Chapter 15

(A)symmetry in double object constructions in Tiriki

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In this paper, I describe and analyze a range of object properties exhibited in double object constructions (DOCs) in Tiriki (Bantu, Luyia; JE413). The preliminary investigation makes clear that Tiriki is symmetrical: both objects of Tiriki DOCs display primary object properties in object-marking, passivization, *wh*-clefting, and relativization. Asymmetry, however, surfaces when one object is passivized and the other undergoes Ā-movements (cf. 'Double Object Movement Asymmetry' or DOMA in Holmberg et al. 2019). While the aforementioned symmetry and emergent asymmetry are fully captured by a high applicative structure that allows for flexible licensing of internal arguments and exhibits phasal properties, Tiriki instantiates two additional DOMA-triggering contexts: passivization combined with left dislocation and *wh*-in-situ. Based on various diagnostics targeting Ā-dependencies, I show that neither left dislocation nor *wh*-in-situ requires a movement analysis, thereby articulating the analytical challenges that these configurations, especially left dislocation, pose to the current movement-based DOMA analysis.

1 Introduction

This paper explores aspects of the morphosyntax of Tiriki (Bantu, Luyia; JE413), an under-documented language of Western Kenya and Eastern Uganda (Lewis et al. 2016). Specifically, I investigate issues related to object properties in Tiriki double object constructions (DOCs), with an emphasis on describing and deriving their (a)symmetry under a range of syntactic operations.

As is common in most Bantu languages, Tiriki DOCs can be either introduced with lexical ditransitive predicates or derived with valency-increasing suffixes. See below for examples of Tiriki DOCs:

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(1) a. Lexical ditransitive *-manyinya* 'show'
Hardley a-manyiny-e va-somi vi-tapu
Hardley 1SM-show-FV.PST 2-student 8-book
'Hardley showed students books.'

b. Benefactive applicative *-tekhela* 'cook for'
Ebby a-tekh-el-e va-cheni vy-apati
Ebby 1SM-cook-APPL-FV.PST 2-guest 8-chapati
'Ebby cooked chapatis for the guests.'

c. Causative *-ng'wekhitsa* 'feed (make … eat)'
Ebby a-ng'wekh-its-e shi-paka ma-vele
Ebby 1SM-drink-CAUS-FV.PST 7-cat 6-milk
'Ebby fed the cat milk.'

As proposed in previous work (cf. Kimenyi 1980, Baker 1988, Bresnan & Moshi 1990), Bantu languages vary with regard to whether one or both internal arguments of DOCs show primary object properties. Tiriki is by and large a symmetrical language, meaning that "different [internal] arguments can simultaneously have primary object properties" (Bresnan & Moshi 1990: 153). As shown below, both objects can be promoted to be the grammatical subject in passives or the head noun in relative clauses:

(2) a. Passivization
i. va-somi va-manyiny-w-e vi-tapu
2-student 2SM-show-PASS-FV.PST 8-book
'Students were shown books.'
ii. vi-tapu vi-manyiny-w-e va-somi
8-book 8SM-show-PASS-FV.PST 2-student
'Books were shown to the students.'

b. Object relative clauses (RCs)
i. va-somi v-a Hardley a-manyiny-e vi-tapu
2-student 2-REL Hardley 1SM-show-FV.PST 8-book
'the students that Hardley showed the books to'
ii. vi-tapu vy-a Hardley a-manyiny-e va-somi
8-book 8-REL Hardley 1SM-show-FV.PST 2-student
'the books that Hardley showed the students'

Asymmetry, however, emerges when the internal arguments undergo a combination of syntactic operations. When the theme object is passivized, the indirect/applied object is unable to undergo Ā-movements like relativization whereas the reverse is grammatical.

(3) Object RCs with passivization

a. *va-somi v-a vi-tapu vi-manyiny-w-e
2-student 2-REL 8-book 8SM-show-PASS-FV.PST
Intended: 'the students that the books were shown to'

b. vi-tapu vy-a va-somi va-manyiny-w-e
8-book 8-REL 2-student 2SM-show-PASS-FV.PST
'the books that the students were shown'

Similar emergent object asymmetries have been attested in other symmetrical Bantu languages like Zulu and Lubukusu (see Holmberg et al. 2019 and references therein). What Tiriki patterns contribute to the existing body of literature is 1) another case study where the currently available analysis and relevant predictions can be tested, and 2) novel asymmetry patterns that pose challenges to the current analysis. For example, *wh*-in-situ, where no overt *wh*-movement is observed, also incurs asymmetry when combined with passivization in Tiriki:

(4) Object *wh*-in-situ with passivization

a. *vi-tapu vi-manyiny-w-e w-ina
8-book 8SM-show-PASS-FV.PST 1-who
Intended: 'The books were shown who?' (*non-echo question*)

b. va-somi va-manyiny-w-e sh-ina
2-student 2SM-show-PASS-FV.PST 7-what
'The students were shown what?' (*non-echo question*)

In this paper, I focus on only lexical and derived ditransitive predicates whose internal arguments bear thematic roles of beneficiary (BEN), recipient (REC), and Theme (THE).[1] I use 'theme objects' and 'direct objects' (DOs) interchangeably

[1]As for applied objects with other thematic roles, causee objects show generally the same patterns as recipient/beneficiary objects and are therefore not elaborated on. I also exclude instrumental and locative applied objects from the discussion. It is still disputed whether objects with these thematic roles are base-generated in the same underlying structure as that of other DOCs (Baker 1988, Nakamura 1997, Jerro 2016), and clarifying the answer to this dispute is outside the scope of this paper.

throughout this paper and refer to non-theme objects collectively as indirect objects (IOs) for ease of exposition.

The rest of the paper is structured as follows: In §2, I introduce basic object symmetry patterns in Tiriki across a range of syntactic contexts (e.g. object-marking, passivization, *wh*-clefts, relative clauses) and analyze them by applying the flexible licensing approach (van der Wal 2017, 2022) to a high applicative DOC structure (Pylkkänen 2008). §3 details how object symmetry is lost when one object is passivized and the other attempts to be Ā-extracted. Besides confirming the general compatibility between the Tiriki facts and the extant account of emergent object asymmetry (Holmberg et al. 2019), I present data on two additional configurations that result in asymmetry, namely left dislocation and *wh*-in-situ in passives. Multiple diagnostics are also performed to ascertain the nature of the syntactic dependencies involved and the implications for a movement-centered account of asymmetry. §4 summarizes the findings and concludes the paper.

2 Deriving object symmetry from structural asymmetry

In this section, I illustrate a range of object properties displayed in Tiriki DOCs with new empirical data. Then, I draw on insights from previous work on Bantu DOCs (chiefly van der Wal 2022, but also see among others Bresnan & Moshi 1990, Jerro 2016, van der Wal 2017) and develop a working analysis of Tiriki object symmetry.

2.1 Object properties in Tiriki DOCs

At first blush, Tiriki exhibits largely symmetrical object properties. Both objects can be object-marked (in (5a)), be promoted to the subject position (i.e. passivization in (5b)), and be involved in Ā-movement dependencies (e.g. *wh*-clefts in (5c) and relative clauses in (5d)). In summary, both internal arguments of Tiriki DOCs are capable of undergoing movement and non-movement operations alike.

