prox.dem 10bees 10prox.dem 10SM-pst-2OM-bite-fv 2hunters
ópúsa
2SMfoolish

In this example, the proximal demonstrative **awa** 'these', agreeing in ϕ-features with the head noun **alenje** 'hunters', appears discontinuous with the rest of the phrase. This is disallowed when the OM is absent from the verbal morphology. Thus sentence (2c) below, in which the proximal demonstrative is fronted, but the OM is not present in the verbal morphology, is ungrammatical.

c. ***Awa** *njuchí* *izi* *zi*-ná-lúm-á **alenje**
2prox.dem 10bees 10prox.dem 10SM-pst-2OM-bite-fv 2hunters
ópúsa
2SMfoolish

The analysis of the SM and OM as pronominal arguments fits Chichewa into the pronominal argument hypothesis (Jelinek 1984). Basically it is a common trait of polysynthetic languages to have missing nominals, allowing morphological elements to provide the relevant information. A central concern in analyses of polysynthetic languages has been the search for explanation of the connection between such highly articulated systems of argument agreement marking, and the free ordering and omission of independent nominal expressions. According to Phillips (1993) an answer to this question was offered by Wilhelm von Humboldt in 1836. In a study of Nahuatl, Wilhelm von Humboldt claimed that "…it is the affixes on the verb which fill the argument positions of the verb, and that independent expressions are only loosely linked to these affixes" (Phillips 1993: 173).

Within generative grammar the issue has been revived by Jelinek's analysis of Warlpiri. Jelinek focused on why it is that independent expressions cannot appear in argument positions in polysynthetic languages. Her suggestion, couched in her pronominal argument hypothesis (PAH), is that the affixes are assigned thematic roles and Case. As such, these are unavailable to license independent phrases in argument positions. Jelinek's analysis of pronominal affixes as arguments got extended to account for the property of non-

configurationality in polysynthetic languages. Hale (1983) characterized such languages as manifesting the following properties:

(i) free word order
(ii) syntactically discontinuous expressions, and
(iii) null anaphora.

By "null anaphora" Hale referred to "the situation in which an argument (e.g., subject, object) is not expressed by an overt nominal expression in phrase structure" (Hale 1983: 40). By syntactically discontinuous expressions is meant the situation where non-adjacent constituents may correspond to a single argument of the verb, resulting in discontinuous expressions.

The facts indicated above appear to warrant the classification of Chichewa as (partially) non-configurational. However, although free word order and possible omission of the nominals are intimately connected with the presence of the SM and OM, as the example above illustrate, discontinuity of the phrasal constituents is also possible in the absence of the OM. In other words, the incorporated pronominal arguments, especially the OM, constitute necessary but not sufficient conditions for discontinuity of constituents. Some of the data will be examined here.

2 Linearization and the relevance of anaphoric linkage

The case to be reviewed here does not fit the technical characterization of split NP. The situation pertains to structures where the NPs that are correlated are in a relation reducible to anaphora. In such cases there is a relation between a topic NP in the left periphery of the clause and a 'remnant' i.e., the element in the post-verbal position. The relation is basically anaphoric in that the remnant is in an appositional relation to the dislocated or fronted head noun.[3] In such cases there are constraints on word order too. These require that the head noun be in left-dislocated position. Consider the following:

[3] The use of the term "fronted", along with other terminology traditionally employed in derivational theories of grammar is merely for convenience, used here simply as labels. The use does not either amount to subscription to any derivational theory of grammar.

(3) a. *Makású* mbidzí zi-na-**í**-gúl-íl-á *awa* *óbúntha*
6hoes 10zebras 10SM-pst-4OM-buy-appl-fv 6these 6SMblunt
mikángó **yókálamba**
4lions 4SMaged
'(As for) hoes, the zebras bought (for) the aged lions these blunt ones.'

In this example, the OM **-i-** agrees with **mikángó yókálamba** 'aged lions', not with **makású awa óbúntha** 'these blunt hoes'. The split NP has its head noun **makásu** 'hoes' appearing sentence-initially. The modifier remains in post-verbal position maintaining an anaphoric or appositional relation between it and the head noun. That the remnant must be construed as anaphoric to the fronted noun is further exemplified by the following:

b. *Mbûzi* atsíkáná á mfúmu a-a-gul-á *zákúd-a*
10goats 2girls 2AssocM 9chief 2S-perf-buy-fv 10SM-black
Lit. 'Goats, the chief's girls have bought black (ones).'

c. *Mikánda*, anyaní ópúsa a-na-b-á *yófíila*
4beads 2baboons 2SMsilly 2SM-pst-steal-fv 4SMred
Lit. 'Beads, the silly baboons stole red ones.'

In these examples, the modifiers **zákúda** 'black' and **yófííla** 'red' agree in the relevant gender and number features with the head nouns **mbûzi** 'goats', and **mikánda** 'beads', respectively. They are also construed as involving a null pronominal that is anaphorically bound by the head noun. The constraints on word order, requiring the modifier to be the remnant and ordered after the head noun rather than preceding it can be shown by the ungrammaticality of the following:

(4) a. **zakuda* atsíkáná á mfúmu a-a-gul-á *mbûzi*
10SMblack 2girls 2AssocM 9chief 2SM-perf-buy-fv 10goats

b. **yofiila* anyaní ópúsa a-na-b-á *míkánda*
4SMred 2baboons 2SM-silly 2SM-pst-steal-fv 4beads

Chichewa is a head initial language and, within a Noun Phrase (or Determiner Phrase (DP)), the modifiers are ordered after the head noun. The constraint on word order when discontinuity is not induced by the presence of the OM seems to require preservation of the 'base' order. Such constraints on linearization of discontinuous constituents has been observed in other languages. For instance,

in the Algonquian language of Ojibwe (cf. Kathol & Rhodes 1999) it has been noted that linear order of discontinuous elements preserves the 'base' order.

The preservation of the base order in the output (split) structure undermines a movement analysis of split NPs. The movement would need to be sensitive to the order of the moved constituents, giving the movement rule global power.

The constraints on linearization of split NPs in Chichewa seems reducible to command relations in anaphora. Thus, the remnant must be c-commanded by the antecedent, preserving in the constituent structure (c-s) representation, functional-command relations, indicated in the functional structure (f-s), adopting the architecture and terminology of the theory of lexical-functional grammar (LFG) (cf. Bresnan 2001; Dalrymple 2001).[4] The theory of LFG does not give recognition to movement operations to account for discontinuity of elements or construal of a 'displaced' element with the 'base' position.

Although there will not be a technical exposition of the theory of LFG here, in broad outline, the theory maintains that languages have an overt organization, modeled by the constituent structure (c-s), that is variable, within limits, across languages. Languages also have an internal organization, modelled by the functional structure (f-s) that is largely invariant. The f-s is shown in the form of an attribute-value matrix (AVM). This represents functional information such as subject, object, as well as information pertaining to the resolution of agreement, conditions on binding relations, functional identification of discourse elements with phonologically null governed grammatical functions, etc. A subcomponent of that is the argument structure (a-s) that deals with lexical argument structure and the relation between arguments and grammatical functions. Another component is that of discourse structure (d-s) in which such information structure notions as TOPIC and FOCUS feature, and their relation with grammatical functions are stated. The relation between the various structural representations is non-derivational. Rather, there is constraint satisfaction such that pieces of c-s are associated with pieces of f-s in systematic ways. Consider the representation of the English sentence "The baboon read the book". The c-s structure of this sentence is represented by the phrase structure configuration given below, whereas the f-s is represented by the AVM indicated.

[4] The theory of lexical-functional grammar (LFG) is presupposed or adopted in this work. The technical aspects of the theory are not discussed for reasons of space. Further, theoretical expositions of the theory are, currently, readily available.

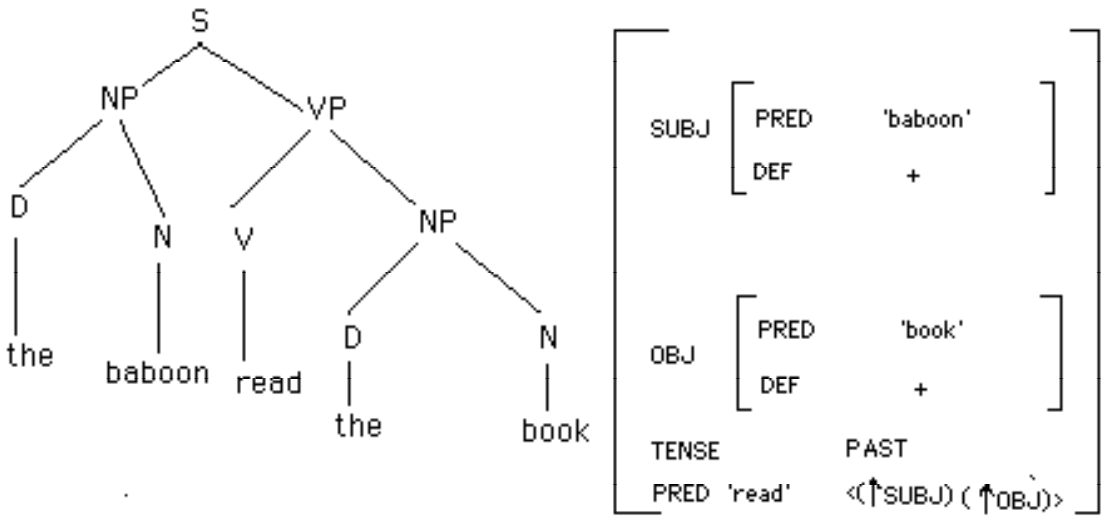

Figure 1

In this English sentence the SUBJ function is associated with the NP directly dominated by the S node in the c-s. The OBJ is associated with the NP that is the daughter of the VP. The tense feature has zero morphology on the verb. While abstracting away from the technical details of the mapping algorithm of the f-s to the c-s it should be noted that the mapping is, as indicated, non-derivational.

3 Super-ordinate/hyponomy relations

The situation of apposition or anaphoric relation indicated above is paralleled by that where the dislocated NP specifies a super-ordinate term with which the remnant is in a subset or hyponym relation. Technically, this cannot be subsumed under discontinuity in the strict sense in that the related components arguably do not form a constituent at any level of linguistic representation. Consider the examples below:

(5) a. *Nsomba*, anyání ópúsa a-na-gúl-á *milämba*
10fish 2baboon 2SMfoolish 2SM-pst-buy-fv 4mudfish
'(As for) fish, the foolish baboons bought mudfish.'

b. *Miténgo*, njovu z-anu zi-ku-gwéts-á *milámbe*
4trees 10elephants 10SM-your 10SM-pres-fell-fv 4baobabs
'(As for) trees, your elephants are pulling down (the) baobabs.'

As in the previous cases where the head noun preceded the remnant in apposition or in an anaphoric relation with it, the super-ordinate term in this

latter case is required to precede the hyponym. The super-ordinate term appears in a left-dislocated position while the hyponym appears in the post-verbal position. The sentences are ungrammatical if the hyponym precedes the super-ordinate term even when the construction involved is, arguably, a right dislocation, as below:

(6)	a.	**Milämba*	anyaní	ópúsa	a-na-gúl-á	*nsómba*
		4mudfish	2baboon	2SMfoolish	2SM-pst-buy-fv	10fish
	b.	*Anyaní	ópúsa	a-na-gúl-á	*milämba*	*nsómba*
		2baboons	2SMfoolish	2SM-pst-buy-fv	4mudfish	10fish

This situation is atypical of genuine discontinuous constituents in the sense that the dislocated topic and the remnant do not form a constituent at any level of linguistic representation (cf. Nolda 2000) for relevant observations about German). The necessary condition is that the super-ordinate/hyponym relation must hold between the relevant noun phrases. Secondly, the presence of the OM is disallowed. Thus the sentences below are ungrammatical:

(7)	a.	**Nsómba*,	anyání	ópúsa	a-na-*zi*-gúl-á	*milämba*
		10fish	2baboon	2SMfoolish	2SM-pst-10OM-buy-fv	4mudfish
		‘(As for) fish, the foolish baboons bought (them, i.e. fish) mudfish.’				
	b.	**Nsómba*,	anyání	ópúsa	a-na-*i*-gúl-á	*milämba*
		10fish	2baboon	2SMfoolish	2SM-pst-4OM-buy-fv	4mudfish
		‘(As for) fish, the foolish baboons bought (them) mudfish’				

In (7a) the OM agrees with the (external) Topic NP **nsómba** ‘fish’. The presence of the OM is a necessary condition for the NP to assume the role of external topic (Morimoto 2000) and is consistent with the pronominal argument status of the OM (cf. Bresnan & Mchombo 1987; De Cat 2002). The ungrammaticality of the sentence seems to derive from “overcrowding’ of nominal expressions. The OM is a pronominal argument anaphorically linked to the external topic but then the remnant is another argument of the verb, comparably anaphorically linked to the E-TOP.

In (7b) the OM agrees with the remnant or hyponym expression **milämba** ‘mudfish’. This is also ungrammatical but, ostensibly, for different reasons. The OM makes the remnant a TOPIC and, somehow, the TOPIC to TOPIC relation between the super-ordinate term and the hyponym that ensues makes for ungrammaticality or unacceptability.

The constraints applying to the order of the super-ordinate Topic NP in a left-dislocated position and the hyponym remnant extends to quantified NPs (QNP).

4 Quantified NPs and Discontinuity

When a QNP is discontinuous, the Topic head noun must be in a dislocated position and must precede the quantifier. This is illustrated by the following:

(8) a. *Zisakasa* mkángó wópúsa u-na-máng-á *zi-sanu* *z-ókha*
8grass.hut 3lion 3SMsilly 3SM-pst-build-fv 8SM-five 8SM-only
Lit. 'Grass huts, the silly lion built only five.'

b. *Zisakasa* mkángó wópúsa u-na-máng-á *zó-chépa*
8grass.hut 3lion 3SMsilly 3SM-pst-build-fv 8SM-few
Lit. 'Grass huts, the silly lion built a few.'

The precedence relation between the head noun and the remnant or the quantifier is underscored by the following sentences where the quantifier precedes the head noun:

(9) a. **Zi-sanu* *z-ókha* mkángó wópúsa u-na-máng-á *zisakasa*
8SM-five 8SM-only 3lion 3SMsilly 3SM-pst-build-fv 8grass.hut

b. **Zó-chépa* mkángó wópúsa u-na-máng-á *zisakasa*
8SM-few 3lion 3SMsilly 3SM-pst-build-fv 8grass.hut

As in the case of the ordering relations in the super-ordinate/hyponym relation, the presence of the OM does not make for marked improvement in grammaticality. In general, the presence of the OM with quantified expressions is subject to various restrictions. It might be expected that the OM, as an incorporated pronominal argument, should be bound by a referring expression. QNPs are non-referring, a characteristic that constituted motivation for the rule of Quantifier Raising (QR) to derive logical form within the principles and parameters theory (PPT). The argument reduced to the claim that as non-referring expressions QNPs could not be assigned θ-role. To avoid violation of the θ-criterion, the quantifier was raised to a non-argument (A-bar) position, leaving a variable in the argument position (May 1985; Neale 1996). The argument here is that the OM should not cross-reference a QNP (cf. Deen 2004; De Cat 2002).[5] However, since quantifiers bind variables, and pronouns can

[5] Discussion of the relation between quantified noun phrases and the subject marker and object marker in Bantu languages is beginning to gain attention. Kamil Ud Deen has raised important questions in some of his work. The questions are likely to be focal points of future research in Bantu linguistics.

function as bound variables (cf. Higginbotham 1980) bound variable interpretation is allowed between the OM and a quantified NP, appropriately in dislocated position. Consider the following:

(10) *Mbidzí* *zi-sanu* mkángó u-ku-*zí*-thámángits-á mwá nkhanza
10zebra 10SM-five 3lion 3SM-pres-10OM-chase-fv 18AssocM 10-cruelty
Lit. 'Five zebras, the lion is chasing them in a cruel manner (cruelly).'

The relation between QNPs and incorporated pronominal arguments is clearer in the case of the SM. The subject marker is obligatory and is marked on all the modifiers of the head noun as well as on the verb. Such obligatoriness calls for variable treatment of the SM and OM in Chichewa and other Bantu languages (cf. Deen 2004; Letsholo 2002).

This underlies the variable treatment of the NPs that are cross-referenced by these markers. Thus, while the NP cross-referenced by the OM clearly has a TOPIC function, is extra-sentential and, in some Bantu languages it cannot appear within the same simple clause as the OM. This is attested in Kikuyu, a Bantu language spoken in Kenya (cf. Mugane 1997), the NP that is cross-referenced by the SM is, in many cases, required and is structurally close to the SM. In Kinande, another Bantu language, when the OM is present in the verbal morphology, the NP that is cross-referenced by the OM must be in a left-dislocated position and ordered to the left of the NP that is cross-referenced by the SM (Baker 2003). Adopting a version of the pronominal argument hypothesis for Bantu languages, and factoring in these noted asymmetries, Morimoto (2000) has analyzed the NPs as discourse licensed Topic elements (I-TOP and E-TOP). The interaction between such information structure elements and morphosyntactic organization is an issue of current interest.

Returning to the issue of constraints on linear order noted above, the observations seem to underscore the relevance of linear precedence relations to semantic interpretation and the need for articulation of linearization principles. Alternatively, this can be viewed as a constraint on the preservation or transparency in c-structure of f-structure relations. For instance, while command relations are stated in f-s, the mapping of the elements in c-s should make those relations transparent, facilitating the computation of the construal of the expression. Take, by way of example, the super-ordinate/hyponym relation and the overt realization of the elements related in that fashion. The relation is that of set inclusion. The super-ordinate term properly includes the hyponym, such that negation of the super-ordinate term entails negation of the hyponym. In brief, if something is not a fish, then it could not be a mudfish or salmon. The set

relation of inclusion may then be overtly indicated by the linearization that makes the super-ordinate precede the hyponym.

5 Limits on Discontinuity

In the previous sections attention has been on elements that are discontinuous, in some specifiable sense. Here, attention will turn to cases where discontinuity of the constituents of the NP is not possible even when the OM is present.

5.1 Relative clauses

One case where discontinuity of the constituents is not possible involves relative clauses (cf. Mchombo 2003, 2004). This is shown below:

(11) Mkángo u-méné ú-ma-sáká mbûzi ú-ma-*wa*-saútsa
3lion 3SM-relpro 3SM-hab-hunt 10goats 3SM-hab-2OM-bother
alenje a-méné á-ma-gwetsá mitêngo
2hunters 2SM-relpro 2SM-hab-fell 4trees
'The lion which hunts goats bothers the hunters who fell trees.'

In Chichewa relative clause formation there is a relative marker **-méne**, which introduces the relative clause. It is marked for agreement with the relativized noun. When the relativized nominal is the object of the verb, the OM is optionally present, functioning as a resumptive pronoun.

Phonologically, the verb within the relative clause introduced by **-méne** is marked by a high tone. Comparable observations have been made about relative clauses in Lunda, a language spoken in West Central Africa, particularly in the north east part of Angola, south-western region of the Democratic Republic of the Congo, and north-western part of Zambia (Kawasha 1999a, 1999b). Returning to Chichewa, consider the following:

(12) a. mkángo u-ku-sáká mbúzi
3lion 3SM-pres-hunt 10goats
'The lion is hunting goats.'
b. mkángó u-méné ú-kú-sáká mbúzi
3lion 3SM-relpro 3SM-pres-hunt 10goats
'The lion which is hunting goats...'

In these examples the tone patterns on the verb **ukusaka** 'it is hunting' are different depending on the presence or absence of the relative marker. The exploitation of tone to signal a relative construction licenses the omission the

relative marker **u-méné**. Sentence (12c) below, which only differs tonally from sentence (12a) above, is construed as a relativized NP configuration:

c. mkángó ú-kú-sáká mbúzi
3lion 3SM-pres-hunt 10goats
'The lion that is hunting goats...'

Returning to sentence 11 above, the verb **sautsa** 'bother, trouble' is marked with the SM **u**, for class 3, agreeing with **mkángo** 'lion'. The OM **wa** agrees with **alenje** 'hunters'. While the order of the nominal expressions **mkángó u-méné ú-ma-sáká mbûzi** 'the lion which hunts goats' and **alenje a-méné á-ma-gwétsá miténgo** 'the hunters who fell the trees' is free with respect to the verb, the constituents of the nominal expressions cannot be discontinuous. The following sentence is, at best, questionable:

(13) ?**Alenje** *mkángó* *ú*-ma-**wa-**saútsa **a-méné** **á-ma-gwetsá**
2hunters 3lion 3SM-hab-2OM bother 2SM-relpro 2SM-hab-fell
miténgo *u*-méné *ú*-ma-saká mbúzi
4trees 3SM-relpro 3SM-hab-hunt 10goats
'The hunters the lion bother them, who fell trees, that hunts goats.'

The nominal expressions are relativized NPs. The possibility of extraposing the relative clause, possible in Chichewa, does not completely rescue the sentence from ungrammaticality. The object NPs within those relative clauses cannot be moved out in part because the OM is excluded from the verbal morphology. Now consider sentence 14 below. In this one, the relativized NP configurations, functioning as subject as well as the one in the post-verbal position both have their verbal heads within the relative clauses marked with resumptive OMs:

(14) Mkángo uméné úma**zi**saka **mbûzi** ú-ma-wa-saútsa alenje améné ama*i*gwetsa *miténgo.*
'The lion which hunts the goats bothers the hunters that fell the trees.'

In addition, the main verb also has the OM in its morphological composition. Yet this sentence does not allow for the range of possible word orders that are normally associated with head-marking in Chichewa. Neither one of the sentences below is grammatical:

(15) a. *Mkángo mbûzi alenje miténgo úmawasautsa umêné umazisaka améné ámaigwetsa.
Lit. 'The lion, the goats, the hunters, the trees, it bothers them which hunts them (goats) who fell them (trees).'

b. *Mbûzi mkángo uméné úmazisaka miténgo alenje améné amaigwetsa úmawasautsa.
Lit. 'The goats the lion that hunts them (goats) the trees the hunters who fell them (the trees) it (the lion) bothers them (hunters).'

The problem here could be attributed to the multiplicity of nominal expressions with similar discourse functions, making for processing or information structuring difficulties. In general, when the nominal expressions have relative clauses, discontinuity among the constituents is more difficult. The problem could equally be reducible to island effects suggesting the presence of *wh*-movement, at any rate at the level of LF within PPT. Prior analyses have subsumed relative clauses under *wh*-movement (Chomsky 1977; Ngonyani 1999). In Chichewa relative clause formation need not be dealt with in movement terms (cf. Mchombo & Mtenje 1983). The presence of the OM functioning as a resumptive pronoun, is not correlated with movement.

5.1.1 Recursive noun phrases

Another case that restricts discontinuity involves recursive constructions with associative phrases. This is exemplified by NPs with a head noun and a complement introduced by the associative marker **-a** 'of' as shown below:

(16) a. chipanda chá kazitápe
7calabash 7AssocM 1a.spy
'the spy's calabash'
Lit. 'calabash of spy'

This construction allows for recursion, shown in the following construction:

b. chipanda ch-á kazitápé w-á alenje
7calabash 7-AssocM 1a.spy 1SM-AssocM 2-hunters
'calabash of the spy of the hunters'

In the sentence below the ϕ-features of this noun phrase are duplicated by the OM in the verbal morphology.

(17) anyaní á mísala a-ku-**chí**-phwány-a
2baboons 2AssocM 4madness 2SM-pres-7OM-smash-fv
chipanda chá kazitápé wá alenje
7calabash 7AssocM 1a.spy 1AssocM 2hunters
'The mad baboons are smashing the calabash of the hunters' spy.'

While re-ordering of the nominal expressions that are the major constituents of the sentence does not pose any problems, discontinuity of the constituents of the nominal expressions is tolerable only within limits. Consider the following:

(18) a. Chá kazitápé wá alenje
7AssocM 1a.spy 1AssocM 2hunters
anyaní á mísala a-ku-chí-phwány-a chipanda
2baboons 2AssocM 4madness 2SM-pres-7OM-smash-fv 7calabash
Lit. 'Of the spy of the hunters the mad baboons are smashing the calabash.'

This sentence is grammatical, with the complement of the head noun **chipanda** 'calabash' fronted. The results are radically different when the fronted constituent is the more deeply embedded complement of **kazitápe** 'spy', viz. **wá alenje** 'of the hunters.' In such cases the result is ungrammatical.

b. ***Wá alenje** anyaní á misala
1AssocM 2hunters 2baboons 2AssocM 4madness
a-ku-**chí**-phwány-a **chipanda chá kazitápe**
2SM-pres-7OM-smash-fv 7calabash 7AssocM 1a.spy

The clash in the ϕ-features of the displaced constituent and of the OM does not account for the ungrammaticality since when that is controlled for, the results remain bad. Consider the sentence below where the ϕ-features of the OM do not clash with those of the fronted complement associative phrase.

c. Anyaní á mísala a-ku-**chí**-phwány-a
2baboons 2AssocM 4madness 2SM-pres-7OM-smash-fv
chipanda chá chiphadzúwá chá alenje
7calabash 7AssocM 7beauty.queen 7SMAssocM 2hunters
'The mad baboons are smashing the calabash of the beauty-queen of the hunters.'

Moving the Associative Phrase 'of the hunters' as in example (18b) still yields ungrammatical results despite agreement between the OM and the moved Associative Phrase.

d.	***Chá**	**alenje**	anyaní	á	misala
	1AssocM	2hunters	2baboons	2AssocM	4madness
	a-ku-**chí**-phwány-a		**chipanda**	**chá**	**chiphadzúwa**
	2SM-pres-7OM-smash-fv		7calabash	7AssocM	7beauty.queen

The ungrammatical sentence involves discontinuity of constituents of a complement of a noun that is itself a complement of a higher noun. This could be handled through appeal to island effects perhaps along the lines of the A-over-A constraint or, possibly, a modified version of the Left Branch Condition of Ross (1967). Alternatively, as noted by Dalrymple (p.c.), the extraction is eliminated by general restrictions on constructions involving non-branching dominance.

Notable from these considerations but not explicitly shown here is the fact that discontinuous constituents in Chichewa and the limits on that do not straightforwardly provide motivation for accounts of information structure grounded in movement rules. Conversely, information structure does not motivate the need for such devices in grammatical theory. This has already been foreshadowed by the observations above concerning constraints on linear precedence. It was noted that the requirement that split NPs preserve the 'base' linear order undermines movement analysis of discontinuous elements (cf. Dahlstrom 1987; Kathol & Rhodes 1999; Mchombo & Morimoto 2004). The movement rule would involve the stipulation that independently moved elements must retain the same ordering relation between the base and derived positions. As noted by Sells (2001), this is a recurrent problem for transformational approaches to phenomena like multiple *wh*-questions and object shift.

6 Conclusion

An issue of recurrent interest in linguistic theory relates to the delimitation of grammatical structure from information structure or discourse. The relation between information structure concepts such as TOPIC and FOCUS with grammatical structure concepts such as SUBJECT and OBJECT, and the realization of these various notions in grammatical structure involves examination of the relation between syntax and pragmatics. Further, the involvement of semantic factors in linearization, and constraints on discontinuity

imposed by, *inter alia*, super-ordinate/hyponym relations, indicate a rather intricate relation between syntax and semantics on the one hand, and between information structure and morphosyntactic organization on the other. This paper has attempted to highlight the intricacies in the relations between information structure and morphosyntactic organization. This is a situation where the relations could be brought into sharp focus in a theory where the informational structures are factored out, with explicit linking principles to capture the connections between the various components.

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Agreement Properties and Word Order in Comparative Bantu

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Agreement is traditionally viewed as a cross-referencing device for core arguments such as subjects and (primary) objects.[1] In this paper, I discuss data from Bantu languages that lead to a radical departure from this generally accepted position: agreement in a subset of Bantu languages cross-references a (sentential) topic rather than the subject. The crucial evidence for topic agreement comes from a construction known as subject-object (S-O) reversal, where the fronted patient agrees with what has uniformly been taken to be a 'subject marker'. The correct analysis of S-O reversal as a topic construction with 'topic agreement' explains a range of known facts in the languages in question. Furthermore, synchronic variation across Bantu in the presence/absence of S-O reversal and in the properties of the (topic/subject) agreement marker suggests a diachronic path from topic to subject marking. The systematic variation and covariation in the syntax of Bantu languages and the historical picture that it offers would be missed altogether if we continue to reject the idea that the notion of topic can be deeply grammaticized in the form of agreement.

1 Introduction

One of the most pronounced and most studied aspects of Bantu grammar is the rich classes of agreement morphology. One of the most detailed studies of Bantu agreement within generative syntax is offered by Bresnan and Mchombo (1987), who focus on the properties of subject and object marking in the Eastern Bantu language Chicheŵa. They show that in Chicheŵa the subject marker (SM) functions both as grammatical agreement and as a topic-anaphoric pronoun, whereas the object marker (OM) functions only as a promoninal argument. Thus

[1]I am grateful to Peter Sells for discussions on earlier versions of this work, to Alxandre Kimenyi and Jeanine Ntihirageza for assistance with Kinyarwanda data and Juvenal Ndayiragije for Kirundi data. I also benefitted from useful comment and suggestions from the editors of this volume, although unfortunately some issues the editors have raised have to be left for future work. Thanks also to Christian Geng for editorial assistance. Any remaining errors or misrepresentations are my own.

in the absence of the OM, the object NP must be licensed positionally within VP. They also observe that the facts about object marking in Chicheŵa do not automatically extend across the whole Bantu family. For example, Swahili requires object marking for definite objects (cf. Bokamba 1981; also Wald 1979); in the Imithupi dialect of Makua studied by Stucky (1981, 1983), the OM is obligatory for the human classes (classes 1 & 2) even when the overt object NP is not topical. Morimoto (2002) discusses these facts under the general concept of differential object marking (DOM; cf. Bossong 1985) and suggests that these cross-linguistic data can be viewed as various stages of the gradual loss of the inflectional morphology and rise of positional licensing for objects.

