

3

Wh-agreement and bounded unbounded movement*

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3.1 Unbounded dependencies: overview

The classical view of movement (see Chomsky 1977) is that it: (a) leaves a gap; (b) is prevented by islands/minimality; and (c) is subject to reconstruction. Displacement lacking these properties has been analyzed as base-generated displacement. A leading idea concerning movement that is unbounded is that it actually proceeds in a successive series of short, local steps.

The phenomenon of wh-agreement has been taken as strong empirical evidence for successive cyclic movement (Chung 1982: 39–77, McCloskey 1979). This is because when wh-agreement occurs, a morphophonological reflex is registered on every clause along the path of a long distance dependency, as if movement had proceeded in a series of smaller steps. The phenomenon is illustrated in (1) for Kinande, a Bantu language. The complementizer *kyo*, which agrees in class with a displaced wh- or focused word, marks the dependency in each clause between the displaced word and the position to which it is thematically related:

- (1) [*ekihi kyo Kambale asi [nga kyo Yosefu*
 what **wh-agr** K know comp **wh-agr** Y
 akalengekanaya [nga kyo Mary' akahuka __]]
 thinks comp **wh-agr** M cooks
 'What did Kambale know that Yosefu thinks that Mary is cooking (for
 dinner)?'

I will establish that, contra initial appearances, Kinande has no successive cyclic movement. Instead, resumption is required to accomplish long distance

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displacement. I discuss the economy implications of resumption under this condition. Finally, this view suggests that minimalism must consider the possibility of base-generating multiple resumptive copies, which, as noted by an anonymous reviewer, poses the non-trivial question of how the relevant links emerge.

3.2 Distribution of wh-agreement

In this section, I will establish the distribution of wh-agreement. The examples in (2a and b) illustrate local displacement of a wh-expression. Note that a lexical item glossed *wh-agr* (wh-agreement) immediately follows the wh-expression and agrees in class with it. The wh-expression in (2a) is a member of class seven and the wh-expression in (2b) is a member of class one.

- (2) a. [*Ekih_i* *kyo_j* *Kambale alangira e_j*]
 What_{*j*} *wh-agr_j* K saw
 ‘What did Kambale see?’
 b. [*Iyondi_j* *yo_j* *Kambale alangira e_j*]
 who_{*j*} *wh-agr_j* K saw
 ‘Who did Kambale see?’

The following examples illustrate the distribution of wh-agreement when displacement is long distance: wh-agreement occurs in every clause along the path of the displacement. In (3), the displaced wh-expression is interpreted as the object of the verb in the most deeply embedded clause and we see that wh-agreement occurs in the embedded clause, the intermediate clause, and the matrix clause:

- (3) [*ekih_i* *kyo* *Kambale asi* [*nga* *kyo* *Yosefu*
 what *wh-agr* K know comp *wh-agr* Y
 akalengekanaya [*nga* *kyo* *Mary’ akahuka* __]]]
 thinks comp *wh-agr* M cooks
 ‘What did Kambale know that Yosefu thinks that Mary is cooking (for dinner)?’

Not only can wh-agreement occur, it *must* occur in every clause between the site of extraction/most deeply embedded wh-agreement morpheme and the site of phonological location of the wh-word. The example in (4a) indicates that it is not possible to have a wh-agreement particle in the most embedded clause and in the intermediate clause, but not also in the matrix clause. (4b) establishes that it is also not possible to have a wh-agreement particle in the most embedded and the most superordinate clause, without also having a wh-agreement particle in the intermediate clause:

- (4) a. [ekihi *(*kyo*) Kambale asi [nga *kyo* Yosefu
 what **wh-agr** K knows comp **wh-agr** Y
akalengekanaya [nga *kyo* Mary' akahuka ____]]]
 thinks comp **wh-agr** M cooks
 'What did Kambale know that Yosefu thinks that Mary is cooking
 (for dinner)?'
- b. [ekihi *kyo* Kambale asi [nga *(*kyo*) Yosefu
 what **wh-agr** K knows comp (**wh-agr**) Y
akalengekanaya [nga *kyo* Mary' akahuka]]
 thinks comp **wh-agr** M cooks
 'What did Kambale know that Yosefu thinks that Mary is cooking
 (for dinner)?'
- c. *[ekihi Kambale asi [Yosefu ng¹ 'akalengekanaya [nga
 what K knows Y comp'thinks comp
 (*kyo*) Mary'akahuka]]]
 (**wh-agr**) M'cooks
 'What did Kambale know that Yosefu thinks that Mary is cooking
 (for dinner)?'