(5) a. Object-marking

i. Hardley a-(va) -manyiny-e vi-tapu
Hardley 1SM-2OM-show-FV.PST 8-book
'Hardley showed them (i.e. students) books.'

ii. Hardley a-(vi) -manyiny-e va-somi
Hardley 1SM-8OM-show-FV.PST 2-student
'Hardley showed them (i.e. books) to the students.'

b. Passivization
   i. [va-somi] va-manyiny-w-e vi-tapu
   2-student 2SM-show-PASS-FV.PST 8-book
   'Students were shown books.'
   ii. [vi-tapu] vi-manyiny-w-e va-somi
   8-book 8SM-show-PASS-FV.PST 2-student
   'Books were shown to the students.'

c. Object *wh*-clefts
   i. [wina] w-a Hardley a-manyiny-e vi-tapu
   1-who 1-REL Hardley 1SM-show-FV.PST 8-book
   'Who did Hardley show the books to?'
   ii. [shina] sh-a Hardley a-manyiny-e va-somi
   7-what 7-REL Hardley 1SM-show-FV.PST 2-student
   'What did Hardley show to the students?'

d. Object relative clauses (RCs)
   i. [va-somi] v-a Hardley a-manyiny-e vi-tapu
   2-student 2-REL Hardley 1SM-show-FV.PST 8-book
   'the students that Hardley showed the books to'
   ii. [vi-tapu] vy-a Hardley a-manyiny-e va-somi
   8-book 8-REL Hardley 1SM-show-FV.PST 2-student
   'the books that Hardley showed the students'

Notably, the only object asymmetry in Tiriki is manifested in post-verbal word order. In neutral discourse contexts, Tiriki speakers always default to the REC/BEN > THE word order and judge the inverse infelicitous:

(6) Canonical post-verbal word order in Tiriki DOCs
   a. Hardley a-manyiny-e va-somi vi-tapu
   Hardley 1SM-show-FV.PST 2-student 8-book
   b. #Hardley a-manyiny-e vi-tapu va-somi
   Hardley 1SM-show-FV.PST 8-book 2-student
   'Hardley showed students books.' (*in neutral discourse contexts*)

In fact, the inverse word order is perfectly natural in the appropriate contexts. It has been widely documented across Bantu languages that information structure affects post-verbal word orders (see van der Wal 2006, 2009 on Makhuwa; Buell 2009, Cheng & Downing 2012, Zeller 2014 on Zulu; Selvanathan 2019, Sikuku &

Diercks 2021 on Lubukusu, among others). For example, Aghem displays focus-related word order variation, where post-verbal focused elements can be scrambled to the immediately-after-the-verb (IAV) position (Watters 1979). In Tiriki, a topicality-related IAV effect can be observed. For all DOCs exemplified above, an aboutness-topic prompt allows the lower object to surface in the IAV position:

(7) Topicality-driven IAV effect in Tiriki

A: m-bol-el-a shi-ndu khu vy-apati
1SG.OM-say-APPL-FV 7-thing about 8-chapati
'Tell me something about the chapatis.'

B: Ebby a-tekh-el-e **vy-apati** va-cheni
Ebby 1SM-cook-APPL-FV.PST 8-chapati 2-guest
'Ebby cooked chapatis for the guests.'

I will not further elaborate on this pragmatically regulated word-order variation as it is not directly pertinent to the inquiry at hand. This brief description of IAV effect is intended to clarify what I refer to as 'canonical word order,' the use of # diacritics, and that this word-order asymmetry is due to information structure.

2.2 Analysis of Tiriki object symmetry

In terms of the underlying structure of Tiriki DOCs, I take it that the canonical post-verbal word order straightforwardly encodes the c-command asymmetry between the two internal arguments' base-generated positions (given the robust relationship between c-command asymmetry and linear order especially in head-initial languages, cf. Kayne 1994). The default word order of IO > DO thus suggests that the IO asymmetrically c-commands the DO in Tiriki DOCs, which is common in most DOCs cross-linguistically (Barss & Lasnik 1986, Marantz 1993). I adopt Pylkkänen's (2008) high applicative structure for Tiriki DOCs, in which the applicative head (Appl) introduces an external-argument-like IO and relates said object and the event described by the predicate. The high applicative structure is schematized in Figure 1.[2]

This syntactic structure for Tiriki DOCs is supported by the fact that IOs in Tiriki ('student' in the example below) can be modified by the depictive secondary predicate ('tired' in this case), a property unique to high applicative structures (Pylkkänen 2008).

[2]See Pylkkänen 2008 for discussion on *v*P versus VoiceP (Kratzer 1996). In this paper, I conflate the two and use *v*P throughout.

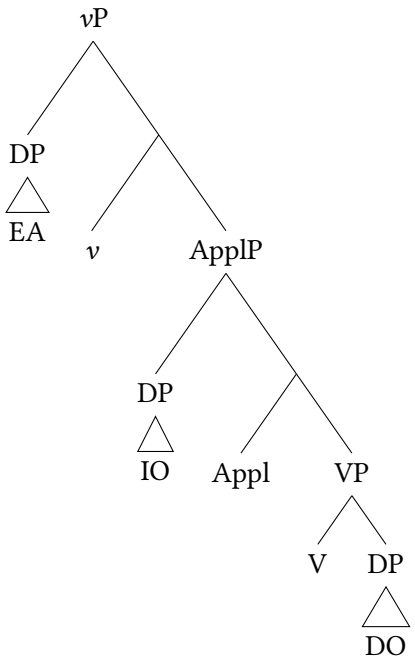


Figure 1: Structure of Tiriki DOCs

(8) High applicative DOCs: Depictives
Hardley a-manyiny-e mu-somi vi-tapu nachoti
Hardley 1SM-show-FV.PST 1-student 8-book 1tired
'Hardley showed a student books (while the student is) tired.'

Also, Tiriki patterns with other high applicative Bantu languages like Kichaga (Bresnan & Moshi 1990; also see Pylkkänen 2008 for the high applicative analysis thereof) in that only discourse-familiar DOs but *not* IOs can undergo null object drop (or unspecified object deletion). Henderson (2018) explains this generalization by claiming that the absence of discourse-familiar DOs simply results from externally merging the applied object above an intransitive VP.

(9) High applicative DOCs: Null object drop
a. Ebby a-tekh-el-e va-cheni ma-kaanda
Ebby 1SM-cook-APPL-FV.PST 2-guest 6-bean
'Ebby cooked beans for the guests.'

b. *Ebby a-tekh-el-e ∅ ma-kaanda
Ebby 1SM-cook-APPL-FV.PST 6-bean
'Ebby cooked beans (for them).'

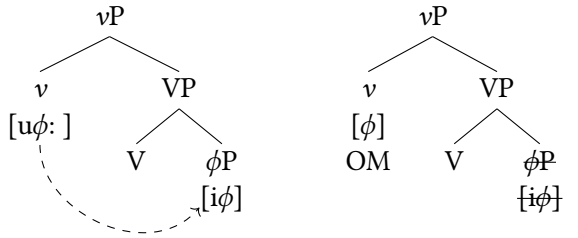
c. Ebby a-tekh-el-e va-cheni ∅
Ebby 1SM-cook-APPL-FV.PST 2-guest
'Ebby cooked (them) for the guests.' (Michael Diercks, personal communication)

Now, I derive Tiriki object symmetry from the high applicative structure using largely the same theoretical machinery presented in Holmberg et al. (2019). In the case of object-marking, I assume the following: First, Tiriki object markers (OMs) arise in the lower domain, as opposed to an independent functional head base-generated atop the verb's landing site like other Bantu prefixes (Julien 2002)[3]; specifically, they are the spellout of ϕ-features on v (contra Sikuku et al. 2018, Sikuku & Diercks 2021). Second, I take Tiriki OMs to reflect the ϕ-agreement between a Probe on v and a defective DP Goal in the thematic object position, following Roberts (2010) and relatedly van der Wal (2015, 2022). I adopt van der Wal's (2022) definition of goal defectivity (modified based on the original conception in Roberts 2010: 62), which states that a defective Goal contains only a subset of the Probe's features. Concretely for ϕ-agreement, a defective Goal would be maximally a ϕP (Déchaine & Wiltschko 2002), which has no D feature. In this Probe-Goal relation, ϕ-features are shared between the Probe and the Goal upon Agree, forming a chain of copies, and only the highest copy gets spelled out and realized as an OM on v due to chain reduction (cf. Nunes 2004). In the case where a non-defective Goal (i.e. a full object DP) is probed, no such chain reduction takes place as the features on the Goal DP do not constitute a subset of those on the Probe. Upon Agree, the ϕ-Probe on v copies back ϕ-features from the Goal DP, which remain unpronounced, and only the full Goal DP spells out. These two configurations are illustrated below:

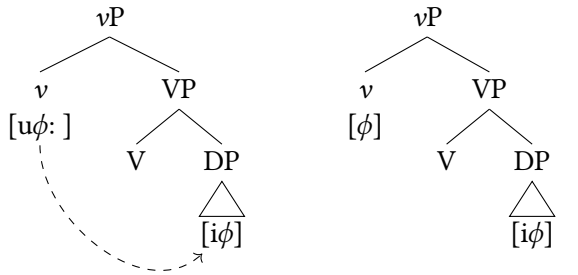
[3]This view on the status of Bantu OMs is informed by work on Bantu morphophonology (e.g. Hyman 2003, Marlo 2013, 2015). They show that Bantu OMs, despite their prefixal position, behave as though they form one unit with their verb stems, i.e. a macrostem. Together, they are subject to tonal processes, such as inflectional tone assignments and repairs to potential violations of the Obligatory Contour Principle.

