## Chapter 31

# Deriving an object dislocation asymmetry in Luganda 

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#### Abstract

In this paper, I document and analyze an object-dislocation asymmetry in Luganda (Bantu: JE15) that becomes apparent only upon comparing double object left-dislocation versus double object right-dislocation. If two objects are left-dislocated, the object markers (OMs) on the verb are strictly ordered $\mathrm{OM}_{\text {THEME }}>\mathrm{OM}_{\text {GOAL/BEN }}$ and the dislocated objects are ordered freely, either GOAL/BEN > THEME or THEME > GOAL/bEN. In contrast, if two objects are right-dislocated, the objects cannot be freely ordered - two right-dislocated objects must be ordered GOAL/BEN > THEME. However, in double object right-dislocation, the OMs must also be ordered $\mathrm{OM}_{\text {THEME }}$ $>\mathrm{OM}_{\mathrm{GOAL} / \mathrm{BEN}}$. I propose that this asymmetry can be captured if left-dislocated objects are base generated in their surface position, whereas right-dislocated objects are derived via movement. Several predictions concerning binding and superiority effects are borne out, providing support for the analysis.


## 1 Introduction

In this paper, I investigate the syntax of object dislocation in Luganda (Bantu: JE15). Example (1a) below exemplifies object left-dislocation (OLD) and (1b) object right-dislocation (ORD): ${ }^{1}$

[^0](1) Luganda
a. Object left-dislocation (OLD)

A-m-envu o-mw-ana y-a-*(ga)-gul-a.
6AUG-6-banana 1AUG-1-child 1SA-PST-60M-buy-FV
'The child bought the banana.'
b. Object right-dislocation (ORD)

O-mw-ana y-a-ga-gul-a luli, a-m-envu.
1AUG-1-child 1SA-PST-6OM-buy-FV the.other.day 6AUG-6-banana
'The child bought the banana the other day.'
Empirically, I document the possible syntactic configurations related to object left and right-dislocation in the language, emphasizing in particular an asymmetry that becomes apparent only in ditransitive constructions. From a theoretical perspective, I propose an analysis inspired by Cecchetto (1999) and Zeller (2015) to capture the phenomenon. Given the complexity of the data, a number of standing issues are left for future investigation. The paper is structured as follows - in §2, I briefly discuss object dislocation cross-linguistically and in the Bantu family. In §3, I describe the pattern of object dislocation in Luganda. In §4, I present my analysis, establishing that OLD and ORD are each derived differently - OLD via base generation and ORD via movement. §5 lays out the predictions made by the proposal. Finally, $\S 6$ concludes and points out areas for future research.

## 2 Object marking and dislocation in Bantu

The analysis of object dislocation has received significant attention cross-linguistically, with a particularly rich body of work concerning the phenomenon in Romance languages (Anagnostopoulou to appear and references therein). Examples (2)a-b below show instances of object dislocation. Note that in both examples, the direct object is not in its canonical position (as evidenced by the prosodic break) and that the object co-occurs with a co-indexed clitic agreeing in $\varphi$-features with the object. The latter observation has led researchers to name the phenomenon clitic left-dislocation and clitic right-dislocation, respectively: ${ }^{2}$

[^1](2) Italian (Cecchetto 1999)
a. Clitic left-dislocation

Gianni, io lo odio.
Gianni I him hate
'I hate Gianni.'
b. Clitic right-dislocation

Io lo odio, Gianni.
I him hate Gianni.
'I hate Gianni.'
Object dislocation has also been investigated in the Bantu languages. First, note that across the family, it is possible to pronominalize an object with an object marker (henceforth OM) on the verb. This is shown below: ${ }^{3}$
(3) Kuria (Diercks et al. 2015)
a. n-aa-t $\varepsilon m$-ér-é ómo-gámbi FOC.1SgSA-PST-hit-PERF-FV 1-king
'I hit the king.'
b. n-aa-mó-tem-ér-e FOC.1sgSA-PST-1OM-hit-PERF-FV 'I hit him.'

Of particular interest has been whether an OM can co-occur with an in-situ object (henceforth OM doubling). ${ }^{4}$ For instance, Bresnan \& Mchombo (1987) analyze OMs in Chichewa as co-occurring with objects outside their canonical position (hence dislocated); in contrast OMs in Sambaa can co-occur with in-situ objects. (4) shows data from Chicheŵa and (5) from Sambaa:
(4) Chicheŵa (Bresnan \& Mchombo 1987)

Njûchi zi-ná-wá-lum-a alenje.
bees SA-PAST-OM-bite-INDIC hunters
'The bees bit them, the hunters.'

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(5) Sambaa (Riedel 2009)

N-za-chi-m-nka ng'wana kitabu.
1sgSA-PERF.DJ-7OM-1OM-give 1child 7book
'I gave the child a book.'
A Bantu language in which object dislocation has been studied in some depth is Zulu (van der Spuy 1993, Cheng \& Downing 2009, Zeller 2009; 2015, Halpert \& Zeller 2015); (6)a below shows an instance of left-dislocation; (6)b exemplifies right dislocation:
(6) Zulu (Zeller 2009; Zeller 2015 respectively)
a. Object left-dislocation (OLD)

UJohn intombazana i-m-qabul-ile.
John1a girl9 SA-OM1a-kiss-PERF
'John, the girl kissed (him).'
b. Object right-dislocation (ORD)

Ngi-ya-yi-theng-a i-moto
1SA-DJ-90M-buy-FV AUG-9.car
'I bought (it), the car.'
With this background in mind, we can now turn to the pattern of OMing and object dislocation in Luganda.

## 3 Patterns of object-dislocation in Luganda

### 3.1 Object marking in Luganda

In this section, I describe the basic distribution of OMs and object dislocation in Luganda. The generalization that will arise is the following:
(7) Object Dislocation and Object Marking (OMing) Generalization in Luganda
a. When one object is dislocated:
i. It must co-occur with an OM both in OLD and ORD. ${ }^{5}$
b. When two objects are dislocated:
i. The dislocated objects occur in any order in OLD

[^3]ii. The dislocated objects must occur in the order GOAL/BEN > THEME in ORD
iii. In both OLD and ORD, the objects co-occur with OMs and the order of OMs is always OMtheme > OMgoal

In the interest of brevity, I will not describe in detail the pragmatic interpretation of dislocated objects in Luganda, since they align with broader crosslinguistic patterns of the phenomenon-(i) weakly quantified objects cannot dislocate, (ii) dislocated objects are interpreted as specific, and (iii) dislocated objects cannot be focused (see Hyman \& Katamba 1993 and van der Wal \& Namyalo 2016 for focus marking strategies in the language). Dislocated objects can function as a variety of topics (in the sense of Reinhart 1981; see Ranero 2015 for discussion), with some differences between left or right-dislocation. Particularly, right-dislocated objects can be exploited as afterthoughts-corrective statements to clarify part of an utterance to the interlocutor (Grosz \& Ziv 1998; Villalba 2000).