A closer look at subject marking in other Bantu languages also reveals that facts in those languages diverge from the findings reported by Bresnan and Mchombo on Chicheŵa. Bresnan and Mchombo (p.778) note that in Dzamba, although all arguments inside VP can be questioned in situ, as in (1b), the subject cannot be questioned in its initial position, as shown by the ungrammaticality of (1c). In order to question the subject, a relative clause must be used, as shown in (1d).[2]

(1) a. ó-Nebo a-imol-aki ó-Biko e-kondo loo mé. Dzamba
'Nebo told Biko a story/tale today.'

b. ó-Nebo a-imol-aki **nzányí** e-kondo loo mé?
(lit.) 'Nebo told who a story today?'

c. ***nzányí** a-imol-aki ó-Biko e-kondo loo mé?
'Who told Biko a story today?'

d. ó-Moto ó-wimol-aki ó-Biko e-kondo loo mé **nzányí**?
(lit.) 'The person who told Biko a story today is who?'

Based on such data, Bresnan and Mchombo speculate that unlike Chicheŵa, in which the subject can be questioned in its initial position, in Dzamba, all subject NPs must necessarily be grammaticized topics. They further note, citing Bokamba (1981), that Dzamba has 'nominal pre-prefixes' which are obligatory on definite NPs. For example, in (1), we have the pre-prefix *ó-* on the proper nouns (*ó-Nebo, ó-Biko*). Such pre-prefixes are obligatory on subjects. This supports their hypothesis that all subjects are obligatorily grammaticized top-

[2]In the examples taken from published sources, I have kept the original use of tones and glosses, which, in some cases, results in inconsistency throughout this paper. For example, a final vowel (FV) in Chicheŵa (e.g. Bresnan and Mchombo 1987) is glossed as ASP(ECT) in Kinyarwanda (e.g. Kimenyi 1980); the morpheme *ra* is glossed as anti-focus (AF) in Kirundi (Ndayiragije 1999) but present tense (PRES) in Kinyarwanda (e.g. Kimenyi 1980).

ics. Taking this initial observation as a starting point, in this paper I explore the idea that what has uniformly been taken to be the subject marker in Bantu languages in fact represents two types of agreement system: subject versus topic agreement.

The crucial evidence for topic agreement in Bantu languages comes from a construction known as subject-object (S-O) reversal in a subset of Bantu languages, exemplified in (2) from Kinyarwanda (Kimenyi 1980).[3] In the canonical SVO sentence in (2a), the relevant agreement marker *a* (boldfaced) agrees with class 1 of the logical subject *Umuhuûngu* 'boy'. In the reversal sentence in (2b), the agreement marker *ki* agrees in class 7 of the lower argument *igitabo* 'book'. As shown in the translation, the fronted patient ('book') is a topic, and the postverbal logical subject receives a (contrastive) focus interpretation.[4]

(2) a. Umuhuûngu **a**-ra-som-a igitabo. SVO
1boy 1-PRES-read-ASP 7book
'The boy is reading the book.'

b. Igitabo **ki**-som-a umuhuûngu. OVS
7book 7-read-ASP 1boy
'The boy (FOC) is reading the book (TOP)' Kinyarwanda

The agreement pattern we see in (2b) is the unique property of this construction that raises the question as to the grammatical relation of the fronted patient to the verb. Unlike the more familiar left-dislocation, the object marker agreeing with the fronted patient is never present in S-O reversal, as shown the contrast between S-O reversal (3a) and left-dislocation (3b) (Kimenyi 1980:192, ex.(4)).[5]

[3]The data without citation have been generously provided by Alexandre Kimenyi for Kinyarwanda and Juvénal Ndayiragije for Kirundi. Tones are unfortunately left out in the elicited examples.

[4]The abbreviations used in the glosses are as follows: AF=anti-focus, ASC=associative, ASP=aspect, Dz=Dzamba, ENCL=enclitic, exp=experiencer, FV=final vowel, IMPERF=imperfect, IM.FUT=immediate future, INDIC=indicative, INF=infinitive (=class 15), Krw=Kinyarwanda, Kdi=Kirundi, LOC=locative, number N= noun class, OM=object marker, PASS=passive, PERF=perfect, PRES=present tense, PST=past, SM=subject marker TM=topic marker.

[5]The S-O reversal example in (3a) is constructed by the author.

(3) a. Igitabo ki-som-ye úmwáana. S-O reversal
7book 7-read-ASP 1child
'The child (FOC) is reading the book (TOP)'

b. igitabo, úmwáana a-ra-gi-som-ye. Object left-dislocation
7book 1child 1-PRES-7-read-ASP
'The book, the child is reading it.' Kinyarwanda

There are two possible solutions for the agreement pattern. The predominant solution has been to maintain the standard assumption about agreement that it licenses core argument functions such as subjects and (primary) objects. Under this assumption, the agreement marker in question must be a subject marker; S-O reversal such as (2b) is then a grammatical-relation changing operation whereby the patient gets linked to the grammatical subject, and the logical subject to the grammatical object. I refer to this solution as the subject analysis. An alternative solution, referred to as the topic analysis, assumes that no grammatical relation change takes place in S-O reversal. Rather, the agreement marker (*ki* in (2b)) is analyzed as a topic marker licensing the topical object. These two alternative solutions naturally lead to diverging predictions. I show evidence to support the topic analysis and argue that the topic function is indeed among the functions that can trigger agreement in so-called topic-prominent languages like Bantu.[6]

The discussion in the rest of the paper proceeds as follows. In section 2, I review some arguments for the previously proposed subject analysis, and point out why the analysis, while being able to maintain the traditionally accepted view of agreement, is nonetheless untenable for empirical reasons. In section 3 I provide the topic analysis within the constraint-based framework of Lexical-Functional Grammar (LFG; Bresnan 1982, 2001, Dalrymple, Kaplan, Maxwell, & Zaenen 1995). In section 4 I try to relate the data on S-O reversal and other correlating facts to the historical path these languages apparently have undergone with respect to their agreement system. The final section summerizes the discussion and points out remaining issues for further research.

[6]The topic analysis of S-O reversal argued in the present work stems from a discussion I had with Joan Bresnan (July 1999) in relation to the observation that in a subset of Bantu languages such as Dzamba in (1), the subject is always a grammaticized topic (noted in Bresnan and Mchombo 1987). I benefitted particularly from our discussion on the systematic differences between the two similar constructions—locative inversion (Bresnan and Kanerva 1989, Bresnan 1994) and S-O reversal.

2 Against the Subject Analysis of Reversal

Earlier work on S-O reversal (e.g. Bokamba 1976, 1979, 1985, Kimenyi 1980, 1988, Morimoto 1999) has generally assumed that the construction involves grammatical relation change, mainly due to the fact that the preverbal patient in reversal apparently triggers subject agreement: the patient (object) is fronted to the subject position and assumes the subject function, and the agent (logical subject) is postposed to the VP-internal object position. The grammatical function (GF) reversal analysis is somewhat analogous to the analysis of inversion in other languages: English, Chichewa, and Chishona, for example, exhibit inversion of the theme subject and locative complement (e.g. *Out of the bushes appeared a giant bear*; cf. Bresnan and Kanerva 1989, Harford 1990, Bresnan 1994); Sesotho and Setswana additionally allow inversion that involves (intransitive) unergative predicates (e.g. equivalent of *In the field are grazing the cattle*; see Machobane 1995, Demuth and Mmusi 1997, Lødrup 1999). In these constructions, the preverbal locative is analyzed as the grammatical subject and the logical subject in postverbal position as object, inducing a grammatical relation change; see Morimoto (1999) for an earlier OT account of all three language types including S-O (agent-patient) reversal in Kirundi and Kinyarwanda. The postverbal agent in S-O reversal has also been analyzed not as an object but as a demoted argument (e.g. chômeur in Kimenyi's (1980) analysis in Relational Grammar). Studies within the Principles and Parameters approach have analyzed S-O reversal as involving raising of the object to some functional projection usually reserved for the subject (e.g. SpecIP in Kinyalolo (1991), SpecTP in Ura (1996), Ndayiragije (1999)) and verb raising (to I or T). The logical subject either remains in its VP-internal position (cf. Kinyalolo, Ura) or raises to a specifier of FocusP above VP (cf. Ndayiragije). The latter (FocusP) alternative is intended to capture the focalization effect of this construction.

Apart from agreement, however, little evidence has been provided for the grammatical function status of the reversal arguments. Kimenyi (1980), for example, proposes that S-O reversal is a type of "subjectivization process" akin to passive: the non-agent argument canonically realized as a non-subject is realized as subject, and the logical subject is demoted. The demotion analysis is supported by the observations that the postverbal agent cannot be relativized, passivized, clefted or pronominalized. These are taken to be standard diagnostics for termhood within Relational Grammar adopted in Kimenyi's work. Kimenyi, however, admits that the preverbal NP lacks the properties of the usual subjects apart from agreement: "NPs advanced to subject by the [S-O] reversal rule do not acquire the properties of basic subjects, such as raising, deletion

under identity, and *ha*-insertion; the only subject property they acquire is verb agreement" (Kimenyi 1980:145).

Despite the apparent formal similarities between locative inversion and S-O reversal and attempts at a unified analysis of these phenomena, I show that there are several advantages for not adopting the subject analysis, and that the alternative analysis pursued in the present work which crucially relies on the grammaticized notion of TOPIC enables us to explain a broader range of related facts. The correct analysis of S-O reversal is critical to the understanding of the agreement systems in Bantu. Although in my analysis I assume that there is no actual GF "reversal", I will continue to refer to this construction as S-O reversal for descriptive purposes.

2.1 Lack of Evidence for Grammatical Relation Change

In the studies of locative inversion in Chichewa and English, Bresnan and Kanerva (1989) and Bresnan (1994) apply a number of syntactic tests for subjecthood and show conclusively that preverbal the inverted locative is indeed the grammatical subject, supporting their view that locative inversion involves grammatical relation change. Here I briefly consider VP attribution, gapping in coordinate structure, and subject-to-subject raising. I then comment on each test with respect to Kirundi and Kinyarwanda, for which elicited (analogous but not identical or even comparable) data are available, only to point out that these tests cannot be reliably used to show anything about the grammatical status of the preverbal patient in S-O reversal.

Control of Attributive VPs: Bresnan (1994:93 ex (58)) shows that Chichewa has a non-finite verb that can be used to modify NPs, as in (4).

(4) a. m-sodzi [$_{VP}$ w-ó-ík-á nsómbá pa m-pando] Chichewa
1-fisherman 1-ASC.INF-put-FV 10.fish 16 3-chair
'a fisherman putting fish on the chair'

b. nsómbá [$_{VP}$ z-ó-ík-í-ídw-á pá m-pando]
10.fish 10-ASC.INF-put-PASS-FV 16 3-chair
'fish being put on a chair'

In both active and passive examples in (4), the subject is modified by the infinitival VP. In Chichewa locative inversion, Bresnan (p.94, ex (59)) shows that the inverted locative subject can also be modified by a non-finite VP:

(5) m-nkhalangó m-ó-khaál-á mi-kângo Chichewa
18-9.forest 18-ASC.INF-live-FV 4-lion
'in the forest where there live lions'

The example in (5) thus provides evidence for the subject status of the inverted locative in Chichewa.

Extraction out of Coordinate Constituents: Extraction out of coordinate constituents is used to distinguish among grammatical functions. The generalization that holds for English is that "subject gaps at the top level of one coordinate constituent cannot occur with any other kind of gap the other coordinate constituent", as succinctly stated in Bresnan 1994:98 (cf. Williams 1977, Gazdar 1981, Falk 1983, Woolford 1987). This is illustrated by the examples in (6) (Bresnan 1994:98, exs (71)–(72)).

(6) a. She's someone that __ loves cooking and __ hates jogging. (S-S)

b. She's someone that cooking amuses __ and jogging bores __. (O-O)

(7) a. *She's someone that cooking amuses __ and __ hates jogging. (O-S)

b. She's someone that cooking amuses __ and I expect __ will hate jogging. (O-embedded S)

Bresnan (1994) shows how the inverted locative in locative inversion in English (e.g. *Out of the bushes appeared a monster*) observes the same constraint with respect to extraction from coordinate constituents (Bresnan 1994:98, exs (73)–(74)). This test has been used to test for subjecthood in other languages as well (cf. Joshi 1993 for Marathi, Kroeger 1993 for Tagalog), as this allows us to distinguish between subjects and non-subjects.

(8) a. That's the old graveyard, in which __ is buried a pirate and __ is likely to be buried a treasure. (subj-subj)

b. That's the old graveyard, in which workers are digging __ and a treasure is likely to be buried __. (nonsubj-nonsubj)

(9) a. ??That's the old graveyard, in which workers are digging __ and they say __ is likely to be buried a treasure. (nonsubj-subj)

b. That's the old graveyard, in which workers are digging __ and they say __ is buried a treasure. (obl-embedded subj)

These examples, then, constitute, evidence that the inverted locative is the gram-

matical subject.

Raising: Bresnan and Kanerva (1989:14) note that Chicheŵa has very few subject raising predicates, but nonetheless report one case of raising of the locative subject of the infinitive:

(10) ... pa-chi-dzala pá-fúna ku-túkúmbuká chi-nthu ...
16-7-rubbish pit 16-IM.FUT-want INF-emerge 7-thing
'... there seems to be something coming out of the rubbish pit ...'

Though not reflected in the English translation, the form of the sentence in (10) is locative inversion like the English *From the rubbish pit seems to be emerging something.* Since such raising is universally restricted to the grammatical subject of the infinitive, the example in (10) confirms the subject status of the inverted locative.

S-O Reversal Languages: As it turns out, these tests for subjecthood that are successfully applied for the conclusive results in Chicheŵa and English are not applicable to the reversal languages, Kirundi and Kinyarwanda.

First, in Kirundi, there is no construction analogous to VP attribution in Chicheŵathat shows subject control. The closest construction in Kirundi is a clausal adjunct that translates to something like "once he has finished buying ... " or "after having bought ... ", according to Ndayiragije (p.c. May 2000).[7] Second, extraction out of coordinate constituents fails to show anything about grammatical functions in Bantu languages for obvious reason: whenever there is a gap (null elements), the subject/object agreement morphology on the verb functions as topic-anaphoric agreement. Hence there can never be a real gap in the coordinate structure. Lastly, Kirundi and Kinyarwanda simply have no subject raising predicates such as *seem*, *expect*, and *likely*.

In short, the standard tests for subjecthood illustrated above for Chicheŵa and English all fail to apply to the reversal languages (Kirundi and Kinyarwanda) due to the lack of comparable constructions/verb types.

2.2 Unexplained Facts

The subject analysis put forth by various researchers also leaves some facts unexplained. Here I focus on the properties of the postverbal agent in S-O reversal, and variation across Bantu languages in the properties of agreement.

[7] See Morimoto 2000:155 for the relevant data.

The postverbal agent has no object properties

One of the puzzling facts that remain unexplained under the subject analysis is that the postverbal agent of a reversal sentence does not display usual object properties. For example, it can neither be relativized (11) nor promoninalized (12).[8]

(11) *N-kund-a umuhuûngu igitabo ki-som-a. Kinyarwanda
I-like-ASP 1boy 7book 7-read-ASP
[Intended as] 'I like the boy (FOC) who is reading the book (TOP).'
[Interpreted as] 'I like the boy that the book is reading (by magic)'

(12) a. Ba-ra-gi-som-a.
2-AF-7-read-ASP
'They are reading it.'

b. Cyi-(ra)-ba-som-a.
7-(AF)-2-read-ASP
#'It is reading them.' (non-reversal reading)
*'They (FOC) are reading it (TOP).' (reversal reading)

The postverbal agent is also not in the canonical, immediately postverbal, object position. In (13a), the postverbal agent is positioned after the adverbial phrase *buhurobuhuro* 'slowly', presumably adjoined to VP. Placing it in the canonical object position inside VP results in ungrammaticality as illustrated in (13b). This postverbal agent is therefore neither positionally nor morphologically licensed as the grammatical object.

(13) a. Ibitabo bi-a-som-ye buhurobuhuro Yohani. Kirundi
book 7-PAST-read-PERF slowly John
'John (FOC) read the book (TOP) slowly.'

b. *Ibitabo bi-a-som-ye Yohani buhurobuhuro.

The postverbal logical subject also could not be a demoted oblique as analyzed by Kimenyi (1980): in the languages considered here (e.g. Kirundi, Kinyarwanda, Dzamba), oblique arguments are generally marked by prepositions

[8]The ungrammaticality of example (11) does not improve even if we add an object marker corresponding to the relativized head noun *umuhuûngu* 'boy' or the correct relative tone marking on the verb inside the relative clause, as shown below.

(i) a. *N-kund-a umuhuûngu igitabo ki-**mu**-som-a.

b. *N-kund-a umuhuûngu igitabo ki-**sóm**-a.

Thanks to Jeanine Ntihirageza for this additional information.

such as *n'* in (14) from Kinyarwanda. If the postverbal agent were a demoted oblique, this would be an odd exception, for which no explanation has been provided.[9]

(14) a. Úmwáalímu a-ra-andik-a **n' íikárámu**. Kinyarwanda
teacher 1-PRES-write-ASP with pen
'The teacher is writing with a pen.'

b. Úmwáana y-a-rir-aga **n' âgahiinda keênshi**.
child 1-PST-cry-ASP with sorrow much
'The child was crying with much sorrow.' Kimenyi (1980)

If the postverbal agent is not an object or oblique, then we are left with the assumption that it is the grammatical subject.

Reversal and non-reversal languages show varying properties of agreement

A closer look at the properties of the agreement morphology in question across the Bantu family reveals systematic variation that correlates with the presence/absence of S-O reversal. The relevant data include the patterns of *wh*-questions and idiomatic expressions involving the verb and object. These data both point towards the different properties of the agreement morphology across Bantu.

Wh-elements: *Wh*-phrases are inherently focused, given that they ask for new information. If the reversal languages employ topic rather than subject agreement and requires the agreeing NP to be always topic, then these languages would not allow a *wh*-element to agree. We saw this earlier in (1c) from Dzamba. Another (similar) example is given in (15). The same holds for other reversal languages like Kinyarwanda as shown in (16). Chicheŵa on the other hand does not permit S-O reversal, and it allows *wh*-subjects in situ, as shown in (17)).[10]

(15) ***Nzányí** ó-wimol-aki ó-Biko e-kondo lɔɔ mé? Dz. *wh*-subject in situ
'Who told Biko a story/tale today?' (Bokamba 1981)

[9]The alternation of the class 1 agreement *a–y* seems to be phonologically conditioned.

[10]Sam Mchombo (p.c, January 2003) points out that the verb in (17) has high tones as indicated, which signal extraction of the *wh*-element. In other words, this question still appears to retain the tonal property of the cleft construction (which is built on relativization in Bantu, according to Bresnan and Mchombo 1987) that is typically used to form a subject *wh*-question in Bantu. It could be that the tonal distinction on the verb remains merely as a historical source of what used to be the cleft required for a subject *wh*-question.

(16) *__Nde__ y-a-som-ye igitabo?
who SM-PAST-read-ASP book
'Who read the book?' Krw *wh*-subject in situ

(17) (Kodí) __chíyâni__ chi-ná-ónek-a?
Q what(7) SM(7)-PAST-happen-INDIC
'What happened?' Chichewa *wh*-subject in situ

If we uniformly assume subject agreement across the whole family, then these facts would be left unexplained. If we assume, instead, that reversal languages display topic agreement, the ungrammaticality of (15)–(16) would be an obvious consequence of the system.

Verb-object idioms: In idiomatic expressions consisting of a verb and its object such as (18) in German, the object is non-referential, and as such they can never be topic.

(18) a. __das Kind__ mit dem Bade ausschütten
'to throw the baby with the bath water'

b. Viele Köche verderben __den Brei__.
'(Too) many cooks spoil the meal.'

If these idiomatic objects can be passive subjects and still maintain the idiomatic interpretation, then it would show that the language allows non-topical, non-referential subjects. Now, German has a non-referential expletive subject *es*, as in *es regnet* 'it is raining'. And we see in (19) that the objects in these verb-object idioms can be passivized subjects without losing the idiomatic interpretation.

(19) a. __Das Kind__ wurde mit dem Bade ausgeschüttet.
'The baby got thrown with the bath water.'

b. __Der Brei__ wird von vielen Köchen verdorben.
'The meal gets spoiled by (too) many cooks.'

In Chichewa, we also find verb-object idioms, as exemplified in (20a). The grammaticality of (20b) shows that Chichewa allows the objects of verb-object idioms to be passivized (Bresnan and Mchombo 1987:763).

(20) a. Chifukwá chá mwáno wâke Mavútó tsópáno
because of rudeness his Mavuto now
a-ku-nóng'ónez-a bôndo.
SM-PRES-whisper.to-INDIC knee
'Because of his rudeness, Mavuto is now whispering to his knee (= feeling remorse).'

b. Bôndo li-ná-nóng'onez-ědw-a.
knee(5) SM(5)-PAST-whisper.to-PASS-INDIC
'The knee was whispered to (= the remorse was felt).'

Chicheŵa also has a few proverbs that involve idiomatic subjects, exemplified in (21) from Bresnan and Mchombo (1987).

(21) a. Kalulu a-na-mu-omba maondo.
Hare SM-PAST-OM-knock knees
'The hare knocked him in the knees.'
(= He has stiff knees which cannot bend.)

b. Njovu i-na-ponda-po.
Elephant 9SM-PAST-step-LOC.ENCL
'The elephant stepped on it (hence rendered it dysfunctional).' Chicheŵa

Again in such expressions, the subject is non-referential; hence it cannot be topical. These data therefore show that subjects in Chicheŵa need not be topical or even referential. This is not true of reversal languages, as illustrated in (22) from Kirundi. The data in (22) are consistent with those of another reversal language, Dzamba, which requires the agreeing preverbal NP to be topic as we have already seen in (15).

(22) a. Yohani a-a-ra-hend-ye umunwa.
John 1SM-PAST-AF-cheat/mislead-PERF mouth
(lit.) 'John cheated/misled the mouth.'
(= 'John ate almost nothing.')

b. *Umunwa u-a-ra-hend-u-ye (na Yohani).
mouth SM-PAST-AF-cheat/mislead-PASS-PERF by John
(lit.) 'The mouth was cheated/misled (by John).'
(= 'Almost nothing was eaten (by John).') Kdi

In short, these data on idiomatic expressions also reveal different agreement properties that are unexplained by the uniform subject analysis.

Agentive object without verbal morphology

Apart from the above facts that are unaccounted for in the subject analysis, it is also worth pointing out that it is typologically quite rare for an agent to be linked to the object function without any morphology accompanying such unusual linking (also argued by Lødrup 1999). And this would be precisely the claim made by the subject analysis.

Now in ergative languages, the more patient-like argument (O) is linked to the most unmarked absolutive case, along with the sole argument of the intransitive predicate (S). The agent of the transitive (A) is linked to the marked ergative case. The linking patterns of A, S, and O are thus said to be the inverse of those in nominative-accusative languages (cf. Manning 1996). Similarly in Austronesian languages, the unmarked linking pattern is one in which the patient-like argument is linked to nominative (e.g. *ang*-marking in Tagalog; cf. Kroeger 1993).

These inverse linking types, however, display rich case/verbal morphology. Bantu languages share no typological properties with these language types. It is therefore not reasonable to assume that ergative/Austronesian type linking is shared by (a subset of) Bantu languages without any morphology.

To summarize, in this section I hope to have shown that the predominantly held view of S-O reversal represented by the subject analysis is untenable, firstly because there is no reliable evidence for the assumed grammatical relation change, and secondly because it fails to provide a coherent explanation of the set of covariation observed in the reversal and non-reversal languages.

3 Salience-Based Agreement vs. Role-Based Agreement

In this section I provide a sketch of the alternative topic analysis of S-O reversal and agreement patterns across Bantu more generally. The key idea is that Bantu languages exhibit two types of agreement: salience-based and role-based. Furthermore, the observed variation in agreement properties across the synchronic Bantu grammars suggests a historical path from salience-based to role-based agreement.

The idea explored in the topic analysis is that just as arguments are ranked according to the argument hierarchy, they are ranked according to the topicality hierarchy. This hierarchy is determined by relative 'salience' of the arguments, and is distinguished from *discourse prominence*. The notions of 'topic salience' and 'discourse prominence' are defined in (23).

(23) a. **Topic Salience**: Arguments are ranked according to topicality. An argument that is most prominent in discourse is also the most salient in terms of topicality. In the absence of such an argument, by default the nominative argument will be most salient (cf. Givón 1976, Keenan 1976, Li and Thompson 1976).

b. **Discourse Prominence**: Any element that can bear a (lexical) stress can be discourse-prominent. It may be topical or focal.

Given that the arguments of a given predicate are *ranked* according to topic salience, naturally there can be at most one argument that is most salient in terms of topicality, while there can be multiple constituents that are discourse-prominent.[11]

The claim in (23a) that the nominative argument will be topically the most salient by default is supported by the cross-linguistic characterization of subjects and the historical source of subjects' topic prominence. Givón (1976), for example, notes that subjects in many languages, such as Mandarin, Malagasy, and also Kinyarwanda, must be either definite or generic (see also Keenan 1976, Li and Thompson 1976). This property is reminiscent of (dislocated) topics, which, according to Givón (1976), are universally restricted to be definite or generic (also see Alsagoff 1992:192, Lambrecht 1994, Birner and Ward 1998). Malagasy is an VOS language, and the nominative NP is placed sentence finally and must be topical (= topically the most salient element). However, like most verb-initial languages, the position for discourse-prominent constituents is clause-initial.

Even in so-called subject-prominent languages such as English, which tolerate indefinite, non-referential subjects, subjects are nonetheless overwhelmingly definite and referential (Givón pp.154–155). In English, continuing topic is generally expressed as a subject, but the new topic (discourse-prominent) is expressed in a left-dislocated position. For example in an answer to the question in A below, B would be more natural than B′, as shown in (24), where *they* (family) is established information:

(24) A: Where does your family live?
B: They live in N.Y.
B′: #My family, they live in N.Y.

[11] By emphasizing *lexical* stress in (23b), I mean to exclude cliticized unstressed pronouns that cannot be discourse-prominent, as in the German *(e)s* in *ich kann's machen* 'I can do it' or the English *'im* in *I got'im* (*I got him*).

On the other hand, as a continuation of the above exchange, if B wanted to mention where his/her cousin lives as opposed to his family, then an utterance like that of B′ in (24) becomes most felicitous. In this context, *cousin* in (25) is introduced as a new topic contrasting with the old topic *family*.

(25) B: (Now) my cousin, he lives in Chicago.
B′: #(Now) he lives in Chicago, my cousin.
B″: (Now) my COUSIN lives in Chicago.
(OK with appropriate intonation)

Thus, a dislocated topic is used as a new/contrastive topic, while the old topic tends to be expressed as a clause-internal topic or the subject in a non-dislocated subject construction. Birner and Ward (1998) make a similar pragmatic difference between English dislocation and topicalization based on a large number of corpus data. I assume therefore that topic salience is universally part of the argument linking domain. Following the system of abstract case features familiar in Lexical Decomposition Grammar (e.g. Wunderlich 2000), I represent topic salience by a binary feature [±ht], as shown in (26a,b). The feature [−ht] states that "there is no argument that is higher in topic salience", and specifies the element in highest topic salience. Conversely, [+ht] states that "there is an argument that is higher in topic salience". These features form a universal scale as shown in (26c), which I refer to as the TOPICALITY HIERARCHY.

(26) Encoding topic salience (á la Wunderlich 2000)

a. [−ht]: "There is no other argument that is higher in topicality."

b. [+ht]: "There is another argument that is higher in topicality."

c. **Topicality hierarchy**: [−ht] > [+ht]

In terms of these feature specifications, topic-prominent languages can be said to link [−ht] (topically most salient) to subject; subject-prominent languages, on the other hand, link [−hr] (highest argument) to subject. Within this system, we can say that subject is cross-linguistically the default topic because [−ht] is assigned to the argument with the [−hr] feature[12] by default when context identifies none of the arguments as topically salient (or non-salient).

Returning to the Bantu agreement systems, we can characterize S-O reversal languages as having salience-based topic marking in the sense that the agreement prefix encodes the most topical, but not necessarily the highest, ar-

[12] [−hr] reads as "there is no argument that is higher in the argument hierarchy, and is assigned to the highest role.

