# Chapter 12

# On subject inversion in Proto-Bantu relative clauses

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This chapter concentrates on the canonical position of lexical subjects in Proto-Bantu non-subject relative clauses. Based on both the geographical and the genealogical distribution of different word orders (Subject Verb-only, Verb Subject-only and Subject Verb / Verb Subject), I propose that the Verb Subject (VS) order is an innovation that came into use only after the split between the North-Western Cameroonian branch of Grollemund et al.'s (2015) classification and the rest of the tree, that is, node 2 or 3. I thus argue for a revision of Meeussen's (1967) and Nsuka-Nkutsi's (1982) claim that Proto-Bantu (node 1) non-subject relative clauses were characterised by a VS order. After expanding Nsuka-Nkutsi's sample from over a hundred Narrow Bantu languages to a total of 167 languages (151 Narrow Bantu and 16 other Niger-Congo languages), we observe that VS-only is still the most frequent word order. However, the Subject Verb (SV) order is dominant in the major clades of Grollemund et al. (2015) located in the north-western Bantu area (20 out of 22 languages in our sample), that is, in the languages that are both closer to the Bantu homeland and more similar to the Niger-Congo languages outside of Narrow Bantu in our sample. SV-only is also found in a significant portion of our sample in the Eastern branch (28 out of 57 languages). Together, these facts suggest that the SV order might be more ancient than previously thought. If this scenario is correct, Bantu zone A languages would not have lost VS due to their evolution from more syntheticity to more analyticity, but they would never have had it at all.

## 1 Introduction

Except for a few notable exceptions, such as Nen A44 (Mous 2003: 304), basic word order in present-day narrow Bantu languages is SVO (Bearth 2003).

Fatima Hamlaoui. 2022. On subject inversion in Proto-Bantu relative clauses. In Koen Bostoen, Gilles-Maurice de Schryver, Rozenn Guérois & Sara Pacchiarotti (eds.), *On reconstructing Proto-Bantu grammar*, 495–535. Berlin: Language Science Press. DOI: 10.5281/zenodo.7575837

Discourse-driven word order is also considered to be typical of the Bantu family and, according to Schadeberg (2003: 152–153), characteristic of Proto-Bantu. In many Bantu languages indeed, various permutations of major constituents yield grammatical sentences. In particular, a lot has been written on so-called "inversion constructions", in which a logical subject, i.e. the highest thematic role selected by the verb, occupies a postverbal position. Depending on the language, the logical subject either controls subject agreement with the verb, as in (1), or does not control it, as in (2). These changes in word order are most often attributed to communicative needs and, in particular, the expression of information-structural notions such as focus and topic (e.g. Marten 2014, Hamlaoui Forthcoming).

(1) Matengo N13 subject inversion (Yoneda 2011: 756)
*ílasí* *ju-a-hémála* *Kinû:nda*
8.potatoes SM1-PST-buy 1.Kinunda
(Talking about potatoes) '(These) potatoes, Mr. Kinunda bought (them).'

(2) Luguru G35 subject inversion (Mkude 1974: 133)
*ibalua* *i-andika* *mwalimu*
9.letter SM9-write.PST 1.teacher
'The teacher wrote the letter.'

Interestingly, at least some (rather Western) Bantu languages do not seem to share this property. Instead, they have been reported to display a much more rigid word order, where surface positions primarily express argument relations and the highest thematic role must be realised as a canonical subject. This is the case of the North-Western Bantu language Basaa A43a, for instance (Hamlaoui & Makasso 2015). Alternatively, other languages such as Mbuun B87 (Bostoen & Mundeke 2011; 2012) and Sikongo H16a (De Kind 2014) display other types of discourse-driven constituent re-orderings, primarily involving the preverbal domain.

In the present chapter, we are interested in Proto-Bantu (PB) word order. In particular we explore the issue of word order in relative clauses, an area in which variation is found and which has not yet been extensively explored. As relative clauses are a rather traditional part of grammatical descriptions and have generally attracted considerable attention, a critical mass of data is now available and the time seems ripe for us to try to reconstruct their PB word order.

Note that the interest in PB relative clauses is not new. Meeussen (1967) dedicates two sections to the topic: one on relative tenses (i.e. verb forms in relative clauses) and one on their syntax. What is of particular interest to us in this

chapter is the location of full subjects (also called "free subjects", as opposed to subject markers, either agreeing with them or referring to them anaphorically) with respect to the verb of the relative clause, as this seems to be a major locus of variation across Bantu. Within relative clauses, some languages indeed have subjects strictly precede the relative verb, as in (3), whereas others have them strictly follow it, as in (4).

(3) Eton A71 relative clause (SV-only) (Van de Velde 2017: 53)
*ímákíd ŋ'↓kúŋkúmá á-↓kúzgí kálâdà ménê ùjàb vấ*
í-m-ákíd Ñ-kúŋkúmá à-$^{H}$-kùz-$^{L}$gì-$^{H}$ kálàdà mə-nè ù-ʤàb vấ
AUG-6-market 3-chief SM1-PST-buy-G-NF book SM6-be 3-far here
'The market where the chief bought the book is far from here.'

(4) Makonde P23 relative clause (VS-only) (Manus 2010: 182)
*aviilá vy-á vy-á-súum-a vá-dyóóko ví-díkídiîki*
8.DEM SM8-REL 8-PRES-buy-FV 2-children 8-small
'Those that the children are buying are small.'

Other languages have relative clauses in which the relative subject is sometimes preverbal and sometimes postverbal, as in (5). The reason for this alternation is not always well understood.

(5) Swahili G42d relative clause (SV/VS) (Givón 1972: 291)

a. *ki-tabu amba-cho m-toto a-me-ki-ona*
7-book say-REL7 1-child SM1-PRF-OM7-see
'the book that the child has seen'

b. *ki-tabu amba-cho a-me-ki-ona m-toto*
7-book say-REL7 SM1-PRF-OM7-see 1-child
'the book that the child has seen'

In the specific case of Nzadi B865, illustrated in (6), subject doubling can sometimes be observed. We will come back to this particular case later on and, following Hyman (2012), classify it with languages that display a postverbal subject-only order.

(6) Nzadi B865 relative clause (SVs) (Hyman 2012: 103)

a. *èsúú (nà) (ŋg') ò mɔ́n àkáàr mwǎàn*
day (that) (which) PST see women child
'the day that the women saw the child'

b. *èsúú (nà) (ŋg') àkáár ò mɔ́n bǒ mwǎàn*
day (that) (which) women PST see they child
'the day that the women saw the child'

Postverbal subjects are so widespread that Meeussen (1967: 120) explicitly reconstructs PB relative clauses as having full subjects following the verb, as shown in (7).

(7) PB reconstruction (Meeussen 1967: 120)
*i-pía dí-dim-á mu-ntu/ba-ntu*
5-garden SM5-cultivate-FV 1-person/2-person
'the garden which the person(s) cultivate(s)'

Nsuka-Nkutsi (1982) offers a thorough overview of morphosyntactic features in Bantu relative clauses. Based on a survey of what we have counted to be 107 languages from 16 Bantu zones (including Tervuren's J zone), he observes that VS is indeed the most frequent word order in his sample and reaches the same conclusion as Meeussen, that VS is the basic word order in object relative clauses and the one characterising PB.[1] As pointed out to us by a reviewer, both of them use the "majority wins" principle (Campbell 1998: 117ff; Dimmendaal 2011: 12). Not referring to the internal genealogical classification of the Bantu languages is however potentially problematic, in that some Bantu languages are more closely related to each other than others (cf. e.g. Grollemund et al. 2015 and references therein). Following Campbell (1998: 114), one would have to make sure that the languages considered do not come from the same branch of the family and thus have an immediate parent that is itself a daughter of PB that might have undergone a separate change. Ideally, one would have to look into the distribution of SV and VS across all major branches of the Bantu family.

In the present chapter, we re-examine both Meeussen's and Nsuka-Nkutsi's proposal that VS is the basic word order in PB relative clauses, using an expanded language set of 167 Niger-Congo languages of which 151 are Narrow Bantu. We have chosen to include 16 Niger-Congo languages that are not Narrow Bantu because, following Nurse (2007), we find it important to try to provide some broader perspective: how does Meeussen and Nsuka-Nkutsi's proposal that VS is the basic word order in relative clauses fit into the larger Niger-Congo picture? Considering that the Niger-Congo phylum counts 1553 languages in the latest Ethnologue (Eberhard et al. 2022), it is not possible yet to provide a sample that

[1]Unfortunately we have not found a count of the languages discussed in Nsuka-Nkutsi (1982). The numbers appearing in the present chapter are our own.

would be representative of it. Our sample is primarily based on the literature that was available to us at the time of writing. We concentrate on relative clauses in non-Bantu Niger-Congo SVO languages, and the ones we have included are listed in §3.1. Among them, 8 are Southern Bantoid, that is, both geographically and genealogically close to Narrow Bantu. Almost all 16 languages show a strict SV word order in relative clauses.

