



Object Marking in Wanga

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Declaration

This thesis is the result of my own work and includes nothing which is the outcome of work done in collaboration except where specifically indicated in the text.

Statement of Length

This thesis does not exceed the word limit of 20,000 words (with relevant exclusions made per course guidelines).

All errors in this dissertation are my own.

Abstract

Object markers (OMs) in the Bantu languages have long been argued to be either incorporated pronouns or agreement markers. With that backdrop, this paper aims to analyze OMs in Wanga [iso:lwg], a Luyia language (a sub-family of Bantu languages; sometimes dubbed a ‘macrolanguage’ [iso:luy]) spoken in Western Kenya near the Ugandan border. I first document observed patterns using Bantu object-marking microparameters identified by Marten & Kula (2012) as a guideline. Crucially, I find that the behavior of the OM in Wanga is quite different depending on the discourse context. In neutral discourse contexts, OM-doubling (the co-occurrence of an object marker and a lexical object DP) is disallowed; the exception being unless the object DP bears an ‘afterthought’ reading, requiring the object to be dislocated to the left or right periphery, and further requiring a prosodic break between the object and the rest of the sentence. Using syntactic and prosodic evidence, I argue that this neutral-discourse OM-doubling is possible only when the object is base-generated at the peripheries, but is *not* possible if the object is in the vP. These findings support the analysis that the Wanga OM is base-generated in the thematic object position in vP, and then incorporated onto the verb as a pronoun. However, *in situ* OM-doubling is licensed by certain pragmatic contexts. More specifically, when the object is interpreted with verum focus, mirative focus, or exhaustive focus, OM-doubling is grammatical. This supports the analysis that Wanga OMs are agreement markers (i.e., a result of Agree per Chomsky (1995)) in the aforementioned emphatic contexts. I therefore analyze Wanga to have two OMs—an pronoun-OM and an agreement-OM—depending on the discourse context. This analysis mirrors the analysis for another Luyia language, Bukusu [iso:bxk], from Sikuku & Diercks (2021). Bukusu and Wanga share a great deal of empirical similarities, but Sikuku & Diercks come to their conclusions using both syntactic and semantic theory; meanwhile, my analysis makes use of prosodic evidence that OM-doubled objects are *in situ* in vP *only* in these emphatic contexts, something that would be impossible if the OM were a pronoun.

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Abbreviations

APPL	applicative
AUG	augment
CJ	conjoint
DEM	demonstrative
DP	determiner phrase
DO	direct object
DJ	disjoint
FV	final vowel
FUT	future
GHD	global high deletion
H	high tone
HTA	high tone anticipation
INCPT	inceptive
IO	indirect object
LF	logical form
LD	low doubling
L	low tone
MD	melodic doubling
MHA	melodic high association
MHD	melodic high deletion
MH	melodic high tone
NEG	negative
OM	object marker
PFT	perfective
PF	phonetic form
PL	plural
PH	prefix hop
PST	pst
REM	remote
RMR	reverse meeussen's rule
SG	singular
Spec	specifier
SM	subject marker
vP	verb phrase

Symbols

§	section
*	ungrammatical
#	infelicitous
?	marginally grammatical
-	segmental morpheme boundary
.	non-segmental morpheme boundary
//	underlying form
σ	syllable
μ	mora
{ }	macrostem boundary
[]	stem boundary
´	high tone
˘	low tone
ˇ	rising tone
ˆ	falling tone
!	downstep

ISO Language Codes

iso:luy	Luyia (macrolanguage)
iso:lwg	Wanga/Oluwanga
iso:bxk	Bukusu/Lubukusu
iso:ida	Tiriki/Lutirichi
iso:nya	Chewa/Chichewa
iso:nyu	Nyungwe/Cinyungwe
iso:kck	Kalanga/Ikalanga
iso:zul	Zulu/isiZulu

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1 Introduction

In this paper, I will document and describe a morphosyntactic phenomenon known as object marking (OMing) in Wanga [iso:lwg]. By way of introduction, Wanga, known in the language itself as Oluwanga, is a Bantu language spoken in Western Kenya, near the Ugandan border. Wanga is specifically part of the Luyia sub-branch of the Bantu languages. Luyia is regarded by some as a ‘macrolanguage’ [iso:luy] and consists of roughly 25 related languages that are mutually intelligible to a fairly high degree (Green et al., Forthcoming). The center of the Wanga community is located in Mumias, a town in the Western Province of Kenya.

- (1) Luyialand (i.a. Green et al. (Forthcoming, p. 1))



According to Ebehard et al. (2021), as of 2009, there are 309,000 members of the Wanga community. However, as Green et al. note, this number is based on a 2009 Kenyan census and is likely inaccurate with respect to the number of fluent, first-language Wanga speakers; it likely includes individuals who identify ethnically as Abawanga but do not speak the language.

However, despite Wanga itself being relatively understudied¹, object marking has emerged as a deeply rich and complex area of study for Luyia and other Bantu languages. At this point, object marking has not been explored in depth in Wanga, and this paper is dedicated to documenting some of the empirical facts surrounding Wanga object marking as well as analyzing object marking in a Minimalist framework using evidence from both syntax and prosody. First, I will introduce a basic sketch of Wanga (morpho)syntax.

1.1 A brief introduction to Wanga syntax and morphology

Object marking, being a morphosyntactic phenomenon, requires some background on Wanga structure. At this point, I'd also like to mention that I use standard orthography

¹See Green et al. (Forthcoming, pp. 3-4) for a list of known cultural and linguistic work on Wanga.

to represent Wanga data throughout the majority of this paper, except when referencing tonological data presented by Green et al. (Forthcoming) in §5.

First, Wanga has a noun-class system, as is typical for Bantu languages. The noun-class system manifests itself as a ‘prefix complex’ that includes an augment and class prefix (Green et al., 2019, p. 8). The following example shows the primary noun classes.²

(2) Green et al. (2019, p. 8)

Class #	Prefix Complex	Noun Example	Gloss
1	o-mu-	o-mu-saatsa	‘man’
2	a-ba-	a-ba-saatsa	‘men’
3	o-mu-	o-mu-saala	‘tree’
4	e-mi-	e-mi-saala	‘trees’
5	li-i	li-i-joni	‘bird’
6	a-ma-	a-ma-yoni	‘birds’
7	e-shi-	e-shi-fuumbi	‘chair’
8	e-fi-	e-fi-fuumbi	‘chairs’
9	i-n/m-	i-m-boko	‘buffalo’
10	tsi-n/m-	tsi-m-boko	‘buffalos’
10	tsi-n/m-	tsi-n-dele	‘fingernails’
11	o-lu-	o-lu-tele	‘fingernail’

These noun classes in turn dictate the class of object markers (OMs) and subject markers (SMs) which surface as prefixal morphemes on the verb: The subject and object markers must ‘agree’ with the noun class of the subject and object, respectively.³ The following shows the primary SM/OM classes.

(3) Green et al. (2019, p. 10)

Class #	SM	OM	Class #	SM	OM
1SG	nd-	nz-	1PL	khu-	khu-
2SG	o-	khu-	2PL	mu-	mu-
1	a-	mu-	2	ba-	ba-
3	ku-	ku-	4	tshi-	tshi-
5	li-	li-	6	ka-	ka-
7	shi-	shi-	8	fi-	fi-
9	i-	tshi-	10	tsi-	tsi-
11	lu-	lu-			

Wanga verbs, however, can be inflected by more than subject markers and object markers. The following shows the ‘fullest’ possible structure of the Wanga verb, which

²I omit classes for diminutives and augmentatives and locative prefixes for simplicity.

³Bear in mind that I use the term ‘agree’ lightly here—as I will show, whether or not the OM and object undergo Agree in the Chomskian sense is a significant question of the object marking puzzle.

can be inflected with numerous combinations of tense/aspect/mood/polarity (TAMP) morphemes.⁴

(4) Green et al. (2019, p. 9)

-8	-7	-6	-5	-4	-3	-2,-1	0	+1,+2,+3	+4
Neg	Tense	Subject	Tense	Aspect	Neg	Object(s)	Root	Derivation	Aspect
+5			+6						
Final.Vowel			Post.Final						

To highlight how Wanga's morphology works, the examples below show how the subject marker has to agree with the syntactic subject of the sentence. Also note that the constructions below are in the Hesternal Perfect, defined by the past-tense *-a-* prefix and the *-ir-* applicative affix (all TAMP constructions are defined by various morphological combinations in this way).

- (5) a. *lii-joni li-a-lexuul-ir-e*
5-bird 5SM-PST-release-APPL
'The bird released.'
- b. *aba-saatsa ba-a-lexuul-ir-e*
2-men 2SM-PST-release-APPL
'The men released.'
- c. **lii-joni ba-a-lexuul-ir-e*
5-bird 2SM-PST-release-APPL-FV
Subject and subject-marker disagree

This next example features a ditransitive Wanga sentence that makes even richer use of the available verbal morphology. While I wait until the next section §1.2 to discuss the function of object markers, observe here that the object markers also agree in class with the syntactic objects. Keep in mind that Wanga is canonically SVO, and the objects in ditransitives appear canonically in an Indirect Object → Direct Object word order. This is the same order as their corresponding object markers appear on the verb. Also note that certain tenses are defined by various combinations of tense/aspect/derivational affixes; the below example is in the Remote Future tense, i.e., the 'day after tomorrow' and is defined by a *-li-* future-tense marker and a *-kha-* inceptive morpheme.

- (6) Omumia shi-a-li-kha-ba-i-weresj-a abaana tsing'ombe
Omumia NEG-1SG.SM-FUT-INCPT-2OM-9.OM-give-FV 2.children 10.cows
taawe
NEG
? 'Omumia will not give them the children them the cows'

⁴For simplicity's sake, I will generally be glossing Wanga examples as 'past' or 'present' unless the specifics are relevant; note, though, that there is more than one past or present tense in Wanga. Namely, remote past, immediate past, near future, remote future, and indefinite future are all available, as well as various particular TAMP inflections indicated by the morphology. See Green et al. (2019, pp. 10-11) for examples of various TAMP morphological patterns.

Note that the translation of the above example is marked with a ?. This is actually due to the presence of the object markers and the complex contexts in which they can surface and how that affects the interpretation of the sentence. Notably, core to the OMin analytical ‘puzzle’ is whether or not that OM and its corresponding lexical object DP can co-occur. I find that the above example *is* possible in Wanga, but is licensed in only certain discourse environments that elicits some perplexing emphatic interpretations; I specifically discuss and attempt to explain constructions like (6) in §2.7. To explain this, more introduction to the function of the object marker in Wanga is necessary.

1.2 Object marking: The puzzle at hand

Object markers are employed to refer to discourse familiar entities much like English pronominalization; i.e., ‘John read the book’ vs ‘John read it.’ This is exemplified below:

- (7) a. Omumia a-li-kha-teesh-e omu-chele
 Omumia 1SG.SM-FUT-INCPT-cook-FV 3-rice
 ‘Omumia will cook the rice.’
 b. Omumia a-li-kha-ku-teesh-e
 Omumia 1SG.SM-FUT-INCPT-3OM-cook-FV
 ‘Omumia ate it.’

Crucially, though, there are only some emphatic contexts (discussed in §2.5) where both the object marker and the lexical object DP can appear in the same sentence.

- (8) */✓ Omumia a-li-kha-ku-teesh-e omu-chele
 Omumia 1SG.SM-FUT-INCPT-3OM-cook-FV 3-rice
 Discourse neutral: * ‘Omumia ate it the rice.’
 Emphatic contexts: ‘Omumia DID eat the rice.’

As I will show, the Wanga OM appears to behave completely differently depending on the discourse context in which it is employed. This is the main puzzle I explore, and the goals of this paper are to document and subsequently analyze OMin patterns in a Minimalist framework (Chomsky, 1995). I argue that, in neutral discourse contexts, the Wanga OM behaves like a pronoun merged onto the verb from the syntactic object position in vP. Because the OM occupies the object position, the lexical object DP is blocked from merging into the structure, therefore blocking the possibility OM-doubling, i.e. the co-occurrence of the OM with an object DP. The notable exception with discourse-neutral contexts is that I find OM-doubling *is* possible thanks to a mechanism in Wanga that allows for the base-generation of the object DP at both the left-and-right peripheries as an ‘afterthought’ (§2.3, §3.3).