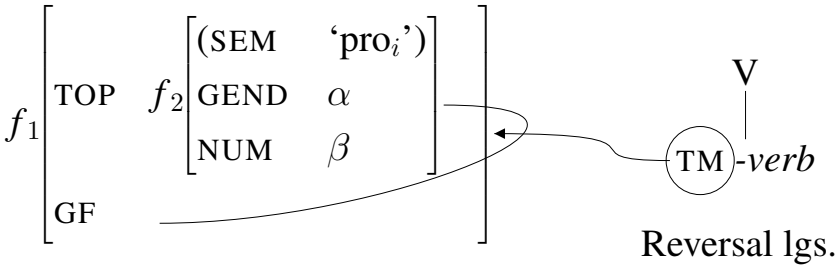
gument. We might represent this property of the topic agreement in a lexical entry like that in (27). These functional schemata, familiar from LFG, specify that there is some feature structure (f_1) that contains a grammaticized discourse topic 'TOP', whose value is another feature structure (f_2). This inner feature structure contains the information specified by the topic marker (TM), gender and number. The optional semantic content SEM = 'pro' abbreviates two feature structures, one with 'pro', which represents a TM functioning as a topic pronoun, and the other without 'pro', representing a TM as topic agreement.

(27) Lexical entry of the topic marker (TM)

TM-: V_{infl} (f_1 TOP) = f_2
(f_2 GEND) = α
(f_2 NUM) = β
((f_2 SEM) = 'pro')

The instantiations of these functional schemata result in the feature structure shown in (28). The curved line from f_2, the value of TOP, to GF in (28) indicates that the TOPIC is associated with one of the argument selected by the predicate (realized as a core GF). This is ensured by the extended coherence condition of LFG (Bresnan 2001, chapter 4), which requires that grammaticized discourse functions TOPIC and FOCUS be associated with one of the argument functions selected by the predicate.

(28)

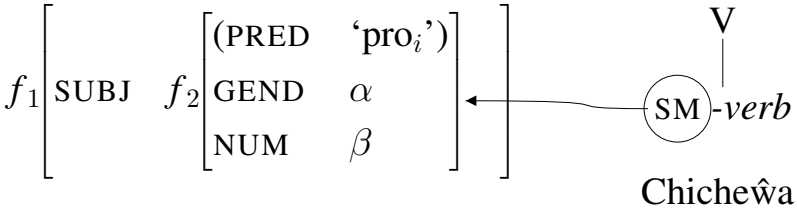


Non-reversal languages like Chicheŵa employ role-based subject marking: the subject marker (SM) encodes the highest argument in the argument hierarchy. Thus, the lexical entry may contain the information shown in (29). Here the SM specifies that there is some feature structure (f_1) that contains a SUBJ, whose value is identified with another feature structure (f_2). The information included in the inner f-structure is identical to that of the TM in (27). The f-structure in (30) shows the instantiations of these functional schemata.

(29) Lexical entry of the subject marker (SM)

$$\begin{array}{lll} \text{SM-:} & V_{infl} & (f_1\ \text{SUBJ}) = f_2 \\ & & (f_2\ \text{GEND}) = \alpha \\ & & (f_2\ \text{NUM}) = \beta \\ & & ((f_2\ \text{SEM}) = \text{`pro'}) \end{array}$$

(30)

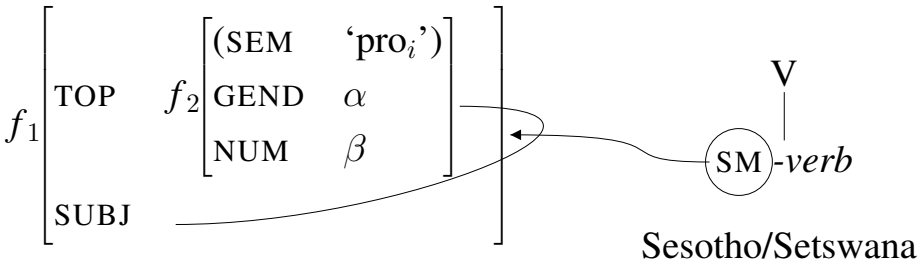


Chichewa

Now there is a third type, namely, languages such as Sesotho and Setswana that do not allow S-O reversal like the salience-based agreement languages, but also do not allow non-topical subjects to agree like the role-based agreement languages (cf. Demuth and Mmusi 1997). In fact, I believe the majority of Bantu languages are described in the literature as belonging to this type.

Within the proposed systems of agreement, we can characterize this third type as having a basically role-based agreement system. The only restriction is that the agreeing subject must be topically salient ([−ht]). The f-structure in (31) shows that the TOPIC function is always associated with SUBJ.

(31)



Sesotho/Setswana

From the diachronic perspective, the Sesotho/Setswana type can be viewed as an intermediate stage in the shift from topic to subject agreement. One piece of supporting data for the supposed historical path that gave rise to the two agreement systems in the present day Bantu languages comes from Meeussen's (1967) reconstruction of Proto-Bantu. Meeussen (1967:120) reconstructs a syntactic pattern in Proto-Bantu that is analogous to S-O reversal (and locative inversion), as illustrated in (32)–(33). These data lead us to infer that the system of topic agreement already existed in Proto-Bantu.[13]

[13]The precise translation of (32) is not available in the original source.

(32) a. nkíma jí-į́ji buénge búá-mití
S (exp) SM-V O (theme)

b. buénge búá-mití bú-į́ji nkíma
O (theme) SM-V S (exp)
'The monkey knows the (cleverness of) trees.'

(33) a. njogų jí-ákų́įde mu-duį
S (exp) SM-V LOC
'The elephant died in the river.'

b. mu-duį mu-ákų́įde njogų
LOC SM-V S (exp)
'In the river (there) died an elephant.'

The historical path from topic to subject marking suggested by the above data can be attributed to a 'frequentist' explanation recently advocated by researchers like Bybee (Bybee 1998, Bybee and Hopper 2001) and Haspelmath (2005) to explain certain morphosyntactic regularities and change. The apparent change in the agreement systems observed through the synchronic variation across the Bantu family can be seen as an effect of frequency—namely, the notion of subject embodies a frequent combination of semantic and information-structural properties, most prominently a combination of agents and topics. Subject agreement is more iconic than topic agreement in the sense that there is one-to-one correspondence between the agreement morphology and grammatical function (paradigmatic isomorphism, cf. Haiman 1980, Croft 1990a). These functional forces seem to be reasonable motivations for the shift in which the topic agreement was reanalyzed as subject agreement, and consequently the preverbal agreeing NP became restricted to the subject function. We can then also expect a further historical path where all Bantu languages eventually come to employ the role-based agreement system. The expected concomitant change is, of course, the eventual loss of S-O reversal. Additional data on S-O reversal suggest that this may already be happening, as discussed below.

4 Grammatical Change along Referential Hierarchies

When the new system replaces the old, it typically does so gradually in a predictable fashion along referential hierarchies. A case in point is split ergativity. Split ergativity is viewed as a transitional synchronic stage in a change from the

ergative/absolutive system to nominative/accusative system (cf. Dixon 1994). In ergative languages, it is claimed that the higher the NP on the nominal hierarchy in (34), adopted by Dixon (1994:85), the more likely it is to be in A (transitive subject) rather than O (transitive object) function (e.g. Du Bois 1987, Dixon 1994).

(34) Nominal Hierarchy

1st > 2nd > 3rd > Name > Human > Animate > Inanimate
←— more likely to be in A than in O function

The first person pronoun is therefore said to be the most "prototypical" or "unmarked" A, while the inanimate NP is the most "unmarked" O. Assuming the general markedness principle widely assumed that marked forms are also morphosyntactically marked, what we expect in a split ergative language along this nominal hierarchy is presence of morphological marking of an NP from the lowest element of the hierarchy when it is in A function, but from the highest element in O function. According to Dixon (1994:85), a number of languages have split case-marking systems exactly on this principle: a morphologically overt (="marked") ergative case is used with NPs from the lowest end, up to some point in the middle of the hierarchy, and an accusative case from that point on, over to the highest end of the hierarchy. Split ergativity illustrates thus how a shift from one system to another takes place systematically and predictably along a referential hierarchy.

In the Bantu languages with the salience-based agreement system, we see that S-O reversal is restricted along the dimension of the animacy hierarchy (= a simpler version of the nominal hierarchy in (34)) given in (35).

(35) Animacy hierarchy: Human > Animate > Inanimate

As in the nominal hierarchy in (34), given two arguments, subject and object, the highest element in the hierarchy (human) is the most "prototypical/unmarked", or—to use the notion of 'frequency' instead—most frequently the subject, while the lowest element (inanimate) is the most frequently the object. Then presumably the most frequent structure (and animacy configuration) would be one such as *the boy is reading a book* where the subject is human, and the object, inanimate. On the other hand, the least frequent (animacy) configuration would be one like *loud noise disturbed the baby*, where the subject is inanimate, and the object, human.

As reported by Morimoto (2003), it is these predicates with rare (termed "marked" in Morimoto 2003) animacy relations that block S-O reversal. This

is exemplified in (36)–(37).[14] Example (36) (presumably) represents the least frequent animacy configuration, where the subject is inanimate and the object is human. As shown in the translation for (36), the reversal reading is blocked. The b sentence is grammatical only in the non-reversal, non-sensical reading. In (37), the subject is also lower in animacy, and again, the reversal reading is blocked in the b sentence.

(36) a. Urushiinge ru-ra-joomb-a umwaana. S=inanimate
needle it-AF-pierce-ASP child O=human
'The needle will pierce the child.'

b. Umwaana a-joomb-a urushiinge. *reversal
child he-pierce-ASP needle
*'The needle$_{FOC}$ will pierce the child$_{TOP}$.' Kinyarwanda

(37) a. Akayabu ka-a-ra-fyese umuhungu. S=animate
cat it-PAST-AF-lick:PERF boy O=human
'The cat licked the boy.'

b. Umuhungu a-a-fyese akayabu. *reversal
boy he-PAST-lick:PERF cat
*'The cat$_{FOC}$ licked the boy$_{TOP}$.' Kirundi

When the arguments are of equal animacy and there is potential ambiguity in interpretation, as in (38), the reversal interpretation is unavailable just from the string (in a null context); the only possible meaning in (38b) is one in which *umukoôwa* 'girl' is the subject/agent, and *umuhuûngu* 'boy' is the object/patient.

(38) a. Umuhuûngu y-a-som-ye umukoôwa. S=human
1boy 1-PST-kiss-ASP 1girl O=human
'The boy kissed the girl.'

b. Umukoôwa y-a-som-ye umuhuûngu.
1girl 1-PST-kiss-ASP 1boy
'The girl kissed the boy.' (no reversal)
*'The boy$_{FOC}$ kissed the girl$_{TOP}$.' (reversal) Kinyarwanda

On the other hand reversal is allowed in an example like (39) where only one of them can be the likely subject/agent due to the core meaning of the verb.

[14]The examples in (36)–(39) are taken from Morimoto (2003).

(39) a. Icyuma cy-a-kas-e umugaati. S=inanimate
knife it-PST-cut-ASP bread O=inanimate
'The knife cut the bread.'

b. Umugati w-a-kas-e icyuma. √reversal
bread it-PST-cut-ASP knife
'The knife$_{FOC}$ cut the bread$_{TOP}$.' Kinyarwanda

In short, S-O reversal is permitted when the subject outranks the object in animacy, but not when the subject is lower in animacy than the object. When there is equal animacy and ambiguity results, the reversal interpretation becomes unavailable. These facts are summarized in (40).

(40) Grammatical Function-Animacy Association in S-O Reversal

		OBJ		
		HUM	ANIM	INAN
SUBJ	HUM	yes*	yes	yes
	ANIM	no	yes*	yes
	INAN	no	no	yes*

yes*: only if there is no ambiguity

The rationale for the facts summarized in (40) seems straightforward: on the one hand, the configuration in which object outranks subject in animacy is less frequent than the one in which subject outranks object. On the other hand, S-O reversal sentences are non-canonical—presumably also rarer in frequency—both syntactically (non-canonical OVS order) and pragmatically (patient is topical and agent is focal), than the non-reversal counterparts. The descriptive generalization, then, is that the less frequently occurring animacy relations cannot be expressed in the non-canonical syntactic construction (reversal).[15] This type of non-canonical form-meaning pairs that are not likely to appear frequently in the language (or blocked altogether as in the present case) seems to be susceptible to change/loss over time (cf. Croft 1990b).[16]

In short, the animacy restriction on S-O reversal suggests this construction is being lost from the least frequent combination of elements in the referen-

[15]See Morimoto (2001) for an OT analysis of these facts.

[16]Animacy also figures in the domain of differential object marking (DOM; cf. Bossong 1985, Aissen 2003), in which objects that are high in animacy are case-marked, while those low in animacy are unmarked. Like split ergativity, DOM is also said to represent a stage in the diachronic process whereby overt case-marking is being lost from the low end of the referential hierarchy.

tial and argument hierarchy (e.g. inanimate-subject, human-object). And this change must be concomitant to the change in the properties of the agreement morphology. Properly recognizing the two systems in the Bantu family, the salience-based and role-based, then enables us to relate the relevant synchronic data like the animacy restriction on S-O reversal, inventory of non-topical subjects to the issue of agreement and to a diachrony of the agreement systems.

5 Conclusion

In this final section I summarize the findings and main issues discussed in this paper, and then point out some remaining issues for future work.

5.1 Summary

In this paper, I have argued for the two-fold agreement systems in Bantu: salience-based agreement and role-based agreement. The crucial evidence for salience-based agreement comes from the existence of S-O reversal, where the preverbal patient triggers topic, rather than subject, agreement. The subject analysis of this construction that assumes grammatical relation change was rejected on both empirical and theoretical basis. I have shown that the proposed view of agreement better explains the set of covariation related to the presence/absence of S-O reversal.

I have also tried to relate the synchronic data to the historical path from topic to subject agreement, which I suggest is a particular realization of the more general functional shift from topic to subject. Referential properties like animacy seem to figure in diachronic change, as attested in split ergativity and differential object marking. The animacy restriction on S-O reversal thus probably represents a stage in the gradual loss of this construction, concomitant with the shift from topic to subject agreement.

In conclusion, in order to provide a coherent explanation of the set of facts related to S-O reversal and to relate those facts to a broader set of agreement phenomena (split ergativity, DOM), it is crucial that we recognize the role of topicality in the core grammar, as manifested in topic agreement.

5.2 Remaining Issues

The present proposal that Bantu languages split between topic and subject agreement has naturally opened doors to new issues and problems, some of which are clearly beyond the scope of this paper. Below I address a few note-

worthy issues for future work.[17]

First, given the claim that a subset of Bantu languages display topic agreement, we should expect more differences between topic agreement and subject agreement languages than those discussed in section 2. For example, Kinyarwanda has four pleonastic pronouns (only for subjects) that are used in impersonal constructions. Under the topic agreement analysis, one would need additional explanation of how such impersonal pronouns can exist at all. Kimenyi (1980:185) notes that one of these pleonastic pronouns that refers to an unspecified agent, *ba-* ('they'), always has ambiguous interpretation as a 'dummy' pronoun and a definite personal pronoun. There are also cases where this pronoun must be interpreted as a definite, topic-anaphoric pronoun. It would be worthwhile to examine the properties of these impersonal pronouns in both topic agreement and subject agreement languages.

Second, from the historical perspective, it is interesting to note that while S-O reversal is restricted to only a subset of Bantu languages, locative inversion remains widespread throughout this language family. As we have seen, S-O reversal generally involves inversion of a proto-typical agent and patient. The animacy condition we saw in section 4 limits S-O reversal to only a subset of predicates. Such a split within the construction makes the overall frequency of S-O reversal relative low compared to a construction without such a split (due to the animacy restriction). It might well be that the decrease in overall frequency has led to the total loss of this construction in the majority of the Bantu languages. To pursue this view, one would have to examine quantitative data on S-O reversal as well as locative inversion.

Lastly, in order to establish a more solid argument for the existence of topic agreement, more contextualized data (e.g. from text) would perhaps be necessary.

Nonetheless, I hope that the present discussion on the split between subject and topic agreement across the Bantu family serves as a step forward towards a better understanding of the relation between agreement properties and word order in Bantu.

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[17]The remaining issues addressed here have been prompted by the editors of this volume.

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Focus in Bantu: verbal morphology and function*

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Although verb forms encoding focus were recorded in various Bantu languages during the twentieth century it was not until the late 1970's that they became the centre of serious attention, starting with the work of Hyman and Watters. In the last decade this attention has grown. While focus can be expressed variously, this paper concentrates largely on its morphological, partly on its tonal expression. On the basis of morphological and tonal behaviour, it identifies four blocks of languages, representing less than a third of all Bantu languages: those with metatony, those with a binary constituent contrast between verb ("disjunctive") and post-verbal ("conjunctive") focus, those with a three-way contrast, and those with verb initial /ni-/. Following Güldemann's lead, it is shown there is a fairly widespread grammaticalisation path whereby focus markers may come to encode progressive aspect, then present tense. Many Bantu languages today have a pre-stem morpheme /a/ 'non-past' and it is hypothesized that many of these /a/, which are otherwise hard to explain historically, may derive from an older focus marker.

1 Introduction

By contrast with other studies which have concentrated on focus in particular Bantu languages or groups of languages, this is an overview of focus across Bantu. It offers no new data or theoretical insights but is at once an attempt to synthesise what others have done and to explore some of the possible historical antecedents of what occurs today. It concentrates on focus marking on the verb, that is, primarily on morphology and to some extent on tonal correlates. It does not deal with syntax, particles, or the noun augment, which all play a role in focus. It examines morphological features occurring in major blocks of languages and ignores those only found in a few languages.

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2 Definition(s)

Concentrating on information, Watters (1979) defines focus as "that information in the sentence that the speaker believes, assumes or knows the hearer does not share with him or her". He and others recognize different discourse functions for focus, such as assertive and contrastive focus. More concerned with the scope of the focus in the utterance, Wald (1997: 57) says: "purpose of a constituent focus system is to assign the maximal focus of a clause to one or another clause constituent". In the same vein, Güldemann (2003) distinguishes three types of scope of focus: term, verb, and truth. Term focus refers to a non-verbal constituent, usually post-verbal ("I'm going to eat porridge"), verb focus refers to the lexical content of the verb ("I'm going to eat it, not drink it"), and truth focus concerns the grammatical categories attached to the verb (tense, aspect, modality: "I'm going to eat it"). Güldemann (2003: 329) acknowledges his intellectual debt to Dik (e.g. 1997), but I cite Güldemann here, since I am following him, rather than Dik (and other sources cited by Güldemann). In what follows I often use the terms post-verbal or clause-final focus (more or less equivalent to Güldemann's term focus) and verb focus (his verb and truth focus), because they occur commonly in the sources.

3 How focus is expressed in Bantu

Focus is indicated across Narrow and Grassfields Bantu by some combination of: word order/movement, clefting, particles, tone, reduplication of the verbal word, verb morphology, and object shape. Examples in (1) are from Aghem, a Grassfields language (Watters (1979)):

(1) a. fíl á mɔ zí kí-bɛ́ án ˈsóm
friends they past eat fufu in farm
'Friends ate fufu on the farm.'

b. fíl á mɔ zí án ˈsóm bɛ́-ˈkɔ́
friends they past eat in farm fufu
'Friends ate fufu on the farm.'

c. kí mɔ̂ dzɔ̀ɔ nɔ̀
it was good FOC
'It was good.'

d. kí mɔ̂ dzɔ̀ɔ nɔ̀ né
'It was good today.'
e. kí máā dzɔ̀
it was.FOC good
'It was good/came out well.'

In (1a, b) the immediately post-verbal constituent is focused (post-verbal focus, word order) and the noun has a different shape, depending whether it is in focus. (1c) focuses on 'good' by postposing the particle *nɔ̀*, and (1e) focuses on the pastness of the verb (verb focus) by its having a different morphology from (1d).

(2) a. Kongo[1] sumba tu-n-sumba
buy we-PROG-buy
'We are buying'
b. Swahili a-lia-lia tu
'It (child) does nothing but whimper'
c. Vunjo ni kiki u-le-soma
is what you-past-read
'What did you read?'
d. Ganda y-a-lába omukázi 'He saw a woman', but
y-a-lábá mákázi 'He saw a woman'

Kongo and Swahili reduplicate the verb, Kongo also involves infinitive fronting (verb focus). The Vunjo example involves clefting. The Ganda example involves the presence/absence of the nominal preprefix and a tonal difference. Other tone contrasts can be seen in (3) and tone is taken up again in section 9. Thinking about focus in Bantu has been largely based on, and shaped by, its appearance in four groups of languages: Grassfields Bantu[2] (exemplified in (1) and (15)); the Zone S languages of southern Africa (including K21)[3], discussed in section 5, below; a set of Lacustrine (D60, E40) and Zambian (M40-50-60) languages, also discussed in section 5: a set of languages in Kenya and Tanzania (E40, E50, E60), dealt with in section 7. To these I have added languages with metatony (section 4, below) and other possibilities are mentioned in sections 6

[1] Kongo example from De Clercq (1912), Vunjo from Dalgish (1976), Ganda from Hyman (p.c.). Here (e.g. Swahili) and elsewhere, where no source for examples is given, it is Nurse (in progress). Glosses are those given in the sources, or, where the examples are my own, I have supplied the gloss.

[2] Grassfields Bantu, spoken in the Cameroon, is usually said to be different from Narrow Bantu but the differences are ill-defined.

[3] Where languages are referred to by number, the latter are from Maho (2003).

and 10. The languages in sections 5, 6, 7 and 10 – where the surface is only now being scratched – represent under a third of all Bantu, so more work is necessary in order to have an adequate picture of focus across Bantu.

4 Metatony

Many – exact number not known – Forest languages show a tonal process called metatony: Zones A, B, C, D10, D20.[4] In metatony a verb final vowel(s) is underlyingly non-H when utterance final but H when followed by a complement (object, adverbial...in the same phrase?) and the H may carry over onto the first TBU of the complement. It tends to characterize some tenses/aspects of each language and not others. It is often described as just a tonal process, and is thus similar to high tone shift or spread, but it is striking that it has certain characteristics linking it to focus: it seems to affect certain (mostly positive) tenses in the language (e.g. Guarisma 2003: 320-327) and marks a contrast between verb focus and post-verbal focus. This suggests it is not merely a tonal process but has a syntactic-semantic function, an opinion shared by Schadeberg (1995: 176, also Dimmendaal 1995: 32, de Blois 1970: 107). Examples:[5]

(3)	a. Duala	wána	'(to) bring', but
		a ma-wáná <u>mabato</u>	'She brings <u>clothes</u>'
	b.	bitó bá-manda	'Women buy', but
		bító bá-mandá <u>mabato</u>	'Women buy <u>clothes</u>'
	c. Basaa	a bí nuŋul	'He sold', but
		a bí nuŋúl bísɛl	'He sold <u>baskets</u>' (metatony), but
		nuŋúl bisɛl	'Sell <u>baskets</u>' (verb but not noun affected)
	d. Mituku	kukúlúmanisa	'to assemble', but
		kukúlúmánísá <u>bantu</u>	'to assemble <u>people</u>'

At first sight, this looks as if what was originally a tonal process became used to encode a function, and that function looks like what follows in section 5: verb versus post-verbal focus. However, in all the cases below, it is the post-verbal focus form (conjunctive) that is unmarked or less marked, whereas here the conjunctive is apparently marked (by the H). The nature and origin of this whole tonal phenomenon needs more examination, as does the issue of whether other types of focus and other strategies exist in the Forest languages.

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[4] Meeussen (1967: 111) thinks metatony can be reconstructed for Proto-Bantu but I am not convinced its current geographical distribution warrants that.

[5] Basaa examples from Hyman (p.c.).

5 Tense marker plus focus, binary contrast: conjunctive versus disjunctive focus

Certain Savanna languages contrast post-verbal and verb focus, the latter marked by an inflectional morpheme following the tense-marker: D60, M40, (M50), M60, P20-30, S20-30, K21, S40-50. This contrast is talked about in the literature in two slightly different ways: in terms of the relationship between verb and other constituents, or in terms of what is focused. Conjunctive (post-verbal[6]) forms are said to emphasize the close relationship between the verb and a following constituent, such as object, adverbial, wh-word, or prepositional phrase in the same clause. Disjunctive (verb focus) forms indicate there is no special relationship between verb and any following constituent. They often stand alone but may be followed by other sentence constituents, provided these do not form part of the same clause. Conjunctive is un- or less marked morphologically, typically there being only tense markers (zero in the present and /a/ in the past). Disjunctive is marked by some combination of morpheme following the regular post-subject tense marker (most often /a/ or /la/, depending on tense and language) and tone. Typically, the contrast seems restricted to certain tenses, most often positive presents, or positive presents and pasts, and also most often does not occur in negatives, relativised verbs and verbs in certain other clause/sentence types. However, in some southern African languages (Tswana, Zulu) positive future and perfect, and some negatives, are also involved. It remains to be seen whether a wider selection of languages will show the same restrictions or not. From my 1970's fieldnotes, some N10 languages may have this kind of contrast, as my Matengo source, for example, said members of two pairs of past tenses did not differ in time reference but one member of each pair was "complete" while the other "required more words". Examples of conjunctive/post-verbal versus disjunctive/verb focus:

(4)			Post-verbal focus	Verb focus
	Ha[7]	a.	ba-ø-rima <u>ibiharagi</u>	ba-ø-ra-rima
			they-ø-cultivate beans	they-ø-FOC-cultivate
			'They cultivate <u>beans</u>'	'They cultivate'
		b.	ba-a-rím-ye <u>ibiharagi</u>	ba-á-ra-rím-ye
			they-P_2-cultivate-FV beans	they- P_2-FOC-cultivate-FV
			'They cultivated <u>beans</u>'	'They cultivated'

[6] Conjunctive (post-verbal) and disjunctive (verb focus) both go under a variety of other names, for which see Güldemann (2003: 328).

[7] These examples show structural and tonal differences (see Harjula 2004: 100).

	c.	y-oo-tee-ye imbutó	y-oo-tée-ye
		he-POT-sow-FV seed	he-POT-sow-FV
		'He would sow the seed'	'He would sow'
	Bemba	bá-ø-bómba	bá-ø-lá-bomba
		'They work...'	'They work'

In a few languages (E401(Ngurimi)-402-403-404-43-44, M54 (Lamba), and M60) *la/ra* occurs in what translates as a progressive or general present. Thus:

(5)	Ngurimi	tu-ra-gura	'We buy, are buying'
	Lamba	tu-la-cita	'We do'

Comparing the Lamba 'present' with the disjunctive in nearby Tonga (M64) (also Bemba), Güldemann (1996: 236) proposes a plausible connection. He suggests Lamba once also had a disjunctive (marked by *la*) versus conjunctive (zero marking) contrast but neutralized it in favor of the marked form, which thereby became the general present form. This explanation of Güldemann's would also provide a link from *ra* elsewhere in Lacustrine languages to this E40 (e.g. Ngurimi) 'present'. That is, as with the Zone M languages, some Lacustrine languages have focal *ra* (D60, e.g. Ha), the original meaning, and others have progressive/present *ra* (E40, e.g Ngurimi), the derived meaning.

6 Three-way contrast: neutral versus verb versus post-verbal focus

Odden (1996: 63-5) recognizes three focus types in Matumbi: neutral, verb, and post-verb ("noun") focus. Noun focus requires a non-verb to be the pragmatic focus of the clause and to appear in the immediately post-verbal position. Verb focus puts contrastive focus on the verb. Neutral forms do not assert that any element of the clause is focused. Unlike in nearby Mwera (Harries 1950: 92-9) where one marker (*ku*) marks focus, several markers operate in Matumbi:[8]

(6)	a. Neutral focus:	ni-ká-ba ka-ni-telek-á
		I-ka-be ka-I-cook
		'I am cooking.'
	b. Noun focus:	ni-ø-kata <u>áanjú</u>
		I-ø-cut firewood
		'I am cutting <u>firewood</u> (not something else).'

[8] The role of *ka* in these Matumbi examples is not clear.

c. Verb focus: e-endá-teleká
he-FOC-cook
'He is cooking (not talking).'

Wald (1997: 65) suggests Shambaa has a three way contrast, where zero indicates post-verbal focus, /a/ is neutral, allowing the verb to be within the maximal focus of the clause, and /ta/ has the verb as the maximal focus of the clause. Thus Shambaa:

(7) ni-ø-dika manga 'I cook/ am cooking cassava'
n-a-dika (manga) 'I am cooking (cassava)'
ni-ta-dika (manga) 'I am cooking (cassava)'

He suggests Swahili once had a similar system, with ø, *a*, and *na* corresponding to ø, *a*, and *ta*, respectively. Shambaa and Swahili being related to the North East Coast Bantu languages (E70, G10, G20, G30, G40), these probably all once had the same system, if Wald is correct.

7 Verb-initial ni-: verb focus, progressive (and present?)

Some northeast languages have a verb-initial *ni-*, whose main function is often stated as assertion: E42-43-401, E46, E50 (not E56), E60.[9] Although differences naturally exist between groups of languages and between individual languages, the similarities between E40 (e.g. Gusii, Kuria), E50 (e.g Gikuyu), and E60 (e.g. Vunjo) are striking. The various grammars and articles, mostly written in complete or almost complete ignorance of the others and at different points in the twentieth century, make very similar statements. The presence of *ni* is said to represent greater certainty on the part of the speaker about the validity of what is being said, while the absence of *ni* indicates less certainty. Typically it appears in positive statements and yes-no questions but not in relatives, negatives, or most WH-questions. When the possibility of assertion or certainty is not present, there is no contrast between the presence and absence of *ni*.[10] Dalgish (1979: 57-63) presents a number of arguments in favor of the proposition that the Chaga (E62) *ni* itself derives from the copula, and in constructions originally involving copular *ni* and a cleft construction ("It is that X, it is the case that X"), a

[9] A set of languages in western Tanzania (F21, F22, F24, F31, F32) also have initial *n-*. It translates variously as relative, conditional, and "if/when". The connection between this and the *ni-* of this section needs more examination.

