

On the subject marker in Kinyarwanda

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Abstract: This article examines the morphosyntactic representation of the subject agreement marker (SM) in null subject constructions in the Bantu language Kinyarwanda. Three prominent analyses are compared. The first analysis treats the SM in null subject constructions as a pronoun which receives the subject theta role in the *morphology*. The second approach analyses the SM as a *syntactic* pronoun, i.e. as a determiner phrase (DP) which receives its theta role in [Spec, V] and then moves to [Spec, T]. The third analysis is based on the theory of *pro*, which assumes that the subject theta role in null subject constructions is assigned to a phonetically unrealised pronoun. According to the *pro*-theory, the SM is simply a reflex of agreement between the verb and the null subject *pro*. The paper shows that the first analysis, which treats the SM as a morphological pronoun, must be rejected for Kinyarwanda on empirical grounds. In contrast, the paper argues that both remaining alternatives represent feasible accounts. The study identifies the empirical predictions and theoretical consequences which are associated with each of these two competing alternatives.

Introduction

In this article I am concerned with the nature and morphosyntactic representation of the subject marker (SM) in Kinyarwanda, a Bantu language spoken in Rwanda and its neighbouring countries. In Kinyarwanda, as in other Bantu languages, the SM (in italics in (1) and (2)) is prefixed to the verb stem and expresses noun class agreement with a preverbal subject NP, as illustrated in (1). Kinyarwanda, like all Bantu languages, is a pro-drop (null subject) language; as the examples in (2) show, a sentence without a full subject NP is interpreted as having a pronominal subject belonging to the same noun class as the SM:¹

- (1a) Umugoré *a-teets-e* inyama.
woman1 SM1-cook-ASP meat9
'The woman is cooking meat.' (Kimenyi, 1980: 14)
- (1b) Inzira *i-nyur-a* urugó imbere.
road9 SM9-pass-ASP compound11 in.front
'The road passes in front of the compound.' (Kimenyi, 1980: 35)
- (2a) *A-teets-e* inyama.
SM1-cook-ASP meat9
'(S)he is cooking meat.'
- (2b) *I-nyur-a* urugó imbere.
SM9-pass-ASP compound11 in.front
'It passes in front of the compound.'

My main aim in this article is to offer a comparison of various analyses of the SM that have been adopted in different studies of Bantu grammar, and to consider the implications of each of these analyses for the representation of Kinyarwanda clause structure.

Specifically, I am concerned with three treatments of the SM that are attested to in the literature. According to the first analysis (which I refer to as 'Alternative 1'), the SM in Bantu is a functionally ambiguous inflectional affix which acts as an agreement marker in sentences with full subject NPs such as (1), but as a *morphological pronoun* in null subject constructions such as (2) (see, for

example, Bresnan & Mchombo 1987).² Alternative 1 therefore implies that the syntax of sentences such as those in (2) does not include a subject NP, since the subject θ -role is assigned to an element which forms part of the verbal morphology (the S_M). In the next section, I examine whether this implication is realised in Kinyarwanda. I provide evidence that passivisation in Kinyarwanda involves syntactic movement of an NP from a position inside VP to the subject position, and, importantly, I show that NP-movement also takes place when the derived subject of a passive construction is a pronoun. This fact can only be explained if pronominal subjects in Kinyarwanda null subject constructions have the status of syntactic phrases, contrary to what is implied by Alternative 1. Therefore, I conclude that Alternative 1 must be rejected for Kinyarwanda.

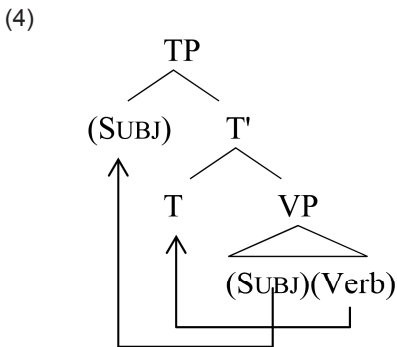
The second analysis of the S_M that I explore (Alternative 2) also treats the S_M in null subject constructions as a pronoun, but does not assume that this pronoun is attached to the verb in the morphology. Instead, the pronominal S_M is analysed as a *syntactic* pronoun which receives the subject θ -role in its base position inside the VP, undergoes syntactic movement to a preverbal position, and then combines with the verb via incorporation or cliticisation. My article offers a discussion of this analysis and its implications for the structural representation of sentences such as those in (1), in which the S_M co-occurs with a subject NP.

Finally, the third analysis that I discuss (Alternative 3) is the theory of *pro* (Chomsky, 1982; Rizzi, 1986), which is the standard account of null subject constructions in the Minimalist Program (Chomsky, 1995, 2000, and subsequent work). According to Alternative 3, the pronominal interpretation of null subject constructions is provided by a *phonetically unrealised* pronoun (*pro*) in the subject position which triggers agreement with the verb. The S_M never acts as a pronoun in this approach, but is always an inflectional agreement marker. I address both the empirical merits and the conceptual problems of Alternative 3 in the last section of this article.

As for the syntax of Kinyarwanda, I adopt the view that all arguments of the verb (including the subject) originate within the VP; the VP is selected by a functional head T (for tense), which provides the landing site for verb movement in Bantu (see Baker, 2003; Carstens, 2005; Kinyalolo, 1991; Zerbian, 2006; and many others). The existence of a VP-internal subject position in Kinyarwanda is confirmed by data such as the following:

- (3) Ha-ra-som-a umwáana.
 EXPL16-TNS-read-ASP child1
 'It's the child who is reading.' (Kimenyi, 1980: 206)

In (3), the postverbal subject NP *umwáana*, 'child', has remained inside the VP; as a result of V-to-T movement, the verb ends up in front of the subject. Note that the verb in (3) does not agree with the VP-internal subject NP but is instead prefixed with the locative (expletive) marker *ha-* of class 16. I assume that the SVO word order of sentences such as (1) is derived when the subject moves to the canonical subject position (the specifier of T, [Spec, T]); this word order licenses the occurrence of the S_M which agrees with the subject NP:



Although (4) represents (a slightly simplified³ version of) the view of phrase structure advocated in the Minimalist Program, the conclusions I draw in this paper are largely independent of this

choice of syntactic framework. Where my arguments depend on specific theoretical assumptions (for instance the idea that syntactic derivations involve NP-movement), I support these with empirical evidence. Since at least one of the alternatives that I compare in this paper (the *pro*-analysis) is adopted mainly by proponents of the Minimalist Program, I occasionally also discuss issues that arise from or are specifically relevant to a Minimalist analysis. By and large, however, I believe that the points I address in this paper are independent of the syntactic theory that I use for my analysis.

The subject marker as a morphological pronoun

Functional ambiguity

As was shown in the introduction, Kinyarwanda is a null subject language; sentences without full subject NPs such as (5b) and (6a-b) receive a pronominal interpretation:

- (5a) Abagabo *ba-ra-som-a* *ibitabo*.
 man2 SM2-TNS-read-ASP book8
 'The men are reading books.'
- (5b) *Ba-ra-som-a* *ibitabo*.
 SM2-TNS-read-ASP book8
 'They are reading books.'
- (6a) *N-da-bón-a* *kó mu-n-kuúnd-a*.
 SM1stSG-TNS-see-ASP that SM2ndPL-OM1stSG-love-ASP
 'I see that you love me.'
- (6b) *Tu-ra-bón-ek-a*.
 1stPL-TNS-see-NEUT-ASP
 'We are visible.'

It is undisputed that the origin of the SM in Bantu is pronominal. Givón (1976) argues that constructions such as (5a) are diachronically derived from topic-shifting constructions in which a fronted topic was anaphorically linked to a subject pronoun ('The men, they are reading the books.'). When the fronted topic was reanalysed as a grammatical subject, the anaphoric pronoun was reanalysed as the SM. According to Givón (1976: 157), '[s]ubject agreement morphemes still retain their older function as anaphoric pronouns' in null subject constructions such as (5b), which is why Bantu languages have the *pro*-drop property.