However, as noted, doubling *in situ* objects is *also* possible in Wanga in some specific pragmatic contexts (again, I explore these conditions in §2.5); in these non-neutral discourse contexts, the OM behaves more like an agreement marker, i.e. a function of Agree. I come to these conclusions using some known and new syntactic diagnostics, as well as

a fairly novel prosodic diagnostic. A major contribution of this paper is that I uphold the same analysis that is come to for Bukusu [iso:bxk] by Sikuku & Diercks (2021), which is empirically quite similar to Wanga in terms of available OMing patterns, but using a different system for analysis (prosody).

1.3 Roadmap

This section served as an introduction to Wanga, Wanga morphology/syntax, and the object marking puzzle at hand. The following section, §2, documents observed relevant OMing constructions, and reintroduces the analytical puzzle.

Following that, §3 discusses the analyses made by previous researchers working on Zulu [iso:zul] and Bukusu, respectively (i.a. Zeller (2012) for Zulu; i.a. Sikuku & Diercks (2021) for Bukusu). This serves many purposes, but most notably how various analyses have been made using diagnostics based on various systems (most notably syntax, semantics, and pragmatics). I also provide an analysis of Wanga OMs in neutral discourse contexts here.

However, I argue in §4 that it would be beneficial to utilize another system, prosody, to analyze OMs in emphatic contexts. §5 is henceforth dedicated to proposing and using a new diagnostic based on phrase-medial rules that affect verb tonology in Wanga. The goal of this diagnostic is to use the presence of said tone rules to determine whether or not lexical object DPs in OM-doubled sentences are *in situ*. This is important because a pronoun analysis would require the OM to occupy the object position in the vP blocking the existence of an *in situ* object DP. I find that the results are consistent with an analysis that Wanga OMs are pronouns in neutral discourse contexts but agreement markers in emphatic contexts.

Finally, I close with a discussion of implications, shortcomings, and directions for future study in §6.

2 A description of object marking patterns in Wanga

This section offers a descriptive account of the syntax of object marking patterns in Wanga. The structure and content that I adopt here build on numerous works in Bantu object-marking research whose relevance will appear throughout this dissertation. Sikuku & Diercks (2021) and Langa de Camara et al. (2022) are two studies whose documentation strategies I found useful when organizing this section. Most of the patterns I record here are, specifically, identified by Marten & Kula (2012) as the primary microparameters that are subject to cross-Bantu variation.⁵ All data was collected via elicitation sessions over

⁵Microparameters are defined by Roberts (2019, pp. 75-76) as parameters that act upon ‘small, lexically definable subclass[es] of functional heads’ such as clitics, auxiliaries, determiners, etc. Roberts’ parameter hierarchy places these parameters below macroparameters (‘gross typological variation’) and mesoparameters (which ‘correspond to government and binding parameters’ such as verb-movement), and above nanoparameters (idiosyncratic/‘irregular’ lexical variations). This system was proposed by joint work from Biberauer & Roberts in 2012, written up i.a. in Biberauer & Roberts (2015).

Zoom from October 2021 through May 2022 with a native speaker for whom Wanga is his mother tongue. The speaker is in his 40s and has lived in Kenya his whole life; while he moved away from Luyialand to Nairobi as a young adult, he maintains close contact with his family and continues to use Wanga regularly.

As a reminder, this section is not necessarily comparative, and will stay relatively Wanga-centric (with some exceptions). §3 will instead seek to compare the findings laid out here in §2 to other Bantu languages and the subsequent ways in which various other Bantu languages' object markers have been previously analyzed by syntacticians.

2.1 Basics of object marking

Here I briefly expand on object marking in non-doubling contexts, i.e. object markers when they do not co-occur with an object DP. To reiterate, object markers can serve to 'replace' discourse-given material:

- (9) a. Nashibe ya-a-li-ir-e obu-suma
 Nashibe 1.SM-PST-eat-APPL-FV 14-ugali
 'Nashibe ate the ugali.'⁶
 b. Nashibe ya-a-(bu)-li-ir-e
 Nashibe 1SG.SM-PST-14OM-eat-APPL-FV
 'Nashibe ate it (the ugali).'

Two object markers are also possible in Wanga, as shown below in a simple ditransitive paradigm.

- (10) a. Aba-ana ba-a-weres-iy-e Omumia eshi-tabu
 2-children 2SM-PST-give-APPL-FV Omumia 7-book
 'The children gave Omumia a book.'
 b. Aba-ana ba-a-(shi)-(mu)-weres-iy-e
 2-children 2SM-PST-7OM-1OM-give-APPL-FV
 'The children gave it (the book) to him (Omumia).'

Note that the object markers appear on the verb in the order of indirect object (IO) → direct object (DO) order, mimicking the canonical IO → DO word order in Wanga; switching the orders of the object markers in (10b) would yield a reading of '#the children gave him (Omumia) to it (the book),' where the hash denotes a sentence that is syntactically grammatical but has a meaning different from the speaker's intentions and is therefore semantically infelicitous here.

Further, object marking is symmetrical in Wanga, meaning both the indirect and direct objects can be OMed.

⁶'Obusuma' is a local Wanga/Luhya word for ugali, a bread-like maize porridge that is a staple food for much of Africa, and especially for the Sub-Saharan countries where Bantu languages are spoken most.

- (11) a. Aba-ana ba-a-shi-weres-iy-e Omumia
 2-children 2SM-PST-7OM-give-APPL-FV Omumia
 ‘The children gave Omumia it (the book).’
 b. Aba-ana ba-a-mu-weres-iy-e eshi-tabu
 2-children 2SM-PST-1OM-give-APPL-FV 7-book
 ‘The children gave the book to him (Omumia).’

Object marking (*without* doubling) is quite robust in this way—in any construction, an object can be ‘substituted’ for the appropriate object marker (‘substitute’ being a term I use rather superficially here so as not to conflict with any analytical issues which will become relevant in the future). The only caveat is, perhaps obviously, that the material you OM has to be discourse-given in some way to be licit.

2.2 Doubling *in situ* objects in neutral discourse contexts

The real puzzle begins here by examining ways in which object markers can or cannot ‘double’ with their corresponding object DP—this is the most important microparameter from Marten & Kula (2012) and is the defining object marking puzzle. This section begins by discussing the availability of an object marker co-occurring with an *in situ* object (in vP). I find that OM-doubling in discourse-neutral contexts is always ungrammatical in Wanga, but this is not the case in other contexts with various emphatic and focal effects at play; hence the distinction between neutral and non-neutral contexts. So, thus far, in examples (9) through (11), and in this section (§2.2), OMs appear in a (mostly) neutral discourse context, with the caveat that any OMed material has to be accessible, i.e., discourse-given.^{7,8}

Here, I explore a breadth of discourse-neutral instances where the object remains *in situ*.

First, in a canonical SVO sentence in a neutral discourse context, OM-doubling is ungrammatical.

- (12) a. Omumia ya-a-tesh-er-e omu-chele
 Omumia 1SM-PST-cook-APPL-FV 3-rice
 ‘Omumia cooked the rice.’
 b. Omumia ya-a-#ku-tesh-er-e omu-chele
 Omumia 1SM-PST-3OM-cook-APPL-FV 3-rice

⁷Moving forward, I will be referring to any non-emphatic context as ‘discourse-neutral’, with the acknowledgment that this is not *fully* accurate: OMing in any capacity requires the OMed material to be discourse-given, which inherently implies a non-neutral pragmatic environment. But, as will become clear in §2.5, it is easier to save the use ‘non-neutral discourse context’ for situations that, specifically, have emphatic/focal effects at play. Other literature, namely Sikuku & Diercks (2021), discusses the relevant interplay (if any) between focus and givenness in the context of Bantu OMing, but such a discussion is not necessary for the goals of this paper, and I therefore generally ignore givenness.

⁸It is also worth noting that I roughly adopt my definition of ‘neutral discourse context’ from Sikuku & Diercks (2021, pp. 80-81). I also adopt their use of the hash (‘#’) to mark sentences that are infelicitous but would be licit in a different discourse context.

Lit.: ‘Omumia cooked it the rice.’

The following examples highlight more varied constructions of interest, namely sentences with temporal adverbials and manner adverbials that appear clause-finally. The relevance of these constructions, however, is based on the assumption that said adverbs mark the right edge of the verb phrase (vP), so as to ensure the (attempted) doubling of the object is while the object is *in situ* in the vP.

(13) Temporal adverb:

- a. Omumia ya-a-tesh-er-e omu-chele mungolobe
Omumia 1SM-PST-cook-APPL-FV 3-rice yesterday
‘Omumia cooked the rice yesterday.’
- b. Omumia ya-a-#ku-tesh-er-e omu-chele mungolobe
Omumia 1SM-PST-3OM-cook-APPL-FV 3-rice yesterday
Lit.: ‘Omumia cooked it the rice yesterday.’

(14) Manner adverb:

- a. Nashibe ya-a-nywe-er-e ama-tsi kaala
Nashibe 1SM-PST-drink-APPL-FV 6-water slowly
‘Nashibe drank the water slowly.’
- b. Nashibe ya-#kanywere ama-tsi kaala
Nashibe 1SM-PST-6OM-drink-APPL-FV 6-water slowly
Lit.: ‘Nashibe drank it the water slowly.’

Another variable construction of potential interest is a vocative, in which an addressee is addressed directly (Hill & Stavrou, 2014). In English, this often manifests through a dislocation of the subject to the right periphery, wherein there is prosodic emphasis on the object, shown commonly by the use of SMALL CAPS and a prosodic break (comma) before the subject, such as in the following:

(15) ‘Read THE BOOK, John.’

Despite this prosodic emphasis on the object, doubling is still disallowed, should the discourse context remain neutral otherwise.

(16) Vocative:

- a. ches-a ama-tuma, omumia
harvest-FV 6-maize, Omumia
‘Harvest THE MAIZE, Omumia.’
- b. #ka-ches-a ama-tuma, omumia
6OM-drink-FV 6-maize, Omumia
Lit.: ‘Harvest it THE MAIZE, Omumia.’

Continuing, semantic categories that are not tied to the discourse context also are not observed to license grammatical OM-doubling. One commonly-used example regards

animacy, which, as you can see below, has no effect on the (un)grammaticality of OM-doubling (again, in neutral discourse contexts).⁹

(17) Non-animate:

- a. Nashibe ya-a-lol-er-e in-zu
 Nashibe 1SM-PST-see-APPL-E 9-house
 ‘Nashibe saw the house.’
- b. Nashibe ya-a-#i-lol-er-e in-zu
 Nashibe 1SM-9OM-see-APPL-FV 9-house
 Lit.: ‘Nashibe saw it the house.’

(18) Non-human animate:

- a. Nashibe ya-a-lol-er-e ipusi
 Nashibe 1SM-PST-see-APPL-FV 9cat
 ‘Nashibe saw the cat.’
- b. Nashibe ya-a-#i-lol-er-e ipusi
 Nashibe 1SM-PST-9OM-see-APPL-FV 9cat
 Lit.: ‘Nashibe saw it the cat.’

(19) Human animate:

- a. Nashibe ya-a-lol-er-e Omumia
 Nashibe 1SM-PST-see-APPL-FV Omumia
 ‘Nashibe saw Omumia.’
- b. Nashibe ya-a-#mu-lol-er-e Omumia
 Nashibe 1SM-PST-1OM-see-APPL-FV Omumia
 Lit.: ‘Nashibe saw him Omumia.’

However, there are some exceptional cases where OM-doubling is allowed, with some caveats, in neutral-discourse contexts.

2.3 OM-doubling left- and right-dislocated objects

The previous section showed that OM-doubling object DPs that are in their *in situ* object position (within vP) is not possible in neutral discourse contexts. However, this is not fully accurate: Neutral-context OM-doubling is technically possible, so long as the object DP surfaces as dislocated to the left or right periphery (i.e., with the object not *in situ* in vP). In such constructions, OM-doubling is allowed, with the additional restriction that there must be a prosodic break between the dislocated object and the rest of the sentence.