The chapter is structured as follows. In §2, we first give a brief overview of the basic properties of non-subject relative clauses and lay out the existing proposals as to the motivation for VS in present-day Bantu relative clauses. Harvesting data from a number of grammatical sketches and descriptions published more recently (among others Henderson 2006; Downing et al. 2010; Atindogbé & Grollemund 2017), we expand Nsuka-Nkutsi's database to look at the frequency and distribution of each of the three attested patterns of variation, both across Guthrie's (1971) zones and the major branches of the lexicon-based phylogenetic classification in Grollemund et al. (2015). We show, in §3, that although VS is still the most common word order in our sample, its frequency is not much higher than the SV order. Moreover, the geographical distribution of both VS and SV questions the idea that SV developed later. Among other things, we see that in our database, 20 out of our 21 Bantu zone A languages only display SV. Of those 20 languages, 15 belong to Grollemund et al.'s (2015) North-Western Cameroon branch, the one closest to the Bantu homeland. In this respect, Bantu zone A languages also seem more similar to our sample of (non-Bantu) Bantoid (n = 8) and (non-Bantoid) Niger-Congo languages (n = 8). One of the questions that arises is whether these Bantu languages (i.e. zone A/North-Western Cameroon) that show the SV-only pattern and other Narrow Bantu languages had a common ancestor that had VS, or whether VS is a word order that emerged only after the split between them, i.e. at the level of node 2 or 3 of Grollemund et al.'s (2015) classification. In the latter case, VS would not be the word order characterising relative clauses in the common ancestor to all present-day Bantu languages, but potentially only to a subset of the major branches of the family. We consider this hypothesis in §4.[2] Remaining agnostic about the degree of agglutinativity of PB verb structure (Güldemann 2003; Hyman 2007; Nurse 2007; Güldemann 2011; Hyman 2017), we explore the possibility that the near absence of VS in present-day Bantu zone A languages, as represented in the sample, is related to their

[2]According to Harris & Campbell (1995: 27), many scholars maintain the view that syntactic change affects main clauses before subordinate clauses. If this is correct and if VS is indeed an innovation at node 2 or 3 of the Bantu tree, VS was thus probably found in main clauses before appearing in subordinate clauses, in particular if VS was motivated by considerations relevant to main clauses such as, for instance, information-structural ones.

more analytic morphology and in particular the absence of headmarking found in other Bantu languages. If this hypothesis is correct, we believe that a correlation should be found between the lack of pre-stem object markers (i.e. the lack of OM-V order) and the absence of VS in particular Bantu languages. Based on a subsample of 162 languages (146 of which are Narrow Bantu languages), we show that such a statistically significant correlation is indeed found. Among the Bantu languages that do not have pre-stem object markers, VS-only represents the minority, and SV/VS has so far been found (in non-restrictive relative clauses) in only one language. Finally, we propose that the lack of pre-stem object markers could have broader consequences for the syntax of North-Western Bantu languages and could explain why a Bantu zone A language like Basaa significantly differs from other Bantu languages as to how it expresses information-structural notions, most particularly with regard to the lack of connection between focus and postverbal position. §5 concludes the chapter.

## 2 Bantu relative clauses

### 2.1 Some basic properties

Bantu languages vary widely as to how they form their relative clauses, and various aspects of relative clause formation have thus been the object of extensive investigation – see Van de Velde (2022 [this volume]), and Cheng (Forthcoming). Here we give only a brief overview of the main issues concerning non-subject relative clauses, also called "indirect relative clauses".

Bantu relative clauses follow their head noun and they typically have a relative marker which agrees with it in noun class features. The morphosyntactic nature of the relative marker and its position with regard to the subject vary considerably. According to Cheng (Forthcoming: 3), clause-initial relative markers, as in (8), are a common strategy.

(8) Venda S21 object relative clause (Zeller 2004: 81)
*munna ane nngwa dza-mu-pandamedza*
1.man REL1 10.dog SM10-OM1-chase
'the man whom the dogs are chasing'

In many Bantu languages, the relative marker is either a demonstrative pronoun or based on one. This is the case in Venda S21 in (8), as well as in Bemba M42, Chewa N31b (Cheng Forthcoming) and in Basaa A43a in (9).

(9) Basaa A43a possessive relative clause (Jenks et al. 2017: 22)
*í-m-ààŋgɛ́ nú ↓ŋgwɔ́ jɛ́↓é ì-ßí-kɔ̀gɔ́l mɛ̂*
AUG-1-child REL1 9.dog POSS9 SM9-PST2-bite me
'the child whose dog bit me'

In other languages, a bound relative marker appears prefixed to the verb. As shown in (10) and (11), with Zulu S42 and Lega D25 respectively (Cheng Forthcoming), the subject of the relative clause either precedes or follows the verb depending on the language.

(10) Zulu S42 object relative clause (Zeller 2004: 79)
*in-cwadi isi-tshudeni esi-yi-funda-yo*
9-letter 7-student REL7-OM9-read-REL
'the letter that the student is reading'

(11) Lega D25 object relative clause (Carstens 2005: 233)
*bi-tondo bí-ku-ténd-a úzo mwána ta-bí-lí bi-sóga*
8-word REL8-PROG-say-FV DEM1 1.child NEG-SM8-be SM8-good
'The words that that child is saying are not good.'

Quite a few languages also seem to display a verb-final or suffixed relative marker. This is the case of Kwakum A91 in (12), which has an additional relative marker at the end of the clause, but also of geographically more distant languages such as Chewa and Zulu (see (10)) (Cheng Forthcoming).

(12) Kwakum A91 possessive relative clause (Hare 2018: 13)
*ai mon paam mo ʃandʒ-e kam-e bulaw-e i*
3SG COP child man REL-PRO father-3.SG.POSS like-3SG.a_lot REL
'He is a boy whose father loved him a lot.'

Relative markers can also be found within the verb, as in Swahili in (13) (Cheng Forthcoming).

(13) Swahili G42d object relative clause (Ngoyani 2001: 61)
*vi-tabu a-li-vyo-nunu-a ʃuma ni ghali*
8-book SM1-PST-REL8-buy-FV Juma COP expensive
'The books Juma bought are expensive.'

Another difference between Bantu languages depends on which item the relative marker agrees with and whether the relative verb shows subject agreement

as well. As seen in (10), the relative marker of Zulu seems to agree with the subject of the relative clause rather than with the head noun. In contrast, in Lega in (11), the relative marker agrees with the head noun and the relative verb shows no agreement with the (postverbal) subject, 'that child'.

Finally, in object relative clauses, Bantu languages vary as to whether the relative verb displays an object marker which agrees in noun class features with the head noun, as it does in Chewa in (14).

(14) Chewa N31b object relative clause (Downing & Mtenje 2011: 76)
*a-lendó a-méné á-ná-wa-bweretsérá m-phátsoo-wo*
2-visitor 2-REL SM2-PST2-OM2-bring_for 10-gift-REL2
*a-koondwa*
SM2.PRF-be_happy
'The visitors who they brought the gifts for are happy.'

Let us now turn to the issue that is central to this chapter: the position of full subjects in relative clauses.

## 2.2 Possible motivations for inverted embedded subjects

Although a lot of work has been done on Bantu inverted subjects in simple sentences, comparatively little has been done on the topic in embedded clauses. Only a few proposals have been made.

Givón (1972) and Demuth & Harford (1999) have proposed that the nature of the complementiser, and particularly its status as a bound morpheme, motivates syntactic operations that result in the VS order. Givón (1972: 289) proposes a "universal principle of pronoun (or subordinator) attraction in relativization", by which the relative marker needs to be immediately adjacent to the head noun modified by the relative clause. Concentrating on object relative clauses and based on data from Swahili, Givón proposes that whenever the relative pronoun is a disyllabic free morpheme, it can be extracted from the canonical position of the argument or modifier it corresponds to and be made adjacent to the head noun, with no other necessary changes in word order. This is the case in *amba*-relative clauses in Swahili (already illustrated in (5a) and repeated below for convenience), in which subject postposing is optional: subject-verb inversion is possible, but not necessary to achieve the adjacency between head noun and relativiser.

(5a) Swahili G42d relative clause (Givón 1972: 291)
*ki-tabu amba-cho m-toto a-me-ki-ona*
7-book say-REL7 1-child SM1-PRF-OM7-see
'the book that the child has seen'

In contrast, when the relativiser is a bound morpheme (i.e. bound to the verb), subject postposing is necessary to achieve adjacency between it and the head noun, resulting in the VS order. This pattern can be illustrated with a different type of relative clause also found in Swahili, in which the relativiser is a verbal prefix. According to Givón, in (15), the subject can only be postverbal.

(15) Swahili G42d object relative clause (Givón 1972: 291)
*ki-tabu a-li-cho-ki-ona m-toto*
7-book SM1-PST-REL7-OM7-see 1-child
'the book that the child saw'

Givón's proposal finds further support in Takizala's (1972) Hungan H42 data. In this language, VS is obligatory whenever an overt relativiser is present, as in the pseudo-cleft in (16).

(16) Hungan H42 pseudo-cleft sentence (Givón 1972: 292)
*(kiim) ki-a-swiim-in Kipes zoon kwe kít*
(7.thing) REL7-SM1-buy-PST Kipese yesterday is 7.chair
'(the thing) what Kipese bought yesterday is a chair'

In the cleft sentence in (17), in contrast, which Takizala analyses as involving a relative clause with no overt relativiser, no subject postposing is observed.

(17) Hungan H42 cleft sentence (Takizala 1972: 269)
*kwe kít Kipes ka-swiim-in zoono*
it's 7.chair Kipese SM1-buy-PST yesterday
'It's a/the chair (that) Kipese bought yesterday.'

Subject postposing is also found in object *wh*-questions, but only when the optional relativiser appears, as shown in (18) and (19).

(18) Hungan H42 *wh*-question (Takizala 1972: 293)
*na Kipes ka-mweene?*
whom Kipese SM1-see.PST
'Whom did Kipese see?'

(19) Hungan H42 clefted *wh*-question (Takizala 1972: 293)
*na wu-u-mweene Kipes?*
whom that-AG-see.PST Kipese
'Who (is it) that Kipese saw?'