[10] Hyman has pointed out to me that while there is no assertion contrast in backgrounded clauses, there is a possibility of some focus marking: thus 'the woman who saw THE MAN' contrasts the referent, not the contents of the clause.

proposition taken for granted by most of the other authors (Barlow 1960, Bennett 1969, Cammenga 2002, 2004, Moshi 1988, Nurse & Philippson 1977, Whiteley 1960, Whiteley & Muli 1962).[11] The examples are from one or other of these authors (Dalgish 1979, Barlow 1960, Cammenga 2004, Dalgish, respectively).

(8) a. Vunjo i. ni wasi n-ulewaawa mdu
is clear FOC-you+killed person
'It is (abundantly) clear you killed someone', but

ii. ni wasi ulewaawa mdu
'It is (less) clear you killed someone'

b. Gikuyu i. nɪ-maathiire
'They went' ('It is a fact they went', verb focus)

ii. maathiire iyo
'They went two days ago' (post-verbal focus)

c. Kuria i. /ne-βa-a-sɔma/ [mbaasɔ́ma]
'Indeed they have read'

ii. /βa-a-sɔma/ [βaasɔmă]
'They have read'

d. Vunjo ngileona kyelya kilya ulekora
I.saw that food you.cooked
'I saw the food which you cooked.'

The last example contains a restrictive relative clause. Since such clauses lack the possibility of an assertion contrast, there is no contrast between initial *ni* and zero (**n-ulekora* is impossible here). At first sight the role of this *ni-* differs from what is presented for the languages in sections 5 and 6. There are obvious differences, such as the absence here of the disjunctive: conjunctive contrast and the fact that *ni* co-occurs with most tenses/aspects, while disjunctive markers are typically restricted to a few tenses/aspects. But the general difference may be less than appears, because the analyses summarized in sections 5 and 6 are recent work, while most of the thinking about the *ni*-languages is older, preceding Dik's (1997 (1989)) work, and often contained in grammars whose main interest was not focus. Muriungi and Abels' (2005) analysis of Tharaka may lead to a change of thinking about the role of *ni*. *Ni* in Tharaka (E54, akin to Gikuyu E51) clearly marks focus. While it does not occur with negatives or (most?) relatives, it does occur with most positive indicative tenses and aspects, and it also occurs on preverbal focused object (and subject) nouns, and with preverbal WH-words in some circumstances. A smaller subset of northeastern

[11] See also McWhorter (1992).

languages (E102, E12-13-14-21-22-23-24)[12] use the same morphology to express the difference between progressive (*ni*-) and non-progressive present (pre-stem zero) aspect. Thus:

		General present		Progressive	
(9)	Bwisi	tu-ku-ghenda	'We go, will go'	n-tu-ø-ghenda	'We are going'
(10)	Tooro	tu-ø-gúra	'We buy'	ni-tu-ø-gúra	'We are buying'

Güldemann (2003) discusses the connection between focal pre-verbal *ni*- and this progressive *ni*-. As Dalgish, he presents arguments connecting copula *ni* to assertive *ni* and then linking assertive to progressive *ni*, and necessarily in that grammaticalisation direction: copula became focus marker became progressive marker – following Hyman and Watters (1984), he sees progressive as a category with inherent focus. It is not clear whether there are languages in this subset where progressive has moved on to general present.

8 Recycling: verb focus to progressive to general present to non-past

The focal strategies in sections 5 and 7 tend in the same direction, as older focus systems disintegrated. Güldemann (2003) establishes a connection between verb focus and progressives, and a specific direction: verb focus may become progressive. Those concerned with grammaticalization paths (Bybee et al (1994), Heine & Kuteva (2002)) point out that progressives may broaden and become general presents, thus: verb focus > progressive > present. Progressives and presents are often extended to future reference, so they would cover non-past, thus: verb focus > progressive > present > non-past (or just future). Progressives becoming presents is not limited to progressives which derive from focus forms.[13] Across Niger-Congo and Bantu, for example, the commonest form of progressive is based on a structure which is or was of the shape be+locative+infinitive (*li-mu-ku*). Over time this reduces to a CV shape, most often *ku* or *ko*, and it is a safe bet that most general presents of that shape today originated as progressives. Bantu examples:

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[12] It is unclear how to interpret the *ni* in E403 *ni-tu-ku-gura* 'We buy, we are buying': focus or progressive? It appears to be the only form in the language with *ni*, which argues for progressive status. But the fact that there is no contrast with a *ni*-less form, and that it is used in the E40 area, which is the *ni*-focus area, argue for its focal status. E56, spoken in NE Tanzania, adjacent to G23, has undergone two changes. It has replaced E50 *ni*- by *na*, borrowed from G23, and this only occurs in the present, similar to E12-13-14-21-22-23-24. See Nurse (2000).

[13] Note also Swahili na, possibly once focus, now progressive for many speakers, and general present for others (Wald 1997).

(11)	a.	Holoholo w-i-mú-ku-keba	'She is searching' (PROG)
	b.	Gogo ni-ku-gulá	'I buy' (general present)
	c.	Hungu tu-ku-sumba	'We will buy' (FUT)

Where Holoholo shows progressive aspect and an almost full *(l)i-mu-ku* shape, Gogo and Hungu show reduced shapes (**li-mu-ku* > *ku*) and shifted meanings.

9 Focus and tone

Hitherto the emphasis has been on the morphology of focus and little coherent has been said of the role of tone in focus. Hyman (1999: 166) is the most detailed statement on this. His general conclusion can be summarized thus: "In some cases we have seen, focus has been morphologized as [+F][14]...In no case, however, have we seen what can be called a "direct mapping" from focus to tone. That is, I am unaware of a "pure" example where semantic focus (and only semantic focus) unambiguously conditions a [+focus] tonal effect, or where the absence of semantic focus (and only its absence) conditions a [-focus] tonal effect'. In each case the grammar mediates between semantic focus and tone." So, while tone certainly plays a role in Bantu focus marking, the "relationship is not direct."

The role of tone can be seen in the examples in (4), although not clearly. While the post-verbal and verb focus forms in the first Ha row have identical surface tones, underlyingly they behave differently (Harjula 2004: 100). In fact, all Ha positive forms with a focus contrast are tonally contrastive, but only some (present, the two pasts) are also morphologically distinct, while others (consecutive, potential) are morphologically identical (ibid). No Ha negative or relativized verb form is focally contrastive. In Haya, quite closely related to Ha, only one past today retains a tonal and morphological contrast (see (14)).

Creissels' (1996) study of Tswana (S31) shows only the present positive as tonally and morphologically distinct, and in S40 languages such as Zulu and Swati both the present positive and the anterior positive are morphologically and tonally distinct. Creissels (ibid) shows that other forms (present negative, anterior negative, future positive) in S30 and S40 languages also have the focal contrast but it is only tonal. No focal contrast of any kind occurs in other tenses/aspects, positive or negative, nor in any relativized verb.

The Haya (E22) situation is even more curious. Section 7 and (10) present cases where general presents (unfocussed) have become present progressives (focused). No mention was made there of tone because seemingly Haya *tu-ø-*

[14] [+focus] stands for the syntactic feature, [+F] for its morphologized analogue.

gúra 'We buy' and *ni-tu-ø-gúra* 'We are buying (PROG)' are tonally identical. But, as the Tswana present, they do in fact differ in their tonal behaviour. Using a different verb (*-kóm-* 'tie' and the name *Káto* in the examples below), Hyman (1999) shows that certain forms in Haya undergo "tonal reduction". That is, if anything follows the verb in the same clause, the underlying H of the verb (and in fact other H's also) deletes: so *ba-ø-kóma* 'They tie (disjunctive)' but *ba-ø-koma káto* 'They tie Kato (conjunctive)'. Tonal reduction does not occur in the progressive: *ni-ba-ø-kóma* 'They are tying' but *ni-ba-ø-kóma káto* 'They are not tying Kato', nor in any negatives: *ti-bá-ø-koma* 'They don't tie', *ti-bá-ø-koma káto* 'They don't tie K', *ti-ba-li-ku-kôma* 'They aren't tying' and *ti-bá-li-ku-kóma káto* 'They're not tying K'.

So far, tonal behaviour supports the morphologically based assumption that the Haya general present and the progressive differ. But all Haya TAM forms divide into two[15]: those that behave as the general present by undergoing tonal reduction, and those that behave as the progressive and do not:

(12) Tonal reduction (adapted from Hyman 1999: 161):

	'They tie', etc	'They tie Kato', etc
General present	ba-ø-kóma	ba-ø-koma káto
P_1	bá-á-kôma	ba-a-koma káto
P_2	ba-ø-komíle	ba-ø-komile káto
Past habitual	ba-a-kóm-aga	ba-a-kom-aga káto
F_1	ba-laa-kôma	ba-laa-koma káto
F_2	ba-li-kóma	ba-li-koma káto

(13) No tonal reduction (adapted from Hyman 1999: 162):

	'They are tying', etc	'They are tying Kato', etc
Progressive	ni-ba-ø-kóma	ba-ø-komá káto
Anterior	bá-á-kóm-ile	bá-á-kóm-ile káto
Experiental	ba-lá-kom-íle	ba-lá-kom-íle káto
Persistive	ba-kyáá-kôma	ba-kyáá-kóm-a káto
Subjunctive	ba-ø-kóm-e	ba-ø-kóm-e káto
Imperative	kóm-a	kom-á káto
P_3, etc	bá-ka-kôma	bá-ka-kóm-a káto

Of the forms without tonal reduction Hyman says: "...such TAM's have an intrinsic morphosyntactic focus [+F], which derives from their marked semantic status... so negation is the marked polarity, subjunctive and imperative are

[15] Hyman (p.c.) says similar tonal marking of focus also obtains in Ganda.

marked moods, progressive and persistive are marked aspects" (also perfect and experiental).

This Haya data, and to a lesser extent that from Ha and Tswana, raises interesting questions, such as:

- in the Haya data, assuming tonal reduction fails to take place in categories which are intrinsically focused, it is easy enough to accept negatives, subjunctives, and imperatives are marked compared with positives, indicatives, or statements, but why should positive progressives, anteriors, experientals, persistives, and P_3 have intrinsic focus, whereas positive perfective (except P_3), and habitual aspects apparently have no marked semantic status or intrinsic morphosyntactic focus. The perfective and habitual forms in Haya have disjunctive and conjunctive forms, the others do not. In Ha and Tswana, only certain forms have focal contrast: why those forms and why are they not the same categories as those in (12) in Haya? In what sense are all the indicative members of (13) intrinsically focused?

- since most members of (13) are marked or more marked morphologically than those in (12), why do they also need tonal marking? Similarly in Ha and Tswana: why are some forms only marked tonally, while others are also morphologically distinct? Were such forms once marked tonally and morphologically ("linguistic redundancy"?) or did one kind of marking take over as the other faded?

- how does this systemic markedness correspond to the discourse-pragmatic notion of focus?

- which other languages behave like this? It would be desirable to examine a selection of other languages to see how far this behaviour extends.

10 Other strategies

The content of sections 5 and 7 (and 4) is arbitrary by including only languages employing particular morphological strategies. This was done because I wanted to concentrate on strategies which are fairly widespread or for which I had data. Languages for which "focus" is mentioned but which represent it in some other way are: Grassfields (Watters (2003: 253-4) implies that only Aghem expresses it morphologically), D41 (Güldemann 2003), ?D42 (Mutaka 1994), E74a (Philippson & Montlahuc 2003), G42 (Wald 1997), H10 (Hadermann 1996)[16], H41 (Ndolo 1972), H42 (Takizala 1972), K30 (Güldemann 2003), ?K41, N10

[16] De Clercq (1912) hints at the possibility of a disjunctive: conjunctive contrast in H16c when he says that the present is negated in two ways: by *sidi* when the verb stands alone (*tu-sidi-kuend-a ko* 'We are not going') but by *si* when material follows *(tu-si-ku-enda ku buala ko* 'We are not going to the village').

(Ngonyani 2001, 2003), P20 (Harries 1950), and P30 (Kisseberth 2003, Schadeberg & Mucanheia 2000), because the data is unclear or does not fit well into the larger blocks. Two strategies little investigated here are the preposing of infinitives (see Kongo example in (2)) and reduplication.[17]

11 The "non-past tense-marker" /-a-/, a recycled focus marker?

Nurse (in progress) studies tense and aspect across Bantu. 84% of the languages in his database[18] have a pre-stem marker /a/, making it the commonest morpheme in that position in Bantu. 78% have /a/ with past reference and 27% with non-past reference: mostly present, some present and future, or, less often, just future. Some languages have /a/'s with past and non-past reference. 27% with non-past reference is some 135 languages (see fn. 19), a considerable total.

Historically, /a/ 'past' is not hard to explain because it can be reconstructed for Proto-Bantu[19], but where does non-past /a/ come from? It is harder to explain than past /a/, because Proto-Bantu probably had a zero vast present[20] (as **tu-ø-lima* 'We cultivate') and a locative-based progressive present (**tu-ø-li ku-lima* 'we are cultivating' < 'we are at cultivating'). As there is no obvious role for a non-past /a/ in such a system, it is unlikely to have been the source of today's non-past /a/'s. Several languages today have contrastive past /a/, that is, with different tone or length /a/ can represent different degrees of past, e.g. near versus remote. But no language contrasts non-past zero and non-past /a/, because different degrees of present temporal reference are impossible.

There appear to be four possible sources for these non-past /a/. At first I considered the possibility that past /a/ had shifted semantically to give present /a/ but found no grammaticalisation path in the major sources (Bybee et al 1994, Heine & Kuteva 2002) from past to present, nor was there any obvious route in the Bantu data. If a few languages had gone that route it might have been treatable as a freak but for 27% to have travelled along an unapproved route is

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17 The sources mentioned describe a range of tonal, segmental/morphological, and syntactic strategies. Güldemann (2003) discusses some at length.

18 The "database languages" are 100 languages, one from each of Guthrie's eighty-five groups, plus an extra fifteen, roughly one more from each of his zones. This gives good geographical and typological coverage. Percentages are of these 100 languages. Since there are some 500 Bantu languages/varieties, multiplying any percentage by five will give a rough idea of the total of languages with that feature.

19 Claims about Proto-Bantu, and all other claims in this section are based on Nurse (in progress).

20 The "vast present", a term coined by my colleague John Hewson, "is used to speak of states and processes which hold at the present moment, but which began before the present moment and may well continue beyond it" (Comrie 1985: 37), such as "Farmers produce crops".

unlikely. A shift from older perfect to current present is a familiar grammaticalization route but older Bantu /a/ is unlikely to have represented a perfect, even though a few languages have an /a/ perfect today. A second possibility is that a short past [a] following the consonant and glide of subject marker could lengthen and eventually become reinterpreted as independent long /a:/. While this is plausible, it is an unlikely source for the non-pasts for two reasons: one is that such a process would represent past not present time, and second, it would result in a long vowel, but most non-pasts have short vowels.

A third possible source would be an original morpheme of the shape [Ca], which would lose its consonant to produce [a]. The commonest pre-stem tense-aspect morphemes occurring today across Bantu and having consonant plus the vowel [a] are, with incidence of occurrence in Bantu in brackets after each: /ka/ (71%), various meanings but never present or non-past; /na/ (40%), various meanings but rarely present or non-past; /nga/ (29%) 'concessive'; /ma/ (25%) 'anterior, past'; /laa/ (17%) 'future'; /la/ (5%) 'disjunctive, present'. A very few other such morphemes occur, with an incidence under 5%, and with only local distribution. It can be seen from this overview that with the exception of /la/, incidence of occurrence 5%, none of these represents a present or non-past meaning and none occurs anywhere near often enough to provide a single possible Bantu-wide source for non-past /a/ (27%).[21] This eliminates the possibility of a single morpheme of the shape CV as the source for non-past /a/.

This leaves the fourth possibility, that this "non-past" /a/, despite its label, did not originate in any morpheme once carrying temporal or aspectual reference. This forces one to consider that it used to represent not tense but focus. For this the evidence would be:

a) the fact that over a quarter of Bantu languages have an /a/ associated with non-past time reference, but an /a/ with such temporal reference is not apparently reconstructible for PB.

b) the fact that several languages today certainly have it marking not tense but verb (disjunctive) focus, so D60, E22, S20-30-40-50, and K21. In the S languages it is associated with present verb focus, in D60 and E22[22] with recent past (Harjula 2004: 100, Hyman 1999):

[21] Could *la/ra* 'disjunctive, present' have once been more common and become /a/ by deleting the liquid? Yes, in principle, but such deletion is not otherwise attested in most languages with only /a/ today.

[22] So Haya (E22) has at least traces of separate tonal (see (12, 13) and morphological focus.

(14)	Non-verb focus	Verb-focus
a. Ha (D66)	y-a-teeye ibigóori	y-a-a-téeye
	3-P_1-sow maize	3-P_1-FOC-sow
	'He sowed maize'	'He sowed'
b. Haya (E22)	y-a-koma káto	y-á-á-mu-kôma
	3-P_1-tie Kato	3- P_1-FOC-him-tie
	'He tied Kato'	'He tied him'
c. Tsonga (S53)	hi-ø-dya vuswa	hi-ø-a-dy-á
	we-ø-eat porridge	we-ø-FOC-eat
	'We eat porridge'	'We eat'
d. Lozi (K21)	ni-ø-lek-á nama	lw-ø-a-ca
	I-ø-buy meat	I-ø-FOC-eat
	'I buy, am buying meat'	'We are eating'

c) a less certain set of data, where non-focal forms have a short vowel and focal forms involve a long vowel, which might be interpreted as the short vowel plus /a/.[23] Such cases need more investigation. Examples;

(15)	Non-verb focus	Verb-focus
a. Aghem	o mɔ bo fíghâm	o má-a bó ghâmfɔ
	3 P_1 hit mat	3 P_1-Focus hit mat
	'He hit the mat'	'He did hit the mat'
b. Shambaa	i. n-a-káánga nyama	n-á$^{!}$-á-káánga
	'I fried meat'	'I fried'
	ii. n-a-dika nyama	n-(a)-a-dika
	'I'm cooking meat'	'I am cooking'[24]

The examples in (14, 15) suggest that this /a/ occurs and occurred as the second in a sequence of pre-stem markers, in the position Meeussen (1967: 109) calls "limitative". The fact that so many languages today have /a/ with (non-past or present) tense reference, and few have it representing focus should not disturb. If the grammaticalisation path suggested in section 8 is correct, then this present/non-past reference is the final step on the path, but the languages affected have had over four millennia to reach this point. While not all of today's non-past /a/ necessarily originate in this disjunctive /a/, there is a good chance that many do.

[23] Hyphens dividing the long vowel are mine. I have taken the liberty of interpreting Aghem *maa* as *mɔ+a*. Hyman suggests that, alternatively, *mɔ* might be a reduced form of *maa*.

[24] Sources for Shambaa do not totally agree on the lengths of the various pre-stem /a/.

Güldemann (2003) proposed a grammaticalisation path from focus marker to progressive marker to present, to which I added "to future". He said this with *ra/la* in mind. I have expanded this to include cases of /a/, which has a wide distribution than *ra/la*, and to push it back possibly to PB.

12 Conclusions

This survey suggests that (1) constituent focus exists widely (at least twelve of Guthrie's fifteen Zones) in contemporary Narrow Bantu, and also in at least Grassfields Bantu, (2) verb (disjunctive) focus is the marked category, post-verbal focus the unmarked (zero) category, (3) inflectional morphology and tonal behaviour play a central role in this marking, which is not surprising, given the agglutinating and tonal nature of Bantu and (4) this system probably goes back to Proto-Bantu in some form, because it is unlikely that so many languages would have innovated morphological focus of this type independently. Section 11 suggests that today's "non-past /a/" was once a central part of a focus system, because it occurs today in so many languages. Possibly /la/, present in far fewer languages, and maybe /na[25]/, earlier general role unclear, were also part of the focus system. Both /a/ and /la/ are predominantly associated with present time disjunctive focus reference: it is unclear which was associated with past focus reference, and it is possible, although unprovable, that /a/ and /la/ are related, via deletion of [l].

Where the focus system was maintained, new marking was innovated areally, e.g. pre-verbal *ni*, as in section 7.[26] Where the system leaked, /a/ and /la/ were used in other ways, in the general direction suggested in section 8: verb focus > progressive > present/future/non-past.

[25] Comparative evidence shows *na* associated with verbs as far back as PB but its status is uncertain. For Swahili Wald (1997) analyzes it as focus/progressive.

[26] G. Philippson has suggested pre-verbal *ni* might be of Cushitic origin. The area where it occurs is known to have had an earlier Cushitic substratum. On the other hand, forms (*-li, ni*) of copula 'be' play a focus role in non-Bantu Niger-Congo languages and also crosslinguistically.

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Parameters of variation & complement licensing in Bantu

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In this paper I argue that the syntax of Eastern Bantu does not make reference to the notion 'syntactic object'. That is, there is no linguistic category of objects that is the target of syntactic rules in Eastern Bantu languages. Instead I propose that syntactic rules broadly distinguish complements and adjuncts[1] as well as category type of complement or adjunct. I argue that Bantu languages are typologically special in that (a) the verb complement structure can be expanded by the valency-increasing applicative suffix[2]; and (b) that the class of adjuncts can be expanded through verb concord licensing. Because of these properties, Bantu languages have a much-expanded notion of 'complement' and 'adjunct'. Namely, complements consist of (a) inherent complements (subcategorised by the lexical verb), and (b) derived complements (licensed by the applicative suffix). Adjuncts consist of (a) non-subcategorised modifying constituents in the usual sense and (b) phrases that are licensed by verb concord (i.e. Topics in Bresnan and Mchombo (1987)). I propose that most the differences in the licensing of objects in Bantu are due to two causes: (a) the unusual split in the composition of complements and adjuncts and (b) a set of typological parameter settings.

1 Introduction

Recent studies of the of the complement structure of Eastern Bantu languages are dominated by the licensing of syntactic objects, c.f. Bresnan and Mchombo (1987), De Guzman (1987), Bresnan and Moshi (1990), Rugemalira (1991), Baker (1988, 1992), Harford (1991), Woolford (1993), Ngonyani (1996) and Mchombo (2004). While object licensing has yielded many insights, large areas remain unknown about the overall complement structure of Bantu languages and how object licensing fits into the overall structure. Further, the analyses of object licensing that have emerged over the years are still unsatisfactory in many ways. The very notion of a 'syntactic object' in Bantu remains problematic

[1] Subjects are not discussed in this study since they are not part of the complement structure.

[2] The causative suffix introduces a subject. I do not consider it as affecting the complement structure per ser despite the occurrence of the secondary subject post-verbally.

because we have no reliable criteria for distinguishing syntactic objects from non-object complements. The problem is that the standard object diagnostics are notorious for contradicting each other. Secondly, some of criteria do not apply in some languages leaving us with no reliable diagnostics for objects across all languages. As a result, one is led to wonder, as Schadeberg (1995) whether the criteria tell us anything about 'objecthood'. Thirdly, without relating object licensing to the general licensing of complements and adjuncts, the status of various analysis of object licensing remains unclear.

This study argues that the notion of a 'syntactic object' in Bantu is not valid. That is, there is no compelling evidence that syntactic rules make reference to or target a 'syntactic object' in Bantu. Instead, we propose that syntactic rules distinguish and target complements and adjuncts. Crucially, the notion of a complement is expanded and consists of (a) inherent complements (licensed by verb sub-categorization) and derived complements (licensed by the applicative suffix). The notion of adjunct is also expanded and consists of (a) free adjuncts with a modifying function (VP adjuncts and temporal adjuncts) and (b) derived adjuncts (viz. constituents in an anaphoric/control relationship with an incorporated pronoun or verb concord).

Based on the proposed complement-adjunct distinction, I propose two types of typological parameters: (a) macro-parameters that account for differences in the complement structure of languages cross-linguistically, as in (1), and (b) micro-parameters which follow from the choices made at the macro-parameter level, as in (2).

(1) a. VC concord: Yes/No
    b. Complement types: (a) inherent, or (b) inherent and derived

(2) a. VC-concord slots: One or many
    b. Syntactic category that triggers VC-concord: DPs only or DPs and PPs
    c. Co-occurrence of concord: Yes/No

I argue that most of the properties attributed to 'syntactic objects' in the literature fall out from the parameter settings and the complement-adjunct split.

The paper is organised as follows. Section 1 reviews the object criteria and illustrates their inadequacies. Section 2 shows that Bantu languages distinguish between complements and adjuncts generally and that the licensing of objects discussed in the literature partly follows from the licensing of the two. Section 3 discusses macro and micro typological parameters and how they can be used to account for the differences in the licensing of complements and

adjuncts cross-linguistically and among the following Bantu languages: Kinyarwanda, Ruyambo, Chichewa, KiSwahili, Tshiluba, Setswana and SiSwati. Section 4 is the conclusion.

2 The unreliability of the object diagnostics

The standard diagnostics for objecthood in Bantu are summarized in (3). Although there are other diagnostics, this study will limit itself to the ones in (3) since they are the most prominent and easiest to test in many languages.

(3) a. Word order: the noun phrase which has access to the post-verbal position is an object. We refer to this criterion as the verb-adjacency test.
b. Object concord: a noun phrase that is capable of triggering object concord (OC) with the verb is an object.
c. Subjectivization in a passive construction: a noun phrase that can become the subject of a passive construction is an object.

The trouble with the diagnostics is that they are unreliable. In other words, they are neither necessary nor sufficient conditions for objecthood. Further, it is not obvious that any of the diagnostics indeed have anything to do with objecthood, as noted by Schadeberg (1995). Refer to section 2 for examples with object definition. Below we briefly illustrate the unreliability of the diagnostics. Unless indicated otherwise, the examples are from SiSwati.

2.1 Verb adjacency

Let us assume that it is true that the basic word order in Bantu is SVO, as in (4a). [3] Placing the time adverb before the object results in ungrammaticality, as illustrated by (4b). It is reasonable therefore to conclude that the position immediately after the verb is an object position (cf. Mchombo (2004)).

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[3] The following abbreviations are used:

SM	subject marker	det	determiner
PRG	progressive	PAST	past tense
PRES	present tense	Prep	preposition
TNS	tense	PRF	Perfect
OM	object marker	FUT	future tense
OC	object concord	FV	final vowel
IP	immediate past tense	PAS	passive
APPL	applicative	Loc	locative
DSM	default subject marker		

The numbers preceding glosses refer to the classification number of the noun.

(4) a. Bafana ba-tseng-e imoto itolo
1boys 1SM-buy-IP 10car yesterday
'The boys bought a car yesterday.'
b. *Bafana ba-tseng-e itolo imoto
1boys 1SM-buy-IP yesterday 10car
'The boys bought a car yesterday.'

The usual justification of the diagnostics in (3) is based on model data as in (5). The verb-adjacency criterion leads us to conclude that the underlined NPs are objects in each of the examples in (5). Further, each of the underlined NPs also meets the other two object criteria, viz. controlling object marking and raising an object to the subject position in a passive construction.

(5) a. Jabulani u-to-tsenga kudla
NAME 1SM-FUT-buy 15food
'Jabulani will buy food.'
b. Bafana ba-to-nika make kudla
2boys 2SM-FUT-give 1mother 15food
'The boys will give mother food.'
c. Tinja ti-cosh-el-e babe tinyoni
10dogs 10SM-chase-APPL-IP 1father 10birds
'The dogs chased the birds for father.'
d. Emadvodza a-hlindz-el-e imbuti e-sibay-eni
6men 6SM-skin-APPL-IP 9goat Loc-kraal-Loc
'The men skinned the goat in the kraal.'

Problems with all the syntactic object diagnostics emerge when we consider data beyond the model data in (5). Take the verb-adjacency diagnostic as a starting point and the examples in (6) and (7). The prediction of the verb-adjacency test is that the underlined NPs are objects.

(6) a. Ku-to-natsa tsine tjwala lamuhla
DSM-FUT-drink us 14alcohol today
'We will drink alcohol today.'
b. Ku-to-fika sitiemela s-anga-4 manje
DSM-FUT-arrive 7train 7-of-4 now
'The 4 o'clock train will arrive now.'

c. Ku-y-e make e-khaya
DSM-go-IP 1mother Loc-home
'Mother went home.'

(7) a. Imali i-dlala bantfwana ka- Gates
4money 4SM-play 2children Loc-NAME
'Children play with money at Bill Gates' home.'

b. Le-moto lena i-to-hamba tsine kuphela
Det-7car this7 7SM-FUT-go us only
'Only we will travel in this car.'

c. Le-sikolo le-sisha si-to-fundza bantfabenkhosi
Det-7school Det-7new 7SM-FUT-read 2children-of-king
'The king's children will study at the new school.'