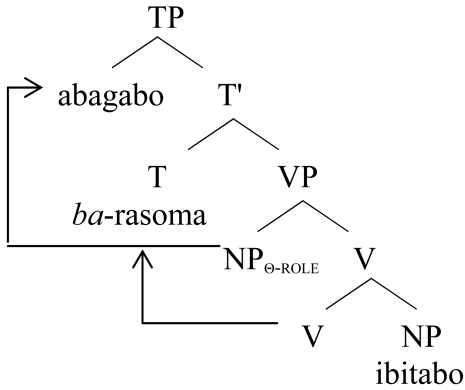
The idea that the pronominal function of the SM is related to its use as an agreement marker lies behind Bresnan and Mchombo's (1987) well known Lexical-Functional Grammar (LFG)-analysis of Chichewa, which is one of the most influential studies on the role and function of subject and object markers in Bantu. According to Bresnan and Mchombo, the SM in Bantu is 'functionally ambiguous'. In constructions with preverbal subject NPs (such as (5a)), the SM acts as an agreement marker, but in constructions with no subjects (such as (5b) and (6a-b)), the SM is an 'incorporated pronoun' (1987: 755).⁴

Bresnan and Mchombo do not explicitly address the morphosyntactic representation of the SM, but their discussion implies that they regard pronominal SMs as inflectional prefixes.⁵ They state that 'the [...] pronominal interpretation of SM will arise when and only when there is no subject NP in the phrase structure' (1987: 745), which suggests that they take the syntactic subject position to remain unfilled when the SM acts as a pronoun. This position has also been adopted by Murphy (1997), who analyses the Bantu SM in the framework of Head-driven Phrase Structure (HPSG) grammar. Murphy treats the Bantu SM as an inflectional morpheme which optionally subcategorises for a subject belonging to the same noun class. According to Murphy (1997: 227), 'in sentences with no subject ... the sentence has no subject of any kind'.

The idea that the SM in null subject constructions is a pronoun which combines with the verb in the morphological component is also advocated by Van der Spuy (2001) in his analysis of Zulu. Van der Spuy assumes that thematic roles can be assigned both in the syntax and in the morphology. While the SM acts as a grammatical agreement marker when the sentence includes a subject NP, Van der Spuy argues (2001: 262–263) that 'if there is no overt subject, [...] the [SM] is pronominal [and] the subject θ -role is assigned to the SM itself'.

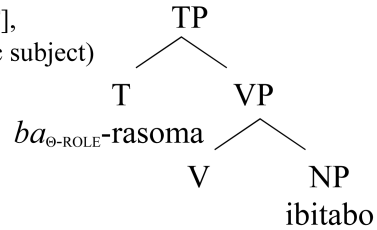
All these analyses share the view that the SM in Bantu is functionally ambiguous and acts either as a morphological pronoun or an agreement marker. I will henceforth refer to this view of the SM as Alternative 1. According to Alternative 1, the sentences in (5) are represented as in (7):⁶

(7a)



(7b)

(no [Spec, T],
no syntactic subject)



In both (7a) and (7b), the SM can be regarded as the morphological realisation of inflectional noun class (gender and number) features which are added to the verb in the morphology. In (7a), the subject θ -role is assigned to an NP inside VP, this NP then moves to [Spec, T], the canonical subject position, and consequently must agree with the features of the SM on the verb. However, when the subject θ -role of the verb is assigned to the SM itself, the SM receives a pronominal interpretation. Since the thematic subject is now part of the verbal morphology, null subject constructions such as (7b) do not include a syntactic subject, and no constituent moves to [Spec, T]. This latter aspect of Alternative 1 is important for the following discussion of passive constructions in Kinyarwanda.

Evidence against Alternative 1: constraints on NP-movement

Consider the active-passive pair in (8):

- (8a) Umwáana a-ra-mén-a idírishyá.
 child1 SM1-TNS-break-ASP window5
 'The child is breaking the window.'
- (8b) Idirishyá ri-ra-mén-w-a n'úumwáana.
 window5 SM5-TNS-break-PASS-ASP by.child1
 'The window is being broken by the child.'

As was already noted in the introduction, I assume that the base position of subject NPs in Bantu is inside the VP and that the preverbal subject position in (8a) is filled via syntactic NP-movement of the subject NP *umwáana*, 'child'. According to the traditional generative analysis, the same holds for the derivation of the passive in (8b). In this case, however, the derived subject originates as the internal argument of the verb, the NP *idirishyá*, 'window'.

Example (9) presents the counterparts of the examples in (8) with pronominal subjects:

- (9a) A-ra-mén-a idírishyá.
 SM1-TNS-break-ASP window5
 'He/she is breaking the window.'
- (9b) Ri-ra-mén-w-a n'úumwáana.
 SM5-TNS-break-PASS-ASP by.child1
 'It (the window) is being broken by the child.'

Recall that according to Alternative 1, the SMs in (9) are pronouns which are prefixed to the verb. While the pronominal SM in (9a) bears the external (agent) θ -role of the verb, the SM in the passive construction in (9b) has been assigned the internal (theme) θ -role in the morphology. As

a consequence, neither of the sentences in (9) includes a syntactic subject NP which would have undergone movement from a VP-internal argument position to the subject position [Spec, T].

However, it can be shown that, contrary to what is assumed by Alternative 1, a passive construction in Kinyarwanda is derived via syntactic movement of a subject from a position inside the VP to [Spec, T], *even when the subject is pronominal*. In the remainder of this section I present data that provide evidence for this conclusion and thereby a strong argument against adopting Alternative 1 for Kinyarwanda.

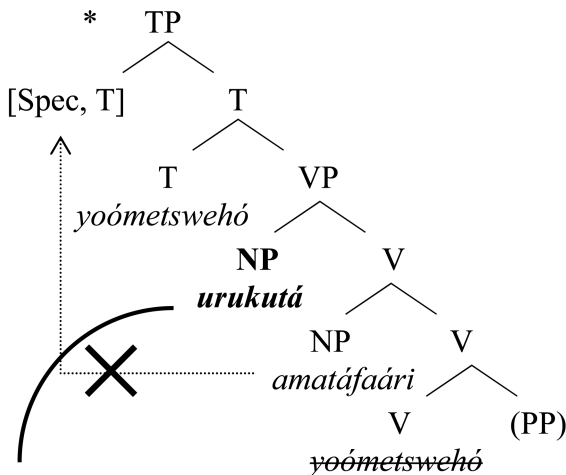
The starting point of my argument is the contrast between the passivised locative constructions in (10b) and (10c):

- (10a) Umufuundi y-o-óme-tse-hó urukutá amatáfaári.
 builder1 SM1-TNS-stick-ASP-LOC wall11 bricks6
 'The builder stuck bricks on the wall.'
- (10b) Urukutá rw-o-óme-ts-w-e-hó amatáfaári n'umufuundi.
 wall11 SM11-TNS-stick-ASP-PASS-ASP-LOC bricks6 by.builder1
 Lit.: 'The wall was stuck bricks on by the builder.'
- (10c) *Amatáfaári y-o-óme-ts-w-e-hó urukutá n'umufuundi.
 bricks6 SM6-TNS-stick-ASP-PASS-ASP-LOC wall11 by.builder1
 'The bricks were stuck on the wall by the builder.'

Double object locative constructions such as (10a) are sometimes referred to as 'locative applicatives' (see, for example, Baker, 1992; McGinnis, 2001; Nakamura, 1997; Zeller, 2006). The indirect object, which immediately follows the verb, expresses the goal of the event, while the direct object refers to the theme.⁷ Importantly, as illustrated by (10b) and (10c), only the indirect object, but not the theme, can undergo passivisation in Kinyarwanda locative applicatives (cf. Kimenyi, 1980).⁸

The contrast between (10b) and (10c) follows straightforwardly if it is assumed that movement to [Spec, T] is constrained by syntactic locality principles (see, for example, Boeckx, 2008; McGinnis, 1998; Ura, 1996; Zeller, 2006). The Minimal Link Condition (MLC) (Chomsky, 1995) states that of two possible candidates for movement, only the one which is *closer* to the attracting head is allowed to move. Since 'closeness' is defined in terms of c-command (Chomsky, 2000), it follows that only movement of the indirect object NP to [Spec, T] is possible. Assuming that the locative NP (the indirect object *urukutá*, 'wall', in (10)) is located in a position inside the VP from where it asymmetrically c-commands the theme NP (the direct object *amatáfaári*, 'bricks'), the indirect object in (10c) counts as closer to the head T (which attracts an NP to its specifier) than the direct object and therefore blocks movement of the latter to [Spec, T]. This situation is illustrated by (11), which is the representation of double object locatives adopted from Zeller (2006) (the copies of elements left behind by movement are indicated by ~~through~~):⁹

(11)



The fact that passivisation in Kinyarwanda double object locatives shows the sort of asymmetry predicted by the MLC already provides evidence that passivisation involves syntactic movement to the subject position. However, proponents of syntactic theories which do not assume movement transformations may object that a locality-based movement approach is not the only way in which asymmetries such as the one illustrated in (10) can be explained. Indeed, alternative analyses of similar contrasts have been put forward, even in the generative literature (see, for example, Baker 1988, 1992; Nakamura 1997). Therefore, in order to show convincingly that passivisation involves NP-movement, additional evidence needs to be provided that demonstrates that the ungrammaticality of (10c) is really due to a violation of the MLC.