(20) Left-dislocation:

- Efi-tabu fino, aba-ana ba-fi-som-er-e
 6-books those, 2-children 2SM-6OM-read-APPL-FV

⁹The word for ‘cat’ is a borrowing that doesn’t see the normal class 9 noun prefix surface; however, the corresponding object marker for ‘cat’ is class 9.

‘These books, the children read them.’

(21) Right-dislocation:

Aba-ana ba-(fi)som-er-e, efi-tabu fino
2-children 2SM-6OM-read-APPL-FV, 6-books those

‘The children read them, these books.’

My Wanga consultant describes constructions like (20) and (21) as most naturally arising as a way one might adjoin information that is an ‘afterthought’ to the rest of the sentence.

It is of note that an important analytical question will arise as to whether the dislocation discussed here is movement or if the dislocated objects are base-generated at the left/right peripheries. The importance of such a question will become clear in §3, and I will eventually argue that both left and right dislocation are the result of base-generation, not movement, in §3.3.

2.4 A summary and initial analysis of patterns thus far

So, doubling is not allowed in neutral discourse contexts unless the object DP is dislocated in some way. This is therefore a case of complementary distribution, where the following two constructions are possible: either, +OM *-in situ* DP_{obj}, or, -OM *+in situ* DP_{obj}. This complementary distribution is the basis of part of my forthcoming analysis. To summarize that analysis briefly here, I adopt a portion of an analysis of Bukusu (Bantu, Kenya) OMs from Sikuku & Diercks (2021) that proposes that, in neutral discourse contexts, the object marker itself is a pronoun generated in the object position (i.e. in vP), meaning it can only co-occur with a syntactic object DP if that object is base-generated outside of vP, therefore leaving the vP object position available for the object marker. Again, this will be expounded upon with more depth and clarity later after I show how much the OMin puzzle changes in non-neutral discourse contexts.

2.5 Pragmatic conditions in which OM-doubling is possible: Re-evaluating *in situ* OM-doubling

While I have thus far introduced the range of OMin in neutral discourse contexts, I now shift to discussing OMin in non-neutral discourse contexts.

Recent object-marking literature has come to an important conclusion: The emphatic effects of object marking simply cannot be ignored (Sikuku & Diercks (2021), Lippard et al. (2022), Colantes (2022), Liu (2022), van der Wal (2022)). That is to say, object marking is inherently not just a syntactic phenomenon that can be studied in a vacuum: Object marking patterns, specifically doubling, are often licensed by various pragmatic contexts linked to emphasis and focus (Sikuku & Diercks (2021), Lippard et al. (2022), Liu (2022), Colantes (2022)). So, it is important to recognize that this paper utilizes pragmatic

contexts and semantic categories that are particularly fruitful with regards to licensing a range of OM-doubling constructions.

To begin, the papers that I draw most inspiration from are Sikuku & Diercks (2021), Lippard et al. (2022), Colantes (2022), and Liu (2022). These works hinge upon research from Silvio Cruschina regarding emphatic interpretations of focus-fronting in Romance (Cruschina (2016), Cruschina (2019a), Cruschina (2019b), Cruschina (2021)). Focus fronting is defined as the dislocation of focused material to the left periphery. Recent literature on Bantu OMing suggests that some of the same emphatic interpretations of focus fronting in Romance are available as discourse functions of OM-doubling in Bantu languages. The studies listed previously that have adopted this focus-fronting paradigm cover a broad swathe of Bantu languages, specifically Bukusu (Kenya), Cinyungwe (Mozambique), Ikalanga (Zimbabwe), and Tiriki (Kenya), respectively.¹⁰ It is worth underscoring that here I merely use the facts about the availability of these emphatic interpretations to elicit and describe OM-doubling constructions that otherwise would not arise in the syntax; there are instances where some ‘deeper’ discussion of the emphatic interpretations is relevant, but it is not necessarily the goal of this dissertation. In many ways, it is in fact to show how, by utilizing different systems such as prosody, one could potentially look *away* from this jungle of emphatic interpretations in order to analyze OMs.

However, these emphatic interpretations are again unignorable when documenting the range of syntactic structures available regarding OM-doubling. So, as one would expect given the behavior of other Bantu languages, at least some (but perhaps more) of the interpretations given in Cruschina’s work are readily available licensors of OM-doubling in Wanga: Here, I showcase mirativity, exhaustivity, and verum.

Mirative focus is a grammatical category whose function is to ‘mark sentences which report information which is new or surprising to the speaker,’ especially with respect to likelier alternatives (Delancey (1997, p.1), Cruschina (2021)). Mirativity readily licenses grammatical doubling in Wanga.

- (22) *Context: The ugali that Omumia cooked looked off—something was clearly not right with it, and Omumia is known for his suspect ugali-making skills. So, you were surprised to see Nashibe eating it, and exclaimed to your other friends:*

Nashibe ya-a-(bu)-li-ir-e (obu-suma)
 Nashibe 1SM-PST-14OM-eat-APPL-FV 14-ugali
 ‘Nashibe ate the ugali!’

Exhaustive focus also licenses doubling. Cruschina (2021) describes exhaustive focus as focus on new information (i.e. information focus) that additionally excludes all other alternatives.

- (23) Nashibe ya-a-(shi)-os-iy-e (shi-chiko)
 Nashibe 1SM-PST-7OM-wash-APPL-FV 7-spoon

¹⁰Lippard et al. (2022) especially synthesizes these facts, and more, in the context of Bantu languages, as it focuses exclusively on these emphatic interpretations, and is therefore a good starting point for more depth on the topic.

‘Nashibe washed the spoon [*and nothing else*].’

The final pragmatic environment I’ll discuss is *verum*. *Verum* is described commonly as focus on the truth of a proposition (Sikuku & Diercks (2021), Gutzmann et al. (2020)). In writing about Lubukusu (Bantu, Kenya), Sikuku & Diercks (2021, p.89) says the following about *verum* and doubling: ‘The conditions that speakers most regularly identify as licensing OM-doubling (in monotransitives) are when the proposition in question is being doubted by somebody in the conversation, and the speaker is attempting to settle an issue under debate, to give the final word.’ I find the same to be true regarding *verum* in Wanga, exemplified in the following example:

- (24) *Context: You and a friend are discussing how lazy Omumia is when it comes to doing chores at home. Another friend comes in and says that Omumia actually washed what was left in the sink today. You dismiss the idea having never seen Omumia ever touch the dishes, and so the friend reiterates:*

Omumia ya-a-shi-os-iy-e shi-chiko
Omumia 1SM-PST-7OM-wash-APPL-FV 7-spoon
‘Omumia DID wash the spoon!’

The emphatic effects of doubling certainly run deeper than this in Wanga; however, these contexts highlight that doubling has some pragmatic range. Further, going deeper than this would be highly unlikely to broaden our knowledge of available *syntactic* constructions involving OM-doubling, which is what this section aims to expound.

It is also appropriate to mention here that there are instances where certain OM-doubling constructions bear puzzling emphatic interpretations that go beyond the documentary purpose of this section. Namely, this arises in doubling extracted objects: e.g., in relative clauses, in *wh*-phrases (both D-linked and non D-linked), and *it* clefts. In §4 I will briefly show how extracted-object contexts such as relative clauses can highlight how muddled the syntax/pragmatics border becomes as we go deeper into the OM-doubling puzzle, and how that issue motivates some changes in how the field may want to analyze doubling.

2.6 Doubling locative objects

Another microparameter discussed in Marten & Kula (2012) is the availability of object markers for locative objects. I find that locative OMs in the traditional sense are not available for Wanga; that is to say, they appear at the end of the verb, rather than in the canonical OM position immediately before the verb stem.¹¹

- (25) (25) aba-ana ba-a-li-ir-e mu-mukunda
2-children 2SM-PST-eat-APPL-FV in-3-shamba
‘The children ate in the shamba.’

¹¹Note in (25) that a *shamba* refers to any cultivated land, such as a farm or garden.

- (26) aba-ana ba-a-li-re-yo
 2-children 2SM-PST-APPL-9LOC.FV
 'The children ate there (in the shamba).'

These locative morphemes appear to agree with the object in noun class and may well behave like object markers in other ways; however, upon initial look, it does not appear to carry the same emphatic interpretations as 'standard' object markers. Given this deviation from object marking, the details of how this morpheme works are beyond the scope of this dissertation but are deserving of future research nonetheless.

However, another facet of this microparameter is whether locative adjuncts facilitate OM-doubling at all; that is, does the presence of a locative adjunct in a ditransitive facilitate doubling of the other, non-locative object. I replicate in Wanga the following two Bukusu examples from Sikuku & Diercks (2021, p.106) to highlight that locative adjuncts do not facilitate doubling on their own, and neither do question focus or new-information focus.

- (27) a. Aba-ana ba-a-ka-ches-er-e ama-tuma yena
 2-children 2SM-PST-harvest-APPL-FV 6-maize where
 'Where did the children harvest maize?'
 b. Aba-ana ba-a-#ka-ches-er-e ama-tuma mu-mu-kunda
 2-children 2SM-PST-6OM 6-maize in-3-shamba
 'The children harvested maize in the shamba.'

So, at this point, we've seen doubling licensed by either discourse environments that bear verum/mirative/exhaustive focus on the object; or, in discourse-neutral environments where the object is dislocated to a periphery and given an 'afterthought' reading. I argue in the rest of this paper that these are mechanically very different from one another. Meanwhile, other microparameters such as the presence of a locative adjunct, and other types of focus such as new information focus do not license doubling. However, before this argumentation, there is still empirical data crucial to form an analyses. The section below, the final empirical section, focuses on the properties of OMin in ditransitives in Wanga.

2.7 Object marking in ditransitives: Wanga allows multiple OMs and symmetrical OM-doubling

Ditransitive constructions are the next obvious point of interest regarding the object-marking puzzle, as with them comes two objects and two OMs that can impact the state of affairs.

To begin, as a reminder, it is possible to object mark both/either the structurally higher object (the IO) and/or the lower object (the DO) in neutral discourse contexts. In other words, OMin is symmetrical (see van der Wal (2022, chp. 3) for a thorough account of Bantu ditransitive OM-doubling and symmetry; also, see Zeller (2015)). (28) below restates this paradigm.

- (28) a. Basic ditransitive:

Omumia ya-a-weres-iy-e aba-ana obu-suma
 Omumia 1SM-PST-give-APPL-FV 2-children 14-ugali
 ‘Omumia gave the children ugali.’

b. OMing both objects:

Omumia ya-a-(ba)-(bu)-weres-iy-e
 Omumia 1SM-PST-2OM-14OM-give-APPL-FV
 ‘Omumia gave it (the ugali) to them (the children).’

c. OMing the IO:

Omumia ya-a-(ba)-weres-iy-e obu-suma
 Omumia 1SM-PST-2OM-give-APPL-FV 14-ugali
 ‘Omumia gave the ugali to them (the children).’

d. OMing the DO:

Omumia ya-a-(bu)-weres-iy-e aba-ana
 Omumia 1SM-PST-14BU-weres-APPL-FV 2-children
 ‘Omumia gave it (the ugali) to the children.’

This is all already rather noteworthy because, in many cases in Bantu, multiple OMs on the verb such as in (28b) are explicitly disallowed (e.g. Langa de Camara et al. (2022, p.11)). While, I believe due to its relative scarcity, this ‘dual-doubling’ has not made it into some typological reviews and analyses of Bantu OMing (e.g. Baker (2016)), it has been covered recently in van der Wal (2022, §3.8) as a discussion of the third way in which object marking can be symmetrical (with the other two being doubling vs non-doubling, and which types of objects are marked).

So, Wanga is fairly unique in that respect. The possibility of multiple OMs raises the following question: Can you OM-double both objects simultaneously in a ditransitive? The answer is, quite surprisingly, yes—and it gives rise to a previously unseen paradigm of emphatic interpretations in Bantu OMing. While, again, the goal of this dissertation is not to necessarily go in-depth into the range of emphatic contexts which license doubling, I introduce the unique nature of the following construction and some available readings which are certainly deserving of future research.