Demuth & Harford (1999) show that Givón's proposal also finds support in Southern Sotho S33 and Shona S10 data. In the former language, in (20), the relativiser is a disyllabic free morpheme, and subject inversion is ungrammatical, while in the latter, in (21), the relativiser is a monosyllabic bound morpheme and subject inversion is obligatory.

(20) Southern Sotho S33 object relative clause (Demuth & Harford 1999: 49)

a. *di-kobo tseo ba-sadi ba-di-rekileng kajeno*
10-blanket REL10 2-woman SM2-OM10-bought today
'the blankets which the women bought today'

b. * *di-kobo tseo ba-di-rekileng ba-sadi kajeno*
10-blanket REL10 SM2-OM10-bought 2-woman today
'the blankets which the women bought today'

(21) Shona S10 object relative clause (Demuth & Harford 1999: 50)

a. *mbatya dza-v-aka-sona va-kadzi*
10.clothes REL10-SM2-TAM-sew 2-woman
'the clothes which the women sewed'

b. * *mbatya dza va-kadzi v-aka-sona*
10.clothes REL10 2-woman SM2-TAM-sew
'the clothes which the women sewed'

In their view, the difference between the two languages lies in the fact that in Shona, a prosodic constraint that requires words to be minimally disyllabic triggers verb movement over the subject towards the relativiser. This prosodic constraint has no effect on the syntax of Northern Sotho, as the disyllabic relativiser satisfies it without the need for the verb to raise over the subject, hence the absence of VS in this language.

In sum, the VS word order has been attributed to morpho-phonological properties of the relativiser and its tight relation to the verb, to which it either needs or does not need to attach depending on the language, resulting in obligatory VS order or SV(/VS) order, respectively.

Counterevidence to this analysis is provided by Kawasha (2008) and Letsholo (2009). In Chokwe K11 and Luvale K14, Kawasha (2008: 50) shows that inverted subjects are obligatory even when the relativiser is a free morpheme. This is shown in (22) and (23), for Chokwe and Luvale respectively.

(22) Chokwe K11 object relative clause (Kawasha 2008: 50)
*ly-onda lízé a-a-mbách-ile pwo*
5-egg REL5 SM1-TNS-carry-REM 1.woman
'the egg which the woman carried'

(23) Luvale K14 object relative clause (Kawasha 2008: 50)
*chi-twámó chízé a-a-neh-á-nga mu-kwézé*
7-chair REL7 SM1-TNS-bring-FV-PST 1-youngster
'the chair that the youngster brought'

Examples (22) and (23) are comparable to Givón's Swahili *amba*-relative clauses in which the relative subject is postverbal: as verb movement is not necessary for the relativiser and the head noun to be adjacent, it is unclear what motivates the VS order. A stronger argument, however, comes from Letsholo (2009: 144), who shows that the affix status of the relativiser does not force inversion in Kalanga S16. As visible in (24), the subject remains preverbal in this language.

(24) Kalanga S16 object relative clause (Letsholo 2009: 144)
*nlúmé bo-Néo wa-bá-ka-bóna wá-énda*
1.man 2a-Neo REL1-SM2A-PST-see SM1-leave
'The man that Neo and others saw left.'

Nsuka-Nkutsi (1982: 256) succinctly puts forward an alternative proposal, according to which VS in relative clauses finds its origin in the emphatic postverbal subjects of simple sentences:

> *[…] il y a de très nombreux cas dans les langues bantoues (et même dans d'autres langues du monde) où, à partir d'une construction emphatique dont l'utilisation devient de plus en plus répandue, on arrive à une phrase admise comme normale.*
>
> […] there are a great many cases in Bantu languages (and even in other languages) where, from an emphatic construction whose use becomes more widespread, we arrive at a sentence considered as normal. (my translation)

He proposes that object relative clauses with a preverbal subject derive, in their turn, from the fronting of the subject before the relative verb, returning to the most widespread word order within Bantu main clauses.

It seems to be an open question whether relative clauses should be expected to be influenced by information-structural considerations, as they generally seem not to participate in the main information-structural articulation of sentences but rather to be embedded within constituents whose information-status is relevant at the sentential level. In languages with overt topic markers, such as for instance Korean and Japanese, these are reported to rarely occur in relative clauses (Kuno 1973; Song 2014).

Hardly any studies have explored the possibility that changes in word order in Bantu relative clauses might be due to information structure. Hyman (2012: 105), however, reports that in Nzadi B865, which has both preverbal and postverbal full subjects, there is no known pragmatic difference between the two possible word orders. One of the few studies which directly addresses the role of information structure in the ordering of the constituents of relative clauses is the description of Mungbam and Mundabli (Southern Bantoid) by Lovegren & Voll (2017). The authors explicitly state that focus-induced changes in word order (i.e. subject inversion) are similar in main and relative clauses in both languages.

In sum, few proposals have been made regarding the origin and motivation of VS in Bantu embedded clauses and they all can be challenged by empirical evidence. More investigation is needed to establish the motivation for VS in embedded clauses, and why other Niger-Congo languages, outside of Narrow Bantu, do not seem to resort to this strategy as much as languages belonging to the major Narrow Bantu branches outside of the North-West. Let us now turn to the frequency and distribution of the three possible patterns: SV-only, VS-only and SV/VS.

## 3 Exploration of an expanded sample

### 3.1 Geographical distribution of SV-only, VS-only and SV/VS

In Bantu non-subject relative clauses, the postverbal location of full subjects has long been noted and treated as a common and widespread phenomenon. According to Nsuka-Nkutsi (1982: 77), VS is the most represented type of object relative clauses. More recent studies have identified additional Bantu languages in which VS is either allowed or compulsory in relative clauses (among others Demuth & Harford 1999; Kawasha 2008; Kisseberth 2010; Hyman 2012).

Interestingly, recent studies have also dedicated more attention to lesser-studied language zones, in particular in North-Western Bantu and among closely related Benue-Congo languages from Cameroon (Downing et al. 2010; Atindogbé & Grollemund 2017). What emerges from these studies is that, in contrast, many of these languages do not allow postverbal subjects in relative clauses. Hamlaoui & Makasso (2015) show that Basaa actually does not accept any type of subject inversion. North-Western Bantu languages are however generally underrepresented in the study of inversion constructions. By way of illustration, out of 46 languages, Marten & van der Wal's (2014) typological study of Bantu inversion constructions includes only one North-Western Bantu language (i.e. Basaa A43a), one Central-Western Bantu language (i.e. Dzamba C322) and two West-Western Bantu languages (i.e. Mbuun B87 and Nzadi B865). All others belong to South-Western and Eastern Bantu, which constitute one single superclade in Grollemund et al. (2015). Based on available studies, it is hard to know whether a construction that is considered typical of the Bantu family as a whole is also typical of the Bantu languages that are geographically closest to the ancestral homeland and which are known for showing a higher degree of diversity than those further removed (Bearth 2003).

Nsuka-Nkutsi's (1982) sample is less biased towards South-Western and Eastern Bantu languages. On the contrary, the best represented group is zone C (n = 18), i.e. Central-Western Bantu, followed by zone D (n = 11), i.e. Central-Western and Eastern Bantu, and zones A, B, L and S (n = 9), i.e. North-Western, West-Western, South-Western and Eastern Bantu. The number of languages found in each zone is shown in a lighter colour in Figure 1. The number of languages found after expanding the sample with data and observations harvested from more recent grammatical sketches and studies appears in a darker colour. In our expanded sample, languages from the north-western part of the Bantu domain remain well represented, with zone A, B, C and D languages constituting 44% of the total sample.

Distinguishing between languages for which only SV, only VS or both SV and VS is reported, Figure 2 provides the position of lexical subjects in non-subject relative clauses for each of the Bantu zones. Both SV-only and VS-only are found in most zones, but in varying proportions.

Some zones seem to have a majority of SV-only languages (i.e. zones A, M, R and S), while others predominantly have VS-only languages (i.e. zones B, C, D, H, K and L). In zones F and P, only VS is found and in zones E, JD and JE, subjects are reported to be only preverbal. As our sample only contains a small number of languages for some zones (i.e. between 4 and 6 languages for zones E, JD and JE),

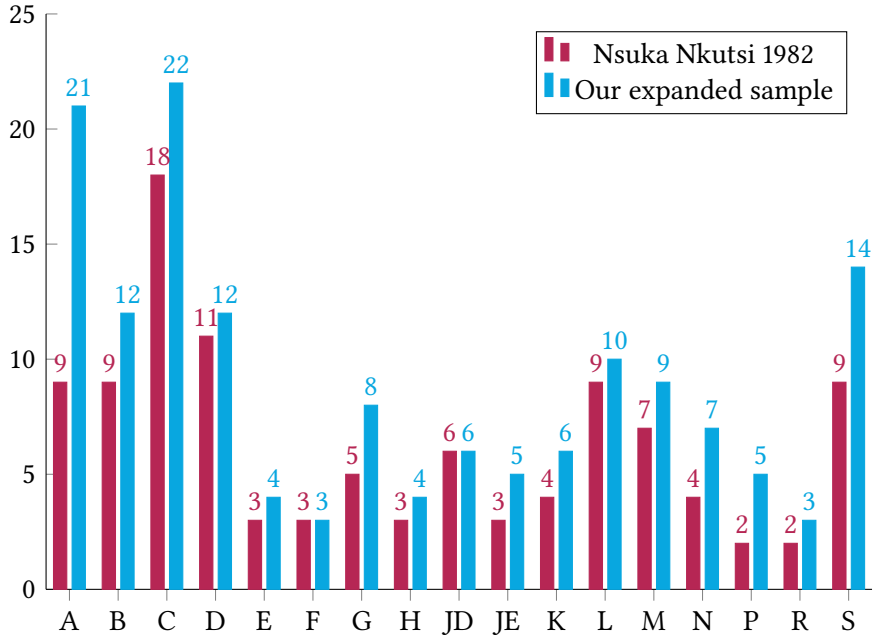



Figure 1: Number of relative clauses in Nsuka-Nkutsi (1982) versus our expanded sample

it is not presently possible to safely conclude that these numbers are representative of what is actually found in each of these zones as a whole (which might not be truly problematic from a reconstruction point of view though). However, our sample for zone A presently counts 21 languages and only one of them (i.e. Kwakum) has, to the best of our knowledge, been reported to allow VS (David M. Hare, p.c.) in some restricted contexts (see §4.2). Table 1 summarises the number of languages for each of the three patterns observed in our sample of Narrow Bantu languages.