Zeller and Ngoboka (2006) and Zeller (2006) present this sort of evidence. We show that there are variants of the locative construction in Kinyarwanda in which the indirect object is *not* in a position where it intervenes between [Spec, T] and the direct object theme NP. Importantly, in these contexts, passivisation of the direct object *is* possible:

- (12a) Umufuundi y-o-óme-tse-hó amatáfaári.
 builder1 SM1-TNS-stick-ASP-LOC bricks6
 'The builder stuck bricks there.'
- (12b) Amatáfaári y-o-óme-ts-w-e-hó n'umufuundi.
 bricks6 SM6-TNS-stick-ASP-PASS-ASP-LOC by.builder1
 'The bricks were stuck there by the builders.'
- (13a) Umufuundi y-a-rw-óme-tse-hó amatáfaári.
 builder1 SM1-TNS-OM11-stick-ASP-LOC bricks6
 'The builder stuck bricks on it.'
- (13b) Amatáfaári y-a-rw-óme-ts-w-e-hó n'umufuundi.
 bricks6 SM6-TNS-OM11-stick-ASP-PASS-ASP-LOC by.builder1
 'The bricks were stuck on it by the builder.'
- (14a) urukutá [umufuundi y-o-óme-tse-hó amatáfaári.]...
 wall11 builder1 SM1-TNS-stick-ASP-LOC brick6
 'the wall on which the builder stuck the bricks...'
- (14b) urukutá [amatafaári y-o-óme-ts-w-e-hó n'umufuundi]...
 wall bricks6 SM6-TNS-stick-ASP-PASS-ASP-LOC by.builder1
 'the wall on which the bricks were stuck by the builder...'

Example (12) shows that it is possible in Kinyarwanda locatives to *omit* the indirect object. In this case, the locative enclitic *-hó* is interpreted as a prepositional proform. In (13), the indirect object is present, but, crucially, it is not realised as a full NP but as an incorporated pronoun which forms part of the verbal complex (*-rw-*). Finally, in (14), the indirect object has been relativised and therefore no longer appears as an NP inside the relative clause-VP. Crucially, as (12b–14b) show, theme passivisation is possible in all these contexts.

The contrast between (10c) and (12b–14b) confirms that the impossibility of making the theme the subject of a passive in (10c) is related to the *syntactic position* of the indirect object NP. Only when the indirect object is in its base position is passivisation of the theme blocked. Once the 'obstacle' is removed through one of the options illustrated in (12–14), can the theme be raised to become the derived subject. This strongly supports an analysis of passivisation in terms of NP-movement to the subject position; movement which may be blocked by an intervening NP in terms of the MLC.

Importantly, this conclusion provides a means to test the implication of Alternative 1 discussed above; namely that sentences with pronominal subjects do not include syntactic subjects. Since examples such as (10c), in which the theme has been passivised, were ruled out because movement of the theme to [Spec, T] is blocked by the intervening indirect object NP, Alternative 1 now predicts that examples such as (10c) become grammatical *when the theme is a pronominal subject*. In such constructions, the theme θ -role would not be assigned to a syntactic phrase, but to the SM, which combines with the verb in the morphological component. No movement across the indirect object would take place, and the MLC could, therefore, not be violated. An example identical to (10c), but with a *pronominal* theme subject, should therefore be grammatical.

However, as (15) shows, in the context of an indirect object NP, theme passivisation is impossible even if the theme is pronominal:

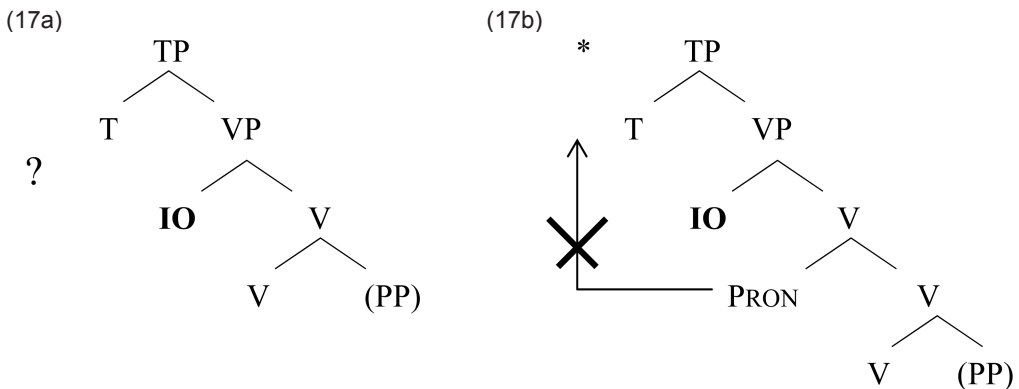
- (15) *Y-o-óme-ts-w-e-hó urukutá n'úmufuundi.
 SM6-TNS-stick-ASP-PASS-ASP-LOC wall11 by.builder1
 'They were stuck on the wall by the builder.'

Example (15) shows that passivisation of a pronominal theme produces an ungrammatical result if the indirect object is realised as an NP inside the VP, just as was the case in (10c). In contrast, the pronominal theme *can* be passivised when the indirect object is omitted, relativised, or realised as an object marker. Examples (16a–c) are similar to (12b–14b) above, which illustrated the same effect with passives including a full subject NP:

- (16a) Y-o-óme-ts-w-e-hó n'úmufuundi. (cf. 12b)
 SM6-TNS-stick-ASP-PASS-ASP-LOC by.builder1
 'They were stuck there by the builders.'
- (16b) Y-a-rw-óme-ts-w-e-hó n'úmufuundi. (cf. 13b)
 SM6-TNS-OM11-stick-ASP-PASS-ASP-LOC by.builder1
 'They were stuck on it by the builder.'
- (16c) urukutá [y-o-óme-ts-w-e-hó n'úmufuundi]... (cf. 14b)
 wall11 SM6-TNS-stick-ASP-PASS-ASP-LOC by.builder1
 'the wall on which they were stuck by the builders...'

The examples in (16) confirm that the impossibility of pronominal theme passivisation in (15) is really the result of the blocking effect created by an intervening indirect object NP. However, Alternative 1 does not predict the occurrence of this blocking effect, since, according to Alternative 1, the sentences in (15) and (16) do not include a syntactic subject which has undergone movement. The syntax of a construction such as (15) would look like (17a) below, but this representation does not account for the ungrammaticality of (15). The contrast between (15) and (16a–c) remains entirely unexplained.

In contrast, the ungrammaticality of (15) is correctly predicted by an analysis according to which examples with pronominal subjects do include a syntactically represented element that receives its θ -role inside the VP and which moves to [Spec, T] (in (17b), I have given this element the theory-neutral label PRON). In such an analysis, the ungrammaticality of (15) is explained on a par with the ungrammaticality of (10c). The pronoun has illicitly crossed the indirect object, (17b):



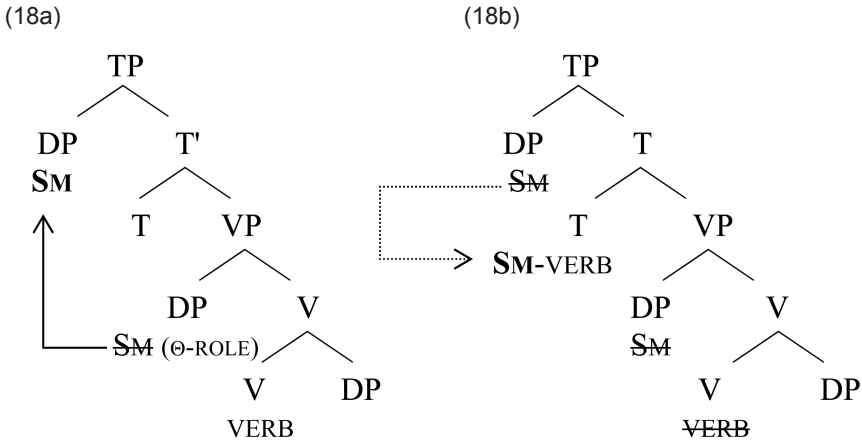
In order to maintain that Alternative 1 is a feasible analysis of the SM in Kinyarwanda, its proponents would have to provide an alternative analysis of the passivisation data in (15) and (16) which obviously could not be based on the MLC. This analysis would have to explain why the possibility of assigning the theme θ -role to an SM in the morphology depends not only on whether a second internal θ -role is assigned, but also on *how* the respective argument is realised syntactically (i.e. as an indirect object NP, or as an object marker etc.). I doubt that such an analysis can be developed easily. It is clear that the possibility of having a pronominal theme argument as the derived subject of a passive depends on whether or not another argument is syntactically realised

as an NP. In my opinion, this fact strongly suggests that the pronominal theme is itself realised syntactically. Therefore I conclude that Alternative 1 cannot be adopted for Kinyarwanda.