(29) Dual-doubling:

Nashibe ya-a-(ba)-(bu)-weres-iy-e (aba-ana) (obu-suma)
 Nashibe 1SM-PST-2OM-14OM-give-APPL-FV 2-children 14-ugali

Lit.: ‘Nashibe gave them the children it the ugali.’

Accurate translation variable depending on context/interpretation, discussed below.

My language consultant gave two initial verum readings of (29):

- (30) a. (29) dismisses external doubt that a) Omumia would share the ugali specifically (as perhaps the ugali was not meant/able to be shared for some reason) *and* b) that Omumia would share anything at all [to children] because of some bias against them.
- b. Despite external doubt about the situation due to some preconceived notion that Omumia is biased against children, (29) is asserting that it is true beyond doubt that Omumia shared with the children (and that it is most definitely in his nature to do so).

These interpretations seem to suggest that you can either have verum focus on both objects, or an ‘extra’ verum emphasis on just the structurally higher object (IO), with the latter interpretation seemingly arising more naturally. This raises some interesting questions. Specifically, in Lubukusu for example, it is only possible to double the structurally higher object in a verum context (Sikuku (2018, p.407), Sikuku & Diercks (2021, p.306)). Doubling the lower object is possible in Bukusu, but only licensed by ‘relative informativity’, i.e. when the lower object is highly informative in context, while the intervening object is minimally informative (Sikuku & Diercks (2021, p.308)).

Meanwhile, in Wanga, I find that emphatic readings (i.e., verum/mirativity) of the higher object (IO) are natural, and emphatic readings of the lower object (DO) are marginal/vary in acceptability. Occasionally, my consultant favors doubling of the lower object but gives an interpretation that suggests that the emphatic reading still comes from the *non*-doubled higher object. In most scenarios in Wanga, though, OM-doubling symmetry in these emphatic contexts (verum, mirative, etc.) seems relatively natural. The following examples highlight this, showing an instance where doubling both the structurally higher object (IO) and the lower object (DO) yields mirative readings. For clarity, I place the relevant doubled object DP which triggers the mirative reading in SMALL CAPS, but note that this does not necessarily correspond with any prosodic emphasis.

- (31) a. Mirative surprise regarding the information conveyed by the IO:
 Omumia ya-a-(ba)-weres-iy-e (aba-ana) obu-suma
 Omumia 1SM-PST-2OM-give-APPL-FV 2-children 14-ugali
 ‘Omumia gave THE CHILDREN the ugali.’
- b. Mirative surprise regarding the information conveyed by the DO:
 Omumia ya-a-(bu)-weres-iy-e aba-ana (obu-suma)
 Omumia 1SM-PST-14OM-give-APPL-FV 2-children 14-ugali
 ‘Omumia gave the children THE UGALI.’

It is therefore peculiar that dual-doubling constructions like in (29) are seemingly most readily available when there is mirative focus on the higher object. This is especially noteworthy because sentences where a mirative reading is derived on the lower object is ungrammatical in Bukusu: The preference for focus on the higher-object in the Wanga dual-doubling construction in (29) seems to therefore maintain some harmony with Bukusu’s

preference for focusing the higher object.¹² (Sikuku & Diercks, 2021). However, I leave these questions for future pragmatically-inclined studies.

3 Bantu object marking: The analytical debate, and how Wanga compares

Thus far in §2 I have documented a range of object-marking and OM-doubling patterns in Wanga. While I have remained relatively Wanga-centric thus far, there have been some references to related work on Bantu object marking. In this section, I aim to expand on those references, and discuss the findings and subsequent analyses of object markers in other Bantu languages.

I begin in §3.1 with an introduction to two analyses of object markers and a helpful case study from Zulu (Bantu, South Africa) (Zeller (2012), Zeller (2014)). Then, in §3.2, I introduce the analysis of Bukusu (Bantu, Kenya) object markers from Sikuku & Diercks (2021) and discuss some initial reasons to believe that Wanga and Bukusu could plausibly have the same analysis (or, more conservatively, why they should be approached in the same way analytically). In short, the Bukusu analysis from Sikuku & Diercks (2021) proposes that Bukusu has two different OMs—one that is an agreement marker, and one that is a pronoun and the ‘true’ object of the sentence—that complementarily appear in neutral discourse contexts versus non-neutral discourse contexts, respectively. I find the same to be true for Wanga, and dedicate the remainder of this paper to arguing that to be the case. However, I begin with Zeller’s Zulu analysis, which effectively showcases OMin properties that in some ways behave like both agreement and pronominalization, but, unlike Bukusu (and Wanga, as I will later argue), end up adhering to *neither* of these analyses.

After establishing relevant analytical background through a review of these recent analyses of Zulu and Bukusu, later, in §4, I discuss why diagnosing object markers remains a difficult task for researchers, and how it may be beneficial to look towards the relative-isomorphism of prosodic and syntactic structures as a diagnostic to fully analyze [Wanga] OMs. This then becomes the focus of §5 where I propose a new tone-based diagnostic to help determine the status of Wanga object markers, moving away from syntactic and semantic systems that have thus far been the focus of object marking analyses.

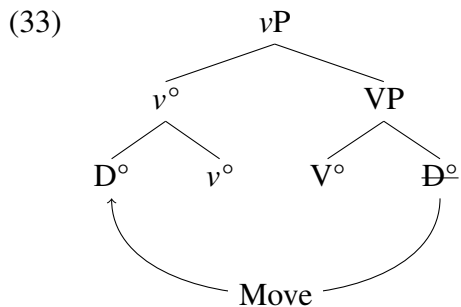
3.1 Types of Bantu object markers: An overview and case study of Zulu (Zeller 2012, 2014)

This section will introduce the analytical debate surrounding OMs in the Bantu languages. Recall that the following range of constructions is possible in Wanga (with (32c) appearing in emphatic contexts such as *verum*):

¹²This is significant given I find many analytical and empirical similarities between Wanga and Bukusu that will become clearer after I present the Bukusu analysis in §3.

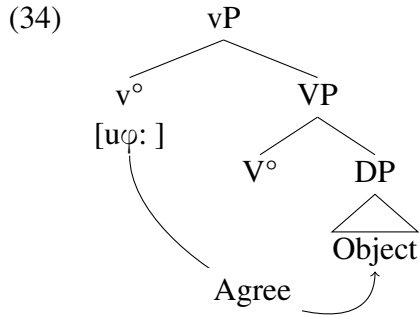
- (32) a. Nashibe ya-a-lir-e obu-suma
 Nashibe 1SM-PST-eat-FV 14-ugali
 ‘Nashibe ate the ugali.’
- b. Nashibe ya-a-bu-lir-e
 Nashibe 1SM-PST-14OM-eat-FV
 ‘Nashibe ate it (the ugali).’
- c. Nashibe ya-a-bu-lir-e obu-suma
 Nashibe 1SM-PST-14OM-eat-FV 14-ugali
 Lit.: ‘Nashibe ate it the ugali.’

Baker (2016) gives an overview (that is now perhaps slightly out of date) of the analyses (‘status’) of OMs in Bantu. As Baker (2016, p.1-2) summarises, there are two core conclusions that have been posited by various researchers: OMs are either ‘pure agreement markers,’ akin to subject markers, or they are themselves cliticized pronouns. When applied to the examples in (32), the latter pronoun analysis would assume the object DP in (32c) to be a dislocated adjunct, while the object marker is the ‘true’ object of the sentence and occupies the object position. Working in a Minimalist framework on Tiriki (Bantu, Kenya/Uganda) (Chomsky (1995), Chomsky (2001), etc.), Liu (2022, p.2) gives a simplified derivation of this incorporated pronoun analysis:



The derivation in (33) is a simplification of the latest incorporated-pronoun analysis, adopted from the analysis of Bukusu (Bantu, Kenya) by Sikuku & Diercks in Sikuku (2018, pp. 398-399) and Sikuku & Diercks (2021, pp. 385-386). In essence, what is occurring here is that the DP object is reduced to D°, and undergoes a process called ‘m-merger’ (‘morphological-merger’, proposed by Matushansky (2006)) which sees the D° (the object marker) merge with v° to make a complex head. Also note that (33) already shows the reduction of the DP to D°. The empirical and theoretical motivations behind this derivation will be discussed in much more detail in my review of the recent literature on Bukusu from Sikuku & Diercks in §3.2.

Liu (2022, p.1, (4)) also summarizes the agreement analysis below in (34) as simple phi-feature agreement (see also Riedel (2009b)).



These two types of OMs were proposed first by Bresnan & Mchombo (1987), who identified essentially the same three constructions as in (32) as readily available in Chichewa (Bantu, Malawi/Zambia).

So, at this point I would like to shift to the all-important question of how past literature has come to adopt these analyses. My plan in this section is to first review an analysis of Zulu OMs from Zeller (2012), for a couple reasons. First, this analysis proposes that OMs in Zulu are in the process of changing from an agreement marker to an incorporated pronoun, which will helpfully showcase both analyses with real-world data.

The second reason is that the diagnostics Zeller employs to analyze Zulu hinge on [object] dislocation which is largely diagnosed by Zeller through observing the syntactic/word-order properties (however, arguments are also made based on morphology and prosody). This leads nicely into the next section §3.2, which analyzes Bukusu OMs largely through a semantic/pragmatic lens, hinting at a need to look outside the syntax to analyze OMs, but still with some diagnostics looking at the syntax and prosody, as well. This is, again, a convenient avenue to my own analysis which hinges on a tone-based, prosodic diagnostic to determine the status of OMs. I hope with my analysis to continue the trend in the field of showing that all of these systems—syntax, semantics, pragmatics, prosody—are relevant and intertwined in solving the OM puzzle. The main difference between my work here and previous literature is that, this time, a prosodic diagnostic is central to the analysis.

The third reason for calling attention to Zeller’s Zulu analysis is, importantly, that it provides helpful contrast to the data from Wanga. In short, Zulu initially exhibits aspects of both a pronoun and agreement analysis, however, the facts end up heavily supporting that the Zulu OM is neither of these. Instead, Zeller eventually proposes that the Zulu OM is one that arises as a reflex of A-bar movement of the DP to dislocated positions (Zeller, 2014). I find that Wanga OMs, too, embody both evidence of pronominalization and agreement. However, unlike Zulu, it seems as though there are two OMs that appear in complementary distribution based on pragmatic contexts, rather than a single OM that displays rather consistently puzzling behavior in any context. I will show that the Wanga data adheres nicely to the analysis of Bukusu, which I will subsequently review in §3.2.

I’ll begin here with a summary of Zeller’s dislocation-based analysis. As has likely become quite clear throughout the paper thus far, the most important microparameter from Marten & Kula (2012) is the co-occurrence of the object marker and corresponding object, i.e. OM-doubling. Marten & Kula (2012) identifies three possible Bantu language types

with respect to doubling: languages where the doubled object can occur *in situ* in vP just as a non-OMed object would, languages where the OM simply cannot co-occur with an object in any position, and languages where the co-occurrence of an OM and object are only possible if the object is right-dislocated.

Zeller (2012) argues that Zulu belongs to the third type of Bantu language where OM-doubling is allowed if the object is right-dislocated. And, while Zeller initially argues in Zeller (2012) that Zulu OMs are in the process of changing from an agreement marker to an incorporated pronoun, he later finds that Marten & Kula's empirical three-way typology of Bantu OMs corresponds 1:1 to a three-way analytical typology: This means that there is a third-type of object marker which is a reflex of A-bar movement, and Zulu OMs belong to this third type (Zeller, 2015).

But before getting into the explanation of Zeller's analytical argument, I will present the main empirical facts relevant to his analysis. His primary empirical finding is that the object in an OM-doubled sentence does not appear in the same position as an unmarked object would, at least not typically. Instead, Zeller finds that the object must be specifically *right* dislocated. The example below shows an OMed object DP appearing to the right of an adverb in a monotransitive sentence.