(10) Object agreement in Tiriki

a.



b.



This analysis correctly captures the fact that Tiriki OMs cannot co-occur with their co-referential *in-situ* object DPs in neutral discourse contexts, thereby accomplishing an incorporation effect of object-marking using a purely Agree-based approach:

(11) Illicit OM doubling in Tiriki
#a-mu -lol-i ∅-raisi
1SM-1OM-see-FV.PST 1-president
'He saw him, the president.' (*neutral discourse context*)[4]

On a high applicative analysis of Tiriki DOCs, object-marking a DO in the presence of an IO is impossible without violating principles of locality and minimality (Rizzi 1990, Chomsky 1995), for the IO always intervenes as the closer Goal. van der Wal (2022) points out the same problem in symmetrical Bantu languages and identifies several possible solutions which either make the DO an equally close,

[4]It has been well-documented for Bantu languages that while OMs behave like incorporated pronouns in neutral discourse contexts, they can also co-occur with their co-referent object DPs (i.e. OM/clitic doubling) in certain pragmatic contexts. I do not discuss this further in this paper, but I direct the interested reader to Liu (2022) on Tiriki, Sikuku et al. (2018) and Sikuku & Diercks (2021) on Lubukusu, Bax & Diercks (2012) on Manyika, and Lippard et al. (forthcoming) for a comparative overview.

if not closer, Goal, or render the closer IO invisible to the Probe and thus inert for Agree. She eventually advocates for the approach of flexible licensing, following van der Wal (2017) and Haddican & Holmberg (2019).

The details are as follows: In Bantu DOCs, both internal arguments require Case-licensing, a mechanism independent of the realization of ϕ-features (following Carstens 2005). Rather than making v the only Case-licensor of the clause, this approach allows the lower functional head Appl to flexibly Case-license either the structurally higher IO or the lower DO (Figure 2).

The object-marking symmetry readily follows from this flexibility in Case-licensing. When Appl assigns Case (and theta role) upward to the IO, the IO becomes deactivated and thus invisible to v (Chomsky 2001). v can then probe downward to a defective DO, Case-license it, and realize it as an OM via Agree. When the DO gets Case-licensed first by Appl, v then proceeds to assign Case and Agree with the IO.[5] I will adopt this analysis for Tiriki object-marking symmetry in DOCs.

In the same vein, the object symmetry in passivization, *wh*-clefts, and relativization can be achieved. Concretely for passivization, the higher Probe becomes T as v does not assign Case in passive voice. DO passives, namely the curious case where the higher Probe T successfully assigns nominative Case to the lower Goal and attracts it to Spec,TP, are made possible by a version of Phase Impenetrability Condition (Chomsky 2001) and a contextually based definition of the lower phase (Bošković 2014, 2015):

(12) Phase Impenetrability Condition (see Holmberg et al. 2019 and references therein)
Given a structure $[_{ZP}$ Z …$[_{XP}$ X [HP α [H YP]]]] where H and Z are phase heads, the domain of H is not accessible to operations at ZP; only H and its edge (i.e. the outermost specifier of HP) are accessible to such operations.

(13) Bošković's (2015) definition of phase
α is the head of a phase Ph making up a thematic domain if and only if α is the highest head introducing an argument in Ph.

In the case of passive DOCs, the lower phase is ApplP. Appl first licenses the IO, and upon completion of the lower phase, the DO undergoes movement to outer Spec,ApplP with its [uCase] feature (McGinnis 2001, Aldridge 2004, Bošković

[5]Note that this is the *only* available Case-licensing mechanism in asymmetrical single-object-marking Bantu languages (e.g. Swahili). See van der Wal (2020) for more discussion on this.

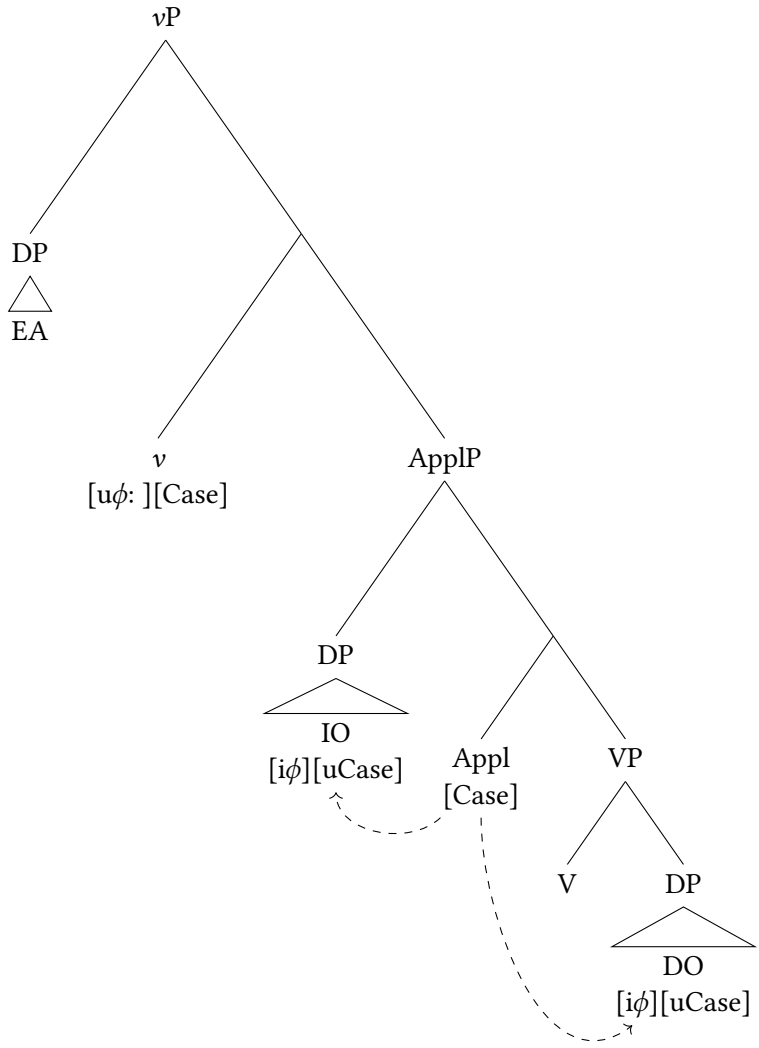


Figure 2: Flexible licensing via Appl (adapted from Holmberg et al. 2019: 687)

2016). This movement follows from Bošković's (2007) account of greed-driven movement, which stipulates that XPs whose uninterpretable features cannot be valued phase-internally must escape through the phase edge to avoid derivational crash. Following this movement to the lower phase edge, the DO gets Case-licensed by T. The opposite mechanism, where Appl licenses the DO and T probes the IO, derives IO passives. In the contexts of *wh*-questions and relativization (in active voice), the lower phase is *v*P. IO and DO receive Case from *v* and Appl, and the object that still bears an unvalued [u*wh*] feature moves to the outermost layer of Spec,*v*P and is probed for subsequent Ā-movement when C is merged and the complement of *v*P is transferred.

All object symmetry facts in Tiriki DOCs have been accounted for thus far with the help of flexible licensing and phasal properties. In the next section, I shed light on the unexpected object asymmetry that emerges from combinations of A-movement, Ā-movement, and non-movement operations in Tiriki—the latter of which is not yet discussed in previous Bantu literature.

3 Deriving (movement) asymmetry from object symmetry

Interestingly, though Tiriki DOCs show symmetry in object-marking, passivization, *wh*-questions, and relativization, asymmetry surfaces under combinations of the aforementioned syntactic operations. Specifically, although both the IO and the DO can be A- and Ā-moved on their own in these languages, a DO can be Ā-extracted from an IO passive, but not vice versa. Such unexpected asymmetries in generally symmetrical DOCs have been widely reported in previous Africanist literature (e.g. Visser 1986 on Xhosa; De Guzman 1987 on Swati; Adams 2010 and Zeller 2012 on Zulu, among others). Holmberg et al. (2019), one of the most recent analytical accounts, provide a cross-linguistic survey of relevant patterns in Norwegian, Northwest British English, Zulu, and Lubukusu. I fully adopt their theoretical assumptions and final proposal for my analysis of similar asymmetries in Tiriki DOCs.

In the following subsections, I review Holmberg et al.'s (2019) account of object movement asymmetry and demonstrate that not only does this asymmetry hold true in Tiriki, but it also arises in different guises that don't immediately lend themselves to their account.