The subject marker as a syntactic pronoun

An alternative analysis of null subject constructions in Kinyarwanda, to which I henceforth refer as ‘Alternative 2’, is similar to Alternative 1 in that it assumes that the SM itself may act as a pronoun and receive the subject θ -role. However, in contrast to Alternative 1, Alternative 2 regards the SM in null subject constructions as a pronoun which is represented as *an NP in the syntax*. According to this view, the pronominal subject in Kinyarwanda null subject constructions is a syntactically independent element which undergoes syntactic movement (and is therefore subject to movement constraints such as the MLC).

The view that a pronominal SM is assigned the subject θ -role in the syntax is explicitly adopted in Young’s (2005) analysis of comitative constructions in Lubukusu (see also Keach (1995) for Swahili). Young represents noun phrases as determiner phrases (DPs) – i.e. projections of determiners or pronouns (Abney, 1987) – and he explicitly argues (2005: 23–24) that the SM is a DP which receives its θ -role in [Spec, V]. The SM then undergoes DP-movement from its θ -position to the subject position [Spec, T], as shown in (18a). From [Spec, T], the SM incorporates into the verb, which has moved to T, (18b):¹⁰



In the following subsections I discuss the structural implications of Alternative 2. Since Young’s (2005) account is the most explicit implementation of Alternative 2 that I am aware of, I adopt his particular approach (including the representation of noun phrases as DPs) in my discussion.

Preverbal subjects and the subject marker

The obvious question that arises from (18) is how Alternative 2 treats constructions such as (19a), which include a full subject DP in preverbal position:

(19a) Abáana ba-shaats-e ibiryó.
 child2 SM2-want-ASP food8
 ‘The children want food.’

(19b) Ba-shaats-e ibiryó.
 SM2-want-ASP food8
 ‘They want food.’

I have assumed so far that preverbal subject DPs such as *abáana*, ‘children’, in (19a) are located in [Spec, T]. However, according to Alternative 2, this is also the position occupied by the (copy) of the pronominal SM in null subject constructions such as (19b). What, then, is the status of the SM which appears on the verb in the sentence in (19a), and what is its relation to the preverbal subject

DP? Below I discuss three possible answers to this question that can be provided from the perspective of Alternative 2.

(1) *The SM as an ambiguous element*

One possibility of explaining why a ‘syntactic’ SM can appear together with a full subject DP in sentences such as (19a) would be to assume that the SM is represented as a DP *only* in null subject constructions, and that it otherwise functions as an agreement marker. According to this view, only the SM *ba-* in (19b) would be represented as in (18b), while *ba-* in (19a) would be an agreement morpheme attached to the verb. In other words, SMs would be treated as ambiguous, and Alternative 2 would be similar to Alternative 1 in this respect, which holds that SMs can function as both inflectional agreement markers and *morphological* pronouns.

It turns out, however, that the idea of a functionally ambiguous SM is difficult to implement within the framework of Alternative 2, in which the SM is analysed as a *syntactic* pronoun. In Alternative 2, the ambiguity of the SM would not merely be functional, but also structural. As a syntactic pronoun, the SM is a DP which is merged in [Spec, V] and moves to [Spec, T]. In contrast, as an agreement marker, the SM would have to be analysed as an affix which forms part of the verb in T. If the SM is ambiguous, then this means that SMs which appear in constructions with full preverbal subjects such as (19a) and SMs which act as pronouns in null subject constructions such as (19b) would be fundamentally different elements. Alternative 2 would then entail that there are essentially two sets of SMs in the Kinyarwanda lexicon; one which includes the agreement markers of each noun class, and one which includes the pronouns. As far as I can see, there is no empirical evidence that would support such a result. The duplication of the inventory of SMs in Kinyarwanda therefore has to be considered an unwelcome conceptual consequence of the idea that SMs are both agreement markers and pronouns.

Moreover, this situation leads to the following empirical problem (cf. Letsholo (2004) who raises a similar point). Consider (19a) first. The subject DP *abáana*, ‘children’, is the syntactic subject in [Spec, T] and triggers agreement with the verb. This agreement is reflected morphologically by the affixal SM *ba-* on the verb. Now, according to Alternative 2, the SM *ba-* in (19b) is a syntactic pronoun, which has the same syntactic status as the subject DP in (19a) – it also moves from [Spec, V] to [Spec, T], as shown in (18b). But (19a) shows that a DP in [Spec, T] triggers agreement with the verb. Therefore, we would now predict the same to happen in (19b), when the pronominal DP is in [Spec, T]. We expect *two* SMs to appear in (19b), one functioning as the pronoun and the other one as an inflectional affix expressing agreement with the pronoun. However, (20) shows that it is impossible to attach two SMs to the same verb in Kinyarwanda:

- (20) *Ba-ba-shaats-e ibiryó.
SM2-SM2-want-ASP food8
‘They want food.’

Note that (20) cannot simply be ruled out by some sort of haplology filter, which would block the occurrence of two identical markers in adjacent positions. If such a filter was operative in Kinyarwanda, then we would not expect to find examples such as the following:

- (21a) Ba-ra-bá-ba-bá-he-ér-a.
SM2-TNS-OM2-OM2-OM2-give-APPL-ASP
‘They are giving them to them for them.’
- (21b) Tw-aa-mu-mu-mu-uz-an-i-ye.
SM1^{PL}-TNS-OM1-OM1-OM1-come-ASS-APPL-FV
‘We brought him to him for him.’ (Kimenyi, 1980: 199–200)
- (22a) Ababyéeyi ba-bon-a abáana buri múunsi.
parents2 SM2-see-ASP children2 every day3
‘Parents see children every day.’
- (22b) Ababyéeyi ba-ba-bon-a buri múunsi.
parents2 SM2-OM2-see-ASP every day3
‘Parents see them every day.’

The examples in (21) show that Kinyarwanda allows for three object markers belonging to the same noun class to appear next to each other; (22b) is an example of an SM and a phonetically

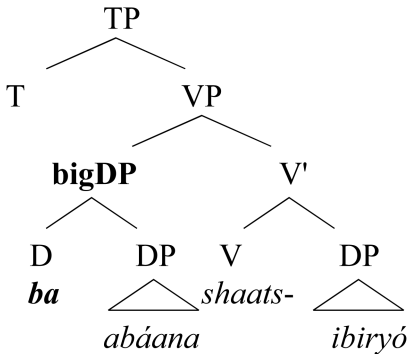
identical object marker appearing in adjacent positions. But if an SM can be followed by an object marker of the same phonetic shape, the idea that the SM is ambiguous fails to explain why a pronominal SM cannot co-occur with an identical subject agreement marker.

In light of the problematic status of the hypothesis that the SM in Kinyarwanda is functionally and structurally ambiguous, it is worth exploring alternative analyses of the structure of SVO-sentences in Kinyarwanda that are compatible with Alternative 2.

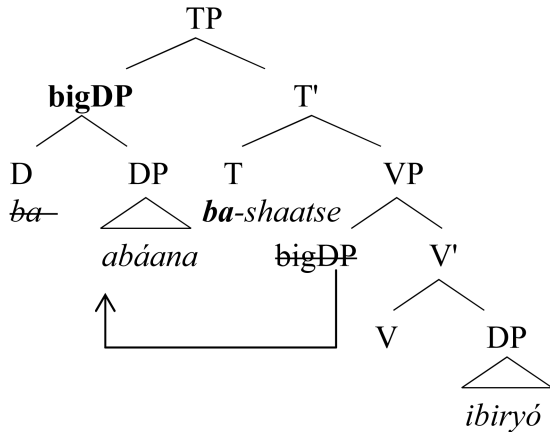
(2) *The SM as the head of the subject DP*

An alternative possibility of explaining the co-occurrence of the SM and a full subject DP in sentences such as (19a) would be to treat the SM and the subject DP as one constituent. According to this proposal, the subject and the SM form a so-called ‘big’ DP (cf. Boeckx, 2003; Cecchetto, 1999; Zeller, 2008) whose head is the SM; the SM takes the subject DP as its complement. Like any other subject DP, the ‘big’ DP originates in [Spec, V], where it is assigned the subject θ -role, cf. (23a). When the ‘big’ DP moves to [Spec, T], its head (the SM) incorporates into T, as illustrated in (23b). This derivation leaves the subject (= the remnant ‘big’ DP minus the SM) in [Spec, T]:

(23a)



(23b)



According to the proposal sketched in (23), the SM in Kinyarwanda can always be represented as the head of the subject DP which incorporates into T. If the SM selects a DP-complement, it co-occurs with a preverbal full subject DP in an SVO-construction; if the SM does not select a complement, it is interpreted as a pronoun in a null subject construction (cf. 18b). The difference between sentences with pronominal subjects and sentences with full subject DPs would therefore simply be a consequence of different internal structures of the ‘big’ DP.