- (35) Zulu (Zeller, 2012, p.221)
- a. si-bon-e i-zi-tshudeni kaningi
1PL-see-PST AUG-8-student often
 - b. *si-zi-bon-e i-zi-tshudeni kaningi
1PL.SM-OM8-see-PST AUG-8-student often
 - c. si-zi-bon-e kaningi i-zi-tshudeni
1PL.SM-OM8-see-PST often AUG-8-student
'We saw the students often.' van der Spuy (1993, p.346)

In ditransitive constructions, Zeller finds that it is not possible to maintain the canonical (IO) -> (DO) word order (the same as in Wanga) when the higher object (IO) is OM-doubled; the IO must follow the DO.

- (36) Zulu (Zeller, 2012, p.222)
- a. U-John u-nik-a a-ba-ntwana i-mali
AUG-1a.John SM1-give-FV AUG-2-child AUG-9.money
'John is giving the children money.'
 - b. *U-John u-ba-nik-a a-ba-ntwana i-mali
AUG-1a.John SM1-2OM-give-FV AUG-2-child AUG-9.money
 - c. U-John u-ba-nik-a i-mali a-ba-ntwana
AUG-1a.John SM1-2OM-give-FV AUG-9.money AUG-2-child
'John is giving the children money.'

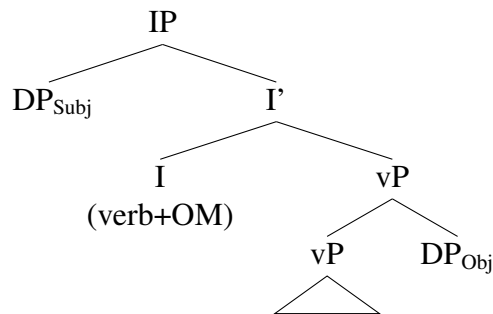
Beyond syntactic evidence of right-dislocation of an OMed object, Zeller finds evidence from verbal morphology and prosody of isiZulu that suggests that doubled objects are unable to surface *in situ* in vP.

Morphologically, Zeller (2012, p.222) cites some relevant literature surrounding the now ‘standard assumption’ that alternations of conjoint (short) verb forms and disjoint (long) forms of verbs are indicators of constituency: ‘The conjoint form is only possible if there is another overt constituent in the vP.’ With that in mind, Zeller finds that mono-transitives where OM and a corresponding object co-occur, the verb *must* appear in the disjoint form, represented by the affix *-ya-* in the present tense example below.

- (37) Zulu (Zeller, 2012, p.222)
- a. *ngi-theng-a le moto*
1SG-buy-FV DEM9 9.car
 - b. **ngi-yi-theng-a le moto*
1SG-9OM-buy-FV DEM9 9.car
 - c. *ngi-ya-yi-theng-a le moto*
1SG-DJ-9OM-buy-FV DEM9 9.car
‘I’m buying (it) this car.’

Through a series of further word-order facts, Zeller concludes that these objects in Zulu must be right-dislocated to a position relatively low in the structure. He proposes that dislocated objects must be right-adjoined to vP (although this conclusion is refined later on in (41)). This conclusion is based generally on interactions between OM-doubling and the position of the doubled, dislocated objects with respect to adverbs that are known to be found at various heights in the structure.

- (38) Zeller (2014, p.10)



Finally, Zeller also cites phonological facts that further support the idea that OM-doubled objects are dislocated in Zulu. Specifically, Zeller notes that, in doubling constructions like in (37c), the penultimate vowel of the verb is lengthened. This penultimate lengthening is evidence of a prosodic phrase boundary between the verb and its object, as per Cheng & Downing (2009) (and many others; I list Cheng & Downing here because of the continuing relevance throughout the rest of this paper of their research on the syntax-prosody interface in Zulu/Bantu). Crucially, Zeller (2012, p.222) notes that, ‘assuming that this prosodic boundary also corresponds to a syntactic phrase boundary, this is evidence that object-marked objects in isiZulu are dislocated.’

I want to slightly diverge for a moment to highlight the importance of this claim of a prosodic boundary corresponding to a syntactic phrase boundary. As I've mentioned, I will propose my own prosodic diagnostic based on some known Wanga tone rules. The notion of prosodic boundaries aligning with syntactic boundaries is fairly core to this idea (and is now generally assumed even in the most conservative of arguments (Elfner, 2018)). Specifically, the alignment of these two systems can tell us a lot about constituency and where material surfaces structurally, which is hopefully clearly becoming the focal point of analyzing OMs.

Going back to Zeller, he initially explains in Zeller (2012) that there are some primary facts that correspond most logically to an agreement analysis: For example, Zulu only allows one object marker per verb. Zeller explains that this can be easily explained if Zulu has just one functional projection responsible for object-DPs, but it is unclear what would rule out multiple-OMs should the Zulu OM be a pronoun. Zeller therefore concludes that Zulu OM is *not* a pronoun. Further, Zeller also finds that there is a lack of locative object markers in Zulu, which is easier to explain in an agreement analysis: 'Since isiZulu no longer has productive locative noun classes, there are no locative DPs, and there cannot be locative agreement' (Zeller, 2012, p.230). Zeller notes that this contrasts with the fact that Zulu does still have strong locative pronouns, making it a valid question why pronominal locative clitics would not still exist in the language.

Yet, as I first mentioned i.a. in §2.4, the general consensus in the field was and is that, when object-markers can't co-occur with an *in situ* vP-internal object DP, a pronoun analysis is highly favored (as it suggests the OM occupies the object position). And, Zulu is arguably the quintessential example of OM-doubling licensing such doubling, with Zeller arguing (again, based on word order facts) that doubled, dislocated object DPs in Zulu are right-adjoined to vP. The conclusion that Zeller comes to in Zeller (2012) acknowledges both the facts consistent with agreement and pronominalization: He therefore postulates that Zulu object markers are currently undergoing a grammaticalisation process where pronominal OMs are being reanalysed as agreement markers.

So, in general, there is what I would consider some 'light' evidence of agreement in Zulu (i.e. behaviors you would expect to be consistent with an agreement analysis) with stronger evidence for a pronoun analysis in the obligatory dislocation of doubled objects. However, there is one major issue for proposing the pronoun analysis for Zulu: OM-doubling a single object (all that is possible in Zulu) sees the dislocation of *both* the IO and DO in a ditransitive construction:

(39) Zulu (Zeller, 2014, pp. 8-9)

- a. $\text{ngi-ya-}\boxed{\text{m}}\text{-theng-el-a}$ $\boxed{\text{u-Sipho}}$ u-bisi
 1SG.SM-DJ-1OM-buy-APPL-FV AUG-1a.Sipho AUG-11.milk
 'I am buying milk for Sipho.'
- b. $\text{*ngi-ya-}\boxed{\text{lu}}\text{-theng-el-a}$ u-Sipho $\boxed{\text{u-bisi}}$
 1SG.SM-DJ-11OM-buy-APPL-FV AUG-1a.Sipho AUG-11.milk

Note that the verb is in its long form in (39) (marked by the disjoint ('DJ') morpheme), which, as Zeller reminds us, means that all postverbal material is outside of the vP (again,

this claim is well-motivated in the literature: see Buell (2005), Buell (2006), Buell (2008), and Zeller (2015)). (39b) also shows us that OM-doubling the DO is not possible here. However, as Zeller highlights, you can OM-double the DO when the verb is in the short (conjunct) form.

- (40) U-John u-yi-nik-a a-ba-ntwana i-mali
 AUG-1a.John 1SM-9OM-give-FV AUG-2-child AUG-9.money
 ‘John is giving it to the children, the money.’ Zulu (Zeller, 2014, pp. 7)

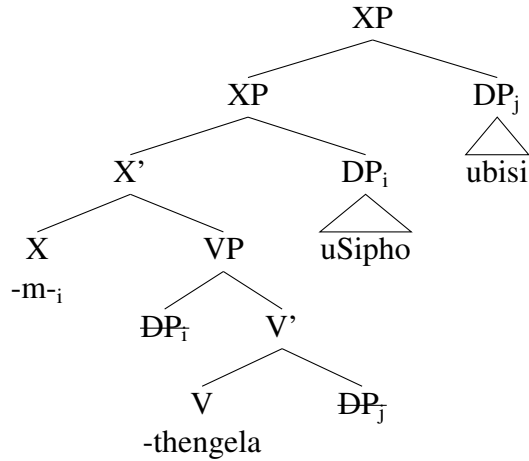
The data in (39) and (40) highlights irreconcilable issues for both a pronoun analysis and an agreement analysis. A pronoun analysis implies that the OM occupies the object position for the object DP the OM ‘refers’ to; however, that wouldn’t mean you would expect *both* objects to be vP-external as in (39). But, if Zulu OMin_g was φ -feature agreement, (40) shouldn’t be grammatical. As Zeller (2014, p.7) explains, if Zulu OMin_g is agreement, ‘the IO intervenes between v° and the DO, and object marking of the DO should therefore be ruled out as a Locality violation.’ Zeller notes that this is the case for Chichewa (Bantu, Malawi/Zambia) and a main point of the argument in favor of an agreement analysis from Bresnan & Mchombo (1987).

These facts prompted Zeller to propose that the Zulu OM is something different altogether: Not a pronoun or agreement marker, but rather a reflex of A-bar movement.¹³ More specifically, and summarized from Zeller (2014, p. 9), Zeller proposes a functional category ‘X’ above vP, which specifically bears uninterpretable ‘antifocus’ features which act as Probes that seek the closest DP with an interpretable antifocus feature. When Agree with the Goal DP takes place, the EPP-feature of X triggers movement of the DP to [Spec,X] (where X is right-branching). This antifocus disallows the agreed-with DP from being narrow-focused (which Zeller describes as being presupposed or discourse given). Further, X also bears uninterpretable φ -features which are valued by the DP that agrees with X’s antifocus probe. These subsequently valued φ -features surface as the object marker at PF, in what Zeller (2014, p. 9) calls a ‘morphological signature of antifocus agreement and A-bar movement to [Spec,X].’

The derivation below from Zeller (2014, p.10) sketches the analysis of (39a) (I condense vP to just VP here for ease and clarity).

- (41) Zeller (2014, p.10)
- ngi-ya-m-theng-el-a u-Sipho u-bisi
 1SG.SM-DJ-1OM-buy-APPL-FV AUG-1a.Sipho AUG-11.milk
- ‘I am buying milk for Sipho.’

¹³This proposal first appears in Zeller (2015), but is cited in Zeller (2014) as ‘Zeller (2013b)’ when it was an unpublished manuscript.



Zeller goes on to argue that this analysis explains why you can't OM-double the direct object when the verb is in the disjoint form in (39b), but not when the verb is in the conjoint (short) form in (40). Recall per Cheng & Downing (2007, 2009) that, when the verb is in the disjoint form, all material preceding the verb is outside of the vP. This means that in (39b) both the direct object and the indirect object have left the vP, which means the IO blocks the DO and X from agreeing (as the IO intervenes between them). Meanwhile, when the DO is OM-doubled while the verb is in the conjoint form in (40), only the DO is dislocated. Therefore, the IO remains *in situ* and no longer intervenes with X and the dislocated DO.

This concludes my basic sketch of Zeller's conclusions surrounding the Zulu object marker. The primary reason for my inclusion of Zeller's analysis is that it 'breaks' the previous binary distinction between pronominalization and an agreement analysis for OMs in the Bantu languages in order to establish a precedent for my later arguments as to why I believe Wanga has *both* a pronominalized object marker and an object marker that arises through agreement. Wanga contrasts with Zulu primarily through the fact that, in neutral discourse contexts, there is obligatory dislocation in order to have OM-doubling, but I argue this dislocation is *not* driven by movement. Instead, I argue Wanga's dislocation is in fact base-generation of the object DP at the peripheries (§3.3 is dedicated to arguing this point). Per this view, Wanga's dislocation is generally unrelated to the syntax, and it could easily be said that Wanga simply disallows OM-doubling in neutral discourse contexts. However, the bulk of this paper is still dedicated to arguing through prosody/tonology that OM-doubled objects are allowed in certain emphatic contexts, and crucially do *not* dislocate as they do in Zulu, pointing to a simpler conclusion that Wanga has an agreement-marker OM in said emphatic contexts.