3.1 Double object movement asymmetry (DOMA) in Tiriki DOCs

Based on data from Zulu and Lubukusu, Holmberg et al. (2019) articulate a movement restriction on these otherwise fully symmetrical languages, where the IO

cannot be relativized when the DO is passivized despite the reverse being grammatical. They summarize this restriction as the 'Double Object Movement Asymmetry' (DOMA). The same DOMA effect is borne out in Tiriki; when the DO is promoted to subject position, the IO is prohibited from being Ā-extracted:

(14) a. Object *wh*-clefts with passivization
   i. *wina wa vi-tapu vi-manyiny-w-e
   1-who 1-REL 8-book 8SM-show-PASS-FV.PST
   Intended: 'Who were the books shown to?'
   ii. shina sha va-somi va-manyiny-w-e
   7-what 7-REL 2-student 2SM-show-PASS-FV.PST
   'What were the students shown?'

b. Object RCs with passivization
   i. *va-somi va vi-tapu vi-manyiny-w-e
   2-student 2-REL 8-book 8SM-show-PASS-FV.PST
   Intended: 'the students that the books were shown to'
   ii. vi-tapu vya va-somi va-manyiny-w-e
   8-book 8-REL 2-student 2SM-show-PASS-FV.PST
   'the books that the students were shown'

In the presence of a passivized DO, an IO also cannot be object-marked:

(15) Object-marking with passivization
   a. Alulu a-kumil-il-e mu-saakhulu tsi-haywa
   Alulu 1SM-touch-APPL-FV.PST 1-grandfather 10-axe
   'Alulu held the axes for grandfather.'
   b. *tsi-haywa tsi-mu -kumil-il-w-e (mu-saakhulu)
   10-axe 10SM-1OM-touch-APPL-PASS-FV.PST 1-grandfather
   Intended: 'Axes were held for grandfather.'
   c. mu-saakhulu a-tsi -kumil-il-w-e (tsi-haywa)
   1-grandfather 1SM-10OM-touch-APPL-PASS-FV.PST 10-axe
   'Grandfather was held axes for.' (Michael Diercks, personal communication)

This inevitable derivational crash incurred by the Ā-movement of IO out of a DO passive is in fact predicted by the analysis presented in the previous section (à la Holmberg et al. 2019). Recall that ApplP becomes the lower phase in passive DOCs. In the grammatical case, e.g. a DO *wh*-question with a passivized IO,

the derivation can be modeled as in Figure 3: First, Appl Agrees with and Case-licenses the DO (arrow (1)). T Agrees with and Case-licenses the IO (arrow (2)), which attracts it to A-move to Spec,TP and fulfill EPP as the grammatical subject. Due to the unvalued [u*wh*], the DO moves to the edge of the lower phase at Spec,ApplP. Upon the spellout of the lower phase, the DO survives and proceeds to the C domain, driven by the [*wh*] on C (arrow (3)).

When it is the other way around, however, the IO gets inevitably stranded within the lower phase, and its unvalued [u*wh*] causes ungrammaticality. This failed derivation is shown in Figure 4.

In order to derive a DO passive, the DO cannot be Case-licensed by Appl this time. Instead, Appl probes upward to license the IO (arrow (1)), leaving [uCase] on the DO unvalued. The DO then proceeds to move over the IO to the phase edge (outermost Spec,ApplP) and get Case-licensed by T (arrow (2)). In this scenario, the IO will not be able to escape the lower phase, for it is stranded in the innermost Spec,ApplP and cannot move to a higher edge position due to anti-locality (Abels 2003, Grohmann 2003). When C is merged, the [u*wh*]-bearing IO will be transferred to PF, causing the derivation to crash.

For object-marking under passivization, ApplP still demarcates the lower phase. Here, I revise the previously introduced assumption that v is the locus of ϕ-agreement for object-marking (cf. (10)) and restrict it to only active contexts. Following Holmberg et al. (2019), I assume that Appl doubles as the lower Case-licensor *and* the ϕ-Probe in passives. In the ungrammatical case of object-marking the IO in a DO passive, spelling out the ϕ-features on Appl becomes impossible as the Goal sits right above the Agreeing head associated with object-marking. After Appl licenses and Agrees with the IO upward (and copies back the ϕ-features), the IO itself becomes the highest copy in the chain, causing the lower copy to be deleted at PF upon transfer of the lower phase. As a result, an IO OM can never be pronounced.

In summary, the emergent asymmetries come down to purely structural constraints, namely the c-command asymmetry between two internal arguments and the cyclic nature of syntactic derivations.

3.2 Other emergent asymmetries in Tiriki DOCs

In this section, I explore the object properties exhibited in the cases where passivization is combined with left dislocation and *wh*-in-situ in Tiriki DOCs. The goal for this section is not to sketch out a complete analysis that accounts for the additional asymmetries; rather, I draw on relevant diagnostics for (covert) movement to develop preliminary arguments on how these asymmetry patterns