One question that immediately arises from the ‘big’ DP-analysis is why the SM only appears with fronted subjects. As was shown in (3) in the introduction, postverbal subjects do not trigger the occurrence of an agreeing SM:

- (24) Ha-ra-som-a umwáana.
 EXPL16-TNS-read-ASP child1
 ‘It’s the child who is reading.’

(Kimenyi, 1980: 206)

A possible answer to this question could be sought in the different interpretations of preverbal (VP-external) and postverbal (VP-internal) subject DPs. As is well known, preverbal subjects in many Bantu languages are incompatible with a focus interpretation; only postverbal subjects can be in focus (see, for example, Buell, 2005; Cheng & Downing, in press; Demuth & Mmusi, 1997; Givón, 1976; Marten, 2007; Morimoto, 2006; Zerbian, 2006). For example, Kimenyi (1980) notes that in Kinyarwanda focus markers cannot have scope over preverbal subjects, (25a). In order to focus the logical subject, it has to appear within the VP, (25b), or it must be clefted, (25c):

- (25a) *Abáana bóonyiné b-a-gii-ye.
 child2 alone SM2-TNS-go-ASP
 ‘Only the children left.’
- (25b) H-a-gii-ye abáana bóonyiné.
 EXPL16-TNS-go-ASP child2 alone
 ‘Only the children left.’
- (25c) Abáana ni bó bóonyiné b-a-gii-ye.
 child2 be PRON only SM2REL-PST-go-ASP
 ‘The children are the only ones that left.’

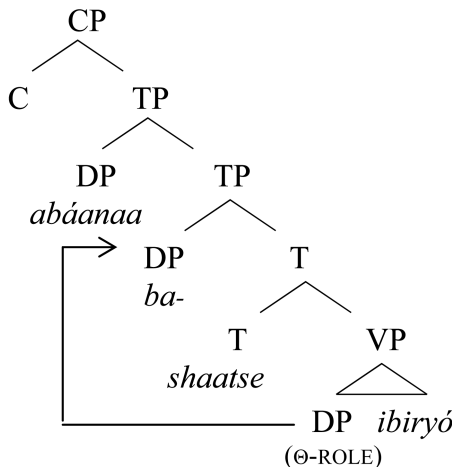
(Kimenyi, 1980: 51)

These data suggest that the construal of a ‘big’ DP headed by the SM might be linked to the non-focus interpretation associated with preverbal subjects. This idea is currently explored in Zeller (2008), who suggests that the SM marks the ‘big’ DP as [– Focus]. Since the VP is the domain of focus (see, for example, Diesing, 1992), a [– Focus] (and therefore ‘big’) DP is not licensed inside the VP and must move out of it. This idea explains why Sms occur only with VP-external subjects; if it is adopted, then the ‘big’ DP-analysis represents a possible solution to the problem raised for Alternative 2 by the co-occurrence of the SM and a full subject DP.

(3) *Subject DPs as dislocated adjuncts*

Another approach compatible with the co-occurrence of a full subject DP and a syntactic SM would be one based on the proposal made by Baker (2003) concerning the syntactic status of preverbal subject DPs in Bantu languages. Baker suggests that preverbal ‘subject’ DPs in the Bantu language Kinande are not really subjects in the structural sense. According to Baker, these ‘subject’ DPs are not located in [Spec, T] but are instead adjoined to TP or a higher constituent. The true subject argument of the verb is always realised by a pronoun which receives its θ -role in [Spec, V] and moves to [Spec, T].¹¹ If one adopts Baker’s proposal and combines it with the syntactic premises of Alternative 2, the syntax of sentence (19a) can be represented as in (26):

(26)



(26) shows that with respect to thematic structure and movement operations, the syntax of the two sentences in (19) is identical. As in (19b), the SM in (19a) is the pronominal subject argument of the verb. It receives its θ -role within the VP and subsequently moves to [Spec, T], from where it incorporates into the verb in T. The only difference is that the preverbal ‘subject’ DP that appears in (19a) is added to the structure as a TP-adjunct. From this position, the dislocated ‘subject’ binds the SM and can therefore be linked to the subject θ -role.¹²

According to a Baker-style analysis of preverbal subjects in Kinyarwanda, the ‘subject’ DP of a normal SVO-sentence has the same syntactic status as an object topic DP in a clitic left dislocation construction – both are TP-adjuncts. Importantly, this means that we now expect to find constructions with SOV-word order in Kinyarwanda: Since Kinyarwanda sentences may include multiple topics (see Kimenyi, 1980: 226ff.), it should be possible to adjoin the subject topic to a position on top of a left-dislocated object DP. As (27) shows, this prediction is borne out; the SOV word order can indeed be derived in Kinyarwanda:¹³

- (27) Abáana, umugoré, b-a-mu-bóon-ye.
 children2 woman1 SM2-TNS-OM1-see-ASP
 ‘The children, the woman, they see her.’

Further support for an analysis along the lines of (26) is provided by the interpretation of preverbal subjects in Kinyarwanda. Alexiadou and Anagnostopoulou (1998) and Baker (1996, 2003) point out (following Cinque, 1990) that dislocated phrases are necessarily definite or specific and that nonreferential, nonspecific phrases can therefore not be dislocated. If preverbal subjects in Kinyarwanda are indeed dislocated, then nonreferential wh-phrases should never occur in the preverbal position in Kinyarwanda. Indeed, it is a well-known fact that preverbal wh-subjects are impossible in most Bantu languages; Kinyarwanda is no exception (see, for example, Kimenyi (1980) and Maxwell (1981) for Kinyarwanda; Demuth and Johnson (1989) for Setawana; Baker (2003) for Kinande; Muriungi (2005) for Kitharaka; Sabel and Zeller (2006) for Zulu; Zerbán (2006) for Northern Sotho):¹⁴

- (28a) *Ndé y-a-kó-ze?
 who SM1-TNS-work-ASP
 ‘Who worked?’
 (28b) *Ndé y-a-gú-ze ibitabo?
 who1 SM1-TNS-buy-ASP book8
 ‘Who bought books?’

To sum up this subsection: it is possible to explain the co-occurrence of a full subject DP and the SM without having to give up the idea that the SM is a syntactic pronoun, by assuming either that the subject DP and the SM form one constituent (a ‘big’ DP), or that subject DPs are dislocated adjuncts. Interestingly, both the ‘big’ DP-analysis and the dislocated adjunct-version of Alternative 2 imply that there are no real subject agreement markers in Kinyarwanda. What has traditionally been analysed as an inflectional morpheme expressing grammatical agreement with the subject is in fact a pronominal-/determiner-like element which incorporates from [Spec, T] into the verb in T.¹⁵

In the next subsection, I discuss some problematic aspects of Alternative 2.

Potential problems

Negation

As (29) shows, the negative prefix *nti-* is attached to the inflected verb and *precedes* the SM in Kinyarwanda:

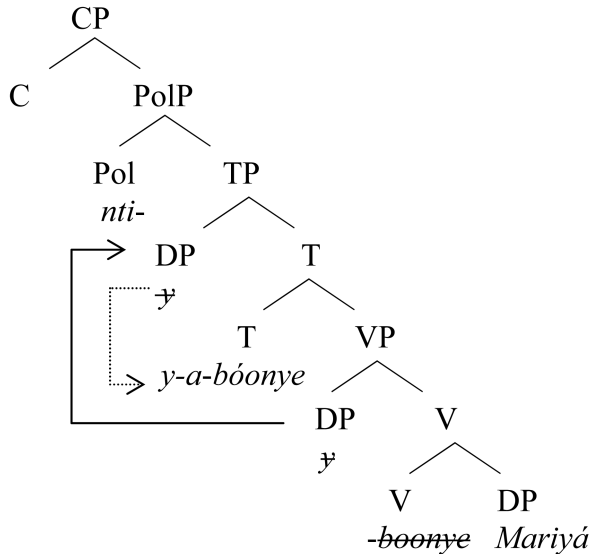
- (29a) *Nti-y-a-bóon-ye* Mariyá.
 NEG-SM1-TNS-see-ASP Mary1
 ‘He didn’t see Mary.’
 (29b) **Y-nti-a-bóon-ye* Mariyá.
 SM1-NEG-TNS-see-ASP Mary1

According to Alternative 2, the SM *y-* in (29a) is a syntactic pronoun which combines with the verb via incorporation (see (18b) above). If the negative marker in Kinyarwanda was treated as a morphological prefix, which is already part of the verb when the verb moves to T, Alternative 2 would incorrectly predict the morpheme order in (29b).