As shown in the previous section for Bantu more broadly, objects in Luganda can be marked on the verbal stem through an OM that agrees in noun class with its corresponding object. I exemplify this below with a lexical ditransitive; note that Luganda is an SVO language and the order of postverbal objects in the ditransitive examples is strictly GOAL/BEN > THEME:
a. O-mu-sajja y-a-w-a a-ba-kazi ssente. 1AUG-1-man 1SA-PST-give-FV 2AUG-2-woman 9a.money
'The man gave the women money.'
b. *O-mu-sajja y-a-w-a ssente a-ba-kazi.

Either of the objects can be OMed on the verb (9)a-b; both objects can be OMed on the verb as well, but the OMs must follow a strict ordering-OM THEME > $\mathrm{OM}_{\mathrm{GOAL} / \mathrm{BEN}}$ (9)c. The reverse ordering $\mathrm{OM}_{\mathrm{GOAL} / \mathrm{BEN}}>\mathrm{OM}_{\mathrm{THEME}}$ is unacceptable (9)d:
a. O-mu-sajja y-a-ba-w-a ssente.

1AUG-1-man 1SA-PST-2OM-give-FV 9a.money
'The man gave them money.'
b. O-mu-sajja y-a-zi-w-a a-ba-kazi.

1AUG-1-man 1SA-PST-9aom-give-FV 2AUG-2-woman
'The man gave the women it.'
c. O-mu-sajja y-a-zi-ba-w-a.

AUG-1-man 1SA-PST-9AOM-2OM-give-FV
'The man gave them it.'
d. *O-mu-sajja y-a-ba-zi-w-a.

As noted in the introduction, it has long been a concern in the Bantu literature whether OM doubling configurations are licit in particular languages. In Luganda, it is impossible for an OM to co-occur with an in-situ object, as evidenced by several diagnostics. ${ }^{6}$ First, a prosodic pause is obligatory before an object in the right-periphery if it co-occurs with an OM on the verb, suggesting that the object is ex-situ. This diagnostic has been extensively used in the Romance literature (for instance Cecchetto 1999, Cruschina 2011, Anagnostopoulou to appear). ${ }^{7}$ An example is shown below; note the obligatory pause before the object: ${ }^{8}$
(10) Aisha y-a-bi-lab-a luli ${ }^{*}($,$) e-bi-nyonyi.$
1.Aisha 1SA-PST-8OM-see-FV the.other.day
8AUG-8-bird
'Aisha saw the birds the other day.'
Second, the placement of temporal adverbs to demarcate the edge of the verb phrase has been used by others to diagnose OM doubling in Bantu (Henderson 2006; Riedel 2009 for Sambaa; Bax \& Diercks 2012 for Manyika; Diercks et al. 2018 for Lubukusu; Zeller 2009; 2015 for Zulu). If an object is to the left of the temporal adverb, it is in-situ, whereas an object to the right of the temporal adverb is in a dislocated position. In Luganda, if the object occurs to the left of the temporal adverb luli, an OM corresponding to the object cannot appear:

[^4]*O-m-wana y-a-ga-gul-a a-m-envu luli.
1AUG-1-child 1SA-PST-6OM-buy-FV 6AUG-6-banana the.other.day
Intended: 'The child bought the banana the other day.'
In contrast, if the object is to the right of the temporal adverb, the OM can appear on the verb. I take this to mean that OMs in Luganda can only co-occur with dislocated objects: ${ }^{9}$
(12) O-m-wana y-a-ga-gul-a luli, a-m-envu. 1AUG-1-child 1SA-PST-6OM-buy-FV the.other.day 6AUG-6-banana
'The child bought the banana the other day.'
Finally, we can construct a ditransitive utterance in which one of the objects is clearly in-situ; attempting to double the object with an OM is unacceptable. Consider the following example, where the GOAL/BEN is to the left of a weakly quantified object. Weakly quantified objects function as indefinites and as such cannot be topics (see Diesing 1992 on indefinites and Reinhart 1981 on why quantificational phrases cannot be interpreted as topics). Given that dislocated positions in Luganda are reserved for topics, we expect weakly quantified objects to be in-situ rather than dislocated. Since the GOAL/BEN argument is to the left of the weakly quantified object, it must also be in-situ:
\[

$$
\begin{array}{lcl}
\text { *Nakayiza } \begin{array}{l}
\text { y-a-mu-w-a }
\end{array} \text { Lukwaago } & \text { e-bi-rabo } & \text { bitono }  \tag{13}\\
\text { 1.Nakayiza } 1 \text { 1SA-PST-1OM-give-FV } & \text { 1.Lukwaago } & \text { 8AUG-8-present } 8 \text { 8.few }
\end{array}
$$
\]

Intended: 'Nakayiza gave Lukwaago few gifts.' (Jenneke van der Wal field notes)

Given the previous discussion, we arrive at the following generalization-an OM can never double an in-situ object in Luganda, but it can co-occur with a dislocated object.

### 3.2 Object left-dislocation

As shown before, OMs can only co-occur with an object in Luganda if the object has been dislocated. Let us first explore the pattern of OLD. An object in Luganda can be dislocated to a pre-verbal position-the left-dislocated object can

[^5]either precede or follow the subject, as shown by the examples in (14)a-b below. ${ }^{10}$ Note crucially that OMing the object is obligatory and failing to do so is unacceptable: ${ }^{11,12}$
a. A-m-envu, o-m-wana y-a-*(ga-)gul-a.

6AUG-6-banana 1AUG-1-child 1SA-PST-60M-buy-FV
'The child bought the bananas.'
b. O-m-wana a-m-envu y-a-*(ga-)gul-a.