Based on the information available in existing descriptions, a handful of languages (n = 15, 10%) variably allow SV and VS. These languages are however found across the Bantu domain (zones A, B, G, H, L, M, N, R and S), in languages belonging to the North-Western, West-Western, South-Western and Eastern clades of Grollemund et al.'s (2015) classification, i.e. in all except Central-Western. They are also found in two of the outgroup Bantoid languages, i.e. Mungbam and Mundabli (Lovegren & Voll 2017).

Nzadi, a West-Western language discussed in detail in Hyman (2012), has been reported to display a singular pattern, in which a full preverbal subject phrase

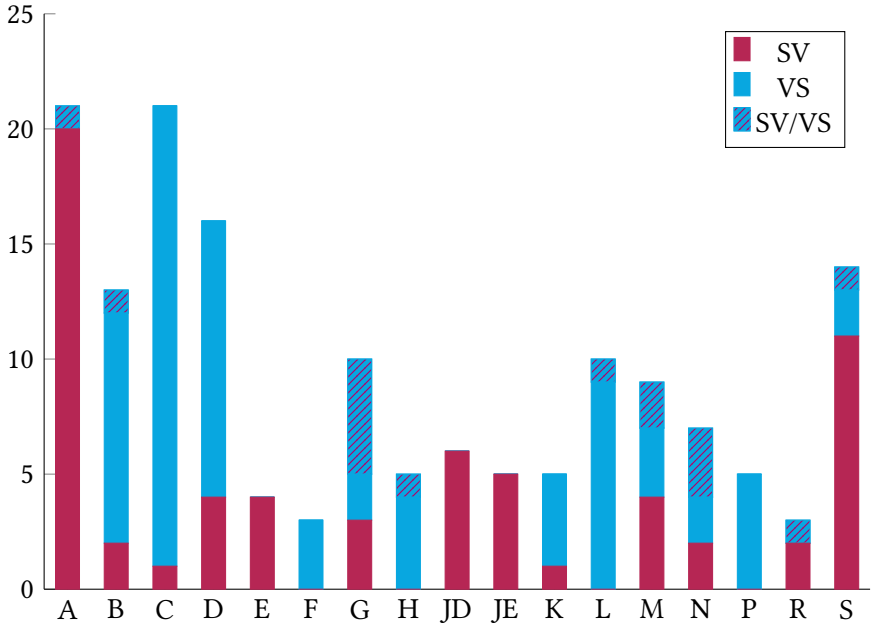



Figure 2: Distribution of SV, VS and SV/VS relative clause word orders across Bantu zones

Table 1: Total number of languages for each observed pattern (151 Narrow Bantu languages)

| Word order | Number of languages |
|---|---|
| SV-only | 63 |
| VS-only | 72 |
| SV/VS | 15 |
| SVs | 1 |
| Total | 151 |

can only appear if it is resumed by a postverbal subject pronoun, thus yielding a subject doubling configuration (noted SVs), see example (6). According to Hyman, the grammatical subject is probably the postverbal one, actually making Nzadi a type of VS language, and this is how we have treated it in our statistics.

As we are interested in PB, it is crucial for us to also have a broader perspective into the Niger-Congo phylum (Nurse 2007). Our set of outgroup languages is admittedly very modest, with only 16 languages, and will need to be expanded, but for the time being, it allows us to have an idea of what is found outside Narrow Bantu. For the sake of comparison with Bantu languages, we limit our examination to other SVO languages. Our sample thus includes other South Bantoid languages (n = 8): Ejagham (Ekoid) (Watters 1981), Bafut and Medumba (Eastern Grassfields) (Tamanji & Achiri-Taboh 2017), Kenyang (Mamfe) (Tabe & Atindogbé 2017), Mungbam and Mundabli (Beboid/Yemne-Kimbi) (Lovegren & Voll 2017), and Wawa and Vute (Mambiloid) (Martin 2017, Thwing 2017). It also includes a few more distant Niger-Congo languages (n = 8): Buli (Gur) (Schwarz 2006), Lelemi, Ewe and Asante Twi (Kwa) (Allan 1973; McCracken 2013; Dzameshie 1995), Pulaar (North Atlantic) (Ba 2015), Zande (Ubangi) (Pasch & Mbolifouye 2011), and Moro and Lumun (Kordofanian) (Rose et al. 2014; Smits 2017).

As in Nurse (2007), our choice was primarily guided by the availability of a reasonable description. Interestingly, 14 out of the 16 outgroup languages display a strict SV order in their relative clauses. The only two languages that, to the best of our knowledge, depart from this pattern are Mungbam and Mundabli, which both show a SV/VS word order (Lovegren & Voll 2017).

In sum, what we observe after expanding Nsuka-Nkutsi's (1982) language sample is that VS remains the most common pattern found across the Bantu family, with 48% (72/151, cf. Table 1) of the languages represented in the Narrow Bantu sample. SV is however not far behind, with 42% (63/151). Geographically speaking, SV-only and VS-only seem equally widespread, except when it comes to Bantu zone A languages, in which SV-only is by far the most common pattern found so far. In this respect, Bantu zone A languages seem more similar to their Bantu relatives outside Narrow Bantu, which also mostly display the SV-only word order. This might be surprising considering the diversity that generally characterises North-Western Bantu languages and the fact that Guthrie's zone A does not correspond to a specific branch of the Bantu family tree. Instead, following the classification offered by Grollemund et al. (2015), our zone A languages spread over 2 different major branches (i.e. North-Western Cameroon and North-Western Gabon).

### 3.2 Genealogical distribution of SV-only, VS-only and SV/VS

Returning to the "majority wins" principle, used by Meeussen and Nsuka-Nkutsi, we have already noted in §1 that it should be used with caution, and that it is necessary to examine how the patterns are distributed over the major branches of the Bantu family to draw conclusions as to the order that characterised PB. Table 2 gives an overview of the distribution of our three patterns across major branches of the Bantu family tree offered by Grollemund et al. (2015).

Table 2: Distribution of SV-only, VS-only and SV/VS patterns across major branches of Bantu (subset of 124 Narrow Bantu languages)

| Major Bantu branch | Number of languages | SV | VS | SV/VS |
|---|---|---|---|---|
| North-Western Cameroon | 15 | 15 | 0 | 0 |
| North-Western Gabon | 7 | 5 | 1 | 1 |
| Central-Western | 30 | 3 | 27 | 0 |
| West-Western | 12 | 1 | 10 | 1 |
| South-Western | 3 | 0 | 3 | 0 |
| Eastern | 57 | 28 | 19 | 10 |
| Total | 124 | 52 | 60 | 12 |

Table 2 shows that SV-only is no more circumscribed to specific major branches of the Bantu family tree than VS-only is. In the subset of 124 languages that we could assign to the classification of Grollemund et al. (2015), SV-only is the most common pattern found both in the geographical North-West (i.e. the North-Western Cameroon and North-Western Gabon branches) and in the East and South (i.e. the Eastern branch). These results appear compatible with the idea that VS could be a later development and thus question Meeussen and Nsuka-Nkutsi's idea that Proto-Bantu displayed a VS-only order in relative clauses. We come back to this conclusion in §4. Let us first examine some of the proposals laid out in §2 in the light of our expanded database and see whether VS in main and embedded clauses necessarily correlate.

### 3.3 Possible correlation with sentential VS

Our set of languages does not allow us to provide any direct evidence in favour of or against the claims in §2.2 regarding possible motivations for embedded inverted subjects. Together with the data found in Marten & van der Wal (2014),

it however allows us to check whether there are correlations between possible word orders at the sentential level and in relative clauses, and thus to get a better idea of whether there could be something specific to either domain that triggers (or licenses) the VS word order. In monoclausal sentences, it is fairly well established that the main motivation for inverted subjects is either focusing or detopicalisation (e.g. Marten 2014; Hamlaoui Forthcoming). If information structure plays a role in relative clause word order, we expect VS at the sentential level to go together with VS at the embedded level. If, on the other hand, a constraint such as the one proposed by Givón (1972) and Demuth & Harford (1999) is at play, VS should be found at the embedded level without necessarily being possible at the sentential level.[3] By checking correlations, we can also see whether any geographical clustering emerges as to the use (or absence) of VS in one or both syntactic domains.

Checking against the set of 37 languages that are found both in Marten & van der Wal's (2014) and our database, we find that five languages seem to have VS in relative clauses only: Mbuun B87, Matuumbi P13, and Makhuwa P31; and possibly Bembe D54 and Gciriku K332. This suggests that there might indeed be something specific to relative clauses that either forces or licenses a non-canonical word order and might help in explaining the predominance of VS-only over SV-only in a family in which the canonical order is SVO. We also find that nine languages have VS at the sentential level but not in relative clauses: Chaga E60, Nande JD42, Soga JE16, Bukusu JE31c, Tumbuka N21, Herero R30, Zulu S42, Sindebele S44, and possibly Rwanda JD61. Together, these results indicate that VS can occur in simple sentences but not relative clauses, and vice versa, and thus that the two processes can function independently.