The problem raised by the order NEG > SM in (29a) can, however, be solved if it is assumed that negation is also represented syntactically, as the head of a functional projection higher than TP. Baker (2003) proposes that in Kinande a respective functional category Focus/Polarity is located between TP and C. If this proposal is adopted for Kinyarwanda, the fact that the negative marker precedes the SM in (29b) follows from the hierarchical position of the syntactic

constituents which host these markers (cf. Baker's (1988) Mirror Principle). The syntax of (29a) is shown in (30):

(30)



In (30), the SM has moved to [Spec, T] and has subsequently incorporated into the verb in T. The verb then moves further to Pol, where it combines with the negative prefix.

Interestingly, the fact that Alternative 2 implies that negation is represented syntactically, as in (30), provides support for the idea (discussed above) that full 'subject' DPs are dislocated adjuncts. As (31) shows, a preverbal subject DP precedes the negated verb in Kinyarwanda:

- (31) Umugoré *nti-y-a-bóon-ye* Mariyá.
 woman1 NEG-SM1-TNS-see-ASP Mary1
 'The woman didn't see Mary.'

As can easily be verified, the structural representation of negation in (30) is incompatible with the idea that a preverbal subject such as DP *umugoré*, 'woman', in (31) is located in [Spec, T]. When the verb in (30) moves to Pol to pick up negation, it ends up in a position higher than [Spec, T] and would therefore precede any material located in this position. The only way in which the word order in (31) can be accommodated by the structure in (30) is by assuming that the subject DP is adjoined to a higher position in the tree. For example, if the DP *umugoré* is adjoined to PolP, then the order DP > NEG > SM in (31) follows directly.¹⁶

Multiple SMS

Corbett (2006) offers a discussion of various criteria for deciding whether to treat a particular marker as a pronominal affix or as an agreement marker. According to Corbett, one of the strongest arguments against a pronominal analysis is provided by contexts in which more than one instance of the marker in question occurs within the same clause. Since 'we do not expect a pronoun to be repeated' (Corbett 2006: 109), the possibility of multiple occurrences of the relevant element suggests that it is an agreement marker.

In light of this, the fact that the so-called compound tenses (also labelled serial verb constructions) in Kinyarwanda and other Bantu languages exhibit the occurrence of *multiple* SMS (see, for example, Kinyalolo (1991) for KiLega; Kimenyi (n.d.) for Kinyarwanda; Carstens (2001) and Henderson (2006) for Swahili; Thwala (2006) for Swati) poses a problem for Alternative 2:

(32) *Mu-siga-ye mú-geend-a mú-heera-ko mú-du-subiz-a.*
 SM2ndPL-stay-ASP SM2ndPL-walk-ASP SM2ndPL-start-from S-M OM1stPL-answer-ASP
 'Now you respond to us immediately.'

(33) *Baa-ri bá-tuu-ye bá-saanz-w-e bá-jy-a bá-kuund-a*
 SM2-AUX SM2-dwell-ASP SM2-join-PASS-ASP SM2-go-ASP SM2-like-ASP
gu-pf-a ku-dú-hamagar-a.
 INF-die-ASP to-OM1stPL-call-ASP
 'They usually at least called us.' (Kinyarwanda, Kimenyi (n.d.))

On the basis of parallel data from Swati, Thwala (2006) argues that the SM in Swati cannot be analysed as a pronoun, but must be an agreement marker. Comparable examples are also mentioned in Baker (2003, note 12); they provide at least one of the reasons why Baker does not treat the SM in Kinande as a pronoun and instead adopts the *pro*-theory (see below) for his treatment of pronominal subjects in Kinande.

There is a possible solution to the problem raised by the data in (32) and (33). It relies on the idea that a subject DP moves from its base position in [Spec, V] to the canonical subject position [Spec, T], leaving behind an unpronounced copy. With respect to the syntax of Bantu compound tenses, it has been suggested that each auxiliary or modal verb form is represented as the head of a separate functional category between CP and VP, and that the subject DP moves successive-cyclically through the various specifier positions of these projections to its final landing site [Spec, T] (Carstens 2001; Kinyalolo 1991). Given this analysis, a sentence such as (33), in which a pronominal subject is represented by multiple SMS, could be derived as follows. The SM *ba-* is a DP merged in [Spec, V] where it receives the subject θ -role. From here, the DP moves through the various specifier positions of intervening functional projections all the way up to [Spec, T]. This means that for each verb form in (33) there is a *syntactic* copy of the SM located in the respective specifier. The data in (33) can now be explained if it is assumed that each of these pronominal copies is actually pronounced at PF, and merges with the adjacent verb form in the phonological component.

The obvious question raised by this analysis is *why* multiple copies of the SM have to be spelled out. Principles of computational efficiency normally allow only the highest copy of a moved element to be pronounced. However, as noted by Chomsky (2005), interface conditions may sometimes require lower copies to be spelled-out. A possible reason for the spell-out of multiple SMS in (32) and (33) could be that the auxiliary verb stems are bound morphemes and must be provided with a prefix for purely morphophonological reasons. According to this view, the copies of the pronominal SMS in (32) and (33) would arguably play the same role as the expletive marker *ha-* in impersonal constructions such as (34):

(34a) *Ha-ra-shyúushy-e.*
 EXPL16-TNS-be.warm-ASP
 'It's warm.'

(34b) *Ha-ra-som-a umwáana.*
 EXPL16-TNS-read-ASP child1
 'It's the child who is reading.' (Kimenyi, 1980: 206)

I speculate that the principle which requires the presence of *ha-* in (34) also requires the spell-out of the pronominal copies in (32) and (33). A copy-spell-out approach along these lines therefore provides a possible solution to the problem raised by the compound tenses in Kinyarwanda.

Relative clauses

Another problem for Alternative 2 is raised by constructions in which the subject has been extracted. Compare the two relative clauses in (35) and (36) (cf. Kimenyi, 1980: 62):

(35a) *N-a-boon-ye umukoóbwa umuhuúngu y-a-haá-ye igitabo.*
 1stSG-TNS-see-ASP girl1 boy1 SM1-TNS/REL-give-ASP book7
 'I saw the girl to whom the boy gave a book.'

(35b) **N-a-boon-ye umukoóbwa umuhuúngu y-a-mu-haá-ye igitabo.*
 1stSG-TNS-see-ASP girl1 boy1 SM1-TNS/REL-OM1-give-ASP book7

- (36a) N-da-bón-a abagabo b-a-gáruts-e.
 1stSG-TNS-see-ASP man2 SM2-TNS/REL-come.back-ASP
 'I see the men who came back.'
- (36b) *N-da-bón-a abagabo a-gáruts-e.
 1stSG-TNS-see-ASP man2 TNS/REL-come.back-ASP

Example (35a) is an object relative clause. As (35b) shows, the relative operator corresponding to the object cannot be resumed by an object pronoun (in italics). However, the opposite behaviour is found in subject relative clauses. Example (36b) shows that the SM cannot be omitted in subject relatives. If the SM is analysed as a subject pronoun, then the data in (35) and (36) represent an asymmetry between object and subject relative clauses that needs to be explained by proponents of Alternative 2.

I can think of two possible explanations for (36a) which are compatible with Alternative 2. The first is based on the fact that the type of asymmetry exhibited in (35) and (36) is actually not at all unusual. It is well known that in many languages subject extraction, but not object extraction, requires the use of a resumptive pronoun in subject position. For example, Yoruba requires resumptive pronouns only in subject wh-questions (37c) (cf. Carstens, 1985):

- (37a) Ajike ñ ta isu ninu oja.
 Ajike ASP sell yams in market
 'Ajike is selling yams in the market.'
- (37b) *ki* ni Ajike ñ ta ninu oja?
 what FOC Ajike ASP sell in market
 'What is Ajike selling in the market?'
- (37c) *ta* ni *(ó) ñ ta isu?
 who FOC 3rdSG ASP sell yams
 'Who is selling yams in the market?' (Carstens, 1985: 39)

It is possible that the principle which causes the obligatory occurrence of the subject pronoun in (37c) is also operative in Kinyarwanda and requires the presence of a resumptive pronoun in subject relatives. According to Alternative 2, this resumptive pronoun is the SM *b(a)-* in (36a).

An alternative explanation of the contrast between (35) and (36) could make use of a recent proposal made in Schneider-Zioga (2007) for Kinande. Schneider-Zioga argues that the SMs in relative clauses in Kinande are *anti-agreement* markers and therefore different in nature from the SMs that occur in regular sentences. In this respect, it should be observed that the form of the SM of noun class 1 used in Kinyarwanda subject relatives is indeed different from the SM of noun class 1 used in regular clauses (compare *a-* in (38a) and *u-* in (38b)):

- (38a) Umugabo a-gii-ye ku kazi.
 man1 SM1-go-ASP to work
 'The man is going to work.'
- (38b) N-da-bón-a umugabo *u-*gii-ye ku kazi.
 1stSG-TNS-see-ASP man1 SM1REL-go-ASP to work
 'I see the man who is going to work.'