An object lacking the augment vowel cannot be left-dislocated, regardless of whether it is OMed or not. Augmentless nouns are in focus (Hyman \& Katamba 1993), so this suggests that dislocated objects cannot be focused. An example with an augmentless noun is shown below in (15): ${ }^{13}$

> * M-envu o-m-wana y-a-(ga-)gul-a. 6-banana 1AUG-1-child 1sA-PST-6om-buy-FV
> Intended: 'The child bought the bananas.'

In lexical ditransitives, either of the objects can be left-dislocated. As with previous OLD examples, OMing the dislocated object is obligatory; this is shown in (17)a-b:

Aizaka y-a-w-a a-ba-kazi e-ki-rabo.
1.Isaac 1sA-PST-give-FV 2AUG-2-woman 7AUG-7-gift
'Isaac gave the women a gift.'

> a. E-ki-rabo Aizaka y-a-*(ki-)w-a $\quad$ a-ba-kazi.
> 7AUG-7-gift 1.Isaac 1SA-PST-7om-give-FV 2AUG-2-woman
> 'Isaac gave the women a gift.'

[^6]b. A-ba-kazi Aizaka y-a-*(ba-)w-a e-ki-rabo.

2AUG-2-woman 1.Isaac 1sA-PST-2om-give-FV 7AUG-7-gift
'Isaac gave the women a gift.'
Both objects can be left-dislocated in either order. If both objects are left-dislocated-regardless of the ordering in which they are dislocated-the OMs on the verb must follow the $\mathrm{OM}_{\text {THEME }}>\mathrm{OM}_{\text {GOAL/BEN }}$ order. This is shown in (18)a-b below:
a. E-ki-rabo a-ba-kazi Aizaka y-a-ki-ba-w-a.

7AUG-7-gift 2AUG-2-woman 1.Isaac 1sA-PST-7om-2om-give-FV
'Isaac gave the women a gift.'
b. A-ba-kazi e-ki-rabo Aizaka y-a-ki-ba-w-a.

2AUG-2-woman 7AUG-7-gift 1.Isaac 1sA-PST-7OM-2OM-give-FV
'Isaac gave the women a gift.'
In contrast, if the ordering of OMs on the verb is $\mathrm{OM}_{\mathrm{GOAL} / \mathrm{BEN}}>\mathrm{OM}_{\mathrm{THEME}}$, left-dislocating both objects in either order is unacceptable, showing that the ordering of OMs must be strictly $\mathrm{OM}_{\text {THEME }}>\mathrm{OM}_{\mathrm{GOAL} / \mathrm{BEN}}$ :
a. *Ekirabo abakazi Aizaka yabakiwa.
b. *Abakazi ekirabo Aizaka yabakiwa.

If neither or only one of the left-dislocated objects is OMed, the utterance is unacceptable, as shown below in (20a-f):
(20) a. *Ekirabo abakazi Aizaka yawa.
b. *Ekirabo abakazi Aizaka yakiwa.
c. *Ekirabo abakazi Aizaka yabawa.
d. *Abakazi ekirabo Aizaka yawa.
e. *Abakazi ekirabo Aizaka yabawa.
f. *Abakazi ekirabo Aizaka yakiwa.

All the patterns described here are replicated with applicative and causative constructions (see Ranero 2015). The essential observation of OLD for the purposes of the upcoming analysis is the following: in ditransitive constructions, either or both objects can be left-dislocated in either order, but the ordering of OMs is strictly $\mathrm{OM}_{\text {THEME }}>\mathrm{OM}_{\mathrm{GOAL} / \mathrm{BEN}}$.

### 3.3 Object right-dislocation

An object in Luganda can be dislocated to a position in the right periphery; an example in a monotransitive clause is shown below. Recall that objects to the right of a temporal adverb are dislocated: ${ }^{14}$ and note that an OM co-occurs with the dislocated object:

Aisha y-a-bi-lab-a luli,
1.Aisha 1SA-PST-80M-see-FV the.other.day
8AUG-8-bird
'Aisha saw the birds the other day.'
As with OLD, an augmentless object cannot be right-dislocated: ${ }^{15}$
(22) * Aisha y-a-bi-lab-a luli, bi-nyonyi.
1.Aisha 1SA-PST-8om-see-FV the other.day 8-bird

Intended: 'Aisha saw the birds the other day.'
In ditransitive constructions, either the GOAL/BEN or THEME argument can be right-dislocated; note that an OM co-occurs with the right-dislocated object: ${ }^{16}$
(23) Namugga y-a-ba-fumb-ir-a e-n-gege luli,
1.Namugga 1SA-PST-2OM-cook-APPL-FV9 AUG-9-tilapia the.other.day a-ba-ana.
2AUG-2-child
'Namugga cooked the tilapia for the children the other day.'
(24) Namugga y-a-gi-fumb-ir-a a-ba-ana luli,
1.Namugga 1SA-PST-9OM-cook-APPL-FV 2AUG-2-child the.other.day e-n-gege.
9AUG-9-tilapia
'Namugga cooked the tilapia for the children the other day.'
${ }^{14}$ Further evidence for this claim comes from the observation that weakly quantified objects
cannot appear to the right of a temporal adverb
(i) * Aisha y-a-(bi-)lab-a luli, e-bi-wugulu bitono. 1.Aisha 1SA-PST-8OM-see-FV the.other.day 8AUG-8-owl 8.few Intended: 'Aisha saw few owls the other day.'

[^7]Both objects can be right-dislocated in a ditransitive construction. The objects must be dislocated in the order GOAL/BEN > THEME and the OMs on the verb must be strictly ordered $\mathrm{OM}_{\text {THEME }}>\mathrm{OM}_{\text {GOAL/BEN }}$ :
(25) Namugga y-a-gi-ba-fumb-ir-a luli, a-ba-ana 1.Namugga 1SA-PST-9OM-2OM-cook-APPL-FV the.other.day 2AUG-2-child e-n-gege.
9AUG-9-tilapia
'Namugga cooked the tilapia for the children the other day.'
Right dislocating the objects in the order THEME > GOAL/BEN is unacceptable, as in (26); OMing in the order $\mathrm{OM}_{\mathrm{GOAL} / \mathrm{BEN}}>\mathrm{OM}_{\text {THEME }}$ is unacceptable regardless of the ordering of the right-dislocated objects, as in (27a-b):

* Namugga y-a-gi-ba-fumb-ir-a luli, e-n-gege a-ba-ana.
a. *Namugga y-a-ba-gi-fumb-ir-a luli, a-ba-ana e-n-gege.
b. *Namugga y-a-ba-gi-fumb-ir-a luli, e-n-gege a-ba-ana.

