1. Introduction

In many languages the agreement relation between an argument and a verb is suppressed or altered when the argument is extracted. These so-called anti-agreement effects (AAEs) have been discussed for Berber, Breton, Irish, Turkish, Italian dialects, and other languages as well (see Ouhalla 1993, among others). Recently, Scheider-Zioga (2000, 2002, 2007) and Cheng (2006) have discussed AAE in Bantu languages. In some Bantu languages, AAE occurs in the context of subject extraction: the subject agreement marker that normally occurs in an SVO sentence is replaced by a different marker that appears only when the subject has been extracted. An example from Kinande, taken from Schneider-Zioga’s work, appears in (1). In (1a) the canonical agreement marker /a-/? is prefixed to the verb. In (1b), however, the subject has been extracted and the /a-/? marker is replaced by a different marker, /u-/. (1c) shows that the canonical marker is impossible in this context:

(1)  a. Kambale a-langIra Marya  
     Kambale 3SG-saw Mary
     ‘Kambale saw Mary.’

   b. IyOndI yO u-langIra Marya
     IREL AAE-saw Mary
     ‘It is who that saw Mary?’

   c. *IyOndI yO a-langIra Marya
     IREL 3SG-saw Mary

In this paper, I will examine the morphosyntactic properties of Bantu AAE in detail, arguing that the facts of Bantu AAE suggest a particular analysis for this phenomenon that is compatible with certain general proposals about the nature of extraction and agreement as put forth in works like Richards (2001) and Boeckx (2003). I will also argue that the Bantu facts suggest that AAE does not involve reference to phi-features generally, but to the feature [person] specifically.

2. Previous Accounts

Recently, both Cheng (2006) and Schendier-Zioga (2007) have offered explicit accounts for AAE in Bantu. I briefly discuss them here.


Cheng (2006) begins with observations about the difference between object and subject relative clauses in Bemba. While relativized objects are followed by a relative marker that is identical to a full demonstrative (2b), relativized subjects are followed by the verb which carries a prefixed relative marker as well as an anti-agreement marker (2c).

(2)  a. umulumendo a-ka-belenga ibuku  
     Bemba
     1boy 3SG-FUT-read 5book
     ‘The boy will read the book.’

b. ibuku ilyo umulumendo a-ka-belenga
   book REL 1boy 3SG-FUT-read
   ‘the book that the boy will read’

c. umulumendo ú-u-ka-belenga ibuku
   boy REL-AAE-FUT-read book
   ‘the boy who will read the book’

Cheng argues that the prefixed relative marker in subject relatives is equivalent to the full demonstrative in object relatives, the former being reduced for phonological reasons. Both, she argues, are spell-outs of a copy-trace of the relativized NP as it moves through SpecCP on its way to its final position. This reduced copy spell-out is required due to the fact that both copies are in the CP domain, making them too local in the sense of Grohmann (2000). Cheng adopts Grohmann’s proposal that such anti-locality violations can be repaired so long as both copies are spelled-out. A derivation for the Bemba object relative in (2b) appears in (3):

(3) [DP [CP ibuku [CP ibuku [IP umulumendo ...V ... ]]]
   ↓ ibuku ilyo umulumendo…..

As for anti-agreement, Cheng also assumes that SpecIP is a part of the same domain as at least the lowest specifier of CP. By the same logic above, Cheng argues that the AAE marker, like the relative marker, is a spell-out copy of the relativized NP:

(4) [DP [CP umulumendo [CP umulumendo [IP umulumendo ...V ... ]]]
   ↓ ↓ umulumendo u- u- kabelenga…

There are questions with Cheng’s account with regard to the ontological status of the AAE she assumes. As the spell-out of a copy of the relativized NP, the AAE morpheme must have a pronominal status in Cheng’s system. Since it is replacing canonical subject agreement, the latter must also be pronominal. Two problems follow from these assumptions. First, it is unclear why two pronouns referencing the same class of nouns (the AAE and canonical agreement morphemes) should differ in shape. That is, if what one needs to rescue the derivation is a subject-oriented pronoun, why not use the canonical one? Second, since Cheng’s account relies on copy-spell out repairing anti-locality violations, it is not clear how this account can be extended to anti-agreement phenomena in other languages such as Berber or Trentino (see Ouhalla 1993) in which there is no distinct morpheme that can be identified as a minimal copy-spell out pronominal. There is, rather, only lack of agreement morphology (or partial agreement morphology) on the verb. It does not seem likely that a copy spell-out approach to AAE could be extended to these languages.