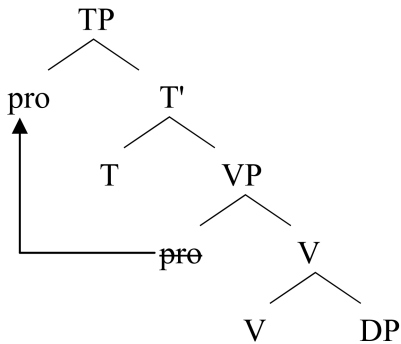
If Schneider-Zioga's proposal is adopted, then the SMs that appear in Kinyarwanda subject relatives would not have to be treated as subject pronouns, but as morphological 'anti-agreement' reflexes of an extracted subject relative operator.

To sum up: Alternative 2, the idea that the SM is the head of a syntactic DP (a pronoun or a determiner), can be adopted for Kinyarwanda, but it has a number of important consequences. First, Alternative 2 needs to be augmented with an analysis of sentences in which the SM co-occurs with a full subject DP. Second, Alternative 2 implies that negation in Kinyarwanda is also expressed syntactically, as the head of a functional projection higher than T. Finally, advocates of Alternative 2 have to find solutions to the problems raised by the occurrence of (multiple) SMs in compound tenses and subject relative clauses. Given these consequences, it is evident that a representation of Kinyarwanda sentence structure based on Alternative 2 is not quite as straightforward as the simple idea of treating the SM as a syntactic pronoun may initially suggest.

The *pro*-analysis

In my discussion of Alternative 1, I provided evidence that null subject constructions in Kinyarwanda include a *syntactic* element which functions as the subject pronoun. In the preceding section, I examined the implications of an analysis that assumes that this pronoun is the *SM* (Alternative 2). In this section, I now turn to another analysis that is compatible with the conclusion reached above, *viz.* the theory of (small) *pro* (cf. Chomsky, 1982; Rizzi, 1986). According to the *pro*-analysis, the subject θ -role in a null subject construction is assigned to *pro*, a pronominal DP with no phonetic content. Like any other subject DP, *pro* receives its subject θ -role inside VP and subsequently moves to [Spec, T]:

(39)

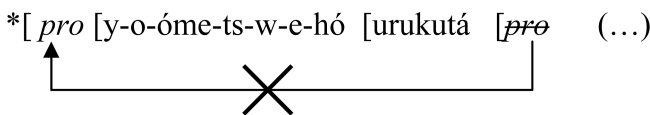


The *pro*-analysis of pronominal subjects is adopted in most generative (Chomskyan) theories of Bantu syntax (see recently Baker, 2003; Buell, 2005; Carstens, 2005; Henderson, 2007; Letsholo, 2004; Schneider-Zioga, 2007; Thwala, 2006). I henceforth refer to this approach as ‘Alternative 3’. According to Alternative 3, the *SM* in null subject constructions in Bantu languages is an inflectional affix that expresses agreement between the verb in T and the *pro*-subject in [Spec, T]; it can therefore be treated on a par with the *SM* in constructions with full subject DPs, which is also regarded as a simple agreement marker.

I have not been able to identify any empirical problems that would arise from adopting Alternative 3 for Kinyarwanda. Since Alternative 3 postulates the existence of a (zero) syntactic pronoun in null subject constructions, the ban on passivisation of pronominal direct objects in double object locatives discussed above can be explained in terms of locality constraints on NP/DP-movement. According to Alternative 3, the theme θ -role in the example in (15) (repeated here as (40)) is assigned to the pronominal DP *pro*. Example (40) is ungrammatical because *pro* has moved to [Spec, T] across the intervening indirect object DP *urukutá*, ‘wall’, violating the MLC:

(40) *Y-o-óme-ts-w-e-hó urukutá n’úmufuundi.
 SM6-TNS-stick-ASP-PASS-ASP-LOC wall11 by.builder1
 ‘They were stuck on the wall by the builder.’

(41)



Since there are no empirical arguments that militate against the *pro*-analysis, one might be tempted to regard Alternative 3 as superior to Alternative 2. On the one hand, both alternatives are compatible with the data discussed so far, but, as was discussed earlier, Alternative 2 faces some non-trivial problems that arise from the claim that the *SM* in Kinyarwanda is analysed as a pronoun. In contrast, Alternative 3 treats the *SM* as an agreement marker, and is therefore not affected by any of these problems. On the other hand, however, Alternative 3 is based on a theory which

postulates a phonetically unrealised pronominal element, an abstract, ‘invisible’ entity, for which there is no need in Alternative 2. Occam’s razor therefore cuts both ways: While Alternative 2 may require more additional assumptions to deal with certain implications of the analysis, the success of Alternative 3 depends on the stipulation that the Kinyarwanda lexicon includes a zero pronoun. The existence of zero elements is difficult to prove; moreover, it is hard to think of empirical evidence that would show that they do *not* exist, which makes the claim that they do exist non-testable. From an epistemological point of view, this could be interpreted as an argument against Alternative 3.

Moreover, Murphy (1997) and Van der Spuy (2001) show that adopting the *pro*-analysis for null subject constructions in the Bantu languages leads to other conceptual problems. According to Alternative 3, the SM in null subject constructions agrees with a *pro*-subject. Since there are different SMs for different noun classes, an analysis which treats the Bantu SM as an agreement marker must postulate a different *pro*-subject for each and every noun class. Kinyarwanda has at least one SM for each of its 16 noun classes, plus four personal pronouns (first and second person singular and plural). Alternative 3 therefore implies that the lexicon of Kinyarwanda includes at least 20 grammatically distinct *pro*-arguments, all of them phonetically zero.

Notice, however, that Murphy’s (1997) and Van der Spuy’s (2001) criticism is based on a particular view of how the agreement relation between a subject and the inflected verb (or rather, the SM in T) is established. According to this view, it is the subject’s inherent noun class features which specify, or *value*, the noun class features of T, which are subsequently pronounced as the corresponding SM on the verb. Since there are 20 different SMs, this variation can only be explained if there are also at least 20 different *pro*-subjects. There is, however, another way of thinking about agreement between a *pro*-subject and the SM in T. Instead of assuming that *pro* belongs to a particular noun class and determines the occurrence of the corresponding SM, one could argue that it is instead the SM which values the relevant noun class features of an underspecified *pro*. In fact, this is exactly the way the theory of *pro* was first conceptualised in the Government-Binding (GB) theory. According to Chomsky (1982) and Rizzi (1982, 1986), the grammatical features of *pro* are inherently unvalued; the content of *pro* is identified or ‘recovered’ by the rich agreement features of a local inflectional head. In other words, it is not the verb which agrees with *pro*; rather, the underspecified *pro*-subject agrees with the grammatical features of the inflected verb. According to this view, the lexicon of a Bantu language like Kinyarwanda would include only one single *pro*-element with unvalued noun class features, and it is the specific SM chosen from the lexicon which ultimately determines the noun class feature content of *pro* under agreement.

Such a GB-style implementation of Alternative 3 would solve the problem raised by Murphy (1997) and Van der Spuy (2001), but it is faced with a problem of a different sort. As discussed in Holmberg (2005), the assumption that the feature content of *pro* is identified by the grammatical features of T contradicts the current view held in the MP that only *interpretable* features have the capacity to value the (uninterpretable) features of another element under agreement (cf. Chomsky, 2000, and subsequent work). For example, in the MP, the uninterpretable case feature of a DP is valued by the interpretable tense-feature of T, while the uninterpretable person and number features of T are valued by the interpretable person and number features of the DP. But if the noun class features of T are uninterpretable, they cannot value the features of *pro*; rather, it must be *pro* (which bears a θ -role and therefore must be interpretable) which values the features of T. This, however, brings back the conceptual problem noted by Murphy and Van der Spuy.

The problem raised by the Minimalist view that only interpretable features can value uninterpretable features may strike the reader as a peripheral issue, since it arises only from a specific assumption internal to the MP. However, the MP is the framework adopted by most of the proponents of the *pro*-theory, and it is therefore worth drawing attention to those aspects of Alternative 3 which are not straightforwardly compatible with Minimalist principles. The idea that *pro* in Kinyarwanda is an inherently underspecified pronoun whose feature content is determined by the SM in T can only be incorporated into the MP if at least one of the following two consequences is accepted: either the feature content of an interpretable element such as *pro* may be valued by the features of an uninterpretable element like the SM in T, or the features of T/the SM are in fact interpretable.