Further checking our language set against Marten & van der Wal's, we find that 14 languages have VS in both simple sentences and embedded clauses: Nzadi B865, Dzamba C322, Kagulu G12, Makwe G402, Swahili G42d, Rundi JD62, Bemba M42, Ndendeule N101, Chewa N31b, Nsenga N41, Yao P21, Shona S10, and possibly Lega D25, and Swati S43. Our results indicate no clear correlation between word order in embedded and non-embedded clauses. For the sake of completeness, we find seven languages that have inverted subject neither in simple nor

[3] As noted by an anonymous reviewer, considerations of information structure could be different in main vs. embedded clauses. In the absence of evidence that in some languages information structure influences word order only in embedded and not in main clauses, our rationale is that if, in a particular language, information structure determines word order in embedded clauses, the most economic hypothesis is that main clauses are subject to the same rules/constraints rather than different ones. Our prediction is thus that if information structure is a key factor in the word order of embedded clauses, the likelihood is higher of finding VS in both embedded and main clauses in a particular language.

in embedded clauses: Basaa A43a, Kuyu E51, Tharaka E54, Lozi K21, Tswana S31, Southern Sotho S33 and Xhosa S41. No geographical clustering seems to arise, either, when it comes to the distribution of the combination (or absence) of VS in simple sentences and relative clauses.

Using our expanded database of Narrow Bantu languages and checking it against Marten & van der Wal's, we have provided a brief overview of the relation between VS in simple sentences/main clauses and in embedded clauses. What we have seen is that knowing possible word orders in one syntactic domain does not allow one to predict possible word orders in the other, suggesting that there could be distinct motivations for departing from the canonical word order in each of these domains. We now turn to our proposal regarding word order in PB relative clauses.

## 4 Word order in relative clauses

### 4.1 An alternative hypothesis?

So far, we have seen that neither the frequency and distribution of the VS-only and SV-only patterns nor the motivation for VS clearly allow us to conclude which order characterised PB. What is striking, however, is the uniformity of our North-Western Cameroon Bantu languages of zone A, which show the SV-only word order and are, in this respect, more similar to the non-Narrow Bantu languages of our sample, which also tend to show a strict SV order. Several scenarios can be considered. We have seen that Bantu zone A languages actually spread over two distinct major branches of the Bantu family according to the classification offered by Grollemund et al. (2015): North-Western Cameroon Bantu, in which 15 out of 15 languages show SV-only, and North-Western Gabon Bantu, in which five out of seven languages show SV-only, one shows VS-only and one SV/VS.

Given that North-Western Cameroon Bantu, which is a sister to the remainder of Narrow Bantu, only has SV, a word order also attested in nearly all other clades, it is most parsimonious to reconstruct SV to PB and to consider VS as a later innovation. The VS word order would then have emerged at node 2 or 3 in the phylogeny of Grollemund et al. (2015), or several times independently as a parallel innovation. Considering SV as the most archaic word order in non-subject relative clauses also ties with its prevalence in the closest Benue-Congo relatives outside Narrow Bantu.

Another scenario would consist in treating the languages showing VS-only as the more conservative ones, as suggested by both Meeussen and Nsuka-Nkutsi.

The present-day SV languages could have "shifted back" to SV from VS, an alternative that is considered by both Nsuka-Nkutsi (1982: 78) and more recently by Hyman (2012: 104) for SVs relative clauses in Nzadi. North-Western Cameroon languages, in particular, could also have developed the SV-only word order through contact with other Southern Bantoid languages in their vicinity. Nonetheless, at present, we do not have enough evidence of intensive language contact and multilingualism to substantiate such a claim.

Interestingly, something else could be at the source of the difference in word order between higher clades in the tree, i.e. the north-western part of the Bantu domain, and the lower ones elsewhere: the difference between analytic and synthetic verbal morphology that distinguishes the former from the latter. Recall Givón's observation regarding relative clauses in Swahili: the more archaic pattern consists of a bound relativiser together with the VS-only word order, whereas the more innovative pattern (*amba*-relative clauses) consists of a free relativiser together with an SV/VS order.

In the Bantu literature, there is presently no consensus on the direction in which morphological typology in the Bantu family as a whole evolved. Whereas Hyman (2007; 2017) and Nurse (2007) defend the view that North-West Bantu languages generally went from being morphologically more synthetic to being more analytic, Güldemann (2003; 2011) argues for the opposite scenario. How would a particular verbal morphology relate to word order? In our view, what is crucial is the head-marking property typical of the more synthetic type of Bantu languages. Morphologically synthetic languages tend to show the discourse-driven, flexible word order considered typical of Bantu languages (Bearth 2003). As underlined in Schadeberg (2003: 152), subject and object concord is "the primary means to identify the arguments that function as subject and object". In contrast, a more analytic language like Basaa does not have subject and object markers: it only has a single paradigm of personal pronouns, and their surface location (i.e. before or after the verb) is the only indicator of their grammatical function (Hyman 2003). Instead of a primarily discourse-driven word order, Basaa displays a so-called "indirect role marking" syntax (Noonan 1992), where surface position primarily encodes grammatical relations (and not information-structural status). As Bantu languages are SVO and thus preferably encode grammatical subjects preverbally and grammatical objects postverbally, it is not surprising to find an SV-only word order in Basaa relative clauses. As the Benue-Bantu languages outside Narrow Bantu in our sample also tend to show a more analytic morphology (Nurse 2007), this would be consistent with their showing SV-only word order in relative clauses too.

In our view, another property that generally restricts the possibility for VS in more analytic Bantu languages has to do with subject agreement and the fact that Bantu subjects generally need to precede the verb in order to agree with it. As outlined in Meeussen's example in (25), relative clauses with postverbal subjects typically have a verb whose subject agreement features are controlled by the head noun. If both nouns are animate and nothing morphologically distinguishes subjects from objects, VS relative clauses result in systematic argument structure ambiguities that are generally avoided by natural languages (Wasow 2015).

(25) Reconstruction of Proto-Bantu relative clause (Meeussen 1967: 114)
*mu-ntu ju-dim-id-a ba-genị*
1-person SM1-cultivate-APPL-FV 2-stranger
i. 'the person who cultivates for the strangers (subjective)'
ii. 'the person for whom the strangers cultivate (objective)'

In the absence of other morphosyntactic marking, a rigid word order can serve the purpose of reducing ambiguities in argument structure (see also Vennemann 1973 regarding the loss of case and the related change from SOV to SVO in English, and a recent discussion in Harris & Campbell 1995). If this is indeed the case, it would be expected that the more analytic Bantu languages generally should show little to no optionality in word order and a strong preference for SV (i.e. the canonical order) in relative clauses. (See however footnote 4.)

As to the more synthetic languages, their head-marking property could generally allow them to have postverbal subjects in main clauses and thus display a VS-only or even SV/VS word order in relative clauses (as seen for instance in the case of Swahili, which is a more synthetic Bantu language). Note however that nothing (aside from other, independent morphophonological considerations, as for instance discussed in §2.2) should in principle force synthetic languages to display these orders. They can also simply display a strict SV word order.

If we are on the right track, a correlation should be found between the analytic verbal morphology of particular Bantu languages and the absence of VS in their relative clauses.[4] How to determine the level of analyticity/syntheticity of a particular language's verbal morphology is not a trivial question. To test our hypothesis, we additionally collected data on the type of (weak) object shown by the languages of our sample, and in particular whether they retained the object

[4]Note however that some analytic languages have ways of encoding grammatical relations other than a strict word order, for instance through distinct pronoun paradigms as in Nen A44 (Maarten Mous, p.c.). These languages might thus show a more flexible syntax than a language like Basaa A43a.

prefix slot at all (Meeussen 1967: 109). The basic idea was for us to be able to distinguish languages that qualify as being of the head-marking type, which tend to have an object prefix, from the ones, such as Basaa, which lack this property and have postverbal object pronouns instead. To do so, we would ideally need to look at two aspects of object marking: how a (weak) object is encoded (affix vs. pronoun) and where it is encoded (preverbally or postverbally). This would at least yield the four following types of languages: oV (typical, synthetic Bantu-type), V o (Basaa-type), Vo and o V.

As stated in Polak (1986: 371), citing Gregersen (1967), the distinction between pronouns and agreement affixes (*"éléments d'accord"*) is often difficult in Bantu. Additionally, as many Bantu languages only allow for one object prefix, when several objects are pronominalised, they follow the verb, either as free pronouns (*"un substitutif qui suit le verbe"*) or as suffixes/enclitics, meaning that many languages have both an object prefix and a postverbal pronoun/enclitic.

The overall picture is also slightly more complex in that among languages with an object suffix, several types are attested. By way of illustration, in Suku H32 (Polak 1986: 376), objects referring to humans are encoded with a prefix and other weak objects are encoded by means of a suffix, with a few exceptions with non-human indirect objects, which can be encoded as prefixes (Piper 1977). In a typology of weak object marking, Suku would thus classify as oV/Vo.

Object pronouns and enclitics are, according to Polak (1986: 377), often morphologically similar, but behave differently in terms of the tonal and segmental processes to which they are subjected. Some languages, such as Myene B11, alternate between the two types of postverbal weak objects, further complicating the typology.