2.2. Schneider-Zioga (2007)

At the core of Schneider-Zioga’s (2007; henceforth S-Z) analysis of Bantu AAE (some details of which are omitted here for brevity), is an understanding of AAE as a last resort strategy employed to avoid violations of minimality and anti-locality. S-Z begins with the argument that in Kinanade, subjects in non-extracted contexts reside in the CP domain by default. Evidence for this conclusion comes from the fact that subjects in canonical SVO sentences cannot be interpreted as indefinites or NPIs, a characteristic of left-peripheral topics.

(5) *(o)-mukali si-a-nzire Yohani
    AUG-woman NEG-3SG-like Yohani
Interestingly, Schneider-Zioga shows that subjects can appear in the more canonical SpecIP position just in case some other argument has been extracted into the CP domain. The subject in (6), for instance, can be interpreted as an NPI or as an indefinite NP, suggesting it is IP-internal.

(6) ekihi kyo mukali sy-a-ngahuka
what FOC woman NEG-3SG-cook
‘What didn’t any woman cook?’

Schneider-Zioga argues that the reason the subject in (6) is merged IP-internally is due to minimality: if the subject in (6) resided in the CP domain, another argument raising to a higher CP domain position would be required to skip a potential A-bar position, a minimality violation. This is illustrated in (7) using S-Z’s category labels. She argues that in these cases subjects are merged in SpecVP and subsequently move to SpecIP, thereby preemptively avoiding such a violation.

(7) [Force [Top1 [FocusP FOC [Top2 subject [FinP [IP…object[+Foc]…]]]]]]

In the case of subject extraction, S-Z argues that subjects are also merged IP-internally, though for a different reason, namely, anti-locality. S-Z notes that if the subject were present in the CP domain (in SpecTop2P, as in (7)) and then extracted to a higher position in the CP domain (SpecFocP), this would result in an anti-locality violation under Grohmann’s (2000) definition. Rather than accepting that such violations are repaired by copy spell-out as Cheng does, however, S-Z argues that the grammar conspires to avoid such violations; therefore, in cases of subject extraction, the subject is merged in SpecVP rather than in the CP domain. From SpecVP, it raises to SpecIP and then is extracted to the CP domain, never encountering an anti-locality violation.1

This understanding of how Kinande avoids minimality and anti-locality violations in extraction contexts sets the stage for S-Z’s account of AAE. Following Zubizarretta (2000), S-Z assumes that the head of the phrase containing the base-generated subject (the lower TopP in S-Z’s system) contains uninterpretable phi-features that must be morphologically identified and checked. This occurs via an agreement relationship with phi-features of the agreement morpheme associated with the verb. This is illustrated in (8):

(8) [TopicP DP [ Top[-int Φ] [IP pro [ [ agr + V]]]]]

In AAE, this identification fails since S-Z assumes that the AAE morpheme (unlike agr in (8)) lacks phi-features. Thus, AAE is incompatible with base-generation of the subject in S-Z’s system. Thus, when the AAE morpheme is associated with the verb, the subject is required to be merged IP- or VP-internally.

The account of AAE which I outline below is partially compatible with S-Z’s account of Bantu AAE, in particular regarding her conclusions concerning anti-locality and its role in forcing subjects to be merged thematically rather than being base-generated. Important differences arise, however, concerning the ontological status of AAE. S-Z takes AAE to reflect a lack of phi-features; however, I demonstrate below that AAE morphemes themselves reflect agreement relations with other elements in the structure, suggesting that they are not the instantiation of a lack of phi-features, but rather of a set of values for phi-features distinct from those of canonical subject-verb agreement.

3. The Morphosyntax of Bantu AAE

In this section, I would like to draw attention to some little-discussed facts about the morphosyntax of AAE in Bantu. The first generalization concerns the relative marker in Bantu subject relatives. As in the Bemba example above, many Bantu languages employ such a marker that prefixes to the verb form in subject relatives. What often is not noted is that this marker is typically identical to

1 For a fuller and more general discussion of these two views of anti-locality, see Boeckx and Henderson (2007).
the augment vowel of the relativized NP in languages that have them. In the Luganda and Bemba data below, one can see the two markers co-vary.