Interestingly, the latter idea has been defended by Alexiadou and Anagnostopoulou (1998: 522) in their Minimalist analysis of Greek and Spanish. Alexiadou and Anagnostopoulou suggest that the agreement affixes associated with T in these languages ‘are independent, clitic-like pronominal elements’ and therefore interpretable.¹⁷ Since Greek and Spanish, like Kinyarwanda, are null subject languages, it is not implausible that this view can also be adopted for the SM in Kinyarwanda. If the SM associated with an inflected verb is treated as interpretable, then it is possible to account for null subject constructions in Kinyarwanda by postulating the existence of only one underspecified *pro*-element. The specific content of this zero pronoun would be determined by the interpretable features of T (realised by the SM), in accordance with standard Minimalist assumptions. Such an approach would avoid the problem raised by Murphy and Van der Spuy and therefore represent a conceptually attractive way of adopting Alternative 3 for an analysis of null subject constructions in Kinyarwanda.

Conclusion

In this paper I have compared and contrasted three alternative analyses of the SM in null subject constructions in Bantu. According to the first analysis (Alternative 1), the pronominal reading arises because the SM is itself a pronoun. It is added to the verb in the morphology, where it also receives the subject θ -role. The second analysis (Alternative 2) differs from the first in that the SM is treated as a syntactic pronoun; i.e. a DP which originates inside the VP, undergoes A-movement to [Spec, T], and then combines with the verb in T. Finally, according to the third analysis (Alternative 3), the SM is an agreement marker which agrees with a phonetically unrealised subject pronoun (*pro*) in null subject constructions.

In discussing the implications of these three analyses, I have focused specifically on the Bantu language Kinyarwanda. I have shown that in this language, syntactic locality conditions, which constrain NP/DP-movement to the subject position, also govern the derivation of sentences with pronominal subjects. This means that a pronominal subject is a syntactic constituent which, like full subject NPs/DPs, originates in the VP and moves to the subject position. Therefore, one major conclusion that I have drawn in this paper is that Alternative 1, which treats the SM as a morphological pronoun, does not represent a feasible analysis of the SM in Kinyarwanda.

In both Alternative 2 and Alternative 3, pronominal subjects are represented as syntactic constituents (the SM in Alternative 2; *pro* in Alternative 3). Therefore, both approaches can explain the locality facts that proved problematic for Alternative 1. I have discussed both alternatives in detail, highlighting the consequences and problematic aspects of each analysis. I concluded that both the *pro*-theory and the pronominal DP-analysis of the SM can in principle be adopted to explain the properties of the SM in Kinyarwanda, but I have remained agnostic about which of the two alternatives represents the more suitable account. My main intention was to show that a particular decision regarding the structural representation of the SM may have important consequences both for the representation of other, at first sight unrelated, aspects of grammar and for the conceptual design of the theory. In this sense, I hope that this paper has contributed to our understanding of the intricate conditions that govern the interplay of morphology and syntax in the Bantu languages.

Notes

- ¹ Morphemes are glossed as follows: APPL = applicative; ASP = aspect; ASS = associative; EXPL = expletive marker; INF = infinitive marker; LOC = locative marker; NEG = negation; NEUT = neuter passive; OM = object marker; PASS = passive; PRON = pronoun; REL = relative marker; SM = subject marker; TNS = tense; numbers = noun classes. Note that the tone marking of some of the examples adopted from Kimenyi (1980) has been corrected, and his glosses have been adjusted to the system used here.
- ² I use the term ‘null subject construction’ to distinguish sentences such as those in (2) from sentences with overt full subject noun phrases, such as those in (1).
- ³ I take the position of VP-internal subjects to be [Spec, V] and ignore the light verb *v* (which, according to standard Minimalist theories, is located between V and T and introduces the external argument in its specifier).

- ⁴ Bresnan & Mchombo (1987) are primarily concerned with the status of pronominal SMs in topic-pronoun constructions such as left and right dislocation, but their analysis of the SM as an incorporated pronoun also carries over to null subject constructions.
- ⁵ Mchombo (2004) also remains vague about the status of the SM in Chichewa. He notes that the SM belongs to a set of verbal prefixes which are ‘more oriented to syntactic aspects’ and concludes that ‘the issue of whether they are simple prefixes [...] may need to be addressed further’ (2004: 74).
- ⁶ The affixal SM can be analysed as combining with the verb either in a pre-syntactic word formation component, or post-syntactically, as the morphological spell-out of a set of grammatical features (Halle & Marantz, 1993). Alternatively, the SM can be regarded as an instantiation of the T-position, in which case the verb combines with it when it moves to T.
- ⁷ Locative constructions such as (10a) can be derivationally related to dative constructions such as (i), where the theme is the direct object and the location is expressed by means of a PP:
- (i) Umufuundi y-o-óme-tse amatáfaári ku rukutá.
 builder1 SM1-TNS-stick-ASP bricks on wall
 ‘The builder stuck bricks on the wall.’
- See Zeller and Ngoboka (2006) and Zeller (2006) for an analysis which derives (10a) from underlying constructions with an NP-PP syntax via preposition incorporation (cf. Baker, 1988).
- ⁸ In contrast, most other types of applicatives in Kinyarwanda allow passivisation of both the theme and the indirect object (see Kimenyi, 1980; Zeller & Ngoboka, 2006).
- ⁹ The argument from locality does not hinge on this particular representation of double object locative constructions in Kinyarwanda but is compatible with any representation in which the indirect object c-commands the direct object. The reader is referred to Zeller (2006) for arguments in favour of the representation in (11) and for technical details of an analysis of (10) in terms of the Minimal Link Condition.
- ¹⁰ There are different ways in which the combination of the SM and the verb stem can be derived from a structure such as (18a). Young assumes that the SM incorporates into the verb syntactically; alternatively, it could be assumed that the SM cliticises to the verb stem for phonological reasons or that the SM and the verb merge in a post-syntactic morphological component (cf. Halle & Marantz, 1993). I leave this point open.
- ¹¹ Baker’s proposal, which has recently influenced the analyses proposed by Miyagawa (2005), Young (2005) and Schneider-Zioga (2007), has its origins in the analysis of Warlpiri presented in Jelinek (1984). Jelinek suggests that in Warlpiri, all arguments of the verb are realised as clitics, while full phrasal nominals are treated as adjuncts. Baker (1996) elaborates this type of analysis for polysynthetic languages such as Mohawk and further develops it for Bantu in Baker (2003). The main difference between Baker’s (2003) analysis and the proposal outlined here is that Baker assumes that the subject pronoun in [Spec, T] is not the SM, but *pro* (cf. the next section). An earlier version of the idea that preverbal subject DPs in Bantu are dislocated adjuncts can be found in Kinyalolo (1991); the same idea has also been defended by Alexiadou & Anagnostopoulou (1998) for languages such as Greek and Spanish.
- ¹² In Baker’s (2003) theory, the pronoun in [Spec, T] turns the TP into a predicate, and the dislocated adjunct DP which binds the pronoun semantically functions as the argument of this predicate.
- ¹³ Interestingly, SOV-orders are impossible in Kinande (Baker, 2003: 115), a fact that forces Baker to assume that dislocated objects can only adjoin to the highest projection of the clause, i.e. CP. They therefore obligatorily precede topicalised subjects.
- ¹⁴ In Kinyarwanda, the logical subject can be realised as a wh-phrase when it remains inside the VP or when it appears in a cleft:
- (i) a. Haá-ko-ze ndé?
 EXPL16-work-ASP who1
 ‘Who worked?’
 b. Nii ndé w-a-kó-ze?
 be who1 SM1REL-TNS-work-ASP
 ‘It is who that worked?’

- ¹⁵ This conclusion has also been reached by Zwart (1997) for Swahili: 'the subject marker in Swahili is not an agreement prefix but a pronoun of some kind' (Zwart, 1997: 6).
- ¹⁶ The 'big' DP-analysis is compatible with the negation data in (31) only if it is assumed that after incorporation of its head, the remnant subject DP (= the 'big' DP minus the Sm) can be further dislocated to the left by adjoining to PolP.
- ¹⁷ For Alexiadou and Anagnostopoulou (1998), T in null subject languages needs to be interpretable in order for it to be capable of checking the EPP. If T can check the EPP in a language, according to their theory, [Spec, T] need not be realised in this language. Alexiadou and Anagnostopoulou mention an interesting consequence of their claim that the features of T are interpretable. They state that this 'opens the possibility of furthermore proposing that the AGR [agreement] affix counts as a theta-bearing argument in NSLs [null subject languages], replacing referential *pro*' (p. 531; my italics). In other words, Alexiadou and Anagnostopoulou acknowledge that in treating the inflectional morphology associated with T as interpretable, they come very close to a theory which assumes that the inflectional morphology *is* pronominal and that *pro* is therefore superfluous. Note that such a theory would essentially be equivalent to Alternative 1, the analysis of the Sm that I discussed earlier in this paper. However, as I showed above, Alternative 1 cannot be adopted for Kinyarwanda.

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