In her study, Polak (1986) distinguishes only between object prefixes (so-called infixes), (postverbal) autonomous pronouns and enclitics, and notes that enclitic objects do not seem to exist in the East (zones E, G, N, P, S). She does not mention cases of preverbal autonomous objects as found in some Bantu zone A languages (and discussed in the next subsection).

As most preverbal object markers are prefixes and as it is difficult to truly distinguish postverbal object pronouns from object enclitics without having access to (often not-yet existing) much more detailed studies of individual languages, we have so far distinguished only the three following types: languages that have pre-stem object markers only (oV), languages that have both pre-stem object markers and pre- or postverbal object pronouns or enclitics (oV/Vo) and languages that only have postverbal object pronouns or enclitics (Vo). The last group is the crucial one to our hypothesis. We are aware that one could argue that some of these languages might not have an object pronoun but rather an enclitic or a suffix

that would militate in favour of classifying them as less analytic. We leave the detailed analysis of these languages open for future research.

## 4.2 Analytic verbal morphology and (absence of) VS order

Collecting data from existing studies on object markers as well as from grammatical sketches (Polak 1983; 1986; Beaudoin-Lietz et al. 2004; Marlo 2014), our hypothesis can be tested on a sample of 162 languages: our 16 outgroup languages and 146 Narrow Bantu languages.[5] With the exception of Moro (Kordofanian) (Jenks & Rose 2015), which displays both pre- and post-stem object markers, the rest of our outgroup languages have a strict Vo order.

Figure 3 shows the distribution of our object-marking types (Vo-only, oV-only and oV/Vo) across the Bantu zones, while Table 3 shows the distribution of these types across the major sub-branches of Bantu.

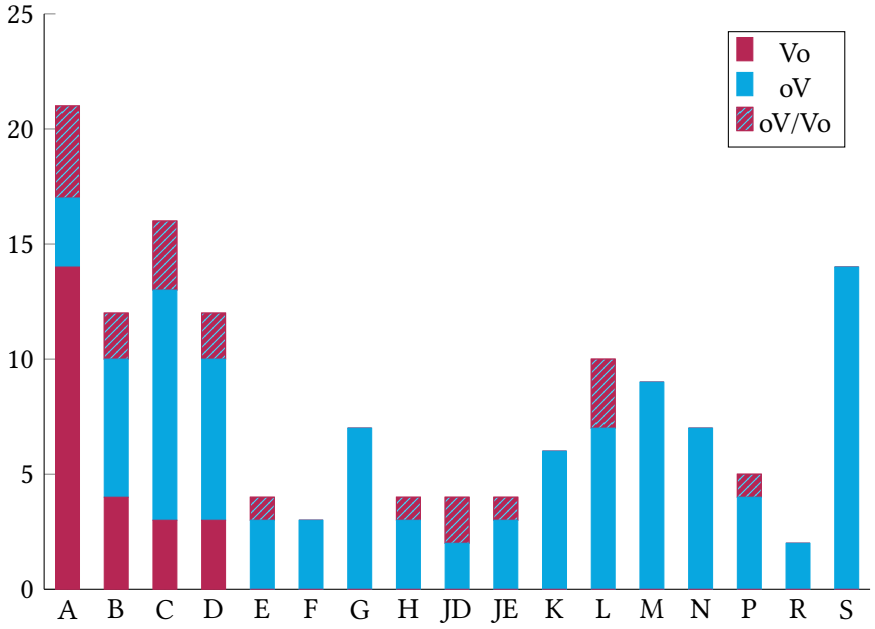



Figure 3: Distribution of Vo, oV and oV/Vo object markers across Bantu zones (146 languages)

[5]Information regarding object marking in the following languages could not be found: Bakutu C61A, Konda C61E, Yela C74, Konzo JD41, and Soga JE16.

Table 3: Distribution of Vo-only, oV-only and oV/Vo patterns across major branches of Bantu (subset of 120 Narrow Bantu languages)

| Major Bantu branches | Number of languages | Vo | oV | oV/Vo |
|---|---|---|---|---|
| North-Western Cameroon | 15 | 9 | 3 | 3 |
| North-Western Gabon | 7 | 5 | 0 | 2 |
| Central-Western | 27 | 5 | 17 | 5 |
| West-Western | 12 | 3 | 8 | 1 |
| South-Western | 3 | 0 | 3 | 0 |
| Eastern | 56 | 0 | 52 | 4 |
| Total | 120 | 22 | 85 | 13 |

Unsurprisingly, languages with no pre-stem object markers are found only in the north-western part of the Bantu domain (zones A, B, C and D), which is consistent with the fact that they are the most analytic in terms of verbal morphology (Nurse 2007; Hyman 2017). In our sample, other Bantu languages seem to show a pre-stem object marker-only pattern, while others show both pre- and postverbal object marking (with the object prefix sometimes only limited to reflexive markers).

According to the descriptions we accessed, three North-Western Cameroon Bantu languages exhibit what we have classified as oV/Vo: Nen A44, Duala A24 and Tuki A601. In the case of Nen, note that oV is actually different from what is found in typical Bantu languages, as the object is here a preverbal pronoun rather than a prefix. In examples from Mous (1997: 126), a second object can even appear between the verb and a preverbal object pronoun. Just like Nen, Duala is also classified by Nurse (2007: 254) as belonging to the more analytical type of languages. According to Polak (1986: 374) the only pre-stem object prefix left in Duala is a reflexive that is about to disappear. Tuki however seems to have a more agglutinative morphology, with a pre-stem object marker rather than a preverbal object pronoun (Biloa 2013).

So far we have three languages in the oV-only category among North-Western Cameroon Bantu languages: Bubi A31, Maande A46, Gunu A622. As stated above, our information might be incomplete and some or all of these languages might also have postverbal object pronouns or enclitics. What is crucial for us is whether they can be said to belong to the more analytic type of languages. We believe that this is the case for Maande (Wilkendorf 2001) and this is how it is classified by Nurse (2007: 253). This is also the case for Gunu according to Nurse and based

on data from Orwig (1991). It is however unclear for Bubi, which might be of the more agglutinative/synthetic type (Clarke 1848). Maande and Gunu illustrate the fact that a more analytic morphology is not necessarily exclusive with a pre-stem object marker in Bantu. As acknowledged in previous studies on the topic, languages sit on a continuum. More work is needed in this area to establish a more fine-grained typology.

Figure 4 shows subject-verb word order in relative clauses as a function of the type of object marking in our 146 Bantu languages as well as in our 16 outgroup languages (n = 162). Languages with only pre-stem object markers (oV) conform to what we have observed in §2, in that the VS word order is the most frequent (n = 51). They also show a considerable number of languages with only SV (n = 38). Interestingly, 13 out of our 17 languages displaying a flexible word order with SV/VS are found in the oV-only group.

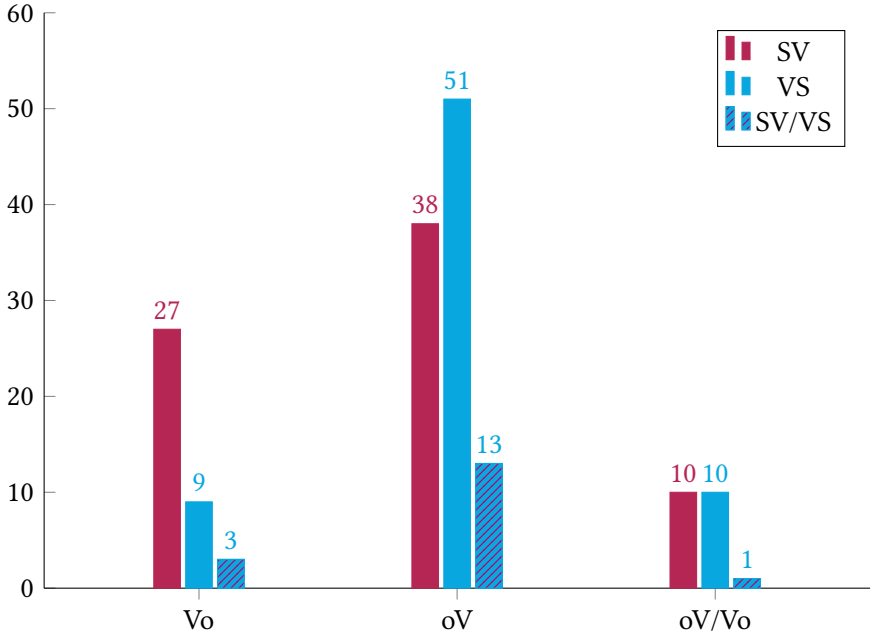



Figure 4: Relative clause subject position by object marking type (162 languages)

Languages with both pre-stem objects and pronouns/enclitics (oV/Vo) have as many languages displaying a VS-only word order (n = 10) as languages displaying an SV-only word order (n = 10). Only one language allows both VS and SV.

The Vo group is the one that interests us most in connection with our hypothesis, as it is the one in which pre-stem object markers are absent and for which we expect the word order to be much less flexible. What we observe is that in this group the tendencies are reversed: SV is the predominant pattern (n = 27), followed by VS (n = 9) and three languages that allow both SV and VS.

To investigate whether there is a relationship between subject-verb word order and object marking in our sample of 162 languages, a chi-square test of independence was conducted. The result of this test was significant, chi-square (4) = 12.52, $p < .05$. However, the effect size of this relationship (i.e. the strength of this effect) was weak, Cramér's V = .196.[6] Examination of standardised residuals indicates that of the 39 languages that display Vo, 69.2% also display SV, while of the 102 languages that show oV, only 37.2% show SV. At the same time, the proportion of languages that use oV and VS is more than two times higher than the proportion of Vo languages that use VS (50.0% (51/102) vs. 23.0% (9/39)). These results thus tend to confirm our hypothesis that the verbal morphology specific to languages in the north-western part of the Bantu domain might lie at the origin of the preference for the SV order in our sample for this area. Our contention is that this morphological typological difference probably goes hand in hand with radical syntactic differences and a general lack of word order flexibility compared to more typical, morphologically synthetic Bantu languages.