(9) a. Ekitabo e-ki-yulise
   7book REL-7AGR-torn (Walusimbi 1996)
   ‘the book that is torn’

b. Akambe a-ka-meyeyse
   12knife REL-12AGR-broken
   ‘the knife that is broken’

c. Abasajja a-ba-kola
   2men REL-3PL-work
   ‘the men who are working’

(10) a. umulumendo ú-u-ka-belenga ibuku
     AUG-1boy 1REL-1SM-FUT-read 5book
     ‘the boy who will read the book’

b. abalumendo a-ba-kabelenga ibuku
   2people REL-3PL-FUT-read book
   ‘The people who will read the book’

c. itabu i-li-a-kon-we-ke
   5table REL-5SA-break-PASS-STAT
   ‘the table that was broken’

In the languages that have them, the function of the augment vowel is to encode aspects of referentiality such as definiteness or specificity. I propose that the morphological identity of the relative marker and the augment vowel in these languages reflects an agreement relation between the valued referential features of the relativized NP and a set of unvalued referential features in C, the functional head in which the relative marker resides. In (11), an unvalued definiteness feature [-def] in C is checked/valued by a valued [def] feature on the relativized NP. The former feature is spelled-out as the relative prefix in relatives like (10), in most cases matching the augment.

(11) CP AGREE
    NP
    tNP
    C
    TP

The second fact I would like to discuss here is that in languages with morphologically distinct relative marker prefixes and AAE morphemes, these morphemes also tend to be phonologically identical (and therefore identical with the augment of the third person singular class 1 NPs in the
This can be difficult to see since often the vowels are adjacent and collapse phonologically. This is the case in the Bemba example above, repeated here, in which the first two morphemes of the verb form would be pronounced as a single long vowel:

\[(12)\] umulumendo ú-u-ka-belenga ibuku Bemba
1boy 1REL-AAE-FUT-read 5book
‘the boy who will read the book’

The generalization is easier to see in Dzamba. In this Bantu language, the negative morpheme intervenes between the relative marker and subject agreement in subject relatives (data from Bokamba 1976):

\[(13)\] I-zibata i-ta-zi-komelaki iloso Dzamba
AUG-5duck REL-NEG-5SA-ate rice
‘the duck that didn’t eat the rice’

As in Bemba and Kinande, an AAE occurs with third singular class 1 NPs. In (14) one can see that the relative morpheme and the AAE morpheme are morphologically distinct. Both are identical and are identical to the augment vowel of the relativized NP.

\[(14)\] O-mwanda ó-ta-ò-nyoloki ondaku a-utaki Bomai
AUG-person REL-NEG-AAE-enter house 3SG-come.from Bomai
‘the person who didn’t enter the house came from Bomai.’

Like the relation between the augment vowel and the relative marker, I propose that the identity requirement between the relative marker and the AAE morpheme also reflects an Agree relation. I suggest that this is a relation between the definiteness features in C (valued by their Agree relation with the relativized NP) and the phi-features in T. This is illustrated in (15):

\[(15)\]

\[\text{Given this analysis, two chief questions arise. First, though the morphological details of AAE in Bantu suggests the analysis in (15), it does not suggest an explanation for why AAE occurs in the first place. What is it about the configuration of subject extraction that requires an Agree relation between}\]

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2 While I take the co-variation of the morphological identity of the AAE, augment, and REL morphemes to reflect Agree relations in this account, this does not entail that these three morphemes will be morphologically identical in every language since morphology does not always so directly reflect syntax. It simply means that such correlations should be seen in some languages. One language where there is not always a match-up is Kinande as the data in (i) demonstrates. Here the augment and the AAE morpheme are not identical.

\[(i)\] o-mukali oyo u-anzire Kambale
AUG-woman that AAE-likes Kambale
‘the/a woman that likes Kambale’
(Schneider-Zioga 2007)
C and T? I address this in section 4. A second question arises regarding the exact nature of the Agree relation between the features of C and phi-features in T. I return to this question in section 5 below.3

4. Explaining AAE

Richards (2001) proposes that movement chains may only contain one strong position. A strong position is defined as a position to which an element moves in association with feature checking. In Bantu, it is generally accepted that the checking of phi-features (agreement) requires movement, resulting in a spec-head relation (Kinyalolo 1991, Carstens 2001). In Richards’ terms, then, SpecTP is a strong position in Bantu.