The essential aspects of ORD are the following: in ditransitives, if both objects are right-dislocated, not only is the ordering of OMs strictly $\mathrm{OM}_{\text {THEME }}>$ $\mathrm{OM}_{\mathrm{GOAL} / \mathrm{BEN}}$ (as with the left-dislocation pattern), but the ordering of the dislocated objects is also strict-GOAL/BEN > THEME.

## 4 Analysis

The literature on generative approaches to the syntax of object-dislocation is extensive. In particular, debates have centered on whether dislocated objects surface in their position through base generation or movement, a distinction that I will argue allows us to explain the asymmetry we observed regarding dislocation of both objects in ditransitives in OLD vs. ORD. While it is not my purpose to review the literature in detail, the following are representative of different approaches. Analyzing left-dislocation as base generation, Cinque (1990), Iatridou (1995), Anagnostopoulou (1994), Suñer (2006), De Cat (2007) are representative; analyzing the phenomenon as the result of movement, Kayne (1994), Zubizarreta (1998), and Zeller (2009). Moving on to right-dislocation, Kayne (1994) and Cardinaletti (2002) treat the phenomenon as base generation, while Kayne (1995), Cecchetto (1999), Zeller (2015) and Samek-Lodovici (2016) treat it as movement. Given the variety of possible analyses, I will make my proposal and explore its
predictions. In so doing, I bring Luganda to bear on the issue of the analysis of these phenomena, while also highlighting another instance of a left vs. right periphery asymmetry that deserves further investigation.

First, let us summarize the core of the proposal:
(28) Object-dislocation in Luganda
a. Object left-dislocation and right-dislocation in Luganda are not derived through the same mechanism.
b. Left-dislocated objects are base generated.
c. Right-dislocated objects arise in their surface position via movement.

This proposal is similar in spirit to an argument made for the analysis of dislocation in Romance languages in Cecchetto (1999), which rejected the hypothesis from Vallduví (1992) that clitic right-dislocation is simply the "mirror image" of clitic left-dislocation. Let us now turn to the analytical assumptions which lead me to propose (28). I take a Minimalist approach couched in the Agree based system (Chomsky 2000 and subsequent work). I assume the operation Merge to come in (at least) two flavors: External Merge, which is when an object not previously introduced into the derivation is taken from the Numeration and merged, and Internal Merge, which involves taking an item previously introduced into the derivation and merging it, resulting in Movement. I assume that Internal Merge (Movement) is driven by an operation Agree, which involves feature-valuation between a Probe and Goal:
(29) Agree

Operation in which a Probe enters into a relation with a Goal it c-commands. The operation applies when a Probe bears an unvalued feature [uF] and enters into an Agree relation with a Goal bearing a valued feature [iF].

Unvalued features must be valued in the course of the narrow syntactic derivation in order to avoid a crash-that is, unvalued features may not arrive at LF without having been valued through the Agree operation. An additional ingredient to Movement involves an EPP feature on the Probe. An EPP feature dictates that movement must occur, so the Goal raises locally to the specifier of the Probe head. An illustration of movement in the context of $w h$-features is observed below; notice crucially that the probe is looking for a Goal with the relevant feature (in this case $w h$-features); if there were an intervening DP that did not possess the relevant feature, the probe would ignore it and no intervention effect would arise:


Figure 1: Agree and movement

As can be observed from Figure 1 as well, I assume that moved elements leave behind a copy-thus I also assume the Copy Theory of Movement (Chomsky 1995). Copies that are left behind from movement are readable at LF and contribute to the interpretation of the utterance. If there are several copies of an element in the derivation that is shipped to LF, then LF has a choice as to which copy to interpret, thus accounting for sentences where several readings are possible. As will be observed later on, the existence of these copies make predictions regarding the interpretation of sentences where I analyze that movement has taken place. Furthermore, I also assume that in carrying out the Agree operation, Locality is essential. I define Locality below (see Zeller (2015) for a similar definition):
(30) Locality

A Probe P with an unvalued feature [ uF ] enters into an Agree relation with a Goal $G$ if $G$ is the closest element bearing a valued Feature [iF]. If there are two Goals $G$ and $G^{\prime}$ in P's c-command domain, then $G$ is closer to $P$ than $G^{\prime}$ if $G$ asymmetrically c-commands $G^{\prime}$.

Another assumption I will make is that copies of moved elements do not intervene between a Probe and a Goal for Locality purposes. When there are two potential Goals with a relevant Feature, a Probe (P) with an [EPP] feature searches its c-command domain and Agrees with the closest Goal (G). Once this Goal (G) has been moved, a second Probe ( $\mathrm{P}^{\prime}$ ) can then search its c-command domain and reach another Goal $\left(\mathrm{G}^{\prime}\right)$. The copy left behind by G between this second Probe $\left(\mathrm{P}^{\prime}\right)$ and second Goal $\left(\mathrm{G}^{\prime}\right)$ does not count as an intervener. This is illustrated below:

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Figure 2: Locality and intervention

With these assumptions in place, we can move to the specifics of the analysis. I propose following Zeller (2015) that right-dislocated objects that co-occur with an OM on the verb move to the right-branching specifier of an optional projection immediately above v , which is labeled TopP in what follows. ${ }^{17}$ The movement of the object is triggered by an Agree operation between the head of the projection Top, which is specified for an unvalued topic feature [uTop] ${ }^{18}$ and

[^8]unvalued $\varphi$-features [u $\varphi$ ], and a Goal bearing valued topic [iTop] and valued $\varphi$ features $[\mathrm{i} \varphi] .{ }^{19}$ It is crucial for our analysis that the main probe is the [uTop] and the $[\mathrm{u} \varphi$ ] is parasitic on the main probe; we thus ensure that OMs never double an in-situ object, but only topicalized dislocated ones. ${ }^{20}$ When the head of the projection Top acts as a Probe and searches its c-command domain, it finds a DP with valued topic features [iTop], triggering an Agree relation. ${ }^{21}$ The head Top carries an [EPP] feature that causes the DP object with which it agrees to move to a right-branching specifier, resulting in a right-dislocation configuration. The Agreement operation also results in the spell-out of the valued $\varphi$-features on the head Top as the object marker OM, which then joins with the verb as the verb moves up through the structure to reach its final landing place, accounting for the morpheme order. ${ }^{22}$ Given space considerations, I do not illustrate the analysis with monotransitives, but move directly to the most complex case, with two objects. An illustration of double object right-dislocation is shown below in Figure 3. The curved line indicates an Agreement relation and the arrow indicates movement:
(31) Namugga y-a-gi-ba-fumb-ir-a luli, a-ba-ana 1.Namugga 1sA-PST-9OM-2OM-cook-APPL-FV the.other.day 2AUG-2-child e-n-gege.
9AUG-9-tilapia
'Namugga cooked the tilapia for the children the other day.' (repeated from (25))