Much of that argument is motivated through the analysis of Bukusu from Sikuku & Diercks (2021), which is again part of the same Luhya sub-family of Bantu languages. I introduce this argument below. The main difference is that their conclusion is motivated through a deeper exposition of semantics/Information Structure, while I use their findings to affirm the status of Wanga OMs using prosody in §5.3.

3.2 Are neutral and non-neutral discourse OMs different? The Bukusu Analysis from Sikuku & Diercks (2022)

Discussing Bukusu is of utmost relevance to my analysis of Wanga given the many empirical similarities regarding available OMing constructions; I tentatively say here that Wanga and Bukusu are near-identical with respect to the syntax of OMing, with the exception that Bukusu only allows one object marker on the verb. The Bukusu analysis also gives a helpful array of diagnostics based on syntax, semantics, and pragmatics that will nicely contrast my own prosodic diagnostic discussed in §5.

Further, I also briefly mentioned in §1.3 that a major contribution of this paper is that my analysis of Wanga upholds the Bukusu analysis, which is built on empirical data that is mostly parallel to the Wanga data, but using different methods and linguistic systems.¹⁴ Specifically, Sikuku & Diercks (2021) find that Bukusu OMs behave like agreement markers in emphatic contexts, and pronouns in neutral discourse contexts, as I discuss below.

3.2.1 Bukusu OMs are agreement markers in emphatic contexts

This section briefly discusses the analysis from Sikuku & Diercks (2021) that Bukusu OMs are agreement markers in emphatic contexts. Specifically, they discuss *verum* (focus on the truth of a proposition) and *mirativity* (focus on information that is new or surprising to the reader), per §2.5. I aim to briefly walk through a derivation of their final analysis here. While going into detail about much of their theoretical claims is beyond the scope of this paper, the primary takeaway here should be that it is the syntax-semantics interface that motivates their analysis. In other words, it is the way in which the syntax appears motivated by semantic interpretations of OM-doubling that gives rise to an agreement analysis. I leave the argumentation of this analysis to the cited literature.

Moving on, I've briefly mentioned the empirical parallels between Wanga and Bukusu. Much of this is due to two simple facts about the complementary nature of the Wanga and Bukusu OMs in discourse neutral and non-neutral contexts. First, they are parallel in that OM-doubling is disallowed in neutral discourse contexts (with some exceptions explained below in (3.2.2) and (3.3)) in a way that favors a pronoun analysis. And second, in certain emphatic interpretations, OM-doubling is allowed, favoring the analysis that the OM in Wanga and Bukusu behave like agreement markers.

The following example highlights this paradigm in Bukusu, where doubling is licensed in (42a) by a *verum* context, but is infelicitous in (42b).

- (42) a. *Context: I told you that I saw the students, but you doubt me, saying that you don't believe that I did. I can respond:*

n-a-ba-bon-a baa-soomi
1SG.SM-REM-2OM-see-FV 2.2-students

¹⁴I would like to point out that I can confidently say the data is quite syntactically parallel, but my understanding of the semantics and pragmatics discussed in Bukusu is fairly elementary. I do my best to synthesize their discussion in §3.2.1.

‘I DID see the students!’ (Sikuku & Diercks, 2021, p. 87)

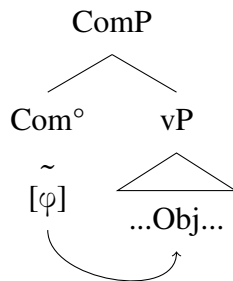
- b. n-a-ba-bon-a (#baa-soomi)
 1SG.SM-REM-2OM-see-FV (#2.2-students)
 ‘I saw them.’

Sikuku & Diercks find that the ability for the pragmatic environment (i.e. discourse context) to affect the syntax is theoretically motivated at the syntax-semantics interface. The theory behind their claims is too vast to be explained here in a relevant manner, but I simplify their argument here.

In essence, the main question Sikuku & Diercks seek to answer is how can OM-doubling be so highly constrained by pragmatics. They explain that, ‘our analysis is that OM-doubling is a [verum/mirative] focus strategy, and there are two distinct semantic/pragmatic operators that are syntactically present (Sikuku & Diercks, 2021, p. 365). They go on to say that the pragmatic licensing is a direct result of focus either in or on the verb phrase that carries the emphatic interpretations of either doubt or surprise (verum or mirativity).

They propose two functional projections they propose account for this: Put simply, the head of a Comment Phrase (ComP) directly above vP bears a ‘squiggle’ operator—an artefact of ‘alternative semantics’ introduced by Rooth (1992). This squiggle operator marks the focus domain, argued to be the verb phrase, making content in the verb phrase available for focus. The head of ComP also hosts a φ -probe that agrees with the doubled object.

(43) Sikuku & Diercks (2021, p.12)



They further propose another Focus-Associated Implicature functional projection above ComP. In very basic terms, emphatic object markers arise as a result of φ -features on FAI°, which also contains operators that introduce mirative/verum emphatic interpretations (Sikuku & Diercks, 2021, p. 363). Through various mechanisms motivated by the theory, the $[\varphi]$ -probe on FAI° agrees with Com°, introducing emphatic operators at Com°, and the probe on Com° then agrees with the doubled objects, which both marks the vP as available for focus (through the squiggle operator) that carries the emphatic interpretation found on FAI° (either mirative focus or verum focus) (Sikuku & Diercks, 2021, pp. 364-365).

This is absolutely not a thorough account of the Bukusu analysis, and I forego showing a full derivation because the semantic theory at play is beyond the scope of this paper. The

main takeaway from this section should merely be that the agreement-like behavior found when OMin_g in these non-neutral discourse contexts in Bukusu is motivated by semantic theory, as argued by Sikuku & Diercks (2021). I intend to strengthen this finding by showing that an agreement analysis based on parallel facts in Wanga is upheld by prosody (in §5).

3.2.2 Bukusu OMs are pronouns in neutral discourse contexts

Before getting into my analysis of Wanga, I will show here how neutral discourse OMs have been analyzed for Bukusu. In the end, analyzing neutral discourse OMs in both Bukusu and later in Wanga can be done by using mostly intra-syntactic diagnostics (but I will later uphold my findings with prosodic evidence).

To summarize, in Sikuku (2018), and defended further in Sikuku & Diercks (2021), it is argued that Bukusu OMs are pronouns that occupy object/argument position at LF in neutral discourse contexts, as per the following structure.

- (44) Sikuku & Diercks (2021, p. 383)

n-a-mu_k-bon-a m_u_k
1SG.SM-REM.PST-1OM-see-FV
'I saw her/him.' [Lubukusu]

Recall that a pronoun analysis of the OM assumes the OM to be the 'true' object of the sentence. A pronoun analysis therefore disallows OM-doubling of an *in situ* object DP as the OM occupies the object position. This section discusses the empirical facts that lead to this conclusion in Bukusu, as well as how Sikuku & Diercks justify their analysis in a Minimalist framework.

The primary empirical piece of evidence for the pronoun analysis is that, like Wanga, in neutral discourse contexts, OM-doubling an *in situ* object DP is disallowed in Bukusu.

- (45) Sikuku (2018, p. 360)

- a. n-á-bon-a Weekesa
 1SG.SM-PST-see-FV 1Weekesa
 'I saw Weekesa.'
- b. n-á-(mu)-bon-a (#Weekesa)¹⁵
 1SG.SM-PST-see-FV (#1Weekesa)
 Int.: * 'I saw Weekesa.'

The same problem arises for doubling *in situ* objects in ditransitives.

- (46) Sikuku & Diercks (2021, p. 78)

N-a-(mu)-w-a (#o-mw-aana) ka-me-beele
1SG.PST-1OM-give-FV 1-1-child 6-6-milk

¹⁵I mark 'Weekesa' with a hash (#) here because, as per §3.2.1, this is syntactically possible, but infelicitous here without an additional emphatic reading (e.g. *verum*).

Without ‘omwaana’: ‘I gave him/her milk.’

With ‘omwaana’: * ‘I gave the child milk.’

However, and like in Wanga (see §2.2), you can OM-double an object DP in neutral discourse contexts in Bukusu, so long as the object is not *in situ*. More specifically, OM-doubling in neutral discourse contexts in Bukusu (and Wanga) is only possible if the lexical object DP is dislocated to either the left or right periphery. Further, there must be prosodic break between the dislocated object and the rest of the sentence. Adhering to those constraints, the following are examples of grammatical neutral discourse OM-doubling in Bukusu.

- (47) a. Sikuku (2018, p. 367)
wéékésá, n-á-mu-síim-a
1Wekesa 1SG.SM-REM.PST-1OM-like-FV
‘Wekesa, I like him.’
- b. Sikuku (2018, p. 368)
n-á-ki-bon-a, ée-m-bwa
1SG.SM-REM.PST-9OM-see-FV 9-dog
‘I saw it, the dog.’

Further evidence of doubled objects’ dislocation to the peripheries in Bukusu comes from word order facts. The paradigm below shows that doubled objects can appear to the right of a temporal adverb, but are unacceptable in their canonical position to the left of the adverb.

- (48) Sikuku (2018, p. 369)
- a. **No OM**
n-aa-bóóne baa-soomi lukolooba
1SG.SM-PST-see-PFV 2.2-students yesterday
‘I saw the students yesterday.’
- b. **OM+Dislocation**
n-aa-ba-bóóne lukolooba , baa-soomi
1SG.SM-PST-2OM-see-PFV yesterday 2.2-students
‘I saw them yesterday, the students.’
- c. **OM, no dislocation**
#n-aa-ba-bóóne baa-soomi lukolooba
1SG.SM-PST-2OM-see-PFV 2.2-students yesterday

However, the fact that doubling is allowed with dislocation, per (47), is potentially problematic for the analysis that neutral discourse OMs are pronouns. If these OM-doubled object DPs are dislocated to the peripheries via A-bar movement from its base position in vP (as is the case in Zulu per §3.1), then a pronoun analysis is impossible as

the OM could not therefore occupy the vP object position. So, by adopting a pronoun analysis in these neutral discourse contexts, it is necessary to argue that the doubled objects in examples such as (47) are in fact base-generated at the peripheries.

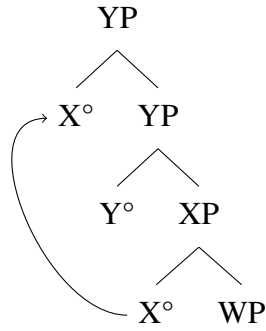
Sikuku & Diercks (2021) do not explicitly diagnose whether doubled objects that are dislocated are base-generated at a dislocated position. However, they do still highlight evidence in favor of a base-generation analysis. One such piece of evidence used to argue for base-generation regards the prosodic break required between the doubled object and the rest of the sentence (Sikuku & Diercks, 2021, pg. 80). They note that the prosodic break is not required for OM-doubling in emphatic contexts (where the OM is analyzed to be an agreement marker: §3.2.1). They suggest that the prosodic break is ‘quite noticeable’ (i.e. a long pause), a finding that is compatible with the fact that the dislocated DP object gets an ‘afterthought’ reading; this would imply that the dislocated object DP materializes at PF at one of the peripheries of the sentence.

Additionally, in the following section, §3.3, I use some other diagnostics (based on binding and syntactic islands) to further diagnose specifically whether Wanga OM-doubled objects in neutral discourse contexts are base-generated at the peripheries or whether they are subject to A-bar movement. I find that the behavior of doubled objects in these contexts is quite firmly in line with a base-generation analysis. Given the many empirical and typological similarities between Bukusu and Wanga, it would seem plausible at worst that one could adopt such an analysis for Bukusu as well, but I will touch more on that in the next (sub)section.