Accepting this view, subject extraction presents a difficulty since it requires an XP to move from one strong position (SpecTP) to another (SpecCP). The result would be a movement chain with two strong positions, an impossible syntactic object in Richards’ system. Considering similar structural situations, Boeckx (2003) argues that there are two ways to ‘rescue’ a chain with more than one strong position. One way is to split the moving element up amongst the strong positions (resumption). The other is to establish an Agree relation between the heads that define the two strong positions. This latter option allows the two strong positions to count as one for computational purposes.4

I propose that this is precisely what is occurring in the context of AAE. Subject extraction from SpecTP to SpecCP in Bantu would result in a movement chain with two strong positions. The computational system overcomes this problem by establishing an Agree relation between the heads that define the two positions, namely C and T. AAE is a side effect of this Agree relation, resulting in the phi-features of T being valued by the [def] feature of C, itself valued by its Agree relation with the extracted subject NP.

5. Anti-Agreement is Anti-[person]

Finally, I would like to address a third interesting fact that Bantu languages bring to the general discussion of AAEs. As discussed by Ouhalla (1993), AAE in languages such as Berber, Breton, and some Italian dialects results in a verb that is marked for third person singular, no matter the person and number feature content of the extracted subject. A result of this is that AAE cannot be detected when the extracted subject is third person singular. In Bantu, however nearly the opposite is true: AAE is only detectable with third singular subjects that are in noun class 1 (the human class). Plural subjects and third singular subjects from other noun classes do not appear to trigger AAE when extracted. This can be seen for a plural human subject in (16a) and a third person singular noun from non-human noun class in (16b). Both examples display canonical subject-verb agreement markers.

3 A reviewer notes that the literature is replete with claims for C-T agreement relations in a variety of syntactic contexts and asks why, in the present account, this relation only holds in cases of subject extraction. In particular, why do we not get AAE in cases of object extraction? One possible answer is that the computational system prefers to check all of the uninterpretable features of a head in a uniform fashion where possible. This would provide an adequate account if we assume, traditionally, that C in (15) contains, in addition to its phi-features, a strong feature [REL] that is responsible for A-bar movement of the relativized NP. In that case, the fact that we do not get AAE in cases of object extraction reflects the fact that C seeks to check both its [REL] feature and phi-features against the same element, namely the extracted object NP. This does not rule out, however, that some sort of C-T Agree relation still exists in such structures (say, for selection purposes); it only dictates that this relation will not involve sets of features which could be checked together. Clearly the full typology and mechanics of C-T relations argued for in the literature requires future work.

4 Boeckx argues that the C-T Agree strategy is preferred for subject extraction while the resumption strategy is preferred for object extraction. This follows simply from the proximity of the relevant heads involved. In the case of subject extraction in languages in which C selects T, a C-T Agree relation is virtually guaranteed and may even be viewed as a side effect of selection itself. In object extraction cases, there is a greater chance that material intervening between the relevant heads will make an Agree strategy impossible, leaving only resumption as an option. Of course, it is possible that material could intervene between C and T in some languages and that no relevant material might intervene between C and a head agreeing with an object, making subject resumption and C-v Agree strategies possible, but less likely.
Ouhalla (1993) proposes that the third person singular form of the verb often arises in AAE contexts due to the fact that in these languages third singular is the ‘default’ form of the verb. More technically, the third person singular form of the verb does not require an underlying set of phi-features. Therefore, in the AAE contexts when phi-features are suppressed, the third singular form arises. The Bantu facts obviously provide a challenge to Ouhalla’s conclusion. Nevertheless, I propose that both sets of facts can be accounted for if AAE is understood not to target phi-features generally, but the feature [person] specifically. Other phi-features, [gender] (or [class] as in the Bantu case) and [number], are unaffected by the C-T relation posited to be behind AAE.

In addition to providing an account for the fact that Bantu AAE targets class 1 NPs only (in a way to be specified below), this proposal also provides an understanding of the C-T Agree relation proposed above. Recall that in this relation, a valued [def] feature of C Agrees with phi-features in T. One problem with this assumption is that it is standardly assumed that in order to undergo an Agree relation, features must be of the same type. The proposal that AAE targets [person] specifically, however, provides a solution to this problem if the [def] and [person] are taken to be labels for the same kind of feature. Interestingly, there have been a number of proposals in the literature recently that suggest that these two features should be considered equivalent in the syntactic computation (see, for example, Longobardi 2005, Alexiadou 2006).

Accepting this, the proposal that the C-T Agree relation underlying AAE is a relation between [def] and [person] alone accounts for the Bantu facts if one assumes a distributed morphology framework of late lexical insertion. In such a framework, phonological information is not present in the syntax. Rather, syntactic computation only manipulates formal features. Phonological forms, including agreement morphemes, are understood as vocabulary items (VIs) that are inserted after the syntactic computation has taken place based upon their feature specifications. Crucially, VIs may be underspecified for the bundles of morphosyntactic features that they represent (Halle and Marantz 1994). I illustrate below.