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Figure 3: Double object right-dislocation
Let us summarize the essential steps in the derivation above. The first Top head merges above $\nu \mathrm{P}$ and searches its c-command domain-given Locality, it finds the DPGoal/ben, which moves to a rightward specifier. When a second Top is merged (given proper discourse configurations), it searches its c-command domain for a goal and finds the DPtheme, which moves as well. Therefore, when two DPs carry a Topic feature, the DPgoal/ben will raise to SpecTopP of the lower TopP, while the DPtheme will raise to SpecTopP of the higher TopP; we
have thus derived the strict ordering of dislocated DPs in right-dislocation. ${ }^{23}$ Crucially, we have also accounted for the ordering of the OMs-given our analysis, the $\mathrm{OM}_{\mathrm{GOAL} / \mathrm{BEN}}$ surfaces closer to the verb root. Since the right-dislocated object is outside the $\nu \mathrm{P}$, which I take to be a prosodic domain, we can also straightforwardly account for the obligatory presence of a pause between $\nu \mathrm{P}$ internal elements and the right-dislocated objects.

Let us now turn to OLD. In contrast to the previous discussion, I propose that a left-dislocated object is base generated in its surface position in the specifier of an $\mathrm{XP}^{24}$ projection above TP. The obligatory OM in left-dislocation constructions arises via an Agree relation between the head Top that searches its c-command domain for a Goal bearing an unvalued Top feature [iTop]. The Goal that Top finds is a pro argument that is co-referential with the DP base generated in leftdislocated position; the left-dislocated object binds the null pro ${ }^{25}$. The subject raises to SpecTP, accounting for the observed word order. Given space considerations, I illustrate the analysis with a double object construction outright:
(32) E-ki-rabo a-ba-kazi Aizaka y-a-ki-ba-w-a.

7AUG-7-gift 2AUG-2-woman 1.Isaac 1sA-pst-7om-2OM-give-FV
'Isaac gave the women a gift.' (repeated from (18)a)

[^10](i) *A Juan, yo lo vi a Juan. a Juan I Cl saw a Juan
Intended: 'I saw Juan.' (Spanish)
There certainly exist phenomena where multiple links in a chain are realized (Nunes 2004), but my analysis of OLD does not involve movement. There could be two reasons then for a leftdislocated object not co-occurring with an overt object in base position: (i) as a result of the base generation analysis versus a movement one, or (ii) pragmatic reasons that have nothing to do with the syntax-repetition is simply dispreffered. I leave for future research exploring whether a base generation analysis of object-dislocation excludes the pronunciation of the dislocated object and an identical object in base position due to syntactic or extra-grammatical reasons.

Given Locality, the Top merged first will find the DPGoal/ben argument and Agree with it, resulting in the spell-out of an OM. The Top merged above it will then search its c-command domain and find the DPtheme argument, resulting in the spell-out of the second OM. Base generation allows for the left-dislocated objects to be ordered freely, so the position of the dislocated DP objects could be swapped, accounting for the two data points in (18)a-b. Note crucially that the way we derive the OMs is the same between object left and right-dislocation, thus accounting for their identical ordering in both constructions. We therefore derive the strict ordering of the OMs, while also deriving the free ordering of both objects in left-dislocation and the strict ordering of both objects in right-dislocation. In the next section, I show that several predictions made by the analysis are borne out. ${ }^{26}$

## 5 Predictions of the analysis

### 5.1 Principle C violations

In this section, I show that three predictions made by my account are borne out, suggesting that the base generation vs. movement approach to left and right object-dislocation in Luganda is on the right track. ${ }^{27}$

First, the base generation analysis for left-dislocation predicts that an R-expression in a left-dislocated position should be able to co-refer with a pronoun in the main clause. ${ }^{28}$ Given that a left-dislocated object does not move out of a vP internal position, no Principle $\mathrm{C}^{29}$ violation should be incurred through-

[^11]

Figure 4: Double object left-dislocation
out the derivation. This is exactly what we find. Consider the following examples: in the canonical sentence in (33)a, a Principle C violation occurs, resulting in an unacceptable sentence if 'she' is co-indexed and c-commands 'Aisha'; contrast with (33)b, where both a free and bound reading are available if the object is left-dislocated:
a. Ye y-a-lab-a a-ba-wala ba Aisha.
she 1sA-PST-see-FV 2AUG-2-daughter 2.poss 1.Aisha
${ }^{\text {'* }} \mathrm{She}_{\mathrm{i}}$ saw Aisha's $\mathrm{s}_{\mathrm{i}}$ daughters.' (bound) / 'She $\mathrm{i}_{\mathrm{i}}$ saw Aisha's $\mathrm{j}_{\mathrm{j}}$ daughters.' (free)
b. A-ba-wala ba Aisha, ye y-a-ba-lab-a.

2AUG-2-daughter 2.poss 1.Aisha 3sg 1sA-PST-2OM-see-FV
'She ${ }_{i}$ saw Aisha's ${ }_{i}$ daughters.'(bound) / 'She $e_{i}$ saw Aisha's $\mathrm{s}_{\mathrm{j}}$ daughters.' (free)

In contrast, the analysis predicts that the equivalent of sentence (33)b in a rightdislocated context should not have two possible readings. If a right-dislocated R-expression moves out of the VP to its surface position, the lower copy should be bound by the subject pronoun at LF and a Principle C violation would result. This is exactly what we find. Notice that in both the canonical sentence in (34)a and the example with a right-dislocated object in (34)b, the bound reading is impossible: ${ }^{30}$
a. Ye y-a-vug-a e-mmottoka ya Babirye bulunji.

3sg 1SA-PST-drive-FV 9aAUG-9a.car 9a.poss 1.Babirye well
*'She ${ }_{i}$ drove Babirye's ${ }_{i}$ car well.' (bound) / 'She ${ }_{i}$ drove Babirye's $\mathrm{s}_{\mathrm{j}}$ car well.' (free)

[^12](i) ${ }^{*}$ Sophie $_{1}$, she ${ }_{1}$ saw $<$ Sophie $_{1}$ >. Intended: Sophie saw herself.