However, there is strong evidence that such an analysis is not correct. Each of the NPs which verb-adjacency test predicts are objects in (6-7) also occur as grammatical subjects, as illustrated in (8-9). Further, the meaning of these constructions suggests that the underlined NPs in (6-7) are always subjects as in (8-9).[4] Consequently, there is no meaning difference between (6-7) and (8-9).

(8) a. Tsine si-to-natsa tjwala lamuhla
We (2nd pl) SM(2nd pl)-FUT-drink 14alcohol today
'We will drink alcohol today.'

b. Sitimela s-anga-4 si-to-fika manje
7train 7-of-4 7SM-FUT-arrive now
'The 4 o'clock train will arrive now.'

c. Make u-y-e e-khaya
1mother 1SM-go-IP Loc-home
'Mother went home.'

(9) a. Bantfwana ba-dlala nge-mali ka-Gates
2children 2SM-play with-8money at-Gates
'Children play with money at Gate's home.'

b. Tsine si-to-hamba nga-le-moto lena
we SM-FUT-go with-det-7car 7this
'We will go in this car.'

[4] But see Marten (this volume) and Morimoto (this volume) for pragmatic differences of these constructions in other Bantu languages.

c. Bantfwabenkhosi ba-to-fundza ku-lesikolo lesisha
2children-of-king 2SM-FUT-read at-det-school new
'The king's children will study at the new school.'

The problem is as follows. Since the verb-adjacency test is not sensitive to verb classes (unergatives/accusatives) or subject inversion, it cannot tell apart noun phrases which are internal arguments/objects from noun phrases which are external arguments/subjects. It wrongly categorizes external arguments as objects in the presentation focus constructions in (6) and in the subject-object reversal constructions in (7).

2.2 Verb adjacency and OM control

The diagnostics are also unreliable because they sometimes contradict each other. Consider, for example, (10-11) in light of the verb-adjacency test. We have to say that the underlined constituents are objects in (6-7) because they immediately follow the verb. But (10-11) suggests that the underlined constituents are not objects because they fail to control object concord. The verb-adjacency test and the OM control test lead to contradicting conclusions.[5]

(10) a. *Ku-to-si-natsa tjwala tsine
DSM-FUT-1st pl.OM-drink 14alcohol we (1st pl)

b. *Ku-to-si-fika manje sitimela s-anga-4
DSM-FUT-7OM-arrive now 7train 7-of-4 o'clock

c. *Ku-m-y-e e-khaya make
DSM-1OM-go-IP Loc-home 1mother

(11) a. * Imali i-ya-ba-dlala ka-Bill Gates bantfwana
4money 4SM-PRG-2OM-play Loc-Name 2children

b. * Le-moto lena i-to-si-hamba kuphela, tsine
Det-8car this 8SM-FUT-1st pl.OM-go only us (1st pl)

c. *Le-sisokolo lesisha si-to-ba-fundza bantfwabenkhosi.
Det-7school 7SM-FUT-2OM-read children_of_king

[5] An anonymous reviewer suggests that OM control may be the only reliable test for objecthood. But the problem arises in Kinyarwanda (see 14a) where PPs which do not qualify as objects also control OM.

2.3 Animacy hierarchy

Evidence from Runyambo (cf. Rugemalira (1991)) also suggests that the verb adjacency test in not useful as an object diagnostic. This is because the DP complement that occurs adjacent to the verb is the highest in the animacy hierarchy. So, if we believe the verb-adjacency test, only *Kato* is the object in (12). But as (12) below shows, both *Kato* and *ebitooce* are capable of object control, suggesting that both are objects according to the OC control test.

(12)	a.	a-ka-teec-er-a	kató	ebitooce
		she-PAST-cook-APPL-FV	Kato	bananas
	b.	*a-ka-teec-er-a	ebitooce	kató
		she-PAST-cook-APPL-FV	bananas	Kato

Runyambo cited from Rugemalira (1991)

It is possible to say that both DP complements qualify as objects in (12) and that verb adjacency (as an object test) applies but that it is voided by a stronger semantic (animacy) constraint. The problem with such a stance is inconsistency and possibly an un falsifiable set of claims. If the diagnostics can be voided, the principles that govern voiding should be spelled out. Otherwise it will never be possible to falsify the diagnostics. I am not aware of such principle, however. Further, while the animacy hierarchy effects are widespread in Bantu languages, they do not apply in all languages and they do not have similar effects in all languages even when they do apply. Therefore, it is not predictable (a) what effects they have and (b) where they have them. For example, in Swahili, the animacy effects determine the DP complement that controls OC and have nothing to do with word order. But in Runyambo they determine the DP complement that must be adjacent to the verb and have nothing to do with OC control.

2.4 Contradiction between OM and subjectivization

The problem is not limited to the verb-adjacency test. There are problems with the other diagnostics as well. Rugemalira (1991) notes that the OC control test and the subjectivization of an object (in passive constructions) test also contradict each other. Thus in Runyambo only one object in double object constructions can occur as the subject of a passive construction (13a-b). Yet both objects can trigger object concord (13c). So, the subjectivization test in passive constructions says there is one object. But the object concord control test says there are two objects.

(13) Runyambo (Rugemalira (1991))

a. omwáánáá (ebiráátwa) a-ka-bi-reet-er-w-á
child (shoes) he-PAST-them-her-bring-APPL-FV
omuséíjá
man
'The child was bought them (shoes) by a man.'

b. *ebiráátwá (omwáána) bi-ka-mu-reet-er-w-á omuséíjá
shoes (child) they-PAST-her-bring-APPL-PAS-FV man
'shoes were bought for her (child) by a man'

c. omuséíjá a-ka-bi-mu-réé-er-a
man he-PAST-them-her-bring-APPL-FV
'The man bought them for her.'

2.5 OM control is extended beyond prototypical objects

Whereas it is admittedly difficult to define objects in structural terms, there is nonetheless wide consensus that objects are nominals that occur as verb complements (i.e. internal arguments). Thus PPs (whether they are locatives or instruments) are not usually considered to be objects. The problem with using OC control as an object diagnostic is that it is not controlled by noun phrases alone. In Kinyarwanda and Chichewa and Swahili, OC can be controlled by locative prepositional phrases, as illustrated below.

(14) a. Kuu ntebe, abaana ba-ra-**h**-iica-ye
on chair children they-PRES-there-sit-ASP
'On the chair the children are sitting on it.'
Kinyarwanda cited in Gerdts et al. (1998)

b. Alenje a-ku-pa-lik-ir-a mikeka (pa-mchenga)
hunters SM-PRES-OM-weave-appl-ind mats
'The hunters are weaving mats in it.'
Chichewa cited in Baker (1992)

c. Ni-na-pa-ju-a
SM1sg-PRES-OM16-know-FV
'I know it (there).'

Given (14) we cannot rely on OC to be diagnostic of objects in the usual sense of the word. The notion of OC control extends beyond objects since the category of PPs also control OC. Given that state of affairs, OM control cannot be used as a diagnostic for objecthood. If we allow preposition phrases, as in (14), to be objects, the notion of an object becomes imprecise. Further, what follows from the analysis is bizarre. Namely, whereas we have to say that PPs are objects in Kinyarwanda, Chichewa and Swahili, we also have to say PPs are not objects in languages like SiSwati where they fail to control OC and other object tests. Such a conclusion is not warranted. We do not expect objecthood to be variable, restricted to DPs in some languages and extending to PPs in other languages. Not least in related languages such as the case here.

2.6 Symmetric and non-symmetric objects

In Bresnan and Moshi (1990) it is proposed that in double object constructions objects can be described as either symmetric or asymmetric. The main idea is that objects are symmetric if they are treated in similar ways by the object diagnostics in (3).

We have already shown that the diagnostics for objecthood are unreliable at best. In this section we show that the three criteria do not pattern together so as to predict the symmetric/asymmetric split. And as a result I argue that the diagnostics cannot be the basis of parametric variation among languages. This inevitably raises doubts about the validity of the symmetric/asymmetric object split in Bantu.

The proposal that there are symmetric and asymmetric objects depends on the existence of diagnostics for the parameter. But as Rugemelira (1991) has observed, there is strong evidence that there are no symmetric/asymmetric languages. Rather, there are various strategies (some semantic, and some morphological and some syntactic) that languages use to distinguish internal arguments. He cites the following evidence to challenge the symmetric/asymmetric language split:

Verb adjacency contradicts OC control: In Runyambo, the NP that follows the verb in double object constructions is the highest in the animacy hierarchy (15a). Based on that pattern, we might conclude that Runyambo is an asymmetric language. But the OC control evidence contradicts this conclusion. Both nominal complements can control object concord, as illustrated in (15c), suggesting that Runyambo is symmetric.

(15) a. a-ka-teec-er-a kató ebitooce
she-PAST- cook-APPL-FV Kato bananas
b. *a-ka-teec-er-a ebitooce kató
she-PAST-cook-APPL-FV bananas Kato
c. omuséíjá a-ka-bi-mu-réét-er-a
man he-PAST-them-her-bring-APPL-FV
'The man bought them for her.'

Runyambo, cited from Rugemalira (1991)

In Swahili, object concord is obligatory with the noun phrase complement that is highest in the animacy hierarchy. Word order is free and so both DP complements have access to the post verbal position. This suggests that Swahili is a symmetric language. But considering the OC concord evidence suggests the opposite since only the NP that is highest in the animacy hierarchy can trigger object concord. Again we have a contradiction and Swahili exhibits both symmetric and asymmetric object properties.

(16) a. *a-li-pik-i-a kato ndizi
she-PAST-cook-APPL-FV Kato bananas
'She cooked bananas for Kato.'
b. a-li-pik-i- a ndizi kato
she-PAST-cook-APPL-FV banana Kato
c. a-li-m-pik-i-a kato ndizi
she-PAST-him-cook-APPL-FV Kato bananas
'She cooked bananas for Kato.'
d. a-li-m-pik-i-a ndizi kato
she-PAST-him-cook-APPL-FV bananas Kato
'she cooked bananas for Kato.'

Swahili, cited from Rugemalira (1991)

Subjectivization in passives contradicts OC control: As noted above, there is also a contradiction regarding subjectivization and OC control in Runyambo. Namely, only one object in double object constructions can occur as the subject of a passive construction. This suggests that the objects are asymmetrical. Yet both objects can trigger object concord otherwise, suggesting that objects are symmetrical.

The problems do not just occur in Runyambo and Swahili. In SiSwati, objects exhibit both symmetric and asymmetric properties (cf. De Guzman (1987)). SiSwati allows one object concord at a time. It exhibits both symmetric

and asymmetric object properties depending on the tense/mood of the sentence. The present progressive tense (marked by the affix *ya*-), and the perfect tense (marked by *-ile*), exhibit symmetric properties in terms of word order. But they exhibit asymmetric properties in object marking. So, both objects have access to the post-verbal position, as illustrated in (17).

(17)	a.	Bafana	ba-ya-m-nika	make	kudla
		2boys	2SM-PRG-1OM-give	1mother	15food
		'The boys give/are giving mother food.'			
	b.	Bafana	ba-ya-m-nika	kudla	make
		2boys	2SM-PRG-OM-give	15food	1mother
		'The boys give mother food.'			
	c.	Bafana	ba-m-nik-ile	make	kudla
		2boys	2SM-1OM-give-PRF	1mother	15food
		'The boys have given mother food.'			
	d.	Bafana	ba-m-nik-ile	kudla	make
		2boys	2SM-1OM-give-PRF	15food	1mother
		'The boys have given mother food.'			

But the objects exhibit asymmetric properties with regards to OC control because all the sentences in (18) are very odd to ungrammatical when the OC is controlled by the noun phrase bearing the thematic role of patient.

(18)	a.	??Bafana	ba-ya-ku-nika	make	kudla
		2boys	2SM-PRG-15OM-give	1mother	15food
	b.	?? Bafana	ba-ya-ku-nika	kudla	make
		2boys	2SM-PRG-15OM-give	1mother	1mother
	c.	*Bafana	ba-ku-nik-ile	make	kudla
		2boys	2SM-15OM-give-PRF	1mother	15food
	d.	*Bafana	ba-ku-nik-ile	kudla	make
		2boys	2SM-15OM-give-PRF	15food	1mother

In contrast, sentences that are in the immediate past tense, remote past tense and future tense exhibit symmetric properties with OC control; but exhibit asymmetric properties in word order. Thus, if OC does not occur in (19) there is

strict word order of: V>$DP_{RECIPIENT}$>$DP_{PATIENT}$ for declarative neutral reading.[6] Thus (19b) is ungrammatical under these conditions.

(19)	a.	Bantfwana	ba-to-nika	make	kudla
		2children	2SM-FUT-give	1mother	15food
		'The children will give mother food.'			
	b.	*Bafana	ba-to-nika	kudla	make
		2boys	2SM-FUT-give	15food	1mother
		'The boys will give food to mother.'			

But both nominal complements can trigger OC, as illustrated in (20). Further, the noun that controls OC cannot be adjacent to the verb in a neutral reading.

(20)	a.	Bafana	ba-to-m-nika	kudla	make
		2boys	2SM-FUT-1OM-give	15food	1mother
		'The boys will give mother food.'			
	b.	Bafana	ba-to-ku-nika	make	kudla
		2boys	2SM-FUT-15OM-give	1mother	15food
		'The boys will give food to mother.'			

SiSwati is therefore a language that exhibits both symmetric and asymmetric properties.

Having observed other problems with the diagnostics for symmetric and asymmetric objects in Kitharaka, Harford (1991) concludes that symmetric languages can be distinguished in terms of the co-occurrence of object properties. For example, as when a passive verb triggers OC with one object and triggers SC with the subjectivized object. The modification does not rescue the diagnostics in SiSwati. This is because when the subjectivized object is the noun phrase bearing the role of patient, OM control by the recipient NP is ungrammatical, as (21b) shows (cf. De Guzman (1987)). But if the subjectivized NP is the recipient, object control by the patient NP is grammatical. To account for (21b) we have to conclude that SiSwati objects are asymmetrical. But given (21d) we have to say they are symmetrical. Again, we have a contradiction.

[6] The strict word order obtains only in a neutral declarative reading. Otherwise, word order in (19b) is possible if the recipient DP is contrastively focused.

(21) a. Kudla ku-nik-w-e make nge-banfana
15food 15SM-give-PAS-IP 1mother by-2boys
'Food was given (to) mother by boys.'

b. *Kudla ku-m-nik-w-e nge-bafana make
15food 15SM-1OM-give-PAS-IP by-2boys 1mother
'Food was given to mother by boys.'

c. Make u-ku-nik-w-e nge-bantfwana kudla
1mother 1SM-15OM-give-PAS-IP by-2children 15food
'Mother was given the food by children.'

d. Make u-lu-nik-w-e nge-bantfwana lutsi
1mother 1SM-11OM-give-PAS-IP by-2children 11stick
'Mother was given the stick by children.'

Alsina's (1996) theory of objects does not solve the problems raised by SiSwati. Space limitations prevent me from commenting in detail. The following brief observations are in order. Firstly, Alsina does not use verb-adjacency as diagnostic of objecthood. We can only assume that it should no longer be used as an object diagnostic. Secondly, Alsina's analysis will still have to analyse the objects in the *-ile* and *ya-* forms as asymmetric while analysing all other objects as symmetric in SiSwati. [7] I take this to mean that the (a)symmetry of objects is not a parameter as such, but a construction-specific rule. Thirdly it is an open question whether a universal thematic prominence hierarchy is empirically justified and that it should rule out (21b) or whether we should seek an alternative analysis for behaviour of complements in general.

In summary, the preceding discussion has cast doubt that there are empirically valid syntactic diagnostics for objecthood that can be used across Eastern Bantu languages. It has also cast doubt that there is a valid parameter of (a)symmetric objects. Crucially, the object criteria do not pattern in a predictable fashion. So OC does not co-occur with all passive constructions; and verb adjacency does not mean the object has access to object control or the subject of the passive construction. We have also argued that the improved diagnostic for symmetric languages proposed by Harford (1991) and the theory of objects proposed by in Alsina (1996) do not solve the problem in SiSwati. This is because the language exhibits both symmetric and asymmetric effects that are not predictable from the theory objects. I take this to show that the symmetric/asymmetric split is not a valid parameter.

[7] Alternatively, another analysis is required to explain why objects in the -ile/ya- paradigms are not symmetric. But that path would only serve to proliferate the ancillary accounts required to prop us the theory of objects.

3.0 The complement structure of Bantu

In this section I propose that complements in Bantu must be broken down into two main categories (a) inherent complements and (b) derived complements. The notion of an inherent complement is a subset of the notion of sub-categorization. So, whereas inherent argument refers to all arguments that are sub-categorized by a verb, inherent complement refers to internal arguments of a verb (cf. Williams (1980)). For the purposes of this study I will assume that sub-categorization distinguishes between external and internal arguments. A derived argument refers to constituents that are licensed by the applicative suffix. Crucially, those constituents behave like complements and thus constitute the extended argument structure of the verb.

I also propose that adjuncts break down into two categories of (a) free adjuncts and (b) derived adjuncts. A 'free adjunct' refers to sentential and VP modifying constituents like adverbs and prepositional phrases whose inclusion in the construction is syntactically optional. Crucially, free adjuncts are not licensed by sub-categorization or the applicative suffix. A 'derived adjunct' refers to constituents that trigger concord with the verb or are Topics in an anaphoric relationship with incorporated pronouns in the vocabulary of Bresnan and Mchombo (1987). Crucially, Topics are optional in the construction.

3.1 Inherent complements and derived complements

Bantu languages are typologically distinguished by the fact that the complement structure is more elaborate than in a language like English. Whereas lexical verbs in Bantu and English are similar in that they sub-categorize for complements, the lexical verb in Bantu differs in that its complement structure can be extended by the applicative suffix. The argument that is licensed by the applicative suffix will be referred to as the derived complement. We therefore conclude that there are two types of complements in Bantu: inherent and derived complements. This study will have nothing to say about external arguments or the causee argument in causative constructions.

The complement structure of the verb in Bantu is summarised as in (22). Inherent complements generally consist of DPs, PPs and clauses. Derived complements also include DPs, PPs and clauses as I show below.

(22)

Complement structure	Inherent complements	Derived complements
Intransitive	V>∅	V-APPL>YP
Mono-transitive	V>XP	V-APPL>YP_{APPL}>XP
Di-transitive	V>XP>ZP	V-APPL>YP>XP>ZP

The licensing relationship between the applicative and the derived complement is illustrated in (23). In (23a) the locative phrase is optional, and therefore an adjunct. But in (23b) it is obligatory. Nouns can also be licensed by the applicative, as the contrast between (23c-d) shows. Thus in (23c) the lexical verb cannot license two noun phrase complements on its own, hence the ungrammaticality. But in (23d) both noun phrase complements are licensed. The noun phrase bearing the role of benefactive is licensed by the applicative, while the noun phrase bearing the role of patient is licensed by the lexical verb.

(23) a. Bafana ba-nats-e tjwala (e-hlatsini)
2boys 2SM-drink-IP 14alcohol Loc-11forest
'The boys drank alcohol in the forest.'

b. Bafana ba-nats-el-e tjwala e-hlatsini
2boys 2SM-drink-APPL-IP 14alcohol Loc-11forest
'The boys drank the alcohol in the forest.'

c. *Jabulani u-tseng-e make kudla
1NAME 1SM-buy-IP 1mother 15food
'Jabulani bought mother food.'

d. Jabulani u-tseng-el-e make kudla
1NAME 1SM-buy-APPL-IP 1mother 15food
'Jabulani bought mother food.'

3.2 Licensing properties of lexical verbs and the applicative

There are differences in the licensing properties of lexical verbs and the applicative suffix. Whereas every lexical verb sub-categorizes its arguments for a given event description, the applicative only licenses arguments which are compatible with the properties the lexical verb. Thus, the verb *-fika* 'arrive', (which sub-categorizes one argument in (24a)), can combine with the applicative and license a locative prepositional phrase complement in (24b). However, a non-locative preposition phrase cannot be licensed by the applicative suffix, as illustrated by the ungrammaticality of (24c). Further, a noun phrase cannot be licensed by the applicative in this context (24d).

(24) a. Bafana ba-to-fika
2boys 2SM-FUT-arrive
'The boys will arrive.'

b. Bafana ba-to-fik-el-a ka-mi/ e-sitolo
2boys 2SM-FUT-arrive-APPL-FV Loc-1st.sg Loc-store
'The boys will arrive at my place/at the store.'

c. *Bafana ba-to-fik-el-a na-mi
2boys 2SM-FUT-arrive-APPL-FV with-me
'The boys will arrive at/with me.'

d. *Bafana ba-to-fik-el-a make
2boys 2SM-FUT-arrive 1mother
'The boys will arrive at/for mother.'

The situation is different with a transitive verb like *-tsenga* 'buy/shop.' In that case, the applicative can license a noun phrase but not a locative prepositional phrase. Thus, under the 'buy' reading, the applicative licenses a benefactive DP complement in (25b) but fails to license the locative prepositional phrase in (25c). Also, under the 'shop' reading in (25d) the applicative licenses the benefactive noun phrase complement but not the locative phrase that remains optional (and thus is considered to be an adjunct).

(25) a. Jabulani u-to-tsenga kudla
1NAME 1SM-FUT-buy 15food
'Jabulani will buy food.'

b. Jabulani u-to-tseng-el-a make kudla
1NAME 1SM-FUT-buy-APPL-FV 1mother 15food
'Jabulani will buy food for mother.'

c. Jabulani u-to-tseng-el-a kudla e-sitolo
1NAME 1SM-FUT-buy-APPL-FV 15food Loc-store
'Jabulani will buy food while at the store.'

d. Jabulani u-to-tseng-el-a make e-sitolo
1NAME 1SM-FUT-buy-APPL-FV 1mother Loc-store
'Jabulani will shop for mother at the store.'

The generalization is the following. The arguments that are licensed by the lexical verb are determined by its lexical semantics. The applicative suffix only licenses arguments that are compatible with the lexical semantics of the lexical verb. This is because the applicative has no independent event structure. Instead, it depends on the lexical verb to provide the event structure for its argument. Naturally, whatever argument is introduced by the applicative must be

compatible with the properties of events denoted by the verb and its inherent arguments.

3.3 Syntax can see both derived and inherent complements

One of the predictions of the analysis is the following. If the complement structure can be expanded we expect the derived complements to be subject to rules that apply to inherent complements. That is, all rules that apply to inherent complements should also apply to derived complements. This is the case as the evidence below shows.

First, if both the lexical verb and the applicative license DP complements, the neutral declarative word order is $V>NP_{APP}>NP_{LEX}$, as in (26). The following conclusion can be reached. The applicative DP argument precedes the lexical verb DP complement.

(26)	Make	u-fundz-el-e	bantfwana	libhayibheli
	1mother	1SM-read-APPL-IP	2children	5bible
	'Mother read the bible for the children.'			

Confirmation of this generalization is seen in double object constructions. The verb *-beka* 'take' sub-categorizes a DP and a PP complement. The applicative combines with the verb to licenses another DP complement. The applicative DP must, however, precede the lexical verb DP complement, as in (27a), giving rise to the word order: $V>NP_{APPL/BEN}>NP_{LEX/PAT}>PP_{LEX/LOC}$. Reversing the order of DPs, as in (27b) is ungrammatical.

(27)	a.	Emaphoyisa	a-bek-el-e	make	kudla	nga-phandle
		6police	6SM-put-APPL-IP	1mother	15food	loc-outside
		'The police put food for mother outside.'				
	b.	*Emaphoyisa	a-bek-el-e	kudla	make	ngaphandle
		6police	6SM-put-APPL-IP	15food	1mother	outside
		'The police put food for mother outside.'				

Second, an NP complement of the lexical verb precedes a PP complement of the applicative as in (28b) in a neutral declarative reading. This is a critical observation since it means that not all arguments of the applicative precede the lexical verb arguments in a neutral reading. We therefore cannot appeal to a generic rule that says applied complements always precede lexical verb complements. Rather, syntax is also sensitive to the category type of the complement. Thus, DPs precede non-DP complements regardless of the head

that licenses them. So the order *V>PP>DP is never realized where DP does not trigger concord with the verb in a neutral declarative reading.

(28) a. Bafana ba-to-dlala ibhola
2boys 2SM-FUT-play ball
'Boys will play ball.'

b. Bafana ba-to-dlal-el-a ibhola ngaphandle
2boys 2SM-FUT-play-APPL-FV ball outside
'Boys will play ball outside.'

Third, an interesting word order constraint is observed when the applicative licenses a purpose/goal complement and the lexical verb subcategorizes a DP complement in SiSwati.[8] The two complements cannot co-occur as lexical phrases when neither of them triggers OC, as illustrated by the ungrammaticality of (29a). The only strategy available for licensing the DP complement is OC, as in (29b). The lexical DP can thus be expressed as a Topic dislocated to the left or to the right.

(29) a. *Bafana ba-dlal-el-a ibhola imali
2boys 2SM-play-APPL-FV 4ball 4money
'Boys play ball for money.'

b. (Ibhola) bafana ba-**yi**-dlal-el-a imali (ibhola)
4ball 2boys 2SM-4OM-play-APPL-FV 4money 4ball
'The ball, boys play it for money.'
'Boys play it for money, the ball.'

In summary, this section has shown that derived complements are subject to the word order constraints that apply to inherent complements. For example, applicative complements generally preceded lexical verb complements. Hence, if the verb and the applicative both license DP complements or if both license PP_{LOC} complements, the applicative complement will be ordered before the lexical verb complement. However, there are some exceptions to this word order. Syntax is also sensitive to category type. Hence, DPs precede PP

[8] Kinyarwanda does not have this constraints since the goal argument can occur overtly as in the following example from Kimenyi's webpage (*Kinyarwanda Applicatives Revisited: www.kimenyi.com/kinyarwanda-applicatives-revisited.php*):

(i) *Umugabo a-ra-som-er-a igitabo amatsiko*.
'The man is reading the book for curiosity.'

complements, regardless of the licensing head. We also noted that a DP purpose/goal applicative complement and a lexical verb DP complement cannot co-occur when neither trigger OC. Instead, the lexical verb DP complement is forced to trigger OC, allowing only the applicative DP complement to be licensed structurally in the post-verbal position.

3.4 Adjuncts versus complements

The most direct way of distinguishing syntactic adjuncts from complements is by optionality in the sentence (cf. Marten (2002) for a different view of adjunct licensing). Adjuncts may be left out of the sentence without causing ungrammaticality, as the constituents in brackets in (30c-d) show. In contrast, complements cannot be left out as the ungrammaticality of (30a-b) shows.

(30) a. *Bafana ba-to-nika
2boys 2SM-FUT-give
'Boys will give.'

b. *Babe u-to-hamb-el-a
1father 1SM-FUT-go-APPL-FV
'Father will leave for.'

c. Emaphoyisa a-y-e e-khaya (itolo/namuhla)
6police 6SM-go-IP Loc-home yesterday/today
'The police went home yesterday.'

d. Bantfwana ba-to-dlala (kahle/nge-moto/na-mi) (kusasa)
2children 2SM-FUT-play well/with-car/with-me tomorrow
'Children will play well/with a car/with me tomorrow.'

Adjuncts broadly break down into two types in Bantu: free adjuncts and derived adjuncts. Free adjuncts broadly refer to all modifying constituents such as temporal adverbs or manner adverbs, or locative phrases, or prepositional phrases, whose occurrence in a sentence is not part of the sub-categorization of the lexical verb or the applicative suffix licensing. Derived adjuncts on the other hand refer to constituents whose adjunct status is licensed directly by the syntax/morphology through an agreement affix or pronominal element. That is, such constituents become optional because there is a pro-form constituent within the sentence that fulfils their syntactic function. In short, only constituents that are in an agreement/anaphoric relationship with the verb or clause can be derived adjuncts. Thus in (31) all the underlined phrases are derived adjuncts.

(31) a. (Bafana$_j$) emaphoyisa a-ya-ba$_j$-funa
2boys police SM-TNS-2OM-want
'As for boys, the police want them.'

b. (E-khaya$_j$), ngi-ya khona$_j$
Loc-home 1stsg-go there
'As for home, I am going there.'

c. (Nga-phandle$_j$), make u-bek-e kudla khona$_j$
Prep-outside 1mother 1SM-put-PAST food there
'As for outside, mother put food there.'

Bantu languages differ in the strategies they deploy to license DPs and locatives as derived adjuncts. Here we focus only on the OC strategy and resumptive strategy. There are languages like SiSwati in which DPs are the only constituents that can be licensed via OC. Since locatives are PPs in those languages, they cannot be licensed via OC. The only available strategy for licensing them as derived adjuncts is the resumptive strategy, as in (31b-c). On the other hand there are languages like Chichewa and Kinyarwanda which license both locatives and DPs via OC (see (14) locative licensing through OC). In other words, the class of locative is treated exactly the same way as DPs in these languages because both can control OC. It is important to note that the class of derived adjuncts we are proposing will be the same regardless of the strategy of licensing. So, in both SiSwati and Chichewa/Kinyarwanda locatives will be derived adjuncts, albeit via different routes. In order to capture the fact that OC control is not strictly a property of DP complements but also includes PP complements in some languages (see Kinyarwanda, Chichewa, and Swahili in (14a)), we will henceforth refer to all so-called object concord as verb-complement concord, abbreviated as VC-concord.