Complementizers do not have these properties. They do not generally occur immediately following a displaced *wh*-word. They do not need to occur in every clause along the path of extraction. These generalizations are illustrated in (5a and b)

- (5) a. I know who **that** left.
 b. What do you think (**that**) Bill said (**that**) Mary read?

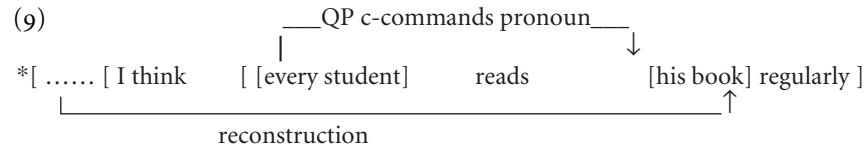
Wh-movement, as indicated by *wh*-agreement, appears to proceed in very short steps. Is this step-by-step intermediate movement feature-driven on every cycle such that the agreeing complementizer is a reflex of feature checking of the chain involving the displaced expression? The answer proposed here will be "no".

3.3 Movement

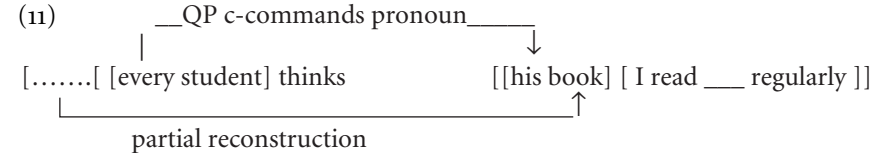
The *wh*-agreement facts seem to indicate that movement in Kinande proceeds in a series of cyclic steps, marked by the appearance of a *wh*-agreement particle in every clause involved in a dependency. However, the syntactic evidence I examine next indicates that there is no long distance movement of a

¹ The complementizer *nga* is a clitic and thus is found in several different positions with respect to agreement morphemes in the sentence. See Schneider-Zioga (2007) for discussion.

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- (9)
- 
- *[..... [I think [[every student] reads [his book] regularly]]]
- reconstruction

In the literature on reconstruction, it has been observed that reconstruction can be partial. That is, reconstruction can be to a point midway between the putative extraction site and the phonological location of the displaced expression. To test this possibility, a QP would need to occur in the superordinate clause. This is so that reconstruction to an intermediate position would still put the pronoun contained within the partially reconstructed expression in the c-command domain of a QP which could then bind the pronoun. However, not even partial reconstruction is possible in Kinande. This impossibility is illustrated below in (10) and schematically in (11):

- (10) *ekitabu kiwe_{k/*j} kyo [obuli mukolo]_j alengekanaya [c_p nga*
 book his *wh-agr* every student think comp
kyo nganasoma ____ kangikangi]
wh-agr I:read regularly
 ‘(It is) His_{k/*j} book that [every student]_j thinks I read regularly.’
- (11)
- 
- [..... [[every student] thinks [[his book] [I read ____ regularly]]]
- partial reconstruction

The fact that partial reconstruction is not grammatical also rules out another possible analysis of long distance displacement. Namely, it has been observed in the literature that in some languages and/or under some circumstances an expression that is displaced long distance doesn't originate in an embedded argument position. Instead, it originates on the left edge of the embedded clause, perhaps in some type of predication structure (see, for example, Iatridou 1990), and, from the position on the embedded left edge, could move into the left edge of a superordinate clause. If this configuration occurred, it would mean that reconstruction would not be possible to argument position of the embedded clause. This is because the displaced position did not originate in the embedded argument position. However, reconstruction would be possible to the left edge of the embedded clause, since this is the original site of the displaced position. Under this circumstance, reconstruction of expressions displaced long distance would appear to be possible only if partial reconstruction is considered. Since a partial reconstruction interpretation is not possible

in Kinande, we can confirm that the displaced expression does not seem to undergo movement at all, not even from a non-argument position.