The example above seems to involve obligatory reconstruction, resulting in the Principle C Violation; this contrasts with the acceptable example raised by the reviewer. I leave for future investigation whether there are cases in Luganda where reconstruction is not obligatory (similar to the example offered by the reviewer), resulting in acceptable examples involving ORD that contrast with the result in (34).

```
b. Ye y-a-gi-vug-a bulunji, e-mottoka ya Babirye.
    3sg 1sA-PST-9aom-drive-FV well 9aAUG-9a.car 9a.Poss 1.Babirye
    *'She \({ }_{i}\) drove Babirye's \(\mathrm{s}_{\mathrm{i}}\) car well.' (bound) / 'She \(\mathrm{i}_{\mathrm{i}}\) drove Babirye's \(\mathrm{s}_{\mathrm{j}}\) car
    well.' (free)
```


### 5.2 Binding of variables

Another prediction made by the analysis concerns the binding of variables. If we assume that bound pronouns must be bound at LF by a quantified phrase (see Hornstein \& Weinberg 1990), then my analysis would predict that in leftdislocating an object, only a free reading should be possible. This follows from the observation that under a base generation analysis for left-dislocated objects, there is no copy of the object at LF that can be bound by a quantified subject. This prediction is indeed borne out: contrast the readings available for the canonical sentence in (35) below with the unavailability of a bound reading in the sentence in (36), where the object is left-dislocated:
(35) Buli mu-yiizi y-a-buuz-a o-mu-somesa we. every 1-student 1SA-PST-greet-FV 1AUG-1-teacher 1.poss
'Every student greeted his teacher.'
For every student x , x greeted x 's teacher. = Available
For every student x , x greeted y 's teacher. $=$ AVAilable
(36) O-mu-somesa we buli mu-yiizi y-a-mu-buuz-a.

1AUG-1-teacher 1.poss every 1-student 1sA-pst-1OM-greet-FV
'Every student greeted his teacher.'
For every student x , x greeted x 's teacher. = unavailable
For every student x , x greeted y 's teacher. = Available
In contrast, I also predict that a bound reading should be available in the context of right-dislocation, given that there is a copy in base position. This is exactly what we find, as shown by the example below: ${ }^{31}$

[^13](37) Buli mu-yiizi y-a-mu-buuz-a <o-mu-somesa we> bulunji, every 1 -student 1sA-PST-1ом-greet-FV <1AUG-1-teacher 1 .Poss> well o-mu-somesa we.
1AUG-1-teacher 1.Poss
'Every student greeted his teacher well.'
For every student $\mathrm{x}, \mathrm{x}$ greeted x 's teacher well. $=$ AVAILABLE
For every student $\mathrm{x}, \mathrm{x}$ greeted y 's teacher well. $=$ AVAILABLE
Since right-dislocated objects are the product of movement, the pronoun contained in the right-dislocated phrase above can be bound by the quantifier subject covertly at LF. Thus, we can see that further evidence for the analysis comes from the behavior of bound variables with respect to left and right object-dislocation.

### 5.3 Superiority effects

A final prediction concerns superiority effects. When two phrases undergo A'movement, the structural hierarchy from which they are extracted affects the linear order in which they appear following movement. If this superiority condition is an inviolable constraint, we expect that in dislocated constructions that are derived via $A^{\prime}$-movement, superiority effects would emerge. In contrast, if dislocated phrases are not the result of A'-movement, but are rather base generated in their surface positions, then we predict that no superiority effects would arise. The latter case is exactly what we find in Luganda OLD: no superiority effects arise. Consider first the canonical utterance below:

O-mu-somesa a-kkakas-a nti a-ba-yiizi ba-a-soma
1AUG-1-teacher 1sA.PRs-believe-FV COMP 2AUG-2-student 2sA-PST-read e-ki-tabo.
7AUG-7-book
'The teacher believes that the students read the book.'
In left-dislocating both the embedded subject and object in the sentence above, a movement approach to left-dislocation would predict that the ordering would have to be fixed and mirror the structural relations between the arguments-that is, the dislocated subject would have to precede and c-command the dislocated object. However, in dislocating both embedded subject and object, we find that their ordering is free:
(39) A-ba-yiizi || e-ki-tabo o-mu-somesa a-kkakas-a nti

2AUG-2-student 7AUG-7-book 1AUG-1-teacher 1sA.PRS-believe-FV COMP ba-a-ki-som-a.
2SA-PST-7OM-read-FV
'The teacher believes that the students read the book.'
In contrast, superiority effects arise in right-dislocation contexts. Consider first the sentence below:
(40) A-ba-yiizi ba-a-som-a e-ki-tabo luli.

2AUG-2-student 2SA-PST-read-FV 7AUG-7-book the.other.day
'The students read the book.'
If both subject and object are right-dislocated, only one ordering is permitted. In (41)a, observe that the dislocated-object precedes the dislocated subject. Attempting the opposite ordering as in (41)b is unacceptable:
a. Ba-a-ki-som-a luli, e-ki-tabo a-ba-yiizi. 2SA-PST-7OM-read-FV the.other.day 7AUG-7-book 2AUG-2-student 'The students read the book.'
b. *Ba-a-ki-som-a luli, abayiizi, ekitabo.

I take these facts to be evidence that a movement analysis for right-dislocation is on the right track, while a base-generation analysis for left-dislocation also makes the correct predictions.