To summarize, the complement structure of Bantu consists of inherent complements and derived complements. There is evidence that syntax treats derived complements to the same word order constraints as inherent complements. The class of adjuncts is also divided into two. On one hand there are free adjuncts and on the other there are derived adjuncts. The crucial difference between them is that free adjuncts are not licensed by sub-categorization or the applicative suffix. Such adjuncts serve as modifies of the event denoted by the proposition in terms of event time, manner of the event, or the location of the event. Derived adjuncts differ in that an anaphoric/agreement constituent within the sentence licenses them. Finally, Bantu languages differ lexically in the type of strategies they deploy to license derived locative adjuncts. Whereas some languages use the VC-concord strategy other languages

use the resumptive strategy. All Bantu languages use the VC-concord strategy to license derived DP adjuncts.

4 Parameters of variation

In this section I show that some of the major differences among Bantu languages follow from two kinds of typological parametric choices: macro parameters that distinguish languages generally and micro parameters that distinguish languages that have opted for the same macro parameters. In general, macro parameters cut across language phyla. Micro parameters on the other hand characterise languages that share macro parameters and frequently these are related languages although not exclusively. I propose that the complement and adjunct structure of Bantu languages we have discussed has its genesis in the choices made at the macro parameter level in (32).

(32) a. VC-concord: Yes/No
b. Complements: inherent only or inherent and derived

The choice of either macro parameter has consequences. If a language chooses the negative value of (32a), then it will be like English and other languages that do not allow VC-concord. But if a language chooses the positive value of (32a), the micro-parameters in (33) must be addressed. If a language chooses inherent complements only in (32b), it is limited to licensing complements through sub-categorization. But if a language chooses both inherent and derived complements, has to contend with the strategy of licensing inherent and derived complements. Clearly the strategies of licensing are not the same. Bantu languages are presented the choices in (33), but languages like English use other strategies which enable a sentence like, '*John had Bill sweep the floor clean'* which express both a causative and resultative semantics.

(33) a. VC-concord slots: One or many?
b. VC-concord categories: DPs only or DPs and PPs?
c. Co-occurrence of concord: Yes/No?

4.1 Micro-parameters of variation

It is clear that Bantu languages are similar at the macro parameter level since they all exhibit VC-concord and they all license inherent and derived complements. Differences are found at the micro parameter level, as in (33).

Below we outline the consequences of each micro parameter and how the different languages pattern according to the choices they make.

4.1.1 VC-concord slots: one or many?

This is a binary parameter in which languages make a choice of one or many VC-concord slots at a time. We therefore propose that there are no languages that select two or three slots, confirming the often-cited notion that languages do not count. In principle, any number of VC-concord slots is possible. Constraints to the attested VC-concord slots are a function of other parametric choices, such as whether other categories other than DPs can control OC. Also, the valency of the verb is another constraint. We may also want to processing and memory constraints as additional constraints to an infinite number of VC-slots attested.

Differences between KiSwahili, SiSwati and Chichewa on one hand and Kinyarwanda, Runyambo, and Tswana on the other hand can be accounted by the choices they make at this micro parameter. The former select one VC-concord slot whereas the latter select many VC-concord slots. Available data suggests that Kinyarwanda is the only language that fully exploits the most slots. In (34) four VC-slots are used. Other languages tend to exploit a maximum of two VC-slots. For example, in Tswana, only two VC-slots seem to be attested.[9]

(34) Abaana ba-zaa-ha-ki-mu-b-eerek-er-a
Children they-FUT-there-it-him-them-show-APPL-ASP
'The children will show it to him for them there.'
Kinyarwanda data cited in Alsina (1996)

It remains a project for future research to determine fully the constraints that limit the VC-slots languages exploit.

4.1.2 VC-concord with DPs only or with DPs and PPs

This parameter groups languages like Chichewa and Kinyarwanda, and Swahili together because VC-concord can be with DPs and PPs. On the other hand Tswana and SiSwati are grouped together because VC-concord is only with DPs.

[9] I base this comment on my own field research of Tswana.

4.1.3 Co-occurrence of concord and lexical XP: Yes/No

This parameter distinguishes languages in which the VC-concord cannot co-occur with its co-referent XP like Tshiluba (Cocchia (2000)) one hand and languages like SiSwati, Chichewa and KiSwahili on the other, in which the VC-concord can co-occur with the co-referent XP.

In summary, this section has outlined the typological macro and micro parameters that I propose account for a significant portion of the licensing properties of complements and adjuncts in Bantu languages. Admittedly, the parameters are still sketchy at best and have only succeeded in suggesting a different way of thinking and of addressing the licensing of complements and adjuncts in Bantu. More empirical research and analysis is still to follow. As noted above, it is an empirical question why languages tend to use only two VC-slots when in principle they have more options like Kinyarwanda. Further, it is also an empirical question whether the typological parameters discussed here can be reduced to cognitive parameters like Baker's (1996) Polysynthesis Parameter.

5 Conclusion

The study has presented a broad analysis of the complement and adjunct structure of Bantu languages. It proposes that there are inherent complements and derived complements on one hand and free adjuncts and derived adjuncts on the other hand. Crucially, it argues that syntactic rules refer to these broad classes as well as to syntactic category type. Thus syntactic rules can further distinguish between DPs, PPs and clauses.

The study also proposed that there are typological macro parameters that account for variation among languages generally. In addition it proposed that there are micro parameters that distinguish languages that make the same macro parameter choices. It illustrated that Bantu languages differ in terms of three micro parameters. It is an open question whether these typological parameters of variation can be reduced to cognitive parameters.

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The disjoint verb form and an empty Immediate After Verb position in Makhuwa*

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The Bantu language Makhuwa makes a distinction between conjoint and disjoint verb forms. Two hypotheses are made from generalisations on the distribution of the conjoint and disjoint verb forms in Makhuwa. 1) The verb appears in its conjoint form when a focal element occupies the Immediate After Verb (IAV) position; 2) the verb appears in its disjoint form when the IAV position is empty. A syntactic analysis is provided that accounts for these hypotheses if the IAV position is defined in terms of structural rather than linear adjacency between two heads in a direct c-command relation.

In the syntactic analysis two focus projections are proposed: one under TP (Ndayiragije 1999) hosting the disjoint morpheme and one under vP, to whose specifier focal elements move. Non-focal elements remain in-situ. This analysis accounts both for the strong adjacency requirement of a conjoint verb form and its focal object and for the empty IAV position that requires a verb to appear in its disjoint form.

1 Introduction

1.1 Makhuwa and the conjoint/disjoint distinction

The theory explored in this paper is primarily applied to the Bantu language Makhuwa (also spelled Emakhuwa or Macua, P.30), specifically the variant Enahara spoken on Ilha de Moçambique and in the surrounding coastal area in the north of Mozambique. This language and variant uses the so-called conjoint (CJ) and disjoint (DJ) verb forms. The terms "conjoint" and "disjoint" were first

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used by Meeussen (1959) in his description of Kirundi. He noticed two different verb forms in one tense and described these as a difference in the relation of the verb with the element following it. Hence the term *conjoint* (< French, 'united') for a combination V X that is very close and the term *disjoint* ('separated') for a structure in which the verb has a looser relation with the following element. These originally French terms are now also used in English, together with conjunctive and disjunctive. Other terms such as 'weak/strong' and 'short/long' have also been used, but these turned out to inadequately describe the meaning of the two verb forms. In this paper I use the terms conjoint and disjoint.

In Makhuwa there are two noticable markings of the CJ/DJ verb forms. First there is a segmental difference in the verb. In the present tense in (1) a separate disjoint morpheme -**aa**- is visible. In the perfect tense in (2) there still is a difference, but it is hard (if not impossible) to segmentalize a DJ morpheme. [1]

present[2]

(1) a. DJ **o-náá-thípa**
3sg-PRES.DJ-dig 'she's digging'

b. CJ **o-n-thípá nlittí**
3sg-PRES-dig 5.hole 'she digs a hole'

perfect

(2) a. DJ **k-oo-rúpa**
1sg-PERF.DJ-sleep 'I slept'

b. CJ **ki-rup-alé nkwaártu**
1sg-sleep-PERF 18.room 'I slept in the room'

[1] Only the disjoint verb form is glossed for the choice of verb form ('DJ'); the conjoint form is taken as the default. In this paper I only consider affirmative declarative sentences, since a CJ/DJ distinction is absent in negative and relative sentences in Makhuwa; but note that this is not the case in all Bantu languages. Other past tenses apart from the perfect tense also segmentally and tonally mark the CJ/DJ distinction.

[2] Abbreviations and symbols used in this paper: 1/2/3 etc (noun classes), 1sg/pl (1st person singular/plural), A (answer), CAUS (causative), CJ (conjoint), CONN (connective), COP (copula), DEM (demonstrative), DJ (disjoint), DS (dummy subject), DUR (durative), FV (final vowel), H (high tone), IMPF (imperfective tense), irr (irrealis), L (low tone), LOC (locative), NARR (narrative), NEG (negative), OM (object marker), OPT (optative), PASS (passive), PAST (past tense), PERF (perfective tense), PERS (persistive), POSS (possessive), PRES (present tense), SM (subject marker), P2 (past), PL (predicative lowering), Q (question), REDUPL (reduplication), REL (relative), REM (remote tense), REP (repetative), RESP (respect), |tt| (retroflex voiceless stop). Liaison is indicated by an apostrophe, high tones are indicated by an accute accent (on or before the element), low tones are unmarked.

Second there is a tonal difference. The tonal part of the CJ/DJ marking in Makhuwa is not on the verb, but in a different tonal pattern occurring on the element following a CJ form (Stucky 1979, Katupha 1983). The object of a DJ verb form has the same tonal pattern as in citation form as shown in (3a), whereas the object of a CJ verb form undergoes so-called "lowering" (Schadeberg and Mucanheia 2000): the first underlying high tone is removed and a final high tone is added (3b).

(3)	a.		**meéle**	'maize'	(LHL)
	b.	DJ	**kinááthítá meéle**		(LHL)
			1sg-PRES.DJ-pound 6.maize	'I pound maize'	
	c.	CJ	**kinthítá meelé**		(LLH)
			1sg-PRES-pound 6.maize	'I pound maize'	

One major difference between the verb forms is their phrase-final distribution. The conjoint form can never appear phrase-finally (4b); i.e., some object or adjunct has to follow (4c,d). The disjoint form, on the other hand, may occur sentence-finally (4a), but does not need to (i.e. something can still follow the DJ verb form, as shown in (4e)). The object following a disjoint form is most likely interpreted as known or old information.

(4)	a.	DJ	**enyómpé tsi-náá-khúura**	
			10-cows 10-PRES.DJ-eat	'the cows are eating'
	b.	CJ	***enyómpé tsi-n-khúura**	
			10-cows 10-PRES-eat	
	c.	CJ	**enyómpé tsinkhúúrá malashí**	
			cows eat grass	'the cows eat grass'
	d.	CJ	**enyómpé tsinkhúúrá orattáni**	
			cows eat at lake	'the cows eat at the lake'
	e.	DJ	**enyómpé tsináákhúúrá maláshi**	
			cows eat.DJ grass	
			'the cows eat grass'	

The distribution of the conjoint and disjoint verb form will be shown to be dependent on the information structure of the sentence, specifically on the position of focus. In the next section some background is given on this issue, which will later be linked to the CJ/DJ distinction.

1.2 Focus and the Immediate After Verb position

Van Valin (1999) explains certain typological differences in focus structures by examining the interaction of rigidity vs. flexibility of syntax and focus structure. A language like English has a rigid syntax and a flexible focus structure in the sense that the language does not readily permit changing the word order of a sentence, but rather moves the stress to the focused word (5).

(5) Kim sent the book to *Leslie* yesterday
Kim sent the *book* to Leslie yesterday
Kim sent the book to Leslie yesterday

A language with a flexible syntax and a rigid focus structure would rather have a fixed position for prominence and change the word order to match the focused element and this position. The syntax adapts to the focus structure, not the other way around. Italian and Spanish are examples of this type of languages, but also Bantu languages like Setswana and Sesotho (and, as will be seen, also Makhuwa) organize their focus structure by changing the word order instead of the focus structure. In these SVO languages there is an absolute constraint against focal elements appearing preverbally (Van Valin 1999, Zerbian 2006). Subjects must be "highly topical, old, given information" (Demuth 1989). The potential focus domain "does not encompass the entire clause in a simple sentence, as in English [...]; rather it is restricted to the verb and following elements" (Van Valin 1999).

Watters (1979) establishes the "immediate after verb" (IAV) position as the focus syntactic position Aghem, a Grassfields Bantu language. He convincingly shows that a focused element, for example in an answer to a wh-question, moves to this immediate after verb position. In (6a) the adverbial clause 'in the farm' is in its typical sentence-final position. In answer to a question about the place the friends ate the fufu, 'in the farm' provides new information and is in focus: **án 'sóm** (in the farm) is moved to the IAV position (6c).

Aghem (Watters 1979: 147)

(6) a. **fɨ́l á mɔ̀ zɨ́ kɨ́-bɛ́ án 'sóm**
friends SM P2 eat fufu in farm
'the friends ate fufu in the farm'

b. **fɨ́l á mɔ̀ zɨ́ ghɛ́ bɛ́-'kɔ́**
friends SM P2 eat where fufu
'where did the friends eat fufu?'

c. **(fɨ́l á mɔ̀ zɨ́) án 'sóm (bɛ́-'kɔ́)**
friends SM P2 eat in farm fufu
'(the friends ate fufu) in the *farm*'

So far I have shown that there is a distinction between conjoint and disjoint verb forms in the language Makhuwa, how this distinction is marked and what its basic distribution is. I have also given data from Aghem with the observation that the Immediate After Verb position is a focus position. In section 2 I first come back to Van Valin's (1999) statement that focal elements should not appear preverbally. I then claim that the position immediately after a conjoint verb form is the position for focus in Makhuwa, much like in Aghem. Section 3 provides arguments for the hypothesis that focal elements cannot immediately follow a disjoint verb form or, phrased more strongly, that the verb appears in its disjoint form when the IAV position is empty. In section 4 the syntax of the IAV position is analysed and it is shown that the observations and hypotheses made in earlier sections follow from this analysis.

2 Focus in the IAV_{CJ} in Makhuwa

2.1 Constraint against preverbal focus

The first observation made is that focal elements can not appear preverbally. For a simple declarative sentence this is indeed the case. Makhuwa, being an SVO language, typically has sentences with a topic-comment structure. In stories, a new participant is introduced in the text in the position after the verb and the next sentence makes reference to this participant in the position before the verb, the typical subject position. In (7a) 'the ghost of the grandmother' is introduced. Now that grandma's ghost is known information, it serves as a topic and occurs as the (pro-dropped) subject (7b). We then get some new information about the

now known participant; in this example we learn that the ghost orders the protagonist to start eating dark shima.[3]

(7) a. **waa-núú-khúmá nnépá wa á-píp' ínyu.**
3.REM-PERS.DJ-go.out 3.ghost 3.CONN RESP-grandma 2.RESP.POSS
'the ghost of your grandmother appeared'

b. **waa-hímyá wiírá eshímá yoóríipa m-patshér-éke ótsha**
3.REM-say that 9.shima 9.dark 2.RESP-begin-OPT 15.eat
'it said that you should start eating dark shima'

When the object is already known or old information, it often moves to the preverbal position. We get either a topic expression (8) or a passive construction (9), where the theme is the syntactic subject. That the theme is known in these examples cannot not only be concluded from the context, but also from the use of the demonstrative.

(8) a. DJ **miẃwá íye ko-haála**
4.thorns 4.DEM 1sg.PERF.DJ-plant
'those thorn bushes, I planted them'

b. DJ **nlópwáná oyó ki-ná-m-phéela**
1.man 1.DEM 1sg-PRES.DJ-1.OM-want
'that man, I want him'

(9) a. **mí ki-thip-alé nlittí**
1sg 1sg-dig-PERF 5.hole
'I dug a hole'

b. **nlíttí noó-thíp-íy-á**
5.hole 5.PERF.DJ-dig-PASS-FV
'the hole was dug'

New information occurring in a passive construction usually follows the verb. Example (10) comes from a story about different kinds of food. It is mentioned that now is the time for cassava and that today the man will have shima for dinner. The shima is newly introduced and *follows* the (passive) verb (in contrast to (9b)). In the next sentence the man claims that he does not eat dark shima

[3] Shima is the staple food of East Africa. It is a stiff porridge made of maize flour (white shima) or cassava flour (dark shima), in Swahili known as 'ugali'.

made from cassava. We know the man and we know the shima and in this sentence all the arguments precede the verb.

(10) a. **vánó yoo-rúw-íy-a eshíma**
now 9.PERF.DJ-cook-PASS-FV 9.shima
'this time shima was cooked'

b. **hw-íra-ka: "mí, eshímá yoóríipa n-ki-ń-tsha."**
NARR-say-DUR: 1sg, 9.shima 9.dark NEG-1sg-PRES-eat
'and he said: "I don't eat dark shima" '

I have established that what precedes the verb is not focal and that in Aghem what immediately follows the verb is focal. In the next section it will be shown that this also holds for Makhuwa and that it interacts with the CJ/DJ distinction.

2.2 Focus immediately follows the conjoint verb

The IAV position is also a focus position in Makhuwa, but only when the verb is conjoint. This can be seen in the tonal lowering, the position of question words and the position of focused elements in question-answer pairs.

Tonal lowering is another mechanism to mark focus. It is different from, but cooperating with, the CJ/DJ distinction, see for example also Schadeberg and Mucanheia (2000). It identifies a unique position, and only the first element following a CJ verb form in a double object construction is tonally lowered. In both sentences in (11) the first element following the verb has the tonal pattern LLH, whereas the second still has its LHL form, which it also has in its citation form.

(11) a. CJ **ni-m-váhá maatsí enúni** (LLH) (LHL)
1pl-PRES-give 6.water 10.birds

b. CJ **ni-m-váhá enuní maátsi** (LLH) (LHL)
1pl-PRES-give 10.birds 6.water
'we give the birds water'

Question words are often analysed as being inherently focused. In Makhuwa wh-words have a strong preference to immediately follow the CJ verb form (12b). Most questions in recorded stories have a CJ form with the wh-word immediately following it, and this is also the structure the informants first give when asked to translate a question. Although grammatical, a question where the wh-word is separated from the verb is the less preferred one (12c). Still, a

question with a conjoint verb from is always better than a question using the disjoint form of the verb (12d,e). The question examples in (12) are all intended to mean 'what did you leave on the table?'.

(12) a. CJ **ki-hiy-alé eliivurú wameétsa**
1sg-leave-PERF 9.book 16.table
'I left the book on the table'

b. CJ **o-hiy-alé esheení wameétsa**?
2sg-leave-PERF what 16table
'what did you leave on the table?'

c. CJ **o-hiy-alé wameétsá eshéeni**?
2sg-leave-PERF 16.table what

d. DJ ***woo-híyá eshéeni waméetsa**?
2sg.PERF.DJ-leave what 16.table

e. DJ ??**woo-híyá wameétsá eshéeni**?
2sg.PERF.DJ-leave 16.table what

A third argument for the claim that the position immediately after a conjoint form is a focus position is found in question-answer pairs. The new information in the answer (namely the element that was questioned) is focused and immediately follows the CJ verb, whether this is its basic position or not. In (13a) the direct object is focused, whereas in (13b) the indirect object is in focus and both are in the IAV position.

(13) a. Q **o-m-vah-alé esheení Teresínya?**
2sg-1.OM-give-PERF what 1.Teresinha
'what have you given Teresinha?'

A **ki-m-vah-alé ekanetá (Teresínya)**
1sg-1OM-give-PERF 9.pen (1.Teresinha)
'I gave (her/Teresinha) a pen'

b. Q **o-m-vah-alé páni ekanéta?**
2sg-1OM-give-PERF who 9.pen
'who did you give a pen?'
A **ki-m-vah-alé Teresínyá (ekanéta)**
1sg-1OM-give-PERF 1.Teresinha (9.pen)
'I gave (it/a pen) to Teresinha'

The position immediately after the conjoint verb form is thus established as a focus position, which implies that focused elements should (always) follow a conjoint verb form.[4] The hypothesis holds true, for example, when the object is contrastively focused as in (14).

(14) **n-ki-var-álé ehópá**,
NEG-1sg-catch-PERF 9.fish 'I didn't catch fish,
CJ **ki-var-alé e-phwetsá**
1sg-catch-PERF 9.octopus I caught *octopus.'*

After a CJ verb form the object can not only have contrastive focus, but also new information focus. Example (15) is the most natural answer to the question 'what did the woman carry?'. The same sentence can also be perfectly used to answer the questions 'what did the woman do?' or 'what happened?', where either the VP or the whole sentence is in focus. It is widely accepted that focus can project, meaning that an entire constituent can be interpreted as focused even if only a subconstituent of it is actually marked for focus (by prosody, for example; see Selkirk 1984). The postverbal element in Makhuwa would fall under the projected wide scope reading of the focus when used in answer to the wider questions and is thus still (part of) the focus.

(15) CJ **nthíyána o-kush-alé eliivurú**
1.woman 1-carry-PERF 9.book
'the/a woman carried a/the book'

[4] Focused elements follow a conjoint form in simple declarative sentences. It is also possible to make a cleft sentence in order to focus something.

In this section I have shown that non-focal elements precede the verb and that focal elements follow a conjoint verb form. Put more specifically, it was shown that they *immediately* follow a conjoint verb form, thus occupying the IAV position.

3 The IAV position and the disjoint verb form

If focal elements immediately follow a conjoint verb form, what immediately follows a disjoint verb form is not expected to be focal. Combined with the observations about the IAV position, the implication that explains the occurrence of the disjoint form is the following: if the Immediate After Verb position is empty, the verb appears in its disjoint form. Non-focused material is assumed to be in a position other than the structurally defined IAV, leaving this position empty.

3.1 Disjoint verb form phrase-finally

The most straightforward argument in favour of this hypothesis is the distribution of the two verb forms in sentence-final position. The conjoint form needs a following element and is ungrammatical without it, whereas the disjoint form can (but does not need to) be in sentence-final position. If nothing follows the verb, obviously the position after the verb is empty and the verb has its DJ form. This situation is found in sentences with an intransitive use of the verb as in (4) (repeated below) and in passive sentences (16a). What usually follows the verb in an active sentence now precedes the verb, leaving the verb in sentence-final position. Note, however, that the passive sentence in (16b) has a (focal) element following the verb and the verb now occurs in its conjoint form.

(4) a. DJ **enyómpé tsi-náá-khúura**
10.cows 10-PRES.DJ-eat ‘the cows are eating’

b. CJ *__enyómpé tsi-n-khúura__
10.cows 10-PRES-eat

c. CJ **enyómpé tsi-n-khúúrá malashí**
10.cows 10-pres-eat 6.grass ‘the cows eat grass’

(16) a. DJ **moóró woo-páríhel-íy-a**
3.fire 3.PERF.DJ-light-PASS-FV
‘the fire has been lighted’

b. CJ **moóró o-parihel-iy-é nkíńtááli**
3.fire 3-light-PASS-PERF 17.compound
'fire has been lighted in the compound'

3.2 Disjoint verb form and old information

Creissels (1996) claims that an element following a DJ verb form is in fact "a topicalized phrase linked to the clause without being strictly speaking a part of it" (p.112). This can be demonstrated for a number of cases in Makhuwa, but not all. Topicalizing the old information correlates with object marking, as can be observed in Tswana, for example. In Makhuwa this pronominal marking is absent.[5] In order to know whether or not a postverbal element is old or non-focal information, one is dependent on the context and the use of demonstratives. That the old information follows a DJ verb form can be seen in (17). The first example comes from a story where a man has just slaughtered a goat and now buried it. In (17b) a hunter has entered a bakery and demanded bread, which is given to him, after which he takes it. The post-DJ element (the goat/bread) is modified by a demonstrative. It is old information and not focal.

(17) a. DJ **oo-thípélá epúrí ile**
1.PERF.DJ-bury 9.goat 9.DEM 'he buried that goat'
b. DJ **oo-kúshá ephááú iyé**
1.PERF.DJ-carry 10.bread 10.DEM 'he took that bread'

3.3 Disjoint verb form and intervening elements

The disjoint form is also used when something intervenes between the verb and the object (18a). With the intended "neutral" reading that has new information focus on the object (that follows the verb, but not immediately), the conjoint form is ungrammatical (18b*i*). Only with a strong contrastive focus on the adverb is it grammatical to use the CJ form (18b*ii*).[6]

[5] Only noun classes 1/2 are always object marked on the verb, other noun classes cannot have an object marker.

[6] The exact reading and status of the object following a focused adverb is unclear at this moment.

(18) a. DJ **k-aa-hí-lówá ntsáná ehópa**
1sg-REM-DJ-catch yesterday 9.fish
'I caught fish yesterday'

b. CJ **kaalówálé ntsáná ehópa / **ehopá**
i. * 'I caught yesterday fish'
ii. 'I caught *yesterday* fish' (not today'

Apart from adverbs, vocatives can also intervene between a DJ verb form and the (new information) object (see also Van der Spuy 1993).[7] The CJ form is ungrammatical in this situation.

(19) DJ **n-ná́á-phéélá mpatthání o-tsúwéla**? (CJ ***mwimphéélá**)
2.RESP-PRES.DJ-want 1.friend 15-know
'do you want, my friend, to know?'

3.4 Disjoint verb form and change of word order

This way of looking at the factors determining the choice between the CJ and DJ form of the verb may also help us understand yet another occurrence of the DJ verb form. When putting a contrastive focus on the verb, the disjoint form must be used. It has been claimed by Voeltz (2004) that by using the disjoint verb in sentences otherwise identical "the emphasis is definitely on the verb. The important information transmitted is 'what is being done' and not 'who did it to whom' or 'when' or 'where something was done'." (Voeltz 2004, p.12). He translates this with English "do-support" (20) (see also Güldemann 1996).

Zulu (Voeltz 2004)
(20) a. CJ **si-dlal-a ekuseni**
we-play-FV in.the.morning
'we play in the morning (not at other times)'

b. DJ **si-ya-dlal-a ekuseni**
we-DJ-play-FV in.the.morning
'we do play in the morning'

[7] In (19) the infinitive 'to know' is treated as a real object, since in Bantu the infinitive behaves as a noun. It belongs to noun class 15 and is also tonally lowered after a conjoint verb form.

These Zulu data could form a counterargument to the hypothesis that nothing focal follows a DJ form, since 'in the morning' in (20) follows a DJ verb form and is not particularly familiar or old information. Similar data with CJ/DJ pairs come from Setswana (21).

Tswana (Creissels 1996)

(21) a. CJ **ke bína lé ene**
1sg dance and 3sg 'I am dancing with him'

b. DJ **ké a bína lé nná**
1sg DJ dance and 1sg 'I am dancing too'

However, McCormack (this volume) noted a preference of putting the DJ verb form phrase-finally when re-eliciting these sentences. Instead of only changing a CJ to a DJ form, informants preferred to change the word order as well (22).

(22) DJ **lé nná ké a bína**
and 1sg 1sg DJ dance 'I am dancing too'

The same effect happens in Makhuwa. Translating sentences like "I *work* on a boat, I don't sleep there" was very hard or impossible in elicitation sessions, but inversion of the positive and negative sentence immediately made the combination of sentences acceptable (23).

Makhuwa

(23) **n-ki-ń-rúpa n-kaláwá-ni**,
NEG-1sg-NEG-sleep 18-boat-LOC 'I don't sleep on a boat,

DJ **ki-náá-lówá (n-kaláwá-ni)**
1sg-PRES.DJ-fish 18-boat-LOC I *fish* on a boat'

Apparently the DJ verb form should be in a phrase-final position or, if that is not the case, what follows should be old information. In reversing the sentences, what follows the verb has already been mentioned and thus is not focal. It remains to be seen whether such an effect also holds for Zulu. If not, the data from Zulu pose a potential problem for the hypothesis that the IAV position is empty when the verb appears in its disjoint form.

3.5 Complement clause

There is one more instance where new information follows a DJ verb form, namely when the verb takes a complement clause. The verb form is expected to be CJ, since what follows is new information. However, example (25) shows (more clearly than (24)) that **wiíra** is a matrix clause complementizer. It thus indicates the beginning of a separate phrase (which can be direct speech) leaving the verb in a position by itself. The verb appears in it DJ form.

(24) DJ **oo-líyála wiírá**
1.PERF.DJ-forget that
t-uúlé a-haa-tthúny-ááwé o-ń-túp-íh-a
COP-1.DEM 1-NEG.impf-want-1.REL 15-1.OM-jump-CAUS-FV
'she (hyena) forgot that' OR 'she forgot:
it was her who didn't want to help him (tortoise) jump'

(25) DJ **yaa-nú-kí-hímeéryá wiírá**
2.REM-PERS.DJ-1sg.OM-tell that
o-hi-n-thelé nthíyáná owoóthá
2sg-NEG-1.OM-marry-OPT 1.woman 1.lying
'they told me that' OR 'they told me:
"you shouldn't marry a lying woman" '

In summary, I have shown various occurrences of the disjoint verb form, and, in general, these all obey the constraint that elements following a disjoint verb form are not focal. In order to provide evidence for the hypothesis that the verb has its disjoint verb form when the IAV position is empty, a definition of the IAV position is needed.