The classical view of reconstruction under the copy theory of movement is to tie it to movement, and hence to properties of opaque versus transparent domains. However, the above contrast (local displacement allowing reconstruction, long distance displacement forbidding it) does not depend on any standard notion of *island*. This need not compel us to reject the classical view of reconstruction as long as we interpret this as a problem for successive cyclic movement. That is, given the classical view of reconstruction, there appears to be no successive cyclic A'-movement in Kinande.

3.3.2 *Evidence from superiority effects*

As pointed out by an anonymous reviewer, superiority effects in multiple wh-questions should be able to provide consolidating evidence bearing on the existence of movement in Kinande: superiority effects are generally attributed to some type of requirement that movement be as short as possible. In Kinande, superiority effects are not exhibited when clausemate wh-words in a single clause are involved, so that the Kinande equivalent of *what does who like* is grammatical with a distributed interpretation (see Schneider-Zioga (2007) for discussion):³

- (12) *Ekihi kyo ndi alangira*
 what wh-agr who saw
 ‘Who saw what?’

In this way, Kinande is like German, Polish, or Spanish, as reported in the relevant literature (see, for example, Fanselow 2004). In fact, superiority effects between clausemate wh-words in the same clause are not observed in a number of languages that clearly have movement. Therefore, the fact that superiority effects do not emerge in Kinande when clausemate wh-words are involved in a single clause is rather equivocal. In any case, it doesn't contradict the reconstruction data that has been presented in support of local A'-movement occurring.

However, in Kinande, superiority effects also do not arise when the superior wh-word is in a different clause from the inferior wh-word. In this, it seems

³ A distributed interpretation is also possible if the subject is moved, and the object left in situ. Note the different morphology on the ex-situ wh-words and the presence of wh-agreement, confirming that the subject has indeed moved under these circumstances:

- (i) *iyondi yo walangira ki*
 who wh-agr saw what
 ‘Who saw what?’

Kinande distinguishes itself from the languages previously mentioned. The following example illustrates a non-clausemate superiority configuration in Kinande; the interpretation is that of a distributed question:

- (13) *ekihi kyo ndi anasi nga kyo Josefu abula*
 what wh-agr who know if wh-agr Joseph bought
 ‘Who knows if Joseph bought what?’ (Literally: ‘What does who know if Joseph bought?’)

The fact that Kinande is impervious to superiority effects in cases of non-clausemate wh-words can be accounted for if long distance wh-displacement does not involve actual movement across a superior wh-word.

3.3.3 *Cyclic A-movement is also impossible*

In this section, I will establish that no type of cyclic movement appears to be possible in Kinande: long distance A-movement is also ungrammatical. However, in parallel to the observation that local A'-movement is possible, local A-movement is also grammatical. Sentence (14a) illustrates a mono-clausal active sentence and (14b) illustrates its corresponding passive. Note that *abakali*, the logical and grammatical subject in (14a), is expressed as the object of a preposition in the passive (14b). Note further that the logical object is now expressed as the grammatical subject in (14b), with the subject/verb agreement reflecting the grammatical subjecthood of the logical object.

- (14) a. *abakali bahuka ebikene*
 women agr:cooked yams
 ‘The women cooked the yams.’
 b. *ebikene byahuka-wa na bakali.*
 yams agr:cooked-pass with women
 ‘The yams were cooked by women.’

Consider now subject raising, a long distance A-displacement. The example in (15) illustrates a non-raised counterpart of the subject raising sentences we will subsequently consider in (16a and b):

- (15) *ali-[nga omulume ananzire ekitabu]*
 agr:is-if man likes book
 ‘It seems that the man likes the book.’

The putative subject raising cases do not look like typical subject raising because the putatively raised subject agrees with the verbs of the subordinate and superordinate clauses.

- (16) a. *Omulum* *a-kavya* [*ng'a-nanzire ekitabu*]
 man agr-is if'agr-likes book
 'The man seems to like the book.'
- b. *abalume ba-kavya* [*nga ba-nanzire ekitabu*]
 men agr-is if agr-like book
 'The men seem to like the book.'