## 6 Conclusions and future directions

In this paper, I have achieved the following: empirically, I have documented an asymmetry concerning left vs. right object-dislocation in Luganda, therefore contributing to our knowledge on the language and the patterning of these phenomena cross-linguistically; from a theoretical perspective, I have shown that an approach treating these two constructions as arising from different syntactic configurations is on the right track. Several questions remain, which cannot be addressed in this short paper, though they are described in Ranero (2015) and are left for future investigation. First, causative ditransitives do not show the asymmetry we described for ORD - if two objects are right-dislocated in a causative construction, they are ordered freely. Second, there exists a very limited construction in which an object is right-dislocated, but no OMing is triggered. Observe
the example below: since the object that is not OMed on the verb occurs to the right of a dislocated object that is OMed, then it must also be right-dislocated:
(42) Namugga y-a-ba-fumb-ir-a luli, a-ba-ana
1.Namugga 1SA-PST-2OM-cook-APPL-FV the.other.day 2AUG-2-child
e-n-gege.
9AUG-9-tilapia
'Namuga cooked the tilapia for the children the other day.'
Objects that are right-dislocated but not OMed are very restricted pragmatically, being limited exclusively to given topics. Due to space considerations, I leave their derivation for future investigation. Third, my analysis makes predictions regarding island effects (Boeckx 2012): right-dislocated objects should be subject to island restrictions, while left-dislocated ones should not. However, this is not consistently the case. For instance, right-dislocating an object out of a coordinated structure is banned (as predicted), but so is left-dislocating the object, contrary to our expectations:
(43) *Aisha y-a-fumb-a naye ye Aizaka y-a-(ki-)som-a 1.Aisha 1sA-PST-cook-FV but 1.FOC 1.Isaac 1sA-PST-7OM-read-FV luli, e-ki-tabo. the.other.day 7AUG-7-book
Intended: 'Aisha cooked but Isaac read a book the other day.'
(44) *E-ki-tabo Aisha y-a-fumb-a naye ye Aizaka 7AUG-7-book 1.Aisha 1SA-PST-cook-FV but 1.FOC 1.Isaac y-a-ki-som-a.
1SA-PST-7OM-read-FV
Intended: 'Aisha cooked but Isaac read a book.'
While such data are puzzling, I note that there exist approaches to left-dislocation that take a base generation approach regardless of island restrictions, such as Cinque (1990) and Iatridou (1995). Given that the study of islands in Luganda has not yet been undertaken in depth, I leave whether these data can be accommodated into our analysis for future investigation as well. Finally, it is necessary to point out avenues for future research in this area of Bantu syntax. As Zeller (2015) notes, while the syntax of object marking in the family has received extensive attention, double object-dislocation constructions specifically
have been restricted to few studies (e.g. Adams 2010, Zeller 2009, and Zeller 2015 for Zulu). Further, the pattern reported here has not been described for other Bantu languages, as far as I know. A first step for future investigation would involve studying double object-dislocation constructions in other Bantu languages that also permit two OMs on the verb. Marlo (2015) points out that the following languages allow for this: Bemba, Dciriku, Ha, Jita, Lungu, Lwena, Nyambo, Nyole, Ruri, Saamia, Taabwa, Tiriki, Ruwund, and Umbundu. Replicating the Luganda data would be a fruitful area of research, both to increase our knowledge of the typology of these constructions, and to explore whether the syntactic principles used here to account for the Luganda patterns can be applied more broadly.

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## Abbreviations

Numbers indicate Bantu noun class, following Hyman \& Katamba (1990).

| APPL | applicative | INDIC | indicative |
| :--- | :--- | :--- | :--- |
| AUG | augment | OM | object marker |
| CAUS | causative | PERF | perfective |
| COMP | complementizer | POSS | possessive |
| DJ | disjoint | PRS | present |
| FOC | focus | PST | past |
| FUT | future | SA | subject agreement |
| FV | final vowel |  |  |

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[^0]:    ${ }^{1}$ All data come from my field notes except where indicated. Tone is not marked in the data. When one object/OM is relevant, it is bolded; when two objects/OMs are relevant, one is bolded as well - this does not carry any significance beyond helping the reader identify the relevant aspects of each example. In the orthography used, a <j> corresponds to a voiced palato-alveolar affricate [b]], a <g> before an <i> a voiced palato-alveolar affricate [d]], a <k> before an <i> a voiceless post-alveolar affricate [ t ], a <ny> a palatal nasal [ n ], a < $\mathrm{y}>$ a palatal approximant [j]. All others correspond to their IPA counterparts. A double vowel represents a long vowel

[^1]:    and a double consonant a geminate. The notation $\|$ between two elements indicates that they are freely ordered. All translations are given in neutral word order, since I have not tried to replicate in English any of the pragmatic aspects of the Luganda data.
    ${ }^{2}$ Throughout the paper, I will use the neutral term object-dislocation for the Luganda data. Note however, that object markers in Bantu have been argued to be clitics (Diercks et al. 2015), so the clitic left-dislocation and clitic right-dislocation terminology might be appropriate for Bantu as well. I leave for future research determining whether OMs in Luganda should also be treated as clitics.

[^2]:    ${ }^{3}$ See Marlo (2015) for an overview of OMing in Bantu.
    ${ }^{4}$ The distinction between Bantu languages that allow OM doubling versus those that only allow an OM to co-occur with a dislocated object mirrors the long tradition of distinguishing between languages that allow clitic doubling versus those that do not-see section 4 for relevant references.

[^3]:    ${ }^{5}$ Although see section 6, where I note that an object can be right-dislocated without the appearance of an OM.

[^4]:    ${ }^{6}$ Some diagnostics used in the Bantu literature to diagnose object-dislocation are not applicable to Luganda. These include the conjoint/disjoint alternation in languages like Zulu (Zeller 2015) and penultimate vowel lengthening to indicate the edge of a phrase (also in Zulu; Cheng \& Downing 2009). I leave for future investigation the applicability of tonal diagnostics to determine the edge of phrases in Luganda (as in Chichewa; Bresnan \& Mchombo 1987).
    ${ }^{7}$ This diagnostic is a one-way diagnostic-that is, the presence of a pause shows that the object is ex-situ, but the absence of a pause is not definitive evidence that the object is in-situ (see Diercks et al. 2018 for Lubukusu; Diercks et al. 2015 for Kuria). An anonymous reviewer asks to define more precisely what I mean by "prosodic pause" here. What I mean is that there is a short break in my consultant's flow of speech before the right-dislocated object. I acknowledge that it would be useful to investigate what the acoustic correlates of this break are and whether there are other effects related to melodic contours, vowel lengthening, or tonal processes. I leave this for future research.
    ${ }^{8}$ Note that here an OM co-occurs with the right-dislocated object. In the final section, I point out the existence of a construction in which an object is right-dislocated but no OM appears.

[^5]:    ${ }^{9}$ An anonymous reviewer asks whether using manner adverbials would be a better diagnostic to demarcate the edge of the verbal phrase, since temporal adverbs could be adjoined as high as TP. Data using manner adverbs were also collected and the pattern is the same as with temporal adverbs. Examples with a manner adverb are shown in (34) and (37).