I will now discuss the theoretical claims made by Sikuku (2018), upheld in Sikuku & Diercks (2021), for analyzing Bukusu OMs as pronouns in a Minimalist framework (Chomsky, 1995). Sikuku (2018, p. 396) adopts clitic-doubling analyses from Harizanov (2014) and Kramer (2014). Sikuku & Diercks acknowledge that those analyses are dependent on proposals from Matushansky (2006) on how head movement is derived in a Minimalist framework. Like in Sikuku (2018), I do not go into the data and argumentation that lead to Matushansky’s theoretical claims; rather, I present the claims here, and the ways these claims were adopted for analyses of clitic-doubling by Kramer and Harizanov. Based on the facts of Amharic and Bulgarian from Kramer and Harizanov respectively, Sikuku & Diercks argue that the cliticization mechanism in these languages is (almost) the same as the Bukusu discourse-neutral object marker.

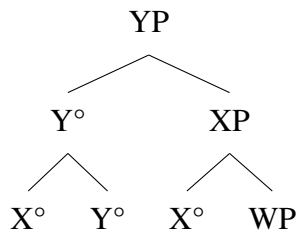
To begin, of utmost importance to Sikuku & Diercks’ analysis is Matushansky’s argument that head movement is derived by movement from a head to a specifier position:

(49) Sikuku (2018, p. 396)



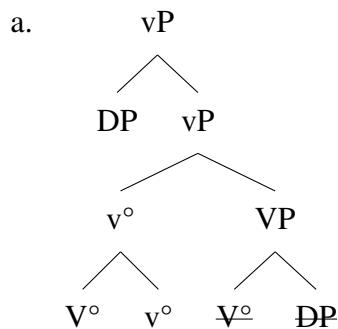
Following this movement of a head to a specifier position is a morphological merger (m-merger) which merges the moved head into the head of the phrase to which it has moved, resulting in a new complex head.

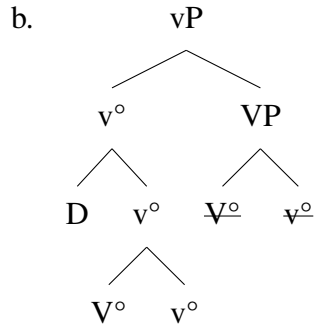
(50) Sikuku (2018, p. 397)



Harizanov (2014) and Kramer (2014) adopt both of these mechanisms (head-to-spec movement and m-merger) from Matushansky in their analysis of the clitic-doubling process in Bulgarian and Amharic. They claim that cliticization arises from movement of the DP to the edge of the vP phase, and then the DP reduces to a ‘D’ (*not* a D-head; D is simply a truncated DP) to m-merge with v° . This reduction of DP→D is formalized as *Reduce* in Baker (2016). A schematic of Harizanov and Kramer’s analyses is presented below.

(51) Kramer (2014, pg. 22), Sikuku (2018, pg. 396)

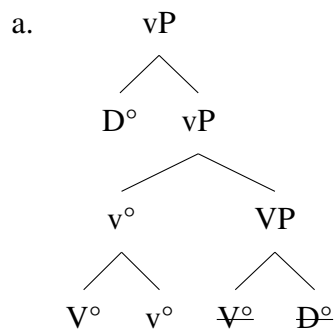




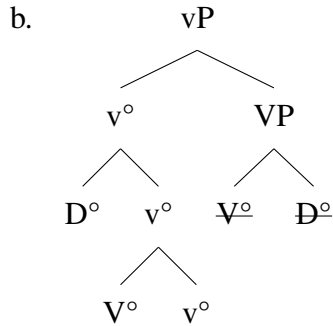
In (51a), the DP moves to spec-vP. In (51b), that DP reduces to a truncated DP (D) and m-merges with v° to create the complex head that is the clitic. With this analysis, the clitic acts as a higher copy of the DP object, and both are pronounced at PF (hence *clitic-doubling*). Both copies are pronounced because the higher copy of the DP is no longer recognized as the same as the lower copy of the DP because the higher copy has been truncated and m-merged with v° to form the clitic.¹⁶

However, if this clitic-doubling analysis were fully adopted by Sikuku & Diercks for Bukusu, the result would be OM-doubling: The OM would be considered a truncated DP to D a higher copy of DP, and then both the OM and the DP object would be pronounced because the *Reduce* operation makes the copies distinct from one another. This poses an issue when accounting for the facts of Bukusu as we know that doubling is disallowed for the neutral-discourse OM. So, Sikuku & Diercks argue that Bukusu lacks the *Reduce* mechanism (which follows an argument from Baker (2016) that *Reduce* is not available for every language). Instead, Sikuku (2018, pg. 397) argue that the OM are merged as arguments of the verb as a lone D-head (*not* the truncated DP ‘D’ argued by Harizonov and Kramer, but an actual D°). This derivation is shown (and slightly simplified) below.

(52) Sikuku (2018, pp. 398-399)



¹⁶ This notion that the higher copy is only pronounced if it is made ‘different’ through the process of *Reduce* is theoretically motivated. Sikuku (2018, p. 398) state that, in the clitic-doubling analyses by Kramer and Harizanov, ‘the higher copy of the DP is not recognized by the linearization algorithm as the same as the lower copy of the DP because it has m-merged with v .’ They point to Nunes (2004) for justification.



In (52a), the OM is merged into argument position as a D° , raising to [spec,vP]. Then, in (52b), m-merger occurs. The result is that only the higher copy of the OM is pronounced as it is the ‘same’ OM that was initially merged in argument position (because there is no *Reduce* operation occurring: see footnote 16). Hence, the neutral-discourse OM disallows doubling with a DP because the OM (the D°) occupies the argument position. The exception, of course, is if an object is base-generated at a periphery as an ‘afterthought,’ as per examples such as (47).

In the next section, I attempt to prove beyond doubt that OMs in neutral-discourse contexts in Wanga behave in the same way as the neutral-discourse OM in Bukusu, introducing some diagnostics that argue in favor of a base-generation analysis of Wanga dislocation.

3.3 Half of the Wanga analysis: Wanga OMs, like Bukusu, are incorporated pronouns in neutral discourse contexts

The empirical facts regarding Oming in neutral discourse contexts are seemingly the same in Wanga as in Bukusu (with the exception that Wanga allows multiple OMs on the verb). That is to say, OM-doubling is disallowed, unless the doubled object is dislocated to the left or right periphery, with a prosodic break between the doubled object DP and the rest of the sentence. The following examples are recalled from §2.3, where a comma (,) marks a prosodic break:

- (53) a. Left-dislocation:
 Efi-tabu fino, aba-ana ba-a-fisom-er-e
 8-books those, 2-children 2SM-PST-8OM-read-APPL-FV
 ‘These books, the children read them.’
- b. Right-dislocation:
 Aba-ana ba-a-fi-som-er-e, efi-tabu fino
 2-children 2SM-PST-8OM-read-APPL-FV, 8-books those
 ‘The children read them, these books.’

While (53a) clearly shows dislocation of the object DP to the left periphery, there is

the question of whether (53b) shows object dislocation.¹⁷ I show in the following example based on word-order facts that (53b) is dislocation to the right periphery. In mirroring example (48) for Bukusu, I show that a [neutral-discourse] OM-doubled object DP can only appear to the right of a temporal adverb, but is ungrammatical in its canonical position to the left of the adverb.

(54) a. **No OM**

Aba-ana ba-a-som-er-e efi-tabu fino mungolobe
 2-children 2SM-PST-read-APPL-FV 8-books those yesterday
 ‘The children read those books yesterday.’

b. **OM+dislocation:**

Aba-ana ba-a-(fi)-som-er-e mungolobe, (efi-tabu) fino
 2-children 2SM-PST-8OM-read-APPL-FV 8-books those yesterday
 ‘The children read them, those books.’

c. **OM, no dislocation**

*Aba-ana ba-a-(fi)-som-er-e mungolobe, (efi-tabu) fino
 2-children 2SM-PST-8OM-read-APPL-FV 8-books those yesterday
 * ‘The children read those books yesterday.’

These dislocation facts mirror the neutral-discourse OM in Bukusu, and I will in this section argue for the same pronoun analysis as in Sikuku (2018) and Sikuku & Diercks (2021). However, as I mentioned in §3.2.2, critical to that argument is whether or not object DPs in doubled sentences are dislocated to the peripheries via A-bar movement or via base-generation at the edges. This is because the pronoun analysis assumes the OM to occupy the argument position at LF, blocking an object DP from being merged *in situ*. I mentioned in the previous section (§3.2.2) pieces of evidence from Sikuku (2018) that point to a base-generation-at-the-peripheries analysis. Wanga shares these facts. Namely, there is a notable prosodic break between the dislocated object and the rest of the sentence, that, with it, comes the reading that the dislocated object is pronounced as an ‘afterthought’ (as both my Wanga consultant and Sikuku (2018) put it). However, I present here some further evidence for a base-generation argument.

To show that dislocated, doubled objects are base-generated at the peripheries, I utilize syntactic islands as a diagnostic. The concept of islands was introduced in Ross (1967). Roberts (2020, lecture, p. 4) defines islands as ‘a piece of structure out of which movement is impossible.’ Ross identifies various islands that contain object DPs; these can be employed by testing if it is possible to dislocate and double object DPs in sentences that

¹⁷This assumes that the existence of a prosodic break is not enough evidence of dislocation. However, it may well be the case that it is. Should the prosodic break be evidence of a prosodic phrase boundary between the dislocated object and the rest of the sentence, then I believe that *is* enough evidence for dislocation: Papers such as Zeller (2014) or Colantes (2022) argue this. However, at this juncture, I also believe that the prosodic break is not enough evidence of a prosodic phrase boundary. That question is relevant to much of this paper, and from section §4 onwards I focus on prosody.

would place the DP in an island, as this should bar the DP from movement from an *in situ* position.

The island constraint I chose to work with is the Complex Noun-Phrase Constraint (CNPC):

(55) **The Complex NP Constraint (CNPC):**

No element contained in a sentence dominated by a noun phrase with a lexical head noun may be moved out of that noun phrase by a transformation.

An online summary and discussion from Lawler (Unknown year.) of Ross's island constraints lists the following two types of complex NPs (which are defined as an NP with a noun head and a modifying clause):¹⁸

(56) Lawler (Unknown year.).

- a. **Relative clauses**, which always contain a noun coreferential to the head noun:
[the dog_i [(which)_i Mary saw ()_i]]
- b. **NP Complements** ([NP[Complement]]), which are only possible where the head noun is a *picture noun*, i.e., a noun denoting a symbolic representation like *picture*, *story*, *rumor*:
[the report[that Quayle sleeps with a Teddy Bear]]

The following example reveals that relative-clause Complex NPs and NP Complements behave like islands, wherein other pieces of structure can be movable:

(57) Lawler (Unknown year.).

- a. Relative Clause CNP:
Bill has brothers_j [who_j live in 3 cities].
***How many cities_i does Bill have brothers_j [who live in ()_i]?**
- b. Participial Clause (*not* an island):
Bill has brothers [living in 3 cities].
How many cities_i does Bill have brothers [living in ()_i]?
- c. NP Complements:
[Frank believes [the report [that Quayle sleeps with a teddy bear]].
***What_i does Frank believe [the report [that Quayle sleeps with ()_i]]?**
- d. Finite Complement (*not* an island):
Frank believes [Quayle sleeps with a teddy bear].
What_i does Frank believe [Quayle sleeps with ()_i]?

As per Ross (1967), these constraints are specifically constraints on movement. Therefore, in Wanga, if you can dislocate objects found in such island constructions, then that is evidence that they are not dislocated via movement, but are base-generated at a dislocated position.

¹⁸This summary was written by John Lawler for the University of Michigan and can be found at <http://www-personal.umich.edu/~jlawler/aue/ross.html>.

Much of Wasike (2006) is dedicated to seeing whether island constraints hold for Bukusu. Wasike finds that you can dislocate objects within CNPs to the left periphery, unlike in English. I find that the CNPC constraint similarly does not appear to hold in Wanga: Objects within a CNP in Wanga can also be dislocated to the left periphery. While I don't present the Bukusu data here, the following examples are roughly recreated from Wasike's data but in Wanga (Wasike, 2006, p. 167-169, p. 188-189) (refer to (57c) for the English counterpart).¹⁹:

- (58) a. Omumia ya-a-nyol-ir-e iripoti mbu Nashibe
 Omumia 1SM-PST-receive-APPL-FV report that Nashibe
 ya-a-kul-ir-e omu-kunda
 1SM-PST-buy-APPL-FV 3-farm
 'Omumia got word that Nashibe bought a farm.'
- b. Nishi; eshya Omumia ya-a-nyol-ir-e [iri-poti [mbu nashibe
 What PRON Omumia 1SM-PST-receive-APPL-FV report that Nashibe
 ya-a-kul-ir-e (;)]
 1SM-PST-buy-APPL-FV
 'What is it that Omumia got report that Nashibe bought?'