Returning to the facts, unlike the languages discussed by Ouhalla (1993), Bantu languages have an articulated noun class system in which third person nouns are distributed amongst what is typically a dozen or so noun classes. These noun classes are defined by corresponding subject agreement affixes. Since all of the nouns are third person, the VIs for the subject agreement affixes associated with each noun class need not be specified for the feature [person]; rather, they need only be specified for a value of the feature [class]; agreement VIs for plural noun classes will also be specified for the feature [plural]. I provide the VI feature correspondences for Bemba below.

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The VI list in (17) explains why AAE does not appear with NPs from noun classes other than class 1. Since the agreement VIs for these noun classes are not specified for [person], the C-T Agree relation that targets [person] in subject extraction will not affect their insertion. Whether the [person] feature of T is valued by the subject, by C, or eliminated altogether, these VIs will be inserted the same.

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5 Ouhalla (2005) also makes the claim that AAE references [person] specifically, based partially upon the fact that in some dialects of Berber subject extraction suppresses person agreement, but leaves number agreement intact.
Unlike these noun classes, however, I assume that the feature [class] is not relevant for the agreement VIs of nouns from class 1 (third singular human NPs) and class 2 (third singular plural NPs). Rather, I propose that the agreement VIs for these classes are specified for [person] and [plural].

(18) Class 1/2 /á-/ ↔ [person 3] /bá-/ ↔ [person 3], [plural]

Recall that AAEs show up with singular NPs from this class (traditionally called class 1), but not with plural NPs (traditionally called class 2). Let us consider the latter first. In the proposed analysis, the C-T Agree relation that occurs in the context of subject extraction values the [person] feature of T with the [def] value of C, a valuation that is possible because [person] and [def] are merely different labels for the same feature. In the case of class 2 NPs, therefore, T will not have the exact feature specifications as the VI for the class 2 subject agreement morpheme. However, as Halle and Marantz (1994) discuss, an exact feature match is not required for lexical insertion to take place. Rather, the inserted VI need only be the VI that is most closely specified to the feature set. In the case of third person plural subject agreement in Bemba, there is no other candidate that is also specified for some value of the [def/person] feature as well as the feature [plural]. Therefore, despite the feature value mismatch, /bá/ is still inserted.

For class 1 NPs, however, things are different. Here the VI makes reference to a value for the feature [person] only. In subject extraction contexts, this feature will again be valued by the [def] feature of C. Unlike with class 2 NPs, at the point of lexical insertion there is a VI that is specified for this exact value, namely the morpheme that functions as the augment and relative prefix for class 1 NPs. Therefore, it is this VI that is inserted in the subject agreement position rather than the canonical class 1 subject agreement marker.

In summary, the seemingly contradictory sets of AAE facts from Bantu and the languages discussed in Ouhalla can both be taken to fall under the conclusions of Ouhalla (2005) that AAEs involve the feature [person] rather than phi-feature generally. Differences in the distribution of AAEs between the two groups of languages can be understood as differences in the specifications of the VIs involved in their respective agreement paradigms. These differences are motivated by the very different noun class and agreement systems employed by these languages.

6. Conclusions

In this paper, I have reviewed the details of AAE in Bantu, demonstrating that the shape of AAE morphology reflects agreement with the augment vowel of the relativized NP. I proposed that this is the result of an agreement relation between C and T that takes place in the context of subject extraction for reasons having to do with chain interpretability. I have also suggested that the fact that AAE is limited to class 1 third person singular subjects while in other languages it is limited to non-third person singular subjects reflects differing conditions on morphological spell-out rather than deep differences between AAE phenomena.

References


While the Bantu facts are in sync with Ouhalla’s conclusions about [person] being responsible for AAEs, it is not clear that they support Ouhalla’s broader conclusions concerning the impact AAE has on the categorical status of AAE-bearing verbs. Briefly, Ouhalla understands AAE in Berber to essentially convert the (un)agreed with verb into a nominal form due to its deleted [person] feature. This is quite a different proposal from those considered here in which [person] features are not deleted, but simply re-valued. Regarding Ouhalla’s conclusions, I would point out that unlike the Berber cases, AAE-bearing verbs in Bantu do not resemble participles or nominal forms. In the present system, one possible alternative to Ouhalla’s conclusions might be that the definite valuation of the [person] feature in T is responsible for the nominal-like character of the AAE-bearing verb in Berber. Such considerations are beyond the scope of this paper.

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