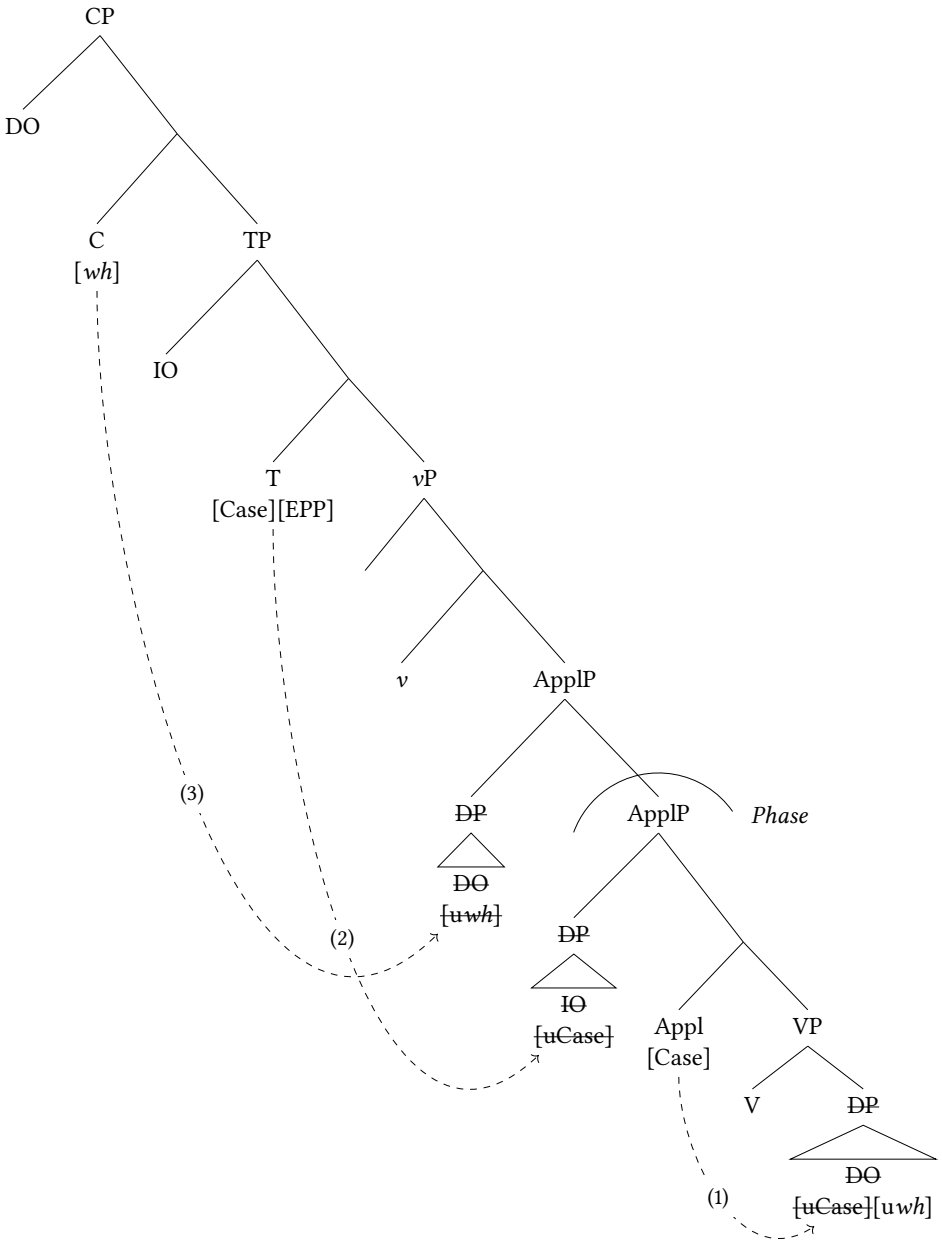


Figure 3: Derivation: Grammatical DO *wh*-clefts with IO passive

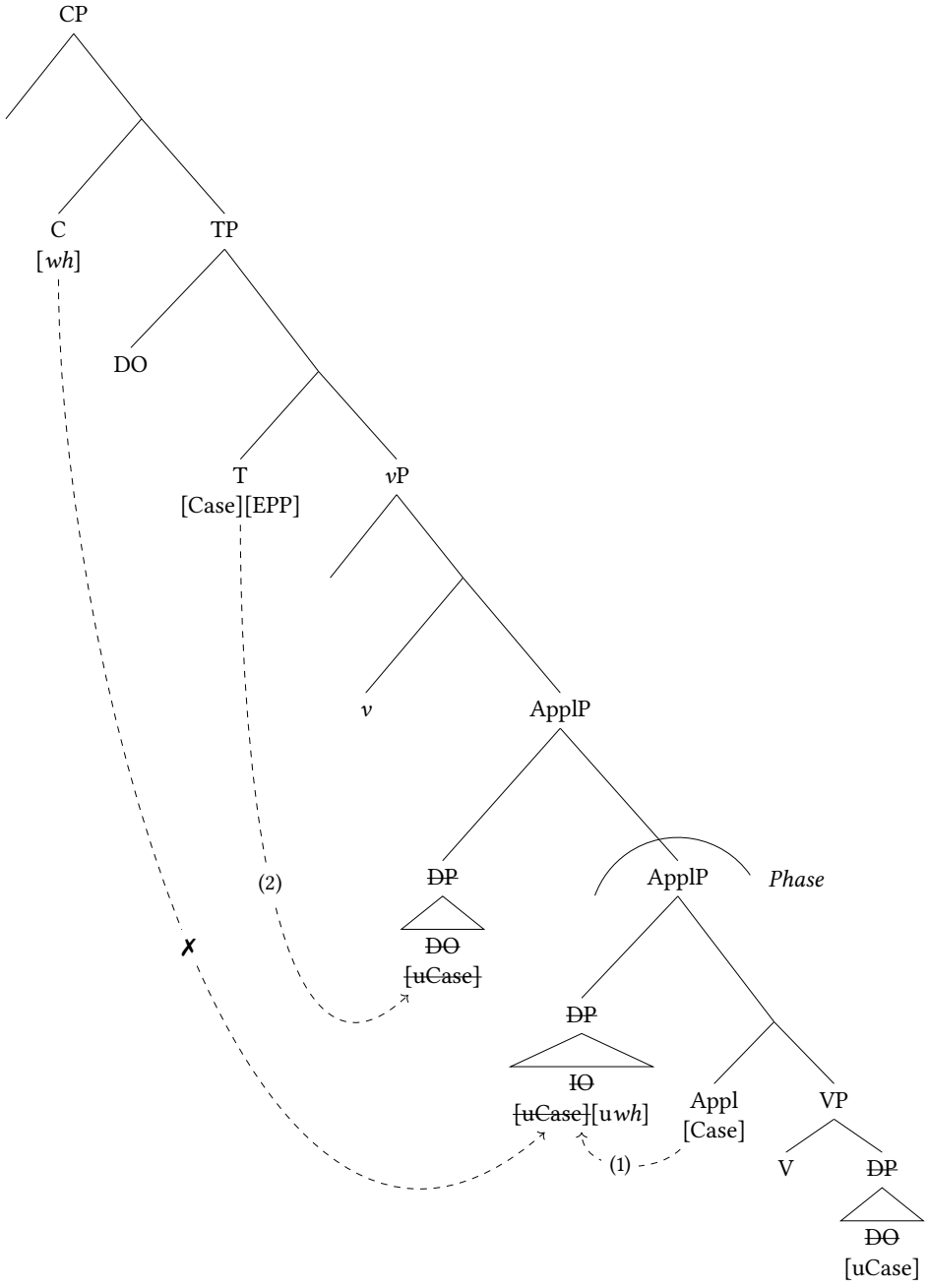


Figure 4: Derivation: Ungrammatical IO *wh*-clefts with DO passive

would fare on Holmberg et al.'s (2019) analysis. I leave the investigation into the syntactic nature of left dislocation and *wh*-in-situ in Tiriki for future research.

3.2.1 Left dislocation in passives

In Tiriki, the object has the option to surface clause-initially (i.e. be left-dislocated) when it bears an aboutness topic reading, a construction reminiscent of English topicalization:

(16) Object left dislocation

a. va-somi , Hardley a-*(va)-manyiny-e vi-tapu
2-student Hardley 1SM-2OM-show-FV.PST 8-book
'The students, Hardley showed them books.'

b. vi-tapu , Hardley a-(*vi)-manyiny-e va-somi 'The books,
8-book Hardley 1SM-8OM-show-FV.PST 2-student
Hardley showed them to the students.'

As shown above, left dislocation (LD) is symmetrical in Tiriki DOCs, where either internal argument can be fronted.[6] However, a DOMA-like asymmetry is observed when left dislocation is combined with passivization:

(17) Object left dislocation with passivization

a. *va-somi , vi-tapu vi-(va)-manyiny-w-e
2-student 8-book 8SM-2OM-show-PASS-FV.PST
Intended: 'The students, the books were shown to.'

b. vi-tapu , va-somi va-(*vi)-amanyiny-w-e
8-book 2-student 2SM-8OM-show-PASS-FV.PST
'The books, the students were shown.'

While these DOMA-like facts may seem unsurprising on an Ā-movement analysis of LD (along the lines of Zeller 2009), further exploration into the properties of Tiriki LD suggests otherwise. As it turns out, LD in Tiriki patterns

[6]Both anonymous reviewers noted that object-marking interacts with left dislocation in interesting ways, given its obligatoriness in (16a) and ungrammaticality in (16b). I do not elaborate on this object-marking asymmetry in this paper, but the findings reported in Liu (2022) suggest that it is due to a combination of animacy effects and asymmetrical object properties under topicalization. Essentially, in monotransitives, it is obligatory to object-mark animate internal arguments, but optional for inanimates; in DOCs, object-marking left-dislocated animate IOs is mandatory, but left-dislocated (in)animate DOs and inanimate IOs cannot be realized as OMs. I leave the syntactic nature of this curious interaction between object-marking and left dislocation, as well as its implications for DOMA, for future research.

more closely with hanging topic left dislocation (HTLD, following Cinque 1977) cross-linguistically, which is generally analyzed as base-generation. In the paragraphs to come, I discuss the basic properties of HTLD and employ several syntactic diagnostics to show that left-dislocated objects in Tiriki are base-generated, rather than moved, clause-initially (see Alexiadou 2017 for an overview, as well as Ranero 2019 for a similar approach to object left dislocation in Luganda).

First, a discernible prosodic break between the dislocated element and the rest of the clause is observed, if not required, in HTLD. Tiriki exhibits the same requirement, as evidenced by the commas in all Tiriki left-dislocation examples. Second, the ban on left dislocation in embedded contexts (such as the adjunct relative clause below) in Tiriki is consistent with the generalization that HTLD is typically only allowed in root contexts.

(18) Illicit object left dislocation inside RC
*d-ukh-i [$_{DP}$ ha-vundu h-a tsi-khuyi , Anangwe
1SG.SM-arrive-FV.PST 16-place 16-REL 10-firewood Anangwe
a-tsi-isiyak-il-e]
1SM-10OM-chop-PFV-FV
Intended: 'I arrived at the place where the firewood, Anangwe chopped it.'

Another hallmark property of HTLD in contrast with other similar constructions (e.g. clitic left dislocation) is the lack of connectivity between the dislocated element and its corresponding thematic position. Such absence of connectivity effects can be shown with idiom chunks. In Tiriki, idioms appear to be not just a surface phenomenon in the sense that the idiomatic interpretation of a full-clause idiom can still be retained when its subparts do not immediately follow each other linearly. For example, the idiomatic reading persists even when the idiom is separated by a (hyper-)raising predicate *-lolekha* 'seem':

(19) Idiom connectivity with raising predicate *-lolekha* 'seem'
i-mbisi$_i$ i-lolekh-a khuli ___$_i$ i-hulil-e mu-lilo
9-hyena 9SM-seem-FV that 9SM-feel-FV.PFV 3-fire
✓ Idiomatic reading: 'Someone seems to have overeaten.'
✓ Literal reading: 'The hyena seems to have felt the fire.'