The fact that an adverb is allowed to occur in between a DJ verb form and an object suggests that the object in this case is in a position other than an object following a CJ form (18). Furthermore, it suggests that the CJ verb form and the object need to be adjacent, which will be shown to be important in defining the syntactic positions of the CJ and DJ verb form and the positions of their following elements. I come back to the definition of the IAV position later in section 4 and first give a structural analysis explaining the position of the verb in the syntactic representation of a Makhuwa sentence. With the proposed syntactic analysis and definition of the IAV position, the two generalizations are accounted for: 1) a verb appears in its conjoint form when a focal element

occupies the IAV position; 2) a verb appears in its disjoint form when the IAV position is empty.

4 Syntactic analysis

4.1 No verb movement above vP

In order to come to an analysis of the IAV position and the objects following a CJ or DJ verb form, I will first explain the syntactic model I assume for a Bantu verb sequence. The Bantu verb consists of a verb stem with inflectional prefixes. This verb stem is built up of a verb root and suffixed extensions.

(26) SM-TAM-OM-$[V_{root}$-Ext$]_{stem}$-FV

I follow Kinyalolo (2003, cited in Carstens 2005), Myers (1990), Julien (2002) and Buell (2005) in assuming that the verb starts out as a root and only moves in the lower part of the derivation to incorporate the derivational suffixes. It then terminates in a position lower than T. The inflectional prefixes on the verb represent functional heads spelled out in their base positions. This analysis is supported by several arguments. First, the suffixes are derivational and able to change the valency of the verb, hence they should be in the theta domain (vP). Following Kayne's (1994) asymmetry framework, moved heads adjoin to the left and hence the extensions (the derivational morphemes) are suffixes. There is no reason to assume that a moved head will first incorporate morphemes to its right and then to its left, so the fact that inflectional morphemes surface as prefixes strongly suggests that these are not incorporated in the verb and thus that the verb has not moved further up.

Second, the prefixes are ordered in the exact same way a structure is is standardly assumed to be built up (27b). In other languages where there is evidence that the verb does move, the inflectional morphemes appear in the opposite order as suffixes on the verb (27a). Again this suggests that the prefixes are still in their original position.

(27) a. **nous aim-er-i-ons**
1pl love-irr-PAST-1pl 'we would love' (French)

b. **n-aa-núú-kúsha**
1pl-REM-PERS-carry 'we had carried'' (Makhuwa)

A final clue is that the verb stem by itself should form a constituent, since only the verb stem is the target for reduplication. When emphasizing the durative or iterative aspect of an action, the verb without its inflectional prefixes is reduplicated. In (28) the verb stem **-koha** is reduplicated without the subject prefix **ki-** or the tense and disjoint prefix **-naa-**.[8]

(28) DJ **ki-náá-kóhá-kohá-tsa**
1sg-PRES.DJ-ask-REDUP-REP 'I am doing research'

4.2 Structural adjacency

Now I return to the definition of the IAV position. If the IAV position is defined linearly, an object with old information should just as well be in that position as one with new information. After all, what is observed in the sentence is just a verb of some form and an element placed directly after it. So the IAV position is (at least in this case) necessarily defined structurally. Since the conjoint verb form demands that the object be adjacent, I propose to define the IAV position as *the position structurally adjacent to the verb*. However, there is more than one way to implement structural adjacency.

Structural adjacency is often used in theories about morphological merger. Fuss (2004), inspired by Halle and Marantz (1993), uses the following definition of structural adjacency.

(29) A terminal node X and the closest terminal node Y c-commanded by X are structurally adjacent.

I assume this definition to mean that two closest c-commanding heads, but also a head and the closest c-commanded specifier are structurally adjacent. It will shortly be clear how this definition works in the proposed tree structure.

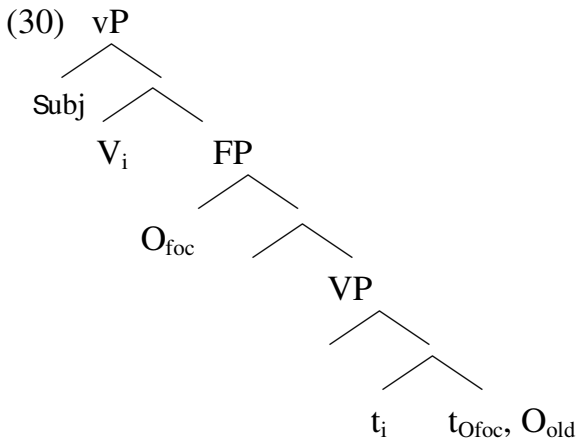
4.2.1 Functional projection under vP

Following Baker and Collins (to appear) I assume a functional projection (FP) under small vP. For them, this FP is the LinkerProjection, hosting a particle they refer to as a linker. The function of the particle is not exactly clear, but Baker and Collins analyse it as a Case checker. In Makhuwa there is no (visible) linker, but the projection functions as a low focus projection. Just as in the Linker-theory an argument moves to the specifier of the FP, only here not specifically

[8] The plural morpheme **-tsa** is a clitic, not an extension, which is attached to the verb after reduplication.

for case reasons, but to satisfy a focus reading.[9] Needless to say, only focal elements can move to this position, for example a focused object or adverb. When the verb then cyclically moves to little v, the verb and the focal element are adjacent; the IAV position is filled (30).

(30)



Since the object representing old information does not have a reason to move, it remains in situ, thus creating a structural distance, non-adjacency between the verb and the object. In between the two is room for adverbs. When an adverb is contrastively focused, it moves to specFP and the object simply stays in its original position. What also follows from this analysis is why only the first element following a CJ form is in focus: there is only one FP with one specifier and hence only one element can move and be in focus.[10,11]

4.2.2 Focus projections and disjoint marking

A remaining issue is how the verb "knows" whether it should appear segmentally in its conjoint or disjoint form. What is the structure above vP? Carstens (2005) claims that TP universally has an EPP feature and thus the subject moves to specTP. Under TP are the projections for tense morphemes, but also a head/projection to host the marking of the disjoint form. For Rundi,

[9] It might also be the case that Baker and Collins's linker is actually a focus marker and the projection turns out to be something with more content than just a 'linker projection'. Unfortunately Baker and Collins provide no information on information structure associated with the various sentences.

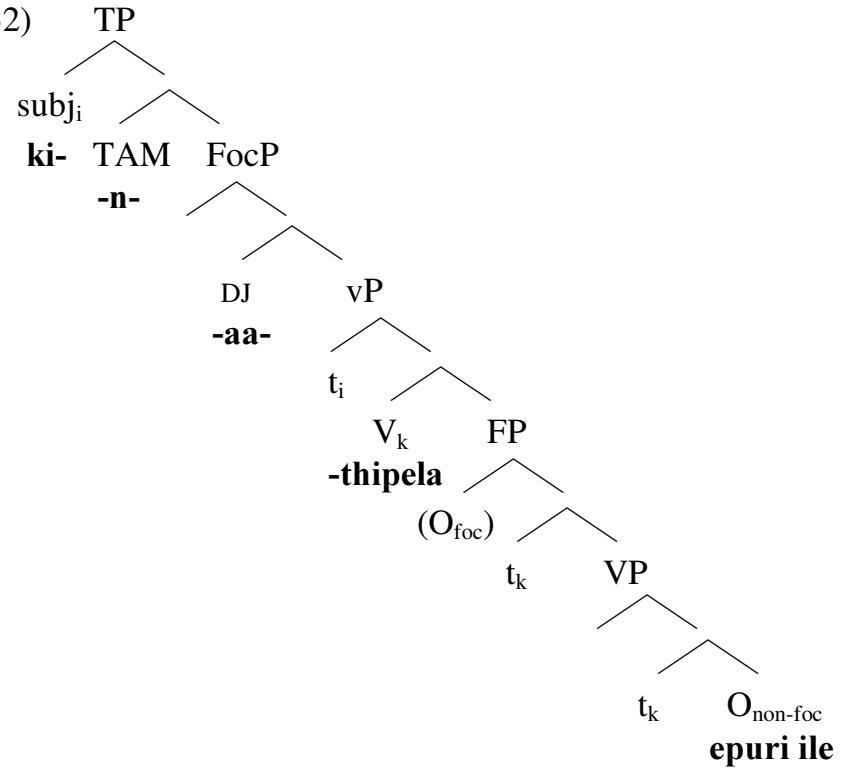
[10] This could explain why it is impossible to make multiple questions in Makhuwa. Question words need focus and since only one element can be in the right position to check its focus, the other one will crash the derivation.

[11] Combining this with the double object constructions Baker and Collins (to appear) discuss, one would predict that a double object construction with a focused adverb is impossible. More data are needed to confirm this prediction.

another Bantu language that uses a CJ/DJ distinction, Ndayiragije (1999) proposes a focus projection under TP, exactly at the place where the DJ marker appears in the string of prefixes. I assume the same focus projection for Makhuwa. There now is a parallel structure in the two phases of the derivation vP and TP, as illustrated in (32) with the disjoint example in (31).

(31) DJ **ki-náá-thípelá epúrí ile**
1sg-PRES.DJ-bury 9.goat 9.DEM
'I am burying that goat'

(32)



The two Focus projections (high (FocP) as in Ndayiragije 1999 and low (FP) adapted from Baker and Collins) are separate projections with separate functions, but they are related. When the specifier of the low FP is filled by a focal object, the head of the higher (FocP) is zero (CJ form) and when specFP is empty, FocP spells out the DJ marking (DJ verb).

(33) DJ FocP **-aa-** specFP (empty)
CJ FocP (empty) specFP **O$_{foc}$**

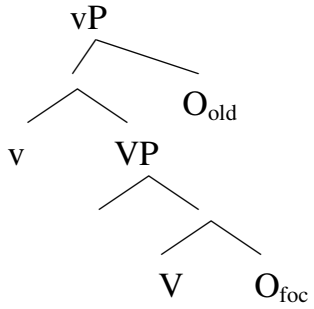
As already mentioned, the verb moves cyclically from V to v via the head of FP. This is where the verb is valued for focus: if the specifier of the lower focus projection is filled by the focal object, the verb is marked [-F]; if the specifier is empty, the verb is valued [+F]. The vP is then selected by the tense markers in the inflectional domain. Because the inflectional domain merges morphologically to the verb stem, it creates a dependency and can thus see the specification of the verb stem. If it is valued [-F], the inflectional domain knows that there already is a focused element inside the vP and the higher FocP is zero. If the inflectional domain encounters a [+F] verb stem in vP, it spells out the DJ marker in (high) FocP.

(34)				
	DJ	specFP (empty) >	V [+F] >	FocP **-aa-**
	CJ	specFP $\mathbf{O_{foc}}$ >	V [-F] >	FocP (empty)

4.3 An alternative analysis

The IAV position could alternatively be defined another way, requiring a different syntactic analysis of the data. The most basic definition for structural adjacency is sisterhood of the verb and object. That is, of the focal object and verb, since the object with old information is required to not be in the IAV position and thus not be adjacent to the verb. If a structure is assumed in which the CJ verb and focal object are sisters, the non-focal object with a DJ verb form should be dislocated to the right.

(35)



There are several problems with this tree structure. For one, right-adjunction violates Kayne's Linear Correspondance Axiom (Kayne 1994), which states that movement and adjunction universally only proceed in a leftward fashion. This need not be a crucial problem, since the LCA has been contradicted before (see, for example, Ndayiragije 1999). Another, more serious, problem is that it is hard to predict whether a verb will appear in its CJ or DJ form, a point which is captured in the analysis proposed above. And then there is still a third

problematic case. In example (18) (repeated below) it was mentioned that a sequence VCJ-Adv-O is only correct when the adverb is (contrastively) focused.

(18) a. **ki-low-alé ntsana ehópa, eléló n-ki-low-ále**
1sg-fish-PERF yesterday 9.fish, today NEG-1sg-fish-PERF
'I caught fish *yesterday*, today I didn't fish'

b. **ntsáná ki-low-alé ehopá**
yesterday 1sg-fish-PERF 9.fish
'yesterday I caught fish'

The position of the focused adverb in (18a) should be the same as that of the focused object in (18b), namely the complement and sister of V. If adverbs can at all be selected by verbs, it still leaves the question where the object is in this case. Since I do not see solutions for these counter arguments at the moment, I assume the previously given account is on the right track.

4.4 A remaining issue: the postverbal subject

A remaining issue that has not been analysed yet, is the construction with a postverbal subject in Makhuwa. This section gives thoughts and data in order to see whether this construction is a possible counterargument for the analysis proposed here. The postverbal subject is clearly new information and still a DJ verb form is used in Makhuwa, which is not what one would expect. In Aghem and Tswana the postverbal position is often used to give the subject focus. In a neutral sentence in Aghem (36a) the subject typically occupies a preverbal position, but when the subject is focused in an answer to a question, it immediately follows the verb (36c). Tswana uses a postverbal subject to make a presentational construction (37).

Aghem (Watters 1979: 146)

(36) a. **fɨ̋l á mɔ̀ zɨ́ ki-bɛ́ án 'sóm**
friends SM P2 eat fufu in farm
'the friends ate fufu in the farm'

b. **à mɔ̀ zɨ́ ndúghó bɛ́-'kɔ́**
DS P2 eat who fufu 'who ate the fufu?'

c. **(à mɔ̀ zɨ́) á-fɨ́n (bɛ́-'kɔ́)**
DS P2 eat friends fufu 'the friends (ate the fufu)'

Tswana (Demuth and Mmusi 1997: 11)

(37) CJ **gó-fithl-ílé rré**
17-arrive-PERF 1a.father 'there arrived father'

The difference between the postverbal subject construction in Aghem or Tswana (36, 37) and Makhuwa (38) is the agreement with the subject. In the first two languages the subject marker on the verb does not agree with the postverbal subject, but is a dummy subject. In Tswana this non-agreeing subject marker is the prefix of the (originally locative) class 17. The Makhuwa examples in (38) show that the subject prefix on the verb is not a dummy or a locative, but that it agrees with the postverbal subject. Other evidence that the postverbal subject has a different status in the different languages, is in the nominal morphology of Aghem. The subject in (36a) is sentence-initial and consists of the noun root, whereas in (36c) the subject is in the IAV position and first has the noun class prefix and then the noun root. Other characteristics for Makhuwa are the disjoint form of the verb and the fact that the subject has its original tonal form, i.e., it is not lowered. The sentence in (38a) comes from a story where a man dresses himself as a ghost and appears at his own house where his wife opens the door and receives the message the "ghost" brings. Later, when the man comes back home, his wife tells him that a ghost appeared. (38b) is the normal way of saying that it rained.

Makhuwa

(38) a. DJ **waa-núú-khúmá nnépá wa á-píp' ínyu**
3.REM-PERS.DJ-go.out 3.ghost 3.CONN RESP-grandma 2.RESP.POSS
'(there/it) came out the ghost of your grandmother'

b. DJ **yoo-rúpá e-púla**
9.PERF.DJ-fall 9-rain
'(there) fell rain'

What must be mentioned here is the difference in focus *meaning* and *form*. Until now we have come across instances of (new) information focus and contrastive focus and it remains to be seen whether VS structure in Makhuwa expresses one of these focus types or perhaps another kind of information structure. For objects or adjuncts, (new) information focus (39) or contrastive focus (40) are usually expressed after a conjoint form or in a cleft sentence.[12]

[12] There is no CJ/DJ distinction in relatives.

(39) Q **Hamísí o-n-thíkílá esheení**?
1.Hamisi 1-PRES-cut what
'what is Hamisi cutting?'
A **Hamísí o-n-thíkíla nthalí**
1.Hamisi 1-PRES-cut 3.tree
'Hamisi cuts a tree'

(40) Q **esheení n-kíńtálí mmó e-nyákulihíya**?
9.what.COP 18-compound 18.here 9-make.noise
'what is making noise in the compound?'
A **<u>nthalí</u> onthíkílááwe Hamísi**
3.tree.COP 3-PRES-cut-REL.1 1.Hamisi
'it is the tree that Hamisi is cutting'

Since a subject can neither follow a conjoint verb form in Makhuwa nor be focused in its normal preverbal position, the only way to focus it (contrastively) is to make a cleft. The focused subject is underlined.

(41) Q **o-n-rúpá ti paní mpáni mmó? Aputuulí?**
1-PRES-sleep COP who inside here Abdul.COP
'Who is sleeping in here? Is it Abdul?'
(lit. 'who is the one who is sleeping...')
A **ka-hííyó Aputúli, o-n-rúpá <u>ti Joána</u>**
NEG-DEM Abdul 1-PRES-sleep COP Joanna
'It's not Abdul; who is sleeping is Joanna.'

Since contrastive focus on the subject is expressed by means of a cleft, the focus expressed in a VS construction must be another type of focus, presumably presentational focus. This term is somewhat misleading since what is in focus is actually the whole sentence (Lambrecht's (1994) Sentence Focus). The VS sentences are entity-central thetic utterances: "an entity-central thetic statement is a type of utterance stating the existence of an entity" (Sasse 1987, p.526). All information in the sentence is new and therefore a theme-rheme or entity-predication relation cannot be established. In this way the information structure in these presentational sentences is on a higher level than sentence-internal focus. It would thus not violate the hypothesis that an element following a DJ

verb form is not focal. Even if so, a syntactic account should be given of the structure and interpretation, which could include the hypothesis that in Aghem and Tswana the subject is indeed in the IAV position, whereas in Makhuwa it is not.

5 Conclusions

In this paper two generalisations are made on the distribution of the conjoint and disjoint verb forms in Makhuwa. 1) A verb appears in its conjoint form when a focal element occupies the IAV position; 2) a verb appears in its disjoint form when the IAV position is empty. A syntactic analysis is provided that accounts for these generalisations if the IAV position is defined in terms of structural adjacency between two heads in a direct c-command relation.

In the syntactic analysis two focus projections were proposed: one under TP (Ndayiragije 1999) hosting the disjoint morpheme and one under vP, to the specifier of which focal elements move. Non-focal elements remain in-situ. This analysis accounts both for the strong adjacency of a conjoint verb form and its focal object and for the empty IAV position that requires a verb to appear in its disjoint form.

Topics for further research include postverbal subject construction (in both an agreeing and non-agreeing form, e.g. Makhuwa and Zulu) and the mapping of phonological or prosodic phrasing onto this syntactic structure. It will be difficult to do this for Makhuwa, since there are no strong indications for phrase boundaries (such as penultimate lengthening in other languages), but since the syntactic analysis should work for more languages with CJ/DJ systems, one of the next steps is to look at languages like Tswana, Zulu, Makwe or Rundi and test the predictions made in/from this paper.

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Questions in Northern Sotho*

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This article gives an overview of the marking of polar and constituent questions in Northern Sotho, a Bantu language of South Africa. It thereby provides a contribution to the typological investigation of sentence types in the world's languages. As will be shown, Northern Sotho follows cross-linguistic tendencies in marking interrogative sentences: It uses intonation as main indicator in polar questions and question words as main indicator in constituent questions. Nevertheless, it also shows interesting language-specific variation, e.g. with respect to the location of raised intonation in polar questions, the presence of two pragmatically distinct question particles in polar questions, or a split in the formation of constituent questions based on the grammatical function of the questioned constituent.

1 Introduction

Northern Sotho (Sesotho sa Leboa, also known as Sepedi after its standardized dialect) is one of the eleven official languages of the Republic of South Africa. It is spoken in the northern provinces of South Africa by approximately 4,208,980 speakers (Statistics South Africa 2004). According to Guthrie's (1967-71) classification it belongs to group S30. It is mutually intelligible with the other languages in this group, namely Tswana and Southern Sotho (also referred to as Sesotho). Like other Bantu languages Northern Sotho is a tone language that uses changes in fundamental frequency to indicate lexical and grammatical differences in meaning. Syntactically, it displays SVO basic word order. Morphologically, Bantu languages are famous for their rich noun class agreement system (for grammars of Northern Sotho see e.g. Ziervogel et al. 1969, Louwrens 1991, Poulos & Louwrens 1994, Louwrens et al. 1995).

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As interrogatives in Northern Sotho are formed on the basis of declarative sentences, basic sentence structure in Northern Sotho declaratives is exemplified in (1).[1]

(1) Declarative sentences in Northern Sotho

a. Mo-nna o ngwal-ela ba-sadi lehono.[2]
CL1-man SC1 write-APPL CL2-woman today
'The man writes to (the) women today.'

b. Ba-sadi ba ngwal-ela mo-nna lehono.
CL2-woman SC2 write-APPL CL1-man today
'The women write to (the/a) man today.'

The sentences in (1) display the basic word order SVO. The subject in Northern Sotho declaratives (and more generally in Bantu languages) is marked unambiguously through agreement with the verb. In agreement the noun is related to the verb via an agreement marker that agrees with the noun in its noun class (in example (1a) this is class 1, in (1b) it is class 2). The object follows the verb. In Northern Sotho, there is no agreement between the object and the verb in basic SVO structures, as displayed in (1).

On the basis of the declarative sentence additional and diverging features will be presented that distinguish declarative sentences from interrogatives. Section 2 discusses interrogative clause formation in Northern Sotho, addressing the formation of polar questions and their prosodic and morphosyntactic aspects in section 2.1, and the formation of constituent questions in section 2.2. Though Northern Sotho uniformly uses question words in constituent questions, there is a striking asymmetry in the distribution of the question words. Therefore, non-subject and subject constituent questions are dealt with separately, in sections 2.2.1 and 2.2.2 respectively. Section 2.2.3 briefly mentions alternative strategies of constituent question formation for both subjects and non-subjects whereas

[1] The examples are given in Northern Sotho orthography which is disjunctive, which means that a.o. concordial markers are written separately. For an overview of Southern Bantu writing systems see Louwrens (1991).
The abbreviations used in the glosses are the following:

1SG	first person singular	PASS	passive
2SG	second person singular	POSS	possessive pronoun
PRES	present tense-a-	PST	past tense
APPL	applicative	PROPNAME	proper name
CL	noun class	QP	question particle
COP	copula	REL	relative tense
LOC	locative	RPRN	relative pronoun
OC	object concord	SC	subject concord

section 2.2.4 discusses the observed asymmetry in more detail. Section 3 provides a summary of the findings.

2 Interrogatives in Northern Sotho

Cross-linguistic research on sentence types (e.g. König & Siemund, to appear) investigates grammatical distinctions that can be correlated with a certain illocutionary force. Interrogatives are typically used for eliciting information and asking questions. Apart from this functional criterion, a definition of sentence types should also be based on formal criteria in that the formal properties characterizing a sentence type set up a system of alternative choices that are mutually exclusive.

Polar and constituent questions in Northern Sotho share the general illocutionary force of interrogatives. Moreover, they also find their place in a cross-linguistic definition of formal properties of interrogatives, as they display cross-linguistically prominent patterns both in the formation of polar as well as in the formation of constituent questions. These as well as interesting language-specific variation will be presented in the following sections. The presentation concentrates on interrogatives as main clauses only. Further research has to show if what holds for non-embedded interrogatives is also true for embedded structures.

2.1 Polar questions

Polar questions (also termed yes/no-questions) are interrogative sentences whose answer is expected to provide the truth-value of the corresponding declarative. In Northern Sotho they are parallel to corresponding declarative sentences in that they show basic word order and identical verbal morphology. Polar questions differ from declaratives in prosody and optionally in lexical means (particles). Among the prosodic and morphological means used to mark polar questions, prosody has to be regarded the crucial factor. Therefore, the presentation will start with prosodic marking in section 2.1.1 and turn to the (optional) morphological marking in section 2.1.2.

2.1.1 Prosodic marking of polar questions

In order to understand how polar questions are distinguished from declaratives with respect to prosody one first has to discuss the relevant prosodic properties at sentence level in Northern Sotho.

Vowel length is not contrastive in Northern Sotho. However, the penultimate syllable of a word in isolation or of the last word in a declarative

sentence is systematically lengthened (Doke 1954, Lombard 1979). Penultimate lengthening is common in many Bantu languages. Polar questions lack this length on the penultimate syllable so that the penultimate syllable of the question utterance does not show significantly different length than other syllables in the utterance (Lombard 1979). Additionally, the polar question as a whole is pronounced at a higher overall pitch (Ziervogel et al. 1969, Poulos & Louwrens 1994). The tonal structure of the utterance, however, remains unaltered in Northern Sotho. These observations are illustrated in the example in (2). The lengthened penultimate syllable is indicated by a colon following it. The upright arrow indicates raising of the overall pitch level.[3]

(2) Polar questions in Northern Sotho[4]

a. Q: ↑O dumediša di-kgarebe?
SC2SG greet CL10-lady
'Are you greeting the ladies?'

A: Ee, ke dumediša di-kgare:be.
Yes SC1SG greet CL10-lady
'Yes, I am greeting the ladies.'

b. Q: ↑Mo-kgalabje ó dúmédíšá ngáka?
CL1-old man SC1 greet CL9.doctor
'Is the old man greeting the doctor?'

A: Ee, mo-kgalabje ó dúmédíšá ngá:ka.
Yes CL1-old man SC1 greet CL9.doctor
'Yes, the old man is greeting the doctor.'

The transcription indicates that the question is pronounced at a higher overall pitch, and the absence of the colon indicates that lengthening does not occur. A close comparison of the tone marking of the questions and answers in (2a) and (2b) shows that there are no changes in the tone structure. To give an impression of the raised pitch register, measurements from two examples are given in (3) in order to illustrate the difference in the fundamental frequency in yes/no-questions and their corresponding answers.

[3] Following common practice, accents mark high tones and underlying high tones are underlined. For details on the tonological processes in Northern Sotho, see Zerbian (2006a, b).

[4] Unless stated otherwise, all examples are from my own research on Northern Sotho.

(3) Average F^0 in yes/no-questions

	Mokgalabje ó dúmédíšá ngá(:)ka (cf.2b)	
F^0 Question	232 Hz	253 Hz
F^0 Answer	167 Hz	181 Hz
	Ngaka The doctor	é tlhókómélá mókgálá(:)bje is looking after the old man.
F^0 Question	211 Hz	224 Hz
F^0 Answer	167 Hz	178 Hz

In the row named 'F^0 Question' pitch peaks are given for the subject (*mokgalabje*, *ngaka*) and the following VP. As the subject is low-toned in both cases, the pitch on the subject is lower than the pitch on the following VP, which starts with a high-toned subject marker. As high tones spread to the right in Northern Sotho (see Lombard 1976, Zerbian 2006b) the whole VP is high-toned. In the row named 'F^0 Answer' pitch measurements of the corresponding answers are given. Again, as the subject is low-toned in both cases the pitch on the subject is lower than on the following VP. However, comparing the pitch level of questions to the pitch level of answers, it becomes clear that the overall pitch of questions is well above the overall pitch of answers.

Jones et al. (2001 a,b) verify the informal observations made for the prosody of polar questions in Bantu languages of Southern Africa in a detailed phonetic study on Xhosa, investigating both the acoustic and perceptual aspect of prosodic marking in polar questions. Xhosa is a Southern African Bantu language also spoken in South Africa, belonging to the Nguni group (S40 in Guthrie's (1967-71) classification). It is an areal neighbour to the Sotho languages but not a member of the same language sub-group. However, impressionistically the same observations have been made for Nguni as for Sotho (see references in Jones et al. 2001). The results of the phonetic studies show that acoustically, polar questions (called queclaratives in their study) differ from declaratives in duration specifically on the penultimate vowel, pitch on the penultimate vowel and overall raised pitch. Perceptually, it was found that duration and pitch on the penultimate syllable are highly significant prosodic features in disambiguating polar questions from declaratives. However, listeners make decisions about the kind of sentence type as early as the first syllable. That the pitch on the first syllable plays an important role in disambiguation reinforces the role of register raising as a cue to interrogativity.

The findings for Northern Sotho and Xhosa are not surprising cross-linguistically. Raised pitch is the most common feature in polarity questions

(Ultan 1978, Cruttenden 1997) and reflects uncertainty on the part of the speaker. Syntactic and morphological means play a more subordinate role.

Although many of the world's languages are reported to have a raise in pitch in polar questions, there is some variation as to where in the utterance the raise in pitch occurs. According to Ultan's sample a higher pitch towards the end of the contour seems to be the prominent pattern, with fewer languages that mark polar questions with a higher pitch towards the beginning of the utterance (Siemund 2001). In contrast, Northern Sotho has high pitch extending over the whole utterance. This is not the case in all Bantu languages. Data from Jita suggest that there is interesting language-specific variation to be found with respect to the domain in which the register raising applies. In Jita, a Bantu language spoken in Tanzania, the domain of register raising is determined by the prosodic structure of the utterance. All low-toned sequences are raised altogether, while in sequences containing one or more high tones the raising only affects the sequence up to the last high tone (Downing 1996:160).

Establishing the prosodic features of lack of vowel length and raised overall register as grammatical markers of polar questions not only shows by which formal means questions are differentiated from statements but also addresses another issue in tone languages. It is still largely uninvestigated if and how intonation is used in tone languages, the reason being that in tone languages change in pitch, the acoustic correlate for intonation, is already used for conveying lexical or grammatical meaning. Whereas some authors (e.g. Cruttenden 1997) claim that intonation only plays a limited role in tone languages to convey linguistic meaning, Yip (2002) collects examples from tone languages that show the use of pitch to convey pragmatic functions such as sentence type and focus. The observations from Northern Sotho can be interpreted exactly in this way. As intonation is used to differentiate between polar questions and statements, it fulfils a grammatical function.