Although our results generally fit with our prediction that Vo-only languages should favour the SV-only order, 9 of our Vo-only languages still favour VS: Myene B11, Duma B51, Mbede B61, Ndumu B63, Mboshi C25, Soko C52, Kele C55, Mbole D11, and Enya D14. As these languages are surrounded by oV/VS, an effect of contact cannot be excluded and could explain why they retained VS despite the systematic argument-structural ambiguity associated with this word order. Here we can examine one of these Vo/VS languages more closely, i.e. Mboshi, to show why it is actually not a problem for our hypothesis. In the existing literature on this language, some of its relative clauses indeed display the above-mentioned type of argument-structural ambiguity, so that subject and object cannot be identified with certainty (Beltzung et al. 2010). This is illustrated in (26) (the first line is the phonetic form of the sentence while the second line is its phonological form).

[6]Note that we still find statistical significance if we conflate our oV-only and oV/Vo categories: chi-square (2) = 11.04, $p < .05$. This is important in case further examination of the languages we have classified as oV-only revealed that some also have postverbal pronouns/enclitics in addition to the pre-stem object marker. The crucial group remains the Vo-only group.

(26) Mboshi C25 (Beltzung et al. 2010: 22)
*ndzɔyi* *yeebomí* *obeŋgi*
N-dzɔyi ye-ye-bom-i í mo-beŋgi
1a-elephant REL1-SM1-kill-FV CONJ.H 1-hunter
i. 'the elephant that killed the hunter'
ii. 'the elephant that the hunter killed'

Interestingly, this language seems to have an alternative strategy to disambiguate this structure: an auxiliary (/di/) can be used to impose a fixed word order, which yields two different word orders depending on the interpretation of the sentence. In (27a) the object must follow the auxiliary+verb complex, while in (27b) the subject must precede the lexical verb.

(27) Mboshi C25 (Beltzung et al. 2010)

a. *ɔmbɔri* *móódze* *lɔ́bɛ́rɛ* *Jean*
mo-mbɔri mo-´-mo-´-di-i lá Co-bɛ́r-a Jean
3-gendarme REL3-H-SM3-H-AUX-FV with INF-hit-FV Jean
'the gendarme who hit Jean'

b. *ɔmbɔri* *móódze* *Jean lɔ́bɛ́rɛ*
mo-mbɔri mo-´-mo-´-di-i Jean lá Co-bɛ́r-a
3-gendarme REL3-H-SM3-H-AUX-FV Jean with INF-hit-FV
'the gendarme whom Jean hit'

The avoidance of argument-structural ambiguities might have motivated a shift "back" to a strict SV order. Mboshi is not the only present-day Bantu language that allows relative clauses which are ambiguous from an argument-structural perspective. Based on the data in (27), the question however arises as to whether, in speakers' productions, ambiguous relative clauses are not already supplanted by other structures with a strict SV word order and/or richer morphological marking of argument relations.

Finally, Kwakum A91 also shows a rather unexpected pattern with respect to our predictions. This language indeed shows a strict Vo order but allows both pre- and postverbal subjects in some of its relative clauses. According to David M. Hare (p.c.), although only preverbal subjects are allowed in object relative clauses of the type in (28), i.e. a restrictive clause with a transitive verb, both orders are acceptable in (29), i.e. a non-restrictive clause with an intransitive verb.[7]

[7]At the time of writing, data on restrictive relative clauses with intransitive verbs and non-restrictive relative clauses with transitive verbs were not available. We refer the interested reader to David M. Hare's future work on Kwakum relative clauses.

(28) Kwakum A91 (David M. Hare, p.c.)

a. *ni´á kum baki mo Emanu mé jaŋsɛ*
1.SG.PST2 find hoe REL Emanu PST2 lose
'I found the hoe that Emanu lost.'

b. * *ni´á kum baki mo mé jaŋsɛ Emanu*
1.SG.PST2 find hoe REL PST2 lose Emanu
'I found the hoe that lost Emanu.'

(29) Kwakum A91 (David M. Hare, p.c.)

a. *ni´á kwalyɛ ɔ AbongMbang ndɔɔ mbɔnjɔ je njilɔ yi*
1.SG.PST2 arrive LOC AbongMbang REL Makaa 3.PL live REL
'I arrived in AbongMbang, where the Makaa live.'

b. *ni´á kwalyɛ ɔ AbongMbang ndɔɔ je njilɔ mbɔnjɔ yi*
1.SG.PST2 arrive LOC AbongMbang REL 3.PL live Makaa REL
'I arrived in AbongMbang, where live the Makaa.'

Kwakum is thus similar to two of our outgroup languages, Mungbam and Mundabli, which also only display postverbal objects and, according to Lovegren & Voll (2017), allow both VS and SV in their relative clauses. One significant difference between these languages and a language like Basaa is that Mungbam, Mundabli and Kwakum show different pronoun paradigms for different grammatical functions. Changes in word order would thus not result in as much argument-structural ambiguity in the latter languages. More research is however necessary to determine the full range of contexts (e.g. relative clause types, verb types, information structure) in which VS is licit in Mungbam, Mundabli and Kwakum and whether it results in the type of systematic ambiguity that other languages seem to avoid.

### 4.3 Further possible effects of verbal morphology on the lack of VS: Expressing focus

Languages in the north-western part of the Bantu domain are generally seen as much more diverse than those further South and East (Bearth 2003). We have seen that when it comes to word order in relative clauses, our Bantu zone A languages show a rather uniform pattern, with 20 out of 21 languages displaying only the SV order. Another way they tend to differ from other Bantu languages, it seems, is in the association for an item in being postverbal and being focused. In many Bantu languages, there is a strong relation between focus and either

an immediately postverbal position or the right edge of the clause. Such a connection is also common in other language families, like Romance and Chadic for instance, to the extent that a number of generalisations have been formulated as to the natural connection between being postverbal and being focused. Such a generalisation is found, for instance, in Fiedler et al. (2010: 255):

> Whenever a subject is not to be interpreted as topic, but as focus, it must occur in the prototypical focus position, that is, in a postverbal position at the right edge of VP.

This particular relation between syntax and information structure is not shared by every Bantu language. In Basaa, for instance, constituents are focused in situ, and there is no general connection between being focused and being postverbal (or any non-canonical word order to express focus) (Hamlaoui & Makasso 2015). We propose that the absence of VS order is, in this context as well, related to the more analytic morphology and, more specifically, to the lack of pre-stem object markers. Our contention is that by lacking the pre-stem object markers, analytic languages like Basaa lack the opposition between weak (i.e. discourse-given or anaphoric) and strong (i.e. discourse-new or focused) objects visible in (typical) more synthetic Bantu languages. According to Güldemann (2003: 185), who discusses the functional contrast between Bantu pre- and postverbal objects, "the postverbal position is associated with the pragmatic function to present new, asserted information. An object concord, however, most often refers to something given and extrafocal which would disfavor its place after the verb."

In more analytic languages such as Basaa, the canonical position of objects is thus more restricted to the postverbal domain. In the absence of other focus marking devices (e.g. prosodic prominence), the postverbal position becomes information-structurally neutral and thus not reserved to non-anaphoric/focused objects in opposition to anaphoric/non-focused objects, which appear elsewhere. In this context, there is no reason for equating postverbal with focused and, as a consequence, no reason for placing other focused items, such as subjects, after the verb. Instead of being a "natural" field for focus, the postverbal domain might thus simply be the neutral location of full objects in a number of SVO languages which also tend to have preverbal object markers (Bantu) or object proclitics (Romance). In the absence of preverbal object markers, as in a number of Bantu zone A languages, the association between being focused and being postverbal simply does not hold.

An interesting question is why other Bantoid languages, like many Grassfields languages, display a strong connection between being focused and being postverbal despite the fact that they are generally considered more analytic as well. Many

of these languages however seem to have grammatical properties that are not necessarily shared by some Bantu zone A languages (e.g. the availability of expletive subjects and case within the pronominal system), which might explain why they display a more flexible, information-structure-driven word order despite their analytic morphology. Additionally, it might be because, instead of lacking a preverbal morphological slot for weak (defocused/anaphoric) objects, they actually have a full-blown preverbal syntactic slot for them, as is the case for instance in Mungbam and Mundabli (Lovegren & Voll 2017: 21). Just like in more synthetic languages, the word order of these analytic languages can be primarily discourse-driven. We leave this question, and in particular the direction of the change in typological morphology within Bantoid, open for future research.