Under the assumption that an idiom as a whole must form one constituent at some point of the derivation, its idiomatic interpretation can only survive the apparent displacement of its subparts when such displacement results from movement. The fact that only a literal interpretation is available under Tiriki LD in

(20b) suggests that the configuration in question is indeed HTLD, and that the dislocated object is base-generated in the left periphery.[7]

(20) Object left dislocation: Idiom chunk

a. Lydia a-h-el-e mw-ana li-chembe
Lydia 1SM-give-PFV-FV.PST 1-child 5-shovel
✓ Idiomatic reading: 'Lydia has given the idle child some work to do.'
✓ Literal reading: 'Lydia has given the child a shovel.'

b. li-chembe , Lydia a-h-el-e mw-ana
5-shovel Ebby 1SM-give-PFV-FV.PST 1-child
✗ Idiomatic reading: 'Lydia has given the idle child some work to do.'
✓ Literal reading: 'Lydia has given the child a shovel.'

Tiriki HTLD also exhibits no Condition C connectivity. As shown in (21b), the left-dislocation of 'Lydia's child' obviates the Condition C violation, permitting *Lydia* in the dislocated DP and the subject pronoun *ye* to co-refer. This contrast, again, points to a base-generation analysis as an Ā-movement dependency would have resulted in a lower copy of the bound R-expression.

(21) Object left dislocation: Condition C

a. ye a-h-el-e mw-ana w-a Lydia ma-chungwa
1-PRO 1SM-give-PFV-FV.PST 1-child 1-ASSOC Lydia 6-orange
✗ Bound reading: 'She$_i$ gave Lydia$_i$'s child oranges.'
✓ Free reading: 'She$_i$ gave Lydia$_j$'s child oranges.'

b. mw-ana w-a Lydia , ye a-*(mu)-h-el-e
1-child 1-ASSOC Lydia 1-PRO 1SM-1OM-give-PFV-FV.PST
ma-chungwa
6-orange
✓ Bound reading: 'Lydia$_i$'s child, she$_i$ gave him oranges.'
✓ Free reading: 'Lydia$_j$'s child, she$_i$ gave him oranges.'

Beyond connectivity effects, HTLD in Tiriki also shows no Weak Crossover effect (WCO) in (22b) while such an effect is robustly triggered by overt *wh*-movements. I take this to suggest that no movement dependency is involved in Tiriki HTLD, following Cinque (1990).

[7] An anonymous reviewer pointed out that alternatively, the loss of idiomatic readings under HTLD might be because idiom chunks cannot be topics (or are in general incompatible with the interpretive effects of Tiriki HTLD). For example, *#As for the bucket, Mary kicked it* cannot be interpreted idiomatically.

(22) Object left dislocation: Weak Crossover

a. *wina$_i$ w-a mw-ana wewe$_i$ y-a-mu-yanz-a
1-who 1-REL 1-child 1POSS 1SM-PRES-1OM-love-FV
Intended: 'Who$_i$ does his$_i$ child love?'

b. Lydia$_i$, mw-ana wewe$_i$ y-a-*(mu)-yanz-a
Lydia 1-child 1POSS 1SM-PRES-1OM-love-FV
'Lydia$_i$, her$_i$ child loves her$_i$.'

Other supporting evidence hinges on island constraints (Ross 1967; see (23) on complex NP and adjunct islands) and scope reconstruction (see (24)). While the absence of these effects does not necessarily correlate with an absence of movement, I conclude that the island insensitivity and lack of scope reconstruction of Tiriki HTLD ought to be explained with a base-generation approach rather than independent syntactic properties of Tiriki, considering other diagnostics discussed above.

(23) Object left dislocation: Island insensitivity

a. shi-tapu , Hardley a-lol-i [$_{DP}$ mu-somi yi-v-i]
7-book Hardley 1SM-see-FV.PST 1-student 1SM-steal-FV.PST
'The book, Hardley saw the student who stole (it).'

b. va-cheni , Alulu a-rhul-i [$_{TP}$ baada y-a Hardley
2-guest Alulu 1SM-leave-FV.PST after ASSOC Hardley
khu-*(va)-shelits-a]
15-2OM-greet-FV
'The guests, Alulu left after Hardley greeted (them).'

(24) Object left dislocation: Scope reconstruction

a. vuli mw-ikitsi a-manyiny-e va-somi veve shi-tapu
every 1-teacher 1SM-show-FV.PST 2-student 2-POSS 7-book
'*Every* teacher showed *his* students a book.'
✓ Bound reading: For every teacher x, x showed x's students a book.
✓ Free reading: For every teacher x, x showed y's students a book.

b. va-somi veve , vuli mw-ikitsi a-*(va)-manyiny-e shi-tapu
2-student 2-POSS every 1-teacher 1SM-2OM-show-FV.PST 7-book
'*His* students, *every* teacher showed them a book.'
✗ Bound reading: For every teacher x, x showed x's students a book.
✓ Free reading: For every teacher x, x showed y's students a book.

In summary, the data at hand strongly hint at a base-generation analysis of Tiriki HTLD. Therefore, the asymmetry reported at the beginning of this subsection constitutes a real challenge to the analysis advanced in Holmberg et al. (2019) as their account targets Ā-movement—but not non-movement—dependencies.

3.2.2 *Wh*-in-situ in passives

DOMA effect in Tiriki can also result from the interaction between *wh*-in-situ and passivization. Like most Bantu languages, Tiriki allows for both *ex-situ* and *in-situ* strategies for forming *wh*-questions:

(25) Strategies for Tiriki *wh*-questions

a. sh-ina sh-a Vusu a-l-il-e
7-what 7-REL Vusu 1SM-eat-PFV-FV.PST

b. Vusu a-l-il-e sh-ina
Vusu 1SM-eat-PFV-FV.PST 7-what
'What did Vusu eat?'

Just like how IOs cannot undergo *wh*-movement in DO passives, IOs also cannot stay *in-situ* when DOs are passivized:

(26) Object *wh*-in-situ with passivization

a. *vi-tapu vi-manyiny-w-e w-ina
8-book 8SM-show-PASS-FV.PST 1-who
Intended: 'The books were shown who?'

b. va-somi va-manyiny-w-e sh-ina
2-student 2SM-show-PASS-FV.PST 7-what
'The students were shown what?'

The fact that *wh*-in-situ is subject to similar DOMA constraints as its *ex-situ* counterpart is suggestive of the involvement of covert movement dependencies.[8] In the paragraphs to come, I describe properties of Tiriki *wh*-in-situ in terms of its island sensitivity, immunity to the focus intervention effect (Beck 2006), and scope reconstruction. I would also like to emphasize that the current investigation into Tiriki *wh*-in-situ is still inconclusive. Much work on whether Tiriki

[8] An anonymous reviewer suggested that *wh*-in-situ in Tiriki might not involve movement at all and can be interpreted *in-situ* under an unselective-binding analysis. On this analysis, DOMA can be posited to constrain any syntactic relation that involves a *wh*-feature (with movement or not). I leave this potential analysis of Tiriki *wh*-in-situ for future research.

islands are transparent for Ā-movements and whether covert movements are indeed involved in *wh*-in-situ (based on their interaction with WCO, the licensing of parasitic gaps, etc.) remains to be done.

First, I show that *wh*-in-situ in Tiriki is sensitive to some islands. It is impossible to interpret the *in-situ wh*-question as a matrix question when the *wh*-phrase remains inside a complex NP (in (27a)) or a sentential subject island (in (27b)).[9]

(27) Object *wh*-in-situ: Island sensitivity

a. *Hardley a-landul-e [$_{DP}$ mu-somi yi-v-i shina]
Hardley 1SM-beat-FV.PST 1-student 1SM-steal-FV.PST 7-what
Intended: 'Hardley disciplined the student who stole what?'
(*non-echo question*)

b. *[$_{CP}$ khuli Franko a-tekh-i shina] ka-chenyiny-e
that Frank 1SM-cook-FV.PST 7-what 6SM-surprise-FV.PST
Maiko
Michael
Intended: 'That Frank cooked what surprised Michael?' (*non-echo question*)

However, it is worth noting that *wh*-in-situ seems insensitive to adjunct islands, as illustrated with a temporal adjunct clause.