2.1.2 Morphological marking of polar questions

Whereas the prosodic marking of polar questions is obligatory, grammar books on Northern Sotho state that polar questions can also be optionally marked by the particles *na/naa* or *a/afa* (Ziervogel et al. 1969, Poulos & Louwrens 1994). In this view, Northern Sotho supports cross-linguistic tendencies in using the two most common strategies for the marking of polar questions (Siemund 2001, König & Siemund, to appear), namely prosody and interrogative particles. According to Ziervogel et al. (1969), the two particles are not different in their meaning but only in their distribution. Although this view on the meaning of the question particles will be rejected later in this section, the distributional asymmetries are still valid. Whereas *na/naa* can occur not only in sentence-

initial position, sentence-finally, in both positions simultaneously as well as clause-second, *a/afa* only occurs in sentence-initial position.

Respective examples are given in (4). Example (4a) shows *na/naa* in sentence-initial position, (4b) in sentence-final position, (4c) in both positions simultaneously, and (4d) shows the question particle even in sentence-medial position. All examples are grammatical.

(4) Use of question particles in Northern Sotho

a. Naa Shwahlane o a šoma?
QP PROPNAME SC1 PRES work
'Does Shwahlane work?'

b. Shwahlane o a šoma na/naa?

c. Naa Shwahlane o a šoma naa?

d. Shwahlane na o a šoma?

(Poulos & Louwrens 1994: 374)

Example (5a) shows the occurrence of *a/afa* in sentence-initial position, example (5b) shows the particle in sentence-final-position. The asterisc marks example (5b) as ungrammatical.

(5)

a. A(fa) puku ya gagwe ke ye botse (na)?
QP CL9.book CL9 POSSPR2 COP CL9 beautiful (QP)
'Is your book a beautiful one?'

b. * O a n-tseba a(fa)?
SC2SG PRES OC1SG-know QP
'Do you know me?' (Ziervogel et al. 1969: 119)

The use of either of the two variants of the interrogative particle (either *na* or *naa*; either *a* or *afa*) does not invoke any important differences with regard to the pragmatic function they fulfill. However, *naa* appears to be slightly more 'inciting than' *na*, and *afa* occurs more frequently than *a* (Louwrens 1987: 122).

The variety found in Northern Sotho in the positioning of the question particle *na/naa* is interesting. Although cross-linguistically question particles in polar questions appear in a variety of positions, their position seems to be relatively fixed within languages. They are mostly found sentence-finally or, though rarer, sentence-initially (Siemund 2001). The occurrence of *na/naa* following the subject, as in (4d), resembles languages like Russian or Khoisan languages in which the question particle clitizises onto the first constituent of the clause (Siemund 2001, citing Comrie 1984 for Russian; Hagman 1977 for Khoekhoe).

Also the use of two different question particles in polar questions is a language-specific peculiarity in cross-linguistic comparison. Prinsloo (1985) and Louwrens (1987) investigate the use of the two question particles *na/naa* and *a/afa* in more detailed studies and reach the conclusion that there is a pragmatic difference between the two. Whereas *na/naa* is used to ask a standard polar question which could be answered in the affirmative or negative, *a/afa* is used for rhetorical questions where no answer is expected. Rhetorical questions therefore show a mismatch of form and function. The rhetorical use of *a/afa* is illustrated from two text excerpts in (6), which are reproduced from Louwrens (1987) and Poulos & Louwrens (1994) respectively:

(6) Rhetorical questions in Northern Sotho

a. Kae, goreng, go dir-el-eng? Afa o šetše o
where why SC17 do-APPL-what QP SC2SG remain.PST SC2SG
lebetše gore go šetše ganyane gore o di
forget.PST that SC17 remain.PST little that SC2.SG CL10
tsen-e kgwedi-ng ya go feta?
enter-PST CL9.moon CL9.POSS CL15 pass
'Where, why, what happened? Have you already forgotten that you almost lost your life last month?'

b. Mokalabi: Ke rek-ile ngwako kua Bulawayo mo-tse-ng
SC1SG buy-PST CL9.house DEM PROPNAME CL3-village-LOC
wa Morningside.
POSS PROPNAME
Mokalabi: 'I bought a house in Bulawayo in Morningside.'
Mmatlala: (Ka makalo) Eng? Afa ke go kwa gabotse?
(with surprise) what QP SC1SG OC2SG hear well
Mmatlala: (astonished) 'What? Do I hear you right?'

Excerpt (6a) describes a mother's reaction when being informed by her son who is a detective that he investigates a robbery. Only a month ago her son almost lost his life while tracking a gang of murderers. She expresses her disapproval as in (6a). Excerpt (6b) shows a mini-dialogue in order to illustrate another use of a polar question as a rhetorical question.

Having a closer look at the distribution of *na/naa* and its combinatoric properties with both constituent questions and *a/afa,* Prinsloo (1985) and Louwrens (1987) conclude that also *na/naa* has a pragmatic meaning: In contrast to *a/afa, na/naa* indicates that an answer is expected. To support their

conclusion they provide data that show that *na/naa* but not *a/afa* can co-occur with constituent questions, as shown in (7). [5]

(7) Constituent questions with question particles (Louwrens 1987)

a. Na/ naa o sepetše le mang?
QP SC2SG walk.PST with who
'With whom did you go?'

b. *Afa o sepetše le mang?

c. *A o sepetše le mang?

The example in (7a) illustrates the co-occurrence of *na/naa* and a question word, which is in this case *mang* occurring in sentence-final position. Example (7b and c) show the ungrammaticality of *a/afa* and question word occurring in the same sentence.

Although *na/naa* may co-occur with another question word in the same interrogative structure while *a/afa* may not, *a/afa* and *na/naa* can also be found co-occurring in the same structure. Examples are given in (8).

(8) Combination of question particles (Louwrens 1987)

a. A o tseba gore se-kgalabjane se-la se
QP SC2SG know that CL7-old.man CL7-DEM SC7
di tsen-e na?
CL10 enter-PST QP
'Do you realize that the poor old man is dead?'

b. Afa o a n-kwa na?
QP SC2SG PRES OC1.SG-hear QP
'Do you hear me?'

In the example in (8a), the variant *a* in sentence-initial position co-occurs with *na* in sentence-final position. In (8b), *afa* co-occurs with *na*. As is suggested from the discussion above, context is crucial for the interpretation of these examples. Louwrens (1987) summarizes that questions as in (8) are asked in situations where the questioner already knows the answer but for some or other pragmatic reason wants the addressee nonetheless to answer the question. He gives two contexts for (8a) and (8b) respectively: Imagine a situation where a gangster killed an old man and is questioned in court by an attorney. The attorney is well aware of the fact that the old man did pass away but wants the accused to admit before court that he too is aware of the fact. By commencing

[5] It is an open question if the particle *a/afa* can appear with rhetorically used constituent questions, like 'Wer ist schon perfekt?' ('Who's perfect?') in German.

the question in (8a) with *a,* he indicates that he knows the answer to the question. By ending the question with *na*, however, he demands to be answered by the accused. For (8b), Louwrens (1987) proposes the context where an annoyed father is scolding his son for something the latter has done. In their argument the father might reach a point where he asks the question in (8b). Again, by starting with *afa* the speaker indicates that he knows the answer to the question, by finishing with *na* he nevertheless demands an answer from the hearer.

Contrary to the view maintained by grammar books and in accordance with Louwrens (1987) neither *a/afa* nor *na/naa* can be considered morphological markers of polar questions in Northern Sotho. The examples have shown that *na/naa* does not unambiguously mark polar questions, as it can also appear with constituent questions. *A/afa,* on the other hand, cannot occur with every polar question but only with those that are used as rhetorical questions. Therefore, polar questions are solely marked by prosody whereas the use of question particles can differentiate the pragmatic meaning of the question further.

2.2 Constituent questions

Constituent questions in Northern Sotho follow the cross-linguistic prominent pattern that intonation is much less important than it is in polar questions. In contrast to polar questions the penultimate syllable of a constituent question is lengthened (Lombard 1979) and no raise of the overall pitch register can be observed.

Instead of prosody, the use of interrogative words (also termed question words, *wh*-words) clearly indicates the sentence type of the utterance. (For the use of the question particle *na/naa* with constituent questions, see 2.1.2) Northern Sotho does not employ any other grammatical means to mark structures as constituent questions. Interestingly, there is a split with respect to the position of the interrogative word and thereby the formation of constituent questions in Northern Sotho. The split is obligatory across grammatical functions. Subjects are questioned differently from non-subjects in syntactic respect (subject/object-asymmetry). However, what both structures of constituent questions have in common is that question words are used to indicate the questioned element. The syntactic position of non-subject and subject question words will be illustrated in section 2.2.1 and 2.2.2, whereas section 2.2.3 lists more marked ways of question formation in Northern Sotho. Section 2.2.4 explores the subject/object-asymmetry further.

2.2.1 Non-subject constituent questions

With respect to the syntactic distribution of the *wh*-word, Northern Sotho shows a split according to the grammatical function the question word fulfills. This section deals with the syntactic position of the question word if it represents non-subjects.

Objects and adverbials are questioned in situ, i.e. the position of the interrogative word in a question corresponds to its syntactic position in basic word order in a declarative sentence. This is shown for objects in the examples in (9).

(9) Object questions in Northern Sotho

a. Mo-kgalabje o nyaka ma:ng?
CL1-old man SC1 look.for who
'Who is the old man looking for?'

b. Mo-kgalabje o jwala e:ng?
CL1-old man SC1 plant what
'What is the old man planting?'

c. O bona mang ka me:hla?
SC2SG see who always
'Who do you always see?'

d. Mo-gkalabje o nyaka ngaka e-fe:ng?
CL1-old man SC1 look.for CL9.doctor CL9-which
'Which doctor is the old man looking for?'

The examples in (9a, b) show that the *wh*-pronoun for objects is differentiated into *mang* for [+human] and *eng* for [-human]. Example (9c) further shows that the *wh*-word appears postverbally, in verb-adjacent position. As Northern Sotho is a head-initial language, a modifier will be questioned following its head, as shown in (9d).

However, in double object constructions where there is more than one object present, the *wh*-word does not necessarily appear verb-adjacent. It will appear in its in situ position which is determined by semantic factors such as thematic hierarchy or person hierarchy (see Hyman & Duranti 1982). This is shown in (10).

(10) Postverbal constituent order in Northern Sotho

a. O fa mo-kgalabje se-hla:re.
SC1 give CL1-old man CL7-medicine
'He gives the old man medicine.'

b. O fa mo-kgalabje e:ng?
SC1 give CL1-old man what
'What does he give the old man?'

c. * O fa eng mo-kgalabje?
SC1 give what CL1-old man

d. O fa mang sehla:re?
SC1 give who CL7-medicine
'Who does he bring the medicine to?'

e. * O fa sehlare mang?
SC1 give CL7-medicine who

The example in (10a) illustrates the basic word order in double object constructions in Northern Sotho. The beneficiary precedes the patient (or the animate object precedes the inanimate object). When asking for the patient, as in (10b), the question word for [-human] *eng* has to appear in the position corresponding to the patient in declarative word order. This is in sentence-final position. Putting the question word in verb-adjacent position leads to ungrammaticality, as shown in (10c). The same applies in a parallel fashion when questioning the beneficiary. The question word for [+human] *mang* has to occur in the position corresponding to the beneficiary in declarative sentence word order. As shown in (10d), this is the verb-adjacent position in this case. Placing the question word in sentence-final position, as in (10e), leads to ungrammaticality.

The same generalization made for objects applies to the questioning of local, temporal, and modal adverbials in Northern Sotho, as shown by the examples in (11).

(11) Constituent questions for adverbials

a. Mo-kgalabje o nyaka ngaka ka:e?
CL1-old man SC1 look.for CL9.doctor where
'Where is the old man looking for the doctor?'

b. Kgarebe e bolela ma-aka ka:e?
CL9.lady SC9 tell CL6-lie where
'Where is the lady telling lies?'

c. Mo-kgalabje o jwala mo-hlare ne:ng?
CL1-old man SC1 plant CL3-tree when
'When is the old man planting a tree?'

d. O bona ngaka ne:ng?
SC2.SG see CL9.doctor when
'When do you see the doctor?'

e. Kgarebe e bolela ma-aka bja:ng?
CL9.lady SC9 tell CL6-lie how
'How is the lady telling lies?'

f. Mo-kgalabje o rekiša ma-swi bja:ng?
CL1-old man SC1 sell CL6-milk how
'How is the old man selling milk?'

The examples in (11) show that question words referring to adverbials are placed in the syntactic position where the adverbial occurs in declarative sentences. Examples (11a,b) shows this for local, (11c,d) for temporal, and (11e,f) for modal adverbials. The default position in which the adverbial appears is postverbally following the object. The examples in (12) are meant to exemplify that question words appearing in other positions than in situ render sentences ungrammatical.

(12) Illicit positions for non-subjects

a. * Neng o bona ngaka?
when SC2.SG see CL9.doctor
Intend. 'When do you see the doctor?'

b. * Mang o bona?
who SC2.SG see
Intend. 'Whom do you see?'

c. * O bona ka mehla mang?
SC2.SG see always who
Intend. 'Who do you always see?'

d. * O fa eng mo-kgalabje?
SC1 give what CL1-old man
Intend. 'What does he give the old man?'

The examples in (12a,b) show that question words cannot appear sentence-initially. The example in (12c) shows that appearing postverbally is not sufficient for the position of the object *wh*-word. An object *wh*-word appearing after a temporal adverbial is ungrammatical. The *wh*-word needs to appear verb-adjacently as any direct object does in Northern Sotho. More generally, (12c) shows that sentence-final is not a position for a question word. The example from (10c), repeated here as (12d) for convenience, shows that there is no obligatory verb-adjacent position for question words.

In sum, constituent questions are not distinguished from declaratives neither in syntax, nor in verbal morphology nor by the use of question particles. Neither is intonation reported to play a role. The only way constituent questions are differentiated from their declarative counterparts is by use of an interrogative word. Northern Sotho thus fits into the cross-linguistic pattern that constituent questions are less marked grammatically than polar questions are (at least for non-subjects), as the interrogative word unambiguously marks the relevant sentence as question (König & Siemund, to appear).

2.2.2 Subject constituent questions

Although Northern Sotho questions objects and adverbials in their canonical position, subjects cannot be questioned in their canonical preverbal position in the pragmatically unmarked case. As already mentioned above, there is a split in the distribution of the *wh*-word in constituent questions in Northern Sotho according to the grammatical function the questioned constituents fulfill. Subjects of transitive verbs are questioned by means of a cleft construction, as shown in the examples in (13).

(13) Cleft construction for subject questions

a. Ké mang (yo) a nyaka-ng nga:ka?
COP who RPRN.CL1 SC1 look.for-REL CL9.doctor
'Who is looking for the doctor?'

b. Ké mang (yo) a bolela-ng ma-a:ka?
COP who RPRN.CL1 SC1 tell-REL CL6-lie
'Who is telling lies?'

c. Ké mang (yo) a rekiša-ng ma-swi ko toropo:-ng?
COP who RPRN.CL1 SC1 sell-REL CL6-milk in town-LOC
'Who is selling milk in town?'

Evidence for the cleft construction does not only come from the use of high-toned *ké* in sentence-initial position but also from the change in the verbal morphology. High-toned *ké* is the copula and also appears in other copula-constructions in Northern Sotho. With respect to verb morphology the subject marker *a* is used instead of *o* and furthermore *-ng* (or *-go* as an idiolectal variant) is suffixed to the final vowel of the verb stem.

Questioning the subject in its canonical preverbal position leads to ungrammaticality, as shown by the example in (14).

(14) Subject in preverbal position

* Mang o nyaka ngaka?
who SC1 look.for CL9.doctor
'Who is looking for the doctor?'

The cleft construction, as used in subject questions in (13), is similar to subject relative clauses, the only difference being that the relative pronoun can be left out in subject questions (see also Kock 1997). In order to illustrate the relation between cleft sentence and subject relative clauses, the data in (15) show subject relative clauses.

(15) Relative clause (Ziervogel et al. 1969)

a. Mo-šemane yo a šoma-go o
CL1-young.man RPRN.CL1 SC1 work-REL SC1
robala gae.
sleep home
'The boy who works sleeps at home.'

b. Nna yo ke lema-go…
PRN1SG RPRN.CL1 SC1.SG plough-REL
'I that plough...'

In both examples (15a,b) the head noun is followed by a relative marker that agrees with the head noun in class membership. The following verb also agrees with the head noun in class. In case of a third person (see 15a), the subject agreement marker is *a* instead of *o* for noun class 1 in declarative clauses. Verbal morphology furthermore shows the relative clause suffix *-go* (or *-ng* as a dialectal variant).

As has been shown in this and the preceding section, there is a distinction according to grammatical functions when it comes to the formation of constituent questions and the placement of the question word. Section 2.2.4 will show that the asymmetry is explicable if one understands that the grammatical functions are closely related to default discourse functions in Northern Sotho. Before turning to this issue, however, the next section will shortly mention alternative structures of constituent questions in Northern Sotho.

2.2.3 Variation in the formation of questions

In section 2.2.1 it has been shown that non-subjects, i.e. objects and adverbials, are questioned in situ in Northern Sotho. However, non-subjects can also be questioned by means of cleft constructions, as shown in the examples in (16).

(16) Cleft constructions for non-subjects in Northern Sotho

a. Ké mang o mo-kgalabje a mo nyaka:-ng?
COP who RPRN.CL1 CL1-old.man SC1 OC1 look.for-REL
'It is who that the old man is looking for?'

b. Ké eng se mo-kgalabje a se jwala:-ng?
COP what RPRN.CL9 CL1-old.man SC1 OC9 plant-REL
'It is what that the old man is planting?'

c. Ké neng mo mo-kgalabje a nyaka-ng nga:ka?
COP when RPRN CL1-man SC1 look.for-REL CL9.doctor
'It is when that the old man is looking for the doctor?'

d. Ké kae mo mo-kgalabje a nyaka-ng nga:ka?
COP where RPRN CL1-man SC1 look.for-REL CL9.doctor
'It is where that the old man is looking for the doctor?'

The example in (16a) shows a cleft construction questioning a [+human] object, (16b) a [-human] object, (16c) a temporal adverb, and (16d) a local adverb. The cleft construction in the examples in (16) is clearly identifiable according to the characteristics established in section 2.2.2, namely the use of the high-toned copula *ké* and the change in verbal morphology both in subject agreement marker and in the additional suffix (*-go*/*-ng*). In object relative clauses, as in (16a,b), the relative complementizer cannot be left out, as is the case in subject questions. The relative complementizer in relative clauses appears initially and agrees with the head noun in class membership.

The use of the cleft construction for questioning non-subjects is, however, not the unmarked case. The cleft-construction is more marked pragmatically and hence more rarely used in Northern Sotho. In situ questions and cleft constructions cannot be used interchangeably for questioning non-subjects in Northern Sotho (for the semantics of object clefts see Zerbian 2006a).

For subjects, in situ questions are possible only in multiple questions and with echo-reading, as shown in the examples in (17).

(17) Subject question in situ

a. Mang o dira eng?
who SC1 do what
'Who is doing what?'

b. A: Mo-kgalabje o tlhokomela ngaka.
CL1-old.man SC1 look.after CL9.doctor
'The old man is looking after the doctor.'

B: Mang o tlhokomela ngaka?
who SC1 look.after CL9.doctor
'Who is looking after the doctor?'

The example in (17a) shows that in multiple questions the question word questioning the subject can appear in situ (Machobane 2001). The mini-dialogue in (17b) shows that subject in situ constructions also occur when an echo-reading is intended. [6]

The examples in (18) show two other alternatives reported in the literature to question the subject in Northern Sotho, if subject is defined as the highest thematic role.

(18) Alternatives for subject questions

a. Go tla mang?
SC17 come who
'Who is coming?'

b. Pitša e thub-ile ke mang?
CL9.pot SC9 break.PASS-PST by who
'The pot was broken by who?'

The example in (18a) shows an impersonal construction. The verb does not show agreement with the logical subject of the sentence (i.e. with the constituent bearing the highest thematic role), but with class 17. Class 17 is an unproductive locative class. The subject appears following the verb. Impersonal structures as in (18a) can be used for questioning the logical subject only if the verb is intransitive. In their pragmatic connotation they are parallel to cleft sentences.[7] The example in (18b) shows a passive structure. In the passive construction the agent is demoted and added as an optional *ke*-phrase. Also the passive construction can be used to ask for the logical subject as a pragmatically unmarked strategy.

The structures presented in (18) show in fact also show questions in which the question word appears in situ (see Demuth & Gruber 1995 for the subject-in-VP hypothesis for Sesotho relevant for example (18a)). An appearance as preverbal subject is, however, crucially excluded for the question words in (18). This observation leads to the next section that investigates the subject/object-asymmetry in Northern Sotho further by relating it to the discourse function that the preverbal subject is assigned.

As this overview of interrogatives in Northern Sotho focuses on the basic question strategy, the alternative strategies which show differing pragmatic

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[6] It is an open question why subject question words can appear in the position they occupy in declarative sentences in multiple questions. See Haida (in prep.) for an approach to multiple questions.

[7] In transitive verbs, the impersonal construction is ungrammatical and the cleft structure is obligatory.

meaning (cf. 16, 17) will not be dealt with further. It has become clear from the examples provided that they involve a more specialised pragmatic meaning. Therefore the following section will come back to the split in the syntax of question formation on the basis of grammatical functions.

2.2.4 The subject/object-asymmetry

Section 2.2.1 and 2.2.2 illustrated that there is a basic difference in the formation of constituent questions in Northern Sotho which is related to the grammatical function the questioned constituent fulfils. Non-subjects are questioned in their canonical position, whereas subjects must not be questioned in their canonical preverbal position. Instead they are questioned by means of a cleft construction in the case of transitive verbs and postverbally in the case of intransitives. This section will discuss that this split is not arbitrary but that it can be explained by relating to the discourse function that preverbal subjects fulfil in Northern Sotho.

Such an asymmetry between subjects and non-subjects in quite common the languages of the world. Some encode the difference in their morphology, like Greek, Latin, Sanskrit or Japanese. Others show a difference between subjects and objects in certain syntactic contexts. The contexts in which the syntax of subjects differs from that of objects is language-dependent. In Northern Sotho, it displays itself a.o. in questions.

In their typology Li & Thompson (1976: 461ff) distinguish four different kinds of languages according to the relation between topic and subject: (i) subject-prominent languages, (ii) topic-prominent languages, (iii) languages that are both subject-prominent and topic-prominent, and (iv) languages that are neither subject-prominent nor topic-prominent. Considering Northern Sotho with respect to the criteria they establish for subject versus topic, it turns out that the constituent in sentence-initial position in sentences like (1), here repeated as (19) for convenience, shows subject properties.

(19) Declarative sentences in Northern Sotho

a. Mo-nna o ngwal-ela ba-sadi.
CL1-man SC1 write-APPL CL2-woman
'The man writes to the women.'

b. Ba-sadi ba ngwal-ela mo-nna.
CL2-woman SC2 write-APPL CL1-man
'The women write to the man.'

Among the subject properties is that the subject is selected by the verb of the sentence, a property that is common to subjects but not to topics. Furthermore there is obligatory verb agreement with the sentence-initial constituent (in

structures as in (19)) which also is a common coding for subjects, according to Li & Thompson (1976).

However, Northern Sotho is not a purely subject-prominent language. It shows a further characteristic that, on the continuum from topic-prominent to subject-prominent languages, shifts it into the direction of topic-prominent languages (Li & Thompson 1976: 461ff): It is incompatible with focus. The examples in (20) illustrate the subject/object-asymmetry that has been described for constituent questions above by means of further focus-related contexts.

Example (20a) shows that in answers to questions the questioned element is focused in situ with non-subjects (here the object), whereas subjects are focused by means of a cleft construction, as shown in (20b). Negation also shows a subject/object-asymmetry as negated elements are said to be inherently focused and therefore creating a topic/focus conflict. Subjects are negated by means of a cleft (20c), non-subjects (here the object) are negated by verb morphology only, thus in situ, as shown in (20d). Focus sensitive particles like *only* create a conflict of topic and focus when they associate with the subject. Whereas with non-subjects (here the object) the particle follows the focused constituent in linear order (20e), the use of a cleft sentence is necessary with subjects, as in (20f).

(20) Asymmetry in focus-related contexts

a. Mo-kgalabje o nyaka ngaka [toropo:-ng]$_F$.
CL1-old man SC1 look.for CL9.doctor CL9.town-in
'The old man is looking for the doctor in TOWN.'

b. Ké mo-kgalabje a tlhokomela-ng nga:ka.
COP CL1-old man SC1 look.for.REL CL9.doctor
Lit. 'It is the old man who is looking after the doctor.'

c. Ga se mo-šemane o a rekišitše-ng borotho maabane, ke mo-kgala:bje.
NEG CL1-boy RELPRN SC1 sell.PST-REL CL14.bread yesterday, COP CL1-old.man.
'It wasn't the BOY who sold bread yesterday, it was the OLD MAN.'

d. Mo-šemane ga se a rekiše bo-rotho maabane, o rekišitše bu:pi.
CL1-boy NEG SC1 sell.PST CL14-bread yesterday SC1 sell.PST porridge
'The boy didn't sell BREAD yesterday, he sold PORRIDGE.'

e. Mo-sadi o tliša ba-na fela se-kolo:-ng.
CL1-woman SC1 bring CL2-children only CL7-school-LOC
'The woman only brings the CHILDREN to school.' (not the teenagers)

f. Ke mo-sadi fela a tliša-ng ba-na se-kolo:-ng.

COP CL1-woman only SC1 bring-REL CL2-children CL7-school-LOC
'Only the WOMAN brings the children to school.' (not the man)

Additional evidence comes from a survey of discourse contexts which shows that the subject does not appear in sentence-initial position when it is discourse-new information. This is shown in (21a) for the beginning of stories or in (21b) for stage directions. The use of impersonal constructions at the beginning of stories underlines the observation that the preverbal subject is discourse-old. As in the beginning of stories all information is new, no grammatical subject surfaces.

(21) All-new contexts

a. Go be go na le di-nonyana le di-phukubje
SC17 was SC17 COP CL10-bird and CL10-jackal
tš-eo di be-go di dula le-šoke- ng.
CL10-REL CL10 was-REL CL10 live CL5-wilderness-LOC
'There were birds and jackals that lived in the wilderness.' (Matabane 1998)

b. Go tsena Matalebele. O a tšwa.
SC17 enter PROP.NAME 3 A leave
'Matalebele enters.' 'He is leaving.' (Makwala 1958)

That the ungrammaticality of subject questions placing the *wh*-word in sentence-initial position is related to the syntactic position, is furthermore shown by the grammaticality of question structures in which the logical subject is questioned, but in which it does not appear in preverbal position. The examples in (18) are repeated here as (22) for convenience. Example (22a) shows the logical subject in postverbal position in the impersonal construction, example (22b) shows a passive structure where the agent is expressed by a prepositional phrase.

(22) Alternatives for subject questions

a. Go tla mang?
SC17 come who
'Who is coming?'

b. Pitša e thub-ile ke mang?
CL9.pot SC9 break.PASS-PST by who
'The pot was broken by who?'

For the Sotho languages, the generalization that subjects are topics has been brought forward by Louwrens (1979, 1981, 1991) and Demuth (1990, 1995).

The term topic is defined as either discourse-old constituent or aboutness-topic in the respective literature.

Further illustration for the strong restriction of subjects to topics comes from data on acquisition. Demuth (1990) observed that syntactic structures like passives are acquired earlier by children learning Sesotho than by English speaking children. She relates this observation to the fact that these constructions are a frequent means in Sesotho to focus or question the subject whereas in English intonation provides the possibility to keep the syntax simple.

To sum up, the subject position in Northern Sotho is not a pure subject position as, although the sentence-initial constituent definitely has subject properties, it bears the discourse function of topic. Therefore, the subject position is restricted to subjects in Northern Sotho, but subjects can only surface if they are topics. The generalization that the subject position is actually a subject-topic position in Northern Sotho can account for the subject/object-asymmetry observed in interrogatives. As the subject position is closely tied to a topic interpretation, it cannot be the position for a questioned element. Question words always ask for (discourse) new information and therefore do not fulfil the requirements to appear in sentence-initial position.

3 Conclusion

In this paper, data from Northern Sotho were presented that illustrate the formation of questions (in main clauses) in this language. It became clear that Northern Sotho follows cross-linguistic tendencies in marking interrogatives, such as raised intonation in polar questions and the use of question words for constituent questions.

However, also language-specific variation came to light, such as the presence of two question particles in connection with polar questions, variation in the syntactic placement of *na/naa* in polar questions, and the differentiation in the placement of question words according to grammatical functions.

This overview of Northern Sotho is not meant to be representative for Bantu languages in general. Although the subject/object-asymmetry is common to some Bantu languages, such as Kikuyu (Schwarz 2003) and Nguni (Sabel & Zeller 2006), others allow the subject to be questioned in preverbal position (e.g. Chichewa, Bresnan & Mchombo 1987). Furthermore, variation can also be found with respect to the position of the question words for non-subjects. Sentence-initial or -final position have also been reported for question words (e.g. Dzamba in Bokamba 1976, Kikuyu in Bergvall 1987). The observable microvariation makes Bantu languages an interesting field for further research.

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