It has been reported in the literature that some languages have raising out of agreeing subjunctive clauses (see Boeckx 2003 for a recent overview). Therefore, the presence of agreement on the verb of every clause along the path of the A-dependency cannot in itself be enough to support the claim that there is no cyclic A-movement. The following data however provide conclusive evidence that movement does not occur in the putative raising constructions in Kinande. In these examples we see all sorts of well-established constraints on movement flagrantly violated. In (17) we see an example of an object "raised" across the subject of the embedded clause and enter into agreement with the superordinate verb. In (18) we see a grammatical example of "super-raising": the subject of the most deeply embedded clause is "raised" across the subject of an intermediate clause:

- (17) *ekitabu_j ki-kavya* [_{subject}*Omulum*_j] *ng'ana-ky-anzire ______j*]
 book agr-is man if' he:object_clitic.likes
 Lit: 'The book seems as if the man likes it.'
- (18) *omulum_j a-kavya* [_{subject}*Marya*_j] *ng'akalengekanaya* [*ng' ______j*]
 man agr-is M if'agr:thinks if'
*anzire ekitabu*_j
 agr:likes book
 'The man seems as if Mary thinks he likes the book.'

This is not a problem for these typical diagnostics of movement provided we conclude that movement is simply not involved in these constructions. It seems more plausible to analyze these as a kind of tough movement construction. Note that in (17) the displaced object is actually resumed by a clitic in the subordinate clause. I return to this fact in the next section where I argue that long distance displacement in Kinande involves resumption.

3.4 Resumption

In the previous section I established that long distance movement does not exist in Kinande. In this section I will argue that long distance dependencies involve resumption. I will first consider A'-dependencies and motivate the

existence of a null resumptive pronoun that can be immediately followed by wh-agreement under certain conditions.

In the next section, I present evidence that wh-agreement can be either (a) preceded by the overtly displaced expression (when head of the dependency), or (b) by a null expression:

- (19) a. [Wh/Focus; *wh-agr* [_{IP} ... _____j...]]
 b. [OP(erator); *wh-agr* [_{IP} ... _____j...]]

This suggests the possibility that an “unbounded” dependency has the following structure schematically:

- (20) [Wh/Focus; *wh-agr* [_{IP} ... [_{CP} OP(erator); *wh-agr* [_{IP} ... _____j...]]]]

3.4.1 *The pronominal nature of the null expression*

Wh-agreement can be immediately preceded by a demonstrative pronoun (21a) and receives a focused interpretation in this context. (21b) illustrates that a null expression preceding wh-agreement in an otherwise identical context is interpreted in the same way:

- (21) a. *ekyo kyo Kambale alangira*
 that **wh-agr** K saw
 ‘THAT (is what) Kambale saw.’
 b. [] *kyo Kambale alangira*
wh-agr K saw
 *‘what did Kambale see?’
 *‘what Kambale saw (free relative)’
 ok: ‘THAT (is what) Kambale saw.’

The pronominal nature of the null expression preceding wh-agreement is independently supported by the behavior of wh-agreement in island contexts. (22a) illustrates that gaps may not occur in islands. (22b) demonstrates that once the gap is embedded one clause deeper, the sentence becomes grammatical.⁴ Note that wh-agreement occurs in the island only in (22b):

- (22) a. **omukali ndi yo wasiga [island embere __ wabuga]*
 woman who **wh-agr** you:left before spoke
 *‘Which woman did you leave before (she) spoke?’

⁴ For completeness, I include this example of wh-agreement related to the grammatical displacement of an object across an island. As with subjects, displacement of an object across an island is grammatical once it is embedded deeply enough that wh-agreement can occur:

- (i) *Ekihi kyo uasiga [island embere Marya aminye [nga kyo wasoma __]]*
 what **wh-agr** you:leave before M knew compl **wh-agr** you:read
 ‘What did you leave before Mary knew you had read__?’

- b. *omukali ndi yo wasiga* [_{island} *embere Kambale anasi* [_{CP}
 woman who **wh-agr** you:left[before K knew [
ko yo — wabuga]]
 that **wh-agr** spoke]]
 ‘Which woman did you leave before Kambale knew that she spoke?’

This property of wh-agreement parallels exactly the rescuing behavior of obvious resumptive pronouns in island contexts where we see that it is ungrammatical for a dependency to exist across an island unless a resumptive pronoun also occurs:

Dependency across an island—without resumption:

- (23) a. **ekihi_j kyo_j Constantine abula* [_{island} *iyondi_k nga yo_{k—k}*
 what **wh-agr** C wondered who if **wh-agr**
uagula —_j]
 bought
 *‘What did Constantine wonder who bought?’
 b. **ebaruha yahi_j yo wasiga* [_{island} *isi-wu-li*
 letter which **wh-agr** you:left neg-you-be
uasoma —_j]
 you:read
 *‘Which article did you leave before you read?’