(28) Object *wh*-in-situ: Adjunct island

a. *wina w-a Lydia a-rhul-i [$_{CP}$ lw-a Hardley
1-who 1-REL Lydia 1SM-leave-FV.PST 11-REL Hardley
a-shelits-e ___]
1SM-greet-FV.PST
'Who did Lydia leave when Hardley greeted?'

b. Lydia a-rhul-i [$_{CP}$ lw-a Hardley a-shelits-e wina]
Lydia 1SM-leave-FV.PST 11-REL Hardley 1SM-greet-FV.PST 1-who
'Lydia left when Hardley greeted who?' (*non-echo question*)

The mixed results of island diagnostics aside, Tiriki *wh*-in-situ also does not exhibit focus intervention effect. Following Beck (2006), I assume that elements such as negation, negative quantifiers, and focus operators intervene between a *wh*-phrase and its licensing C. Specifically, the intervenor blocks the *wh*-phrase's

[9] An anonymous reviewer pointed out that the effect of 'island sensitivity' might be because *wh*-in-situ is clause-bounded in Tiriki, like other LF movements (e.g. QR).

projection of focus alternatives and thereby bleeds the semantic association between the *wh*-phrase and the C. Said configuration is schematized below:

(29) Structure of focus intervention
*[C …[intervenor [… *wh*-phrase …]]]

In Tiriki, both *wh*-clefts and *wh*-in-situ can obviate the focus intervention effect. The former is expected as overt *wh*-movements remove the *wh*-phrases from the c-command domain of the intervenors. The fact that no intervention effect is observed in (30b) suggests that *wh*-in-situ in Tiriki may still involve movements, as covert movements have been also shown to achieve similar rescuing effects (Pesetsky 2000, Kotek 2014).

(30) Object *wh*-in-situ: Focus intervention effect
a. shina sh-a Ebby w-onyene a-tekh-i
7-what 7-REL Ebby 1-only 1SM-cook-FV.PST
'What did only Ebby cook'
b. Ebby w-onyene a-tekh-i shina
Ebby 1-only 1SM-cook-FV.PST 7-what
'Only Ebby cooked what?' (*non-echo question*)

A covert movement analysis of *wh*-in-situ is also supported by scope ambiguities. Apart from the surface scope reading, the *wh*-phrase *shina* can still take wide scope over the quantifier in the subject position without any indication that an overt *wh*-movement has taken place.

(31) Object *wh*-in-situ: Quantifier scope ambiguity
vuli mu-somi a-som-i shina
every 1-student 1SM-read-FV.PST 7-what
'Every student read what?' (*non-echo question*)
✓ ∀ ≫ *wh*: For every student x, what did x read?
✓ *wh* ≫ ∀: What is x such that every student read x?

Despite the positive evidence for covert movement presented above, I stop short of concluding that *wh*-in-situ in Tiriki does involve covert movement without more systematic investigation into its island sensitivity and properties of *wh*-licensing. There are two ways in which a definitive solution to Tiriki *wh*-in-situ can inform us of the nature of the observed asymmetry: If Tiriki *wh*-in-situ questions are derived via covert movement, the aforementioned asymmetry can then be easily accommodated by the current DOMA analysis as the same constraint

should hold for overt and covert movements alike. If the *wh*-phrase is proved to be *in-situ* at both PF and LF, the DOMA analysis will need to be revised to fully capture the Tiriki patterns.[10]

4 Conclusion

In this paper, I documented and examined different object properties and their (a)symmetry exhibited in Tiriki DOCs. Descriptively, I showed that Tiriki is a largely symmetrical language, allowing both objects to be ϕ-probed and undergo a range of A and Ā-movements. By combining the aforementioned syntactic operations with passivization, I also substantiated the predictions of DOMA (Holmberg et al. 2019): Like Zulu and Lubukusu, it is ungrammatical in Tiriki to object-mark or Ā-extract the IO out of a DO passive. Similar DOMA effects were also replicated in other unattested contexts, namely when the DO is passivized and the IO is left-dislocated or replaced with an *in-situ wh*-phrase. In these contexts, the IO is not involved in apparent movement dependencies, which deviates from the DOMA configurations reported elsewhere.

Analytically, I applied Holmberg et al.'s (2019) account of cross-linguistic DOMA effects and outlined the challenges that Tiriki presents. By revisiting the extant DOMA analysis, I demonstrated how the c-command asymmetry between two objects, the flexible Case-licensing of the high Appl head, and its phasal properties in passives result in unavoidable movement asymmetry. Moreover, I showed that left dislocation and *wh*-in-situ in Tiriki don't necessarily involve movement dependencies and yet are still able to trigger DOMA effects in passives. For future work, a more in-depth understanding of Ā-dependencies and their constraints in Tiriki is needed to derive a more complete account of DOMA facts reported in this paper.

[10] An alternative conclusion that can be drawn from the novel DOMA data in Tiriki is that the analytical machinery of the Minimalist Program is not so well-equipped to deal with the observed asymmetry. Crucially, a empirical generalization is lost: Whenever there are more than one grammatical-function-changing operations targeting the objects, passivization, which seeks to promote the grammatical function of the object, *always* targets the thematically more prominent object (IO, or recipient/beneficiary). This robust link between grammatical function hierarchy and thematic prominence is perhaps better accounted for by other frameworks of syntax (cf. discussions in Alsina 1996 and §4 of Zeller 2015). I thank an anonymous reviewer for this insightful comment.

Abbreviations

1	noun class	PST	past tense
1SG	first person singular	PFV	perfective
APPL	applicative	POSS	possessive
FV	final vowel	REL	relativizer
OM	object marker	RP	resumptive pronoun
PASS	passive	SM	subject marker
PRES	present tense		

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References

Abels, Klaus. 2003. *Successive cyclicity, anti-locality, and adposition stranding*. Storrs, CT: University of Connecticut. (Doctoral dissertation).

Adams, Nikki. 2010. *The Zulu ditransitive verb phrase*. University of Chicago. (Doctoral dissertation).

Aldridge, Edith. 2004. *Ergativity and word order in Austronesian languages*. Cornell University. (Doctoral dissertation).

Alexiadou, Artemis. 2017. Left dislocation. In Martin Everaert & Henk van Riemsdijk (eds.), *The Wiley Blackwell Companion to Syntax*, 2nd edn., 1–34. Hoboken: John Wiley & Sons.

Alsina, Alex. 1996. Passive types and the theory of object asymmetries. *Natural Language & Linguistic Theory* 14(4). 673–723.

Baker, Mark. 1988. Theta theory and the syntax of applicatives in Chichewa. *Natural Language & Linguistic Theory* 16(3). 353–390.

Barss, Andrew & Howard Lasnik. 1986. A note on anaphora and double objects. *Linguistic Inquiry* 17. 347–354.

Bax, Anna & Michael Diercks. 2012. Information structure constraints on object marking in Manyika. *Southern African Linguistics and Applied Language Studies* 30. 185–202.
Beck, Sigrid. 2006. Intervention effects follow from focus interpretation. *Natural Language Semantics* 14(1). 1–56.
Bošković, Željko. 2007. On the locality and motivation of Move and Agree: An even more minimal theory. *Linguistic Inquiry* 38(4). 589–644.
Bošković, Željko. 2014. Now I'm a phase, now I'm not a phase: On the variability of phases with extraction and ellipsis. *Linguistic Inquiry* 45. 27–89.
Bošković, Željko. 2015. From the Complex NP Constraint to everything: On deep extractions across categories. *The Linguistic Review* 32. 603–669.
Bošković, Željko. 2016. Getting really edgy: On the edge of the edge. *Linguistic Inquiry* 47. 1–33.
Bresnan, Joan & Lioba Moshi. 1990. Object asymmetries in comparative Bantu syntax. *Linguistic Inquiry* 22(2). 147–186.
Buell, Leston. 2009. Evaluating the immediate postverbal position as a focus position in Zulu. In Masangu Matondo, Fiona McLaughlin & Eric Potsdam (eds.), *Selected Proceedings of the 38th Annual Conference on African Linguistics*, 166–172. Somerville, MA: Cascadilla Proceedings Project.
Carstens, Vicki. 2005. Agree and EPP in Bantu. *Natural Language & Linguistic Theory* 23(2). 219–279.
Cheng, Lisa Lai-Shen & Laura J. Downing. 2012. Against FocusP: Arguments from Zulu. In Ivona Kučerová & Ad Neeleman (eds.), *Contrasts and positions in information structure*, 246–266. Cambridge: Cambridge University Press.
Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.
Chomsky, Noam. 2001. Derivation by phase. In Michael Kenstowicz (ed.), *Ken Hale: A life in linguistics*, 1–52. Cambridge: MIT Press.
Cinque, Guglielmo. 1977. The movement nature of left dislocation. *Linguistic Inquiry* 8(2). 397–412.
Cinque, Guglielmo. 1990. *Types of Ā-dependencies*. Cambridge, MA: MIT Press.
De Guzman, Videa. 1987. Indirect objects in SiSwati. *Studies in African Linguistics* 18. 309–325.
Déchaine, Rose-Marie & Martina Wiltschko. 2002. Decomposing pronouns. *Linguistic Inquiry* 33(3). 409–442.
Grohmann, Kleanthes K. 2003. *Prolific domains. On the anti-locality of movement dependencies*. Amsterdam: John Benjamins.
Haddican, Bill & Anders Holmberg. 2019. Object symmetry effects in Germanic. *Natural Language & Linguistic Theory* 37(1). 91–122.