## 5 Conclusion

After expanding Nsuka-Nkutsi's (1982) sample to a total of 167 languages (151 Narrow Bantu and 16 other Niger-Congo languages), VS is still the most frequent word order in Bantu relative clauses. However, Bantu zone A languages predominantly show an SV-only word order. We have questioned the claim by Meeussen (1967) and Nsuka-Nkutsi (1982), that Proto-Bantu, understood here as node 1 in Grollemund et al. (2015), had a VS-only word order. What we see when examining both the geographical and the genealogical distribution of different word orders is that SV-only is the dominant pattern in the major clades of Grollemund et al. (2015) situated in the north-western Bantu area: 20 out of 22 languages, cf. Table 2 in §3.2 and the phylogenetic tree in Appendix A. These languages are both closer to the Bantu homeland and more similar to the Niger-Congo languages outside of Narrow Bantu in our sample, as the latter languages also predominantly show SV-only order in their relative clauses. Even if the SV-only word order found in these areas is innovative, as what we believe would be a natural consequence of the shift in morphology argued for by Nurse (2007) and Hyman (2017) (i.e. from synthetic to analytic verbal morphology), SV-only is also found in a significant portion of our sample in the major Eastern branch (28 out of 57 languages), together with a more typical, synthetic verbal morphology. The VS order could thus be an innovation that came into use only after the split between the major North-Western Cameroonian branch of Grollemund et al.'s (2015) classification and the rest of the tree, i.e. node 2 or 3. If this is correct, Bantu zone A languages would not have lost the VS order shown by a common ancestor to them and the rest of the Bantu family, but rather, they would not have had it at all (see for instance Ehret (1972) for a similar perspective on other features of North-Western

Bantu languages). Research on a larger set of Bantu zone A languages might shed some light on whether there is any evidence for VS in the relative clauses of this zone and, particularly, in the North-Western Cameroon clade of the Bantu tree.

As we have seen, due to some morphosyntactic properties typical of Bantu languages, VS sometimes leads to systematic argument structure ambiguities which languages generally tend to avoid. We have mentioned evidence of this from two languages, Swahili and Mboshi, whose basic word order in relative clauses seems to be VS. Interestingly, these languages also have alternative relative clause structures (with *amba* and the copula *di*, respectively) which either allow SV (Swahili) or impose it (Mboshi). In a language in which VS relative clauses are ambiguous, the introduction of SV might lead to the eventual loss of VS if there are no functional (e.g. information-structural) differences between the two alternatives and thus a possible shift "back" from VS to SV comparable to the one considered by Nsuka-Nkutsi (1982) and Hyman (2012).

We have also mentioned the case of the Grassfields speech varieties Mungbam and Mundabli which, rather against expectations considering the prevalence of the SV-only pattern in our outgroup sample, show a SV/VS word order (Lovegren & Voll 2017). These languages also show a VS order in main clauses when the subject is focused, and generally associate focus with the immediately after the verb position. According to Lovegren & Voll (2017), the same information structure-motivated alternations in word order are found in main and relative clauses, making SV and VS functionally different in these languages. As suggested by a reviewer, it is possible that these Bantoid languages have developed this alternation in constituent order as an independent innovation.

Independently of the direction of the analytic vs. synthetic morphological shift, we have proposed that what distinguishes our SV-only languages in the northwestern part of the Bantu domain from other Bantu languages is the fact that they primarily, or even exclusively, encode grammatical relations through word order. Using Basaa as a reference, we have argued that due to the lack of devices such as object concord (commonly found in Bantu languages from the East and South) and distinct paradigms of pronouns (as in some Bantu languages in the North-West and Grassfields languages), the VS word order would lead to systematic argument structure ambiguities.

Finally, we have put forward the idea that the above-mentioned differences in object marking morphology between Bantu zone A and other languages could have further consequences for their syntax. In particular, we have proposed that the lack of association between being focused and being postverbal might be related to the general lack of contrast between preverbal weak/anaphoric objects (object prefixes) and full new/focused objects. One of the questions that remains

open is why Grassfields languages, which also display a more analytic morphology, still maintain the contrast between neutral preverbal subjects and focused postverbal ones.

## Acknowledgements

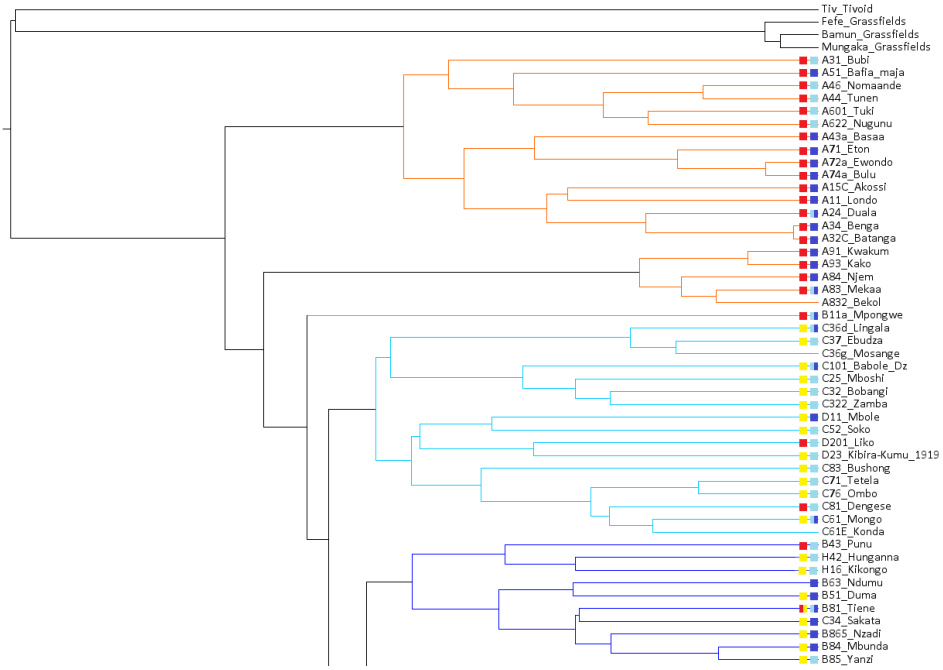
Many thanks go to the organisers of the workshop on "Reconstructing Proto-Bantu Grammar" and the editors of this volume, and in particular to Koen Bostoen for extensive feedback on previous versions of this chapter. I am very grateful to Rebecca Grollemund and two anonymous reviewers for helpful comments, as well as to Jacky Maniacky for generously providing me with a copy of François Nsuka-Nkutsi's precious dissertation. Heartfelt thanks also go to Frank Collins for proofreading this chapter. The usual disclaimers apply.

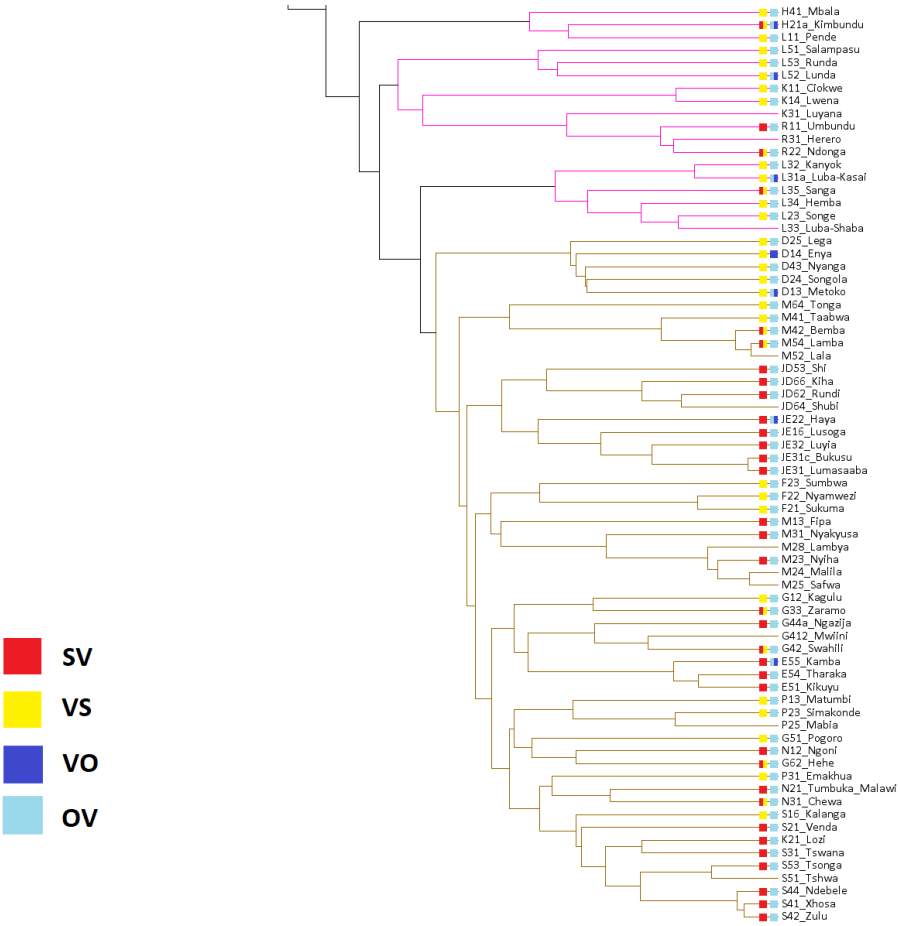
## Abbreviations

| | |
|---|---|
| AG | agent |
| AUG | augment |
| AUX | auxiliary |
| CONJ | conjunctive (tone) |
| COP | copula |
| DEM | demonstrative |
| FV | final vowel |
| G ('g-form') | reflex of the PB pre-final morpheme (Van de Velde 2017) |
| INF | infinitive |
| LOC | locative |
| NEG | negation |
| NF | non-final marker (Van de Velde 2017) |
| OM | object marker |
| PFV | perfective |
| PL | plural |
| POSS | possessive |
| PRES | present |
| PRO | pronoun |
| PROG | progressive |
| PST | past |
| REL | relative |
| REM | remote |

| | |
|---|---|
| SG | singular |
| SM | subject marker |
| TAM | tense/aspect marker |
| TNS | tense |
| 1, 2, 3 … | noun classes |

# Appendix A Word order and object marking across branches of the Bantu phylogenetic tree (107 languages)






[Figure produced by R. Grollemund, using the phylogenetic tree presented in Grollemund et al. (2015) as a base.]

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