Dependency across an island—resumption involved:

- (24) a. *ekihi_j kyo Yosefu akabula* [_{island} *iyondi_k nga y’*
 what **wh-agr** Y wonders who if **wh-agr**
uka-ki-gula]
 agr:tense-clitic-buy
 *‘What does Yosefu wonder who is buying (it)?’
 b. *ebaruha yahi yo uasiga* [_{island} *isi-wu-li*
 letter which **wh-agr** you:left neg-you-be
uasoma-yo]
 you:read-clitic
 *‘Which article did you leave before you read it?’

We can summarize the facts schematically as follows:

- (25) a. * wh_j [.... [_{island}..... —_j]]
 b. ok: wh_j [.... [_{island}..... pro_j]]
 c. ok: wh_j [.... [_{island}..... wh-agr_j]]

Therefore, the null expression that precedes *wh*-agreement can be analyzed as a pronominal operator fulfilling a resumptive function, similar to the view of McCloskey (2002: 184–226) for *wh*-agreement in Irish or Davies (2003: 237–59) for *wh*-agreement in Madurese. Other relevant non-movement analyses of *wh*-dependencies would be also Adger and Ramchand (2005: 161–93), and Finer (2002: 157–69) for Selayarese.⁵ In addition, Boeckx (2007, 2008), based solely on the position his theory forces him to, concludes that long distance dependencies in Kinande cannot involve successive cyclic movement. Rather, he concludes that something along the lines of the prolepsis proposed by Davies for Madurese must be at play in Kinande. Bošković (2007) also comes to a similar conclusion about Kinande based on his theory of feature checking.

3.4.2 *A reconsideration of raising*

Here I reconsider the putative raising constructions we examined earlier. We can observe that long distance A-displacement is parallel to A'-displacement where resumptive pronouns and *wh*-agreement have the same distribution and function. (26) demonstrates that the embedded object can be displaced across an embedded object and *wh*-agreement occurs in the embedded clause. (27), a repeat of sentence (17), confirms that a resumptive clitic can also occur in this context.

- (26) *ekitabu_j ki-ri-[nga kyo [subject omulume] anzire _____j]*
 book agr-is-if *wh-agr* man he:likes
 Lit: 'The book seems as if the man likes it.'
- (27) *ekitabu_j ki-kabya [[subject omulume] ng'a.na.ky.anzire _____j]*
 book agr-is man if' he.tense.clitic.likes
 Lit: 'The book seems as if the man likes it.'

In sum, I have introduced a variety of data to provide evidence that *wh*-agreement is associated with a null pronominal operator. This provides support for the proposal that "unbounded" movement in Kinande actually involves resumption. I repeat the (schematic) proposed structure (20) here for convenience:

- (28) [*Wh/Focus_j wh-agr* [*IP* ... [*CP* *OP(erator)*_j *wh-agr* [*IP* ... _____j...]]]

⁵ Although a discussion of these interesting and important papers is beyond the scope of this chapter, it is not insignificant that all of the languages noted above, for which non-movement dependencies have been proposed, are *wh*-agreement languages.

3.5 Some issues raised by the lack of movement in Kinande

The lack of movement in a wh-agreement language has implications for the theory of feature checking. To see this, consider the following. Comp to comp movement, assuming it exists, raises problems for the idea that all movement is last resort. What then motivates the intermediate steps in unbounded movement? Hornstein (2001: 119) suggests that the checking of A'-agreement features drives movement to intermediate wh-positions. He bases his proposal on the morphology of wh-agreement languages, whose existence he takes as evidence for his position. However, based on what I have established here concerning the syntax of Kinande, wh-agreement cannot be taken as evidence for feature-motivated intermediate checking of links of an A'-movement chain any more than it can be taken as evidence of successive cyclic movement.

I have established that movement in Kinande is clause-bound. Why is movement so restricted in this language? It appears that there is no successive cyclic movement because even embedded clauses in Kinande behave like root clauses in V-2 languages. Following Emonds (1970), a root clause allows maximally one fronting per S, and since root clauses are not the target of further movement, they lack escape hatches. This one-fronting-per-S rule operates in every clause in Kinande producing an X-second pattern where the initial expression is not structure-preserving in that it can be either a DP or PP (see Schneider-Zioga 2005, 2007 for extensive discussion); the second position element is either a verb or complementizer which agrees with the preceding expression. This pattern is even found embedded under non-bridge verbs, affirming the uniform character of clauses in Kinande.