Henderson, Brent. 2018. Bantu applicatives and Chimiini instrumentals. In Augustine Agwuele & Adams Bodomo (eds.), *The Routledge handbook of African linguistics*, 1st edn., 262–280. New York: Routledge.

Holmberg, Anders, Michelle Sheehan & Jenneke van der Wal. 2019. Movement from the double object construction is not fully symmetrical. *Linguistic Inquiry* 50(4). 677–721.

Hyman, Larry M. 2003. Suffix ordering in Bantu: A morphocentric approach. In Geert Booij & Jaap van Marle (eds.), *Yearbook of morphology 2002*, 245–281. Dordrecht: Kluwer Academic Publishers.

Jerro, Kyle. 2016. *The syntax and semantics of applicative morphology in Bantu*. University of Texas at Austin. (Doctoral dissertation).

Julien, Marit. 2002. *Syntactic heads and word formation*. New York: Oxford University Press.

Kayne, Richard S. 1994. *The antisymmetry of syntax*. Cambridge, MA: MIT Press.

Kimenyi, Alexandre. 1980. *A relational grammar of Kinyarwanda*. Berkeley & Los Angeles: University of California Press.

Kotek, Hadas. 2014. *Composing questions*. Massachusetts Institute of Technology. (Doctoral dissertation).

Kratzer, Angelika. 1996. Severing the external argument from its verb. In Johan Rooryck & Laurie Zaring (eds.), *Phrase structure and the lexicon*, 109–137. Dordrecht: Kluwer Academic Publishers.

Lewis, M. Paul, Gary F. Simons & Charles D. Fennig (eds.). 2016. *Ethnologue: Languages of the world*. 2nd edn. Dallas: SIL International.

Lippard, Hannah, Justine Sikuku, Crisófia Lánga da Câmara, Madelyn Colantes, Kang (Franco) Liu & Michael Diercks. Forthcoming. Emphatic interpretations of object marking in Bantu languages. *Studies in African Linguistics*.

Liu, Kang. 2022. *Object marking in Tiriki*. University of Cambridge. (MA thesis).

Marantz, Alec. 1993. Implications of asymmetries in double object constructions. In Sam A. Mchombo (ed.), *Theoretical aspects of Bantu grammar 1*, 113–151. Stanford: CSLI Publications.

Marlo, Michael R. 2013. Structure and tone in Tiriki. Ms, University of Missouri.

Marlo, Michael R. 2015. Exceptional properties of the reflexive in Bantu languages. *Nordic Journal of African Studies* 24. 1–22.

McGinnis, Martha. 2001. Phases and the syntax of applicatives. In Minjoo Kim & Uri Strauss (eds.), *Proceedings of the North East Linguistic Society 31*, vol. 2, 339–349. Amherst, MA: GLSA.

Nakamura, Masanori. 1997. Object extraction in Bantu applicatives: Some implications for minimalism. *Linguistic Inquiry* 28(2). 252–280.

Nunes, Jairo. 2004. *Linearization of chains and sideward movement* (Linguistic Inquiry Monographs 43). Cambridge, MA: MIT Press.
Pesetsky, David. 2000. *Phrasal movement and its kin*. Cambridge: MIT Press. 132.
Pylkkänen, Liina. 2008. *Introducing arguments* (Linguistic Inquiry Monograph 49). Cambridge, MA: MIT Press.
Ranero, Rodrigo. 2019. Deriving an object dislocation asymmetry in Luganda. In Emily Clem, Peter Jenks & Hannah Sande (eds.), *Theory and Description in African Linguistics: Selected Proceedings of the 47th Annual Conference on African Linguistics*, 595–622. Berlin: Language Science Press. DOI: 10.5281/zenodo.3367189.
Rizzi, Luigi. 1990. *Relativized minimality*. Cambridge, MA: MIT Press.
Roberts, Ian. 2010. *Agreement and head movement: Clitics, incorporation, and defective goals*. Cambridge, MA: MIT Press.
Ross, John. 1967. *Constraints on variables in syntax*. Massachusetts Institute of Technology. (Doctoral dissertation).
Selvanathan, Naga. 2019. A Case based account of Bantu IAV-focus. In Emily Clem, Peter Jenks & Hannah Sande (eds.), *Theory and description in African linguistics: Selected papers from the 47th Annual Conference on African Linguistics*, 623–645. Berlin: Language Science Press. DOI: 10.5281/zenodo.3367191.
Sikuku, Justine & Michael Diercks. 2021. *Object marking in Bukusu: At the interface of pragmatics and syntax*. Ms, Moi University and Pomona College. https://research.pomona.edu/mjkd/papers/.
Sikuku, Justine, Michael Diercks & Michael R. Marlo. 2018. Pragmatic effects of clitic doubling: Two kinds of object markers in Lubukusu. *Linguistic Variation* 18(2). 359–429.
van der Wal, Jenneke. 2006. The disjoint verb form and an empty immediate after verb position in Makhuwa. *ZAS Papers in Linguistics* 36. 233–256.
van der Wal, Jenneke. 2009. *Word order and information structure in Makhuwa-Enahara*. Universiteit Leiden. (Doctoral dissertation).
van der Wal, Jenneke. 2015. Bantu object clitics as defective goals. *Revue Roumaine de Linguistique* 60(2–3). 277–296.
van der Wal, Jenneke. 2017. Flexibility in symmetry: An implicational relation in Bantu double object constructions. In Michelle Sheehan & Laura R. Bailey (eds.), *Order and structure in syntax II: Subjecthood and argument structure* (Open Generative Syntax 2), 115–152. Berlin: Language Science Press.
van der Wal, Jenneke. 2020. The AWSOM correlation in comparative Bantu object marking. In Katharina Hartmann, Johannes Mursell & Peter W. Smith (eds.), *Agree to agree: Agreement in the Minimalist Programme* (Open Gener-

ative Syntax 6), 199–234. Berlin: Language Science Press. DOI: 10.5281/zenodo.3541755.

van der Wal, Jenneke. 2022. *A featural typology of Bantu agreement*. Oxford: Oxford University Press.

Visser, Marianna W. 1986. Cliticization and Case theory in Xhosa. *South African Journal of African Languages* 6(3). 129–137.

Watters, John R. 1979. Focus in Aghem: A study of its formal correlates and typology. In Larry M. Hyman (ed.), *Aghem grammatical structure* (Southern California Occasional Papers in Linguistics 7), 137–198. Los Angeles: University of Southern California.

Zeller, Jochen. 2009. On clitic left-dislocation in Zulu. In Sonja Ermisch Ruediger (ed.), *Focus and topic in African languages* (Frankfurt African Studies Bulletin 18), 131–156. Köln: Rüdiger Köppe Verlag.

Zeller, Jochen. 2012. Object marking in isiZulu. *Southern African Linguistics and Applied Language Studies* 30. 219–325. DOI: 10.2989/16073614.2012.737600.

Zeller, Jochen. 2014. Three types of object marking in Bantu. *Linguistische Berichte* 239. 347–367.

Zeller, Jochen. 2015. Argument prominence and agreement: Explaining an unexpected object asymmetry in Zulu. *Lingua* 156. 17–39. DOI: 10.1016/j.lingua.2014.11.009.