[^6]:    ${ }^{10} \mathrm{An}$ anonymous reviewer asks whether dislocation of the external argument was studied as well. Note that in (14)b, the subject must be left-dislocated, since it precedes the left-dislocated object. In $\S 5$, subject left and right-dislocation are used to test the predictions of the analysis. However, I leave for future research a full investigation of how dislocating the external argument interacts with object dislocation.
    ${ }^{11} \mathrm{~A}$ comma indicates a prosodic pause. A pause after a left-dislocated object is optional.
    ${ }^{12}$ Throughout all the dislocation examples, I will maintain a neutral translation that does not attempt to reflect the information structure considerations that render these constructions licit; I briefly discuss these information structure constraints, but refer the reader to Ranero (2015) for a more complete discussion.
    ${ }^{13}$ This relates to the observation before regarding the information structure constraints on dislocated objects, which can only function as topics.

[^7]:    ${ }^{15}$ Regardless of whether the OM is present or not; see $\S 6$ for an example of ORD without an OM.
    ${ }^{16}$ I exemplify throughout with an applicative construction, although the pattern is replicated as well with lexical ditransitives (see Ranero 2015).

[^8]:    ${ }^{17}$ Right-branching specifiers have been proposed to account for word order in a variety of languages. For instance, Chung (1998) provides an array of diagnostics showing that specifiers branch rightwards in Chamorro (Austronesian), while Aissen (1992) accounts for VOS order in Mayan languages through the subject occupying a right-branching specifier.
    ${ }^{18}$ Zeller (2015) calls this feature "anti-focus", primarily because non-focused DPs in Zulu must vacate the vP . Given that this does not apply to Luganda, I use [Top] as the relevant feature, given the interpretation of the dislocated objects.

[^9]:    ${ }^{19} \mathrm{An}$ anonymous reviewer asks why the external argument does not intervene. I assume that the external argument does not carry an [iTop], so it cannot be an intervener for the Top that is searching for this specific feature-the object is the first relevant DP carrying the feature. Whether features relevant to information-structure considerations are active in the narrow syntax is an issue of ongoing debate in the literature, particularly among proponents and critics of the cartographic approach (Rizzi 1997 and subsequent work); see for instance Landman \& Ranero (2018) for a proposal in favor of such an architecture in Bantu and Horvath (2007) for a contrary position to the general idea.
    ${ }^{20} \mathrm{An}$ anonymous reviewer asks what we mean by the [ $\varphi$ ] features being parasitic on [Top]. I simply mean to capture the fact that OMs never occur unless the Top head is merged; this head then enters into an Agree relation with an object that is a topic and the $\varphi$-agreement is spelled-out as the OM. Note that Top enters into an Agree relation with pro and an OM is spelled out in cases where there is no overt object at all-see (9)a-c.
    ${ }^{21}$ I crucially assume the Weak Phase Impenetrability Condition; the complement of the $v$ phase does not become unavailable for syntactic computation until the higher C phase head is merged (Citko 2014).
    ${ }^{22} \mathrm{An}$ alternative placement for the Topic projection would be high in the left-periphery. However, note that the placement of the OM immediately before the root should reflect the syntactic configuration, in adherence to the Mirror Principle (Baker 1985). Therefore, I propose the existence of the low Top position in Luganda.

[^10]:    ${ }^{23}$ This immediately highlights the virtue of this analysis over one that would assume the antisymmetric program (Kayne 1994), which bans rightward specifiers. Under such an approach, right dislocation would have to be derived in Luganda via movement of the DP objects to leftward-specifiers, followed by remnant movement of the $v \mathrm{P}$ above them - however, note that that account would predict the wrong strict ordering of the dislocated objects (DPTHEME > DPGOAL/BEN). Given this strikingly inaccurate prediction, we do not take such an approach, noting additionally that the antisymmetric program has been called into question for independent reasons (Abels \& Neeleman 2009).
    ${ }^{24}$ I could have called this TopP as well, but I call it XP to avoid confusion with ORD.
    ${ }^{25}$ Given that pro is phonetically null, it is irrelevant for our purposes whether Top carries an [EPP] feature in examples like these and pro raises to the right-branching specifier of Top. An anonymous reviewer asks how we ensure that left-dislocation does not co-occur with an overt object in base position. In other languages that allow object left-dislocation, having an object in base position as well is unacceptable:

[^11]:    ${ }^{26}$ The analysis presented here contrasts with Zulu in two ways. First, Zulu allows for doubleobject dislocation, but only for one OM on the verb (though Adams 2010 claims that a second OM in double object-dislocation constructions is phonologically null; see Zeller 2015 for discussion); second, Zeller (2009) claims that OLD is derived via movement, even if both leftdislocated objects are ordered freely (see fn.27). Given that OMing in other languages such as Chichewa is restricted thematically, we do not delve into the details of their analysis, though see Bresnan \& Mchombo (1987) for a seminal treatment of objects and OMs in that language.
    ${ }^{27}$ The three diagnostics presented in this section follow Zeller (2009), which explores OLD in Zulu. Applied to Zulu, the diagnostics in $\S 5.1$ and $\S 5.2$ yield the opposite result to Luganda, suggesting that left-dislocated objects in Zulu are derived via movement.
    ${ }^{28}$ This follows from the Copy Theory of Movement, which proposes that a moved phrase leaves behind a copy in A-bar movement configurations (unpronounced at PF) that is relevant for interpretation at LF. If the left dislocated object were generated from inside the VP and moved to its base position in the left periphery, we would expect that the lower copy of the object R-expression would be bound by the pronoun at LF and a Principle C violation would result.
    ${ }^{29}$ Principle C: An R-expression (an expression that introduces a referent) must be free; it cannot be c-commanded by a co-indexed category at LF.

[^12]:    ${ }^{30} \mathrm{An}$ anonymous reviewer wonders given (34) why an English example like 'Which of Sophie's ${ }_{1}$ daughters did she ${ }_{1}$ send a care package to?' is not ungrammatical, since the subject ccommands the lower copy of Sophie. Note that the example offered by the reviewer is not exactly parallel to the Luganda data, since the R-expression is more deeply embedded in the English sentence. The degree of embedding seems relevant for examples involving topicalization in English:

[^13]:    ${ }^{31}$ An anonymous reviewer asks how movement facilitates binding in ORD. I clarify that it's not the movement itself that facilitates binding, but the existence of the VP internal copy of the dislocated object in ORD. In contrast, such a copy does not exist in OLD.