I will establish that embedded clauses in Kinande behave as if they were root clauses in that their syntax is insensitive to the superordinate verb. Sentences (29–33) illustrate a variety of superordinate verbs. The clauses embedded under these verbs display SVO word order:

- (29) *Kambale mwakanganirye kwenene Marya ko'mwagula ekitabu*
 K proved that M that'bought book
 'Kambale proved that Mary bought the book.'
- (30) *Kambale anasi Marya ko'mwagula ekitabu*
 K knows M that'bought book
 'Kambale knows that Mary bought the book.'
- (31) *Kambale anasadikirye Marya ko'mwagula ekitabu*
 K claims M that'bought book
 'Kambale claims that Mary bought the book.'

- (32) *Kambale mwahakikisya Marya ko'mwagula ekitabu*
 K emphasized M that'bought book
 'Kambale emphasized that Mary bought the book.'
- (33) *Kambale mwayibulya Marya nga'mwanagula ekitabu*
 K doubted M if'bought book
 'Kambale doubted if Mary bought the book.'

It is also possible for an inversion to take place such that embedded XP-V-S word order occurs. The grammaticality of this word order and the fact that its grammaticality is insensitive to the superordinate verb is illustrated below in sentences (34–8):

- (34) *Kambale mwayibulya ekitabu nga ky-agula mukali*
 K doubted book if agr-bought woman
 'Kambale doubted that a woman bought the book.'
- (35) *Kambale mwayibulya omomulongo nga mo mwanahika mukali*
 K doubted in:village if agr arrived woman
 'Kambale doubted that a woman arrived in the village.'
- (36) *Kambale mwahakikisya ati ekitabu kyagula mukali*
 K emphasized say book agr:bought woman
 'Kambale emphasized that a woman bought the book.'
- (37) *Kambale anasi omomulongo ko mwahika mukali*
 K knows in:village that agr:arrived woman
 'Kambale knows that a woman arrived in the village.'
- (38) *Kambale anasi ekitabu ko kyagula mukali*
 K knows book that agr:bought woman
 'Kambale knows that a woman bought the book.'

The above data help establish the root-like nature of embedded clauses in Kinande. This supports the claim that all clauses are root clauses in Kinande. This, in turn, sheds light on the impossibility of unbounded movement in Kinande.

3.6 Economy and resumption—some tentative conclusions

The classical view of movement is that it: (a) leaves a gap; (b) is prevented by islands/minimality; and (c) is subject to reconstruction. Displacement lacking these properties has been analyzed as base-generated displacement. A minimalist approach must wonder about the existence of two distinct operations to construct displacement: base-generation and movement, although a priori it is not clear whether it is a luxury for the grammar to prohibit one of the types of operations or a luxury to allow both types.

Minimalist researchers have proposed the following disparate positions:

- (i) There is no displacement via base-generated construal of some type. Instead illicit movement is possible and can be **repaired** by resumptive pronouns, that is, resumption rescues island violations (see Hornstein 2001).
- (ii) There is no displacement via base-generated construal. Illicit movement can be **enabled** via a *big DP* which has independent status in the lexical array (see Boeckx 2003), where the resumptive pronoun is a stranding of the determiner of the *big DP*.
- (iii) A lexical item with the same status as other pronouns can be used to achieve **displacement via base-generation** (see Aoun and Benmamoun 1998, Aoun and Li 2003).

The Kinande facts surrounding “successive cyclic” movement demonstrate the need for a notion of resumption whose characteristics cannot be attributed to any purported properties of illicit movement, since the dependency in question clearly does not involve islands of the typical sort. This argues for the necessity of displacement via base-generation at least as a language-particular option and supports minimalist position (iii).

Finally, the Kinande facts indicate that minimalism will need to reconsider resumption itself. That is, we see there is a resumptive strategy that is different from typical pronominal resumption, where a single resumptive pronoun stands in a relation with a displaced expression across an apparently unbounded distance. Instead, we see a language where multiple resumptive copies must be base-generated. Therefore, minimalism must address this possibility and work out how the relevant links of such a resumptive relation emerge.