The same dislocation is acceptable in non-WH constructions.

- (59) a. Omumia ya-a-nyol-ir-e li-khuwa mbu Nashibe
 Omumia 1SM-PST-receive-APPL-FV 5-word that Nashibe
 yakulire tsiim-bete
 1SM-PST-buy-APPL-FV 10-rings
 'Omumia got word that Nashibe bought rings.'
- b. Tsiim-bete nitsio Omumia ya-a-nyol-ir-e li-khuwa mbu
 10-rings PRON Omumia 1SM-PST-receive-APPL-FV 5-word that
 Nashibe ya-a-kul-ir-e
 Nashibe 1SM-PST-buy-APPL-FV
 'It is the rings that Omumia got word that Nashibe bought.'

It is worth noting that, in (59b), OM-doubling is optional, so long as there is a prosodic break between 'tsiimbete' and the rest of the sentence, as one would expect given the data presented so far.

Further evidence for a base-generation analysis comes from the obligatory inclusion of the resumptive pronoun *nitsio* in (59b), indicating a significant structural 'distance' between the object and the rest of the sentence (Prince, 1990).

There is further evidence from binding that these peripheral dislocations are base-generation (Government & Binding Theory; Chomsky (1982)). Take the following example, which is ungrammatical due to a Principle A violation.

¹⁹In (58), the Wanga word for 'report', *iripoti*, is borrowed from a Swahili borrowing of English; Swahili has different noun-class prefixes, so I omit marking the prefix in the gloss.

- (60) Ya_i-a-weres-iy-e om-wana_j wa nashibe_i efi-tabu
 1SM-PST-give-APPL-FV 1-child of Nashibe 8-books
 *She_i gave Nashibe's_i son_j books

Here, if 'Nashibe's son' was dislocated the left periphery via movement, there would still be a Principle A violation at LF. However, I find that dislocation of that sort is grammatical, and with no required OMing:

- (61) Om-wana_j wa Nashibe_i, ya_i-a-weres-iy-e efi-tabu
 1-child of Nashibe, 1SM-PST-give-APPL-FV 8-books
 'Nashibe's_i son_j, she_i gave (him) books.'

This datum is understandable if Nashibe's son was base-generated at the left periphery, as Nashibe would therefore c-command 'she.' And, you can, of course, OM-double the above example because the object is dislocated:

- (62) Om-wana wa Nashibe, ya-a-fi-weres-iy-e efi-tabu
 1-child of Nashibe, 1SM-PST-give-APPL-FV 8-books
 'Nashibe's son, she gave him books.'

One pitfall here is that I didn't diagnose right-dislocation with binding and island constraints, but only left-dislocation. The argument for their being the same just comes from the identical ways in which OM-doubling is possible for both left and right dislocation.

Regardless, I find it sufficient to argue for an adoption of the analysis of the discourse neutral OM from Sikuku & Diercks (2021) for Bukusu: Recall from §3.2.2 that this analysis argues that the OM is merged into the structure at LF as a D^o which moves into [spec,vP] and m-merges with v^o.

4 Another approach to diagnosing OM-doubling constructions in emphatic contexts: Looking towards the syntax-phonology interface

Thus far, we have seen Bantu object markers analyzed using syntactic diagnostics, like the dislocation diagnostics from Zeller in Zulu (§3.1) and the island constraints/binding diagnostics I utilized for the Wanga neutral-discourse OM above in §3.3. We have also seen OMs diagnosed by looking at semantics/pragmatics/Information Structure by Sikuku & Diercks in §3.2.1. And yet, object marking in Bantu languages remain a tantalizing puzzle that is difficult to solve.

The semantics of the OM has been a nebulous system, despite being tied to the licensing of OM-doubling *in situ* object DPs in Wanga and Bukusu. §12 of Sikuku & Diercks (2021) discusses some outstanding empirical issues for Bukusu OMing regarding semantic interpretations. One of the core issues they discuss is OM-doubling extracted objects, such as in relative clauses (recall from §2 I mentioned that I specifically did not include

such constructions in Wanga due to the confusing marginality of OMing and OM-doubling in extracted-object contexts). On p. 395-396, Sikuku & Diercks (2021) explain that OM-doubling the extracted object in a relative clause is unnatural without a verum-like reading of the lower clause:

- (63) W-a-bon-a sii-tabu ni-syo Nafula a-a-kul-il-a
 2SG.SM-PST-see-FV 7-book COMP-7 1Nafula 1SM-PST-buy-APPL-FV
 esi-somelo?
 7-school
 ‘Did you see the book that Nafula bought at the school?’

Tawe, n-a-bon-a (sii-tabu) ni-syo Nafula
 NEG 1SG.SM-PST-see-FV 7-book COMP-7 1Nafula
 a-(#si-)kul-il-a esi-somelo
 1SM-PST-7OM-buy-APPL-FV 7-school

‘No, I saw the book that Nafula *DID* buy at the school.’ *requires a verum-like reading of the predicate inside the relative clause*

Sikuku & Diercks note that similar results hold for OM-doubling inside clefts, and that they are not quite sure what to make of this data. This is presumably because it is nontrivial to determine what a verum reading of an embedded clause really is or how it is derived—the vast majority of the literature on verum only deals with main clause contexts. While this is mainly an issue with the semantic interpretation of doubling, it is still potentially an analytical problem due to the availability OM-doubling in relative clauses in languages where OMing is analyzed to be agreement (e.g. like Sambiaa in Riedel (2009a)). The main point here is that it could absolutely be beneficial to look at other systems for analyzing the status of the OM in languages where the emphatic interpretations of OMing can become quite complex, as is the case in Bukusu or Wanga. I use this section to introduce some logic of looking towards the syntax-phonology interface (and specifically prosody/tonology) for solving syntactic phenomena. This sets up a new tone-based diagnostic for analyzing the Wanga OM in §5.

The primary question in the syntax-prosody field is: Are prosodic structures and syntactic structures coextensive? The answer is undoubtedly yes, to at least some extent.²⁰

²⁰Arguments have been made that either whole structures (syntactic and prosodic) line up 1:1 or, at a minimum, that the edges of large syntactic structures and prosodic phrases are aligned (Elfner, 2018). These ‘large syntactic structures’ are generally CP and vP ‘phases’ as per Chomsky (2001). The ‘weak’ and ‘strong’ arguments just mentioned regarding syntax-prosody isomorphism refer to ‘indirect-reference’ and ‘direct-reference’ approaches to the syntax-prosody interface. Elfner (2018) discusses arguments for both at length.

I do not specifically go into any syntax-prosody mismatches in this paper, so discussing this is extraneous to my goals, but I mention it here out of interest. The primary takeaway should just be that it is plausible that the boundaries of syntactic structures and prosodic structures reflect each other. This is motivated through empirical data (see Elfner) and also by arguments from child language acquisition (see, e.g., Speer & Ito (2009)).

This syntax-prosody isomorphism has much relevance in the Bantu languages, and is generally assumed in the literature. For example, Zeller (2012, p. 222) states: ‘Assuming that this prosodic boundary also corresponds to a syntactic phrase boundary, this is evidence that object-marked objects in isiZulu are dislocated.’ And it is that logic to which my diagnostic is dedicated: If prosodic facts can tell us about the position of [OM-doubled] objects, we can use our understanding of those positions to almost solely inform our analysis, as we have seen done in Zulu (§3.1) and with the discourse-neutral OM in Bukusu and Wanga (§3.2.2 and §3.3).

However, it isn’t necessarily clear from the syntax alone whether OM-doubled objects in emphatic contexts in Wanga are *in situ*. While in §3.2.1 I showed that an analysis could be formed regardless by looking at semantic theory, it could absolutely be beneficial to find other approaches, and I argue that looking at prosody is a logical next step.

Evidence from the literature suggests that there are prosodic cues that can tell us the syntactic position of material at LF. For example, Cheng & Downing (2007) determine that the CP and vP phases play a big part in determining alignment with prosodic phrases in Bantu, and therefore the prosodic consistency ‘across’ these boundaries can tell us about where material is in the syntax.²¹

However, thus far, only limited attempts have been made to create a systematic OM diagnostic based on prosody and tonology, given Bantu languages are tonal. Prosodic breaks have had their relevance in this paper where OM-doubling is only possible with a prosodic break (and dislocation) between the doubled object and the rest of the sentence. However, there is no prosodic break between OM-doubled objects and the rest of the sentence in emphatic OM-doubling contexts in Wanga. But the absence of a prosodic break is, of course, not evidence that the doubled object is necessarily *in situ*, something that would only be possible in a non-pronoun analysis of the OM.

One attempt at using a prosodic diagnostic in an object marking analysis comes from Bresnan & Mchombo (1987). Their diagnostic relies on a rule in Chichewa known as High Tone Retraction, which reduces a high tone to a low tone when a high tone surfaces on a phrase-final syllable. The following examples (curated in Sikuku & Diercks (2021, p. 30)) show this:

- (64) Bresnan & Mchombo (1987, p. 750)
- a. Ndikufúná kutí áná ánga [a-pitriz-é phúnziro.]
 I-want that children my SM-continue-SBJV lesson
 ‘I want my children to continue the lesson.’
 - b. Ndikufúná kutí [a-pitiriz-e] aná ánga.
 I-want that SM-continue-SBJV children my
 ‘I want my children to continue.’

Using this diagnostic, Bresnan & Mchombo show that High Tone Retraction applies when an OM-doubled object follows the verb, which implies that the verb is still phrase-final (and that the OM-doubled object is not *in situ* in the verb phrase).

²¹See Chomsky (2001) regarding phases.

(65) Bresnan & Mchombo (1987, p. 750)

Ndikufúná kutí áná ánga [a-li-pítíríz-e] phúnziro.
I-want that children my SM-OM-continue-SBJV lesson

‘I want my children to continue it, the lesson.’

These results provide evidence for a pronoun analysis of the Chichewa OM, as it appears a lexical object DP cannot occupy argument position in an OM-doubling construction.

The forthcoming diagnostic I propose functions much like this Chichewa diagnostic from Bresnan & Mchombo. However, the interplay of tone rules in Wanga is complex, and there are only very specific scenarios in which one can utilize specific tone rules, especially as they relate to the position of objects in the syntax. Therefore, from here on, I introduce the Wanga tone diagnostic by first establishing the facts of Wanga’s tonology that license such a diagnostic.

5 A new tone-based diagnostic for analyzing Wanga object markers in emphatic contexts

The previous section, §4, introduced the syntax-prosody/syntax-phonology interface and how we can utilize it as a diagnostic tool for Bantu object markers. To reiterate, that section acknowledged the isomorphism between syntactic structures and prosodic structures, as well as a tone-based diagnostic for Chichewa that made use of that isomorphism.

This section meanwhile aims to utilize a documented tone rule in Wanga whose presence or absence will provide evidence as to the position of object DPs when doubled with an OM. Specifically, I intend to use this diagnostic in emphatic contexts where doubling is not linked to overt dislocation from the object (see §2.5).

This approach therefore builds off of the findings and analysis for Bukusu in Sikuku & Diercks (2021) where, like Wanga, there is required object-dislocation for OM-doubling in neutral discourse contexts, while doubled objects in emphatic contexts do not require dislocation.²² In the end, through various diagnostics and arguments, they argue for two separate OMs in Bukusu: A non-neutral discourse OM that is itself a pronoun occupying the object position, and a neutral-discourse OM that is an agreement marker. As will become clear in this section, I will make the same argument for Wanga using solely data from this new diagnostic, which I argue to be robust enough to yield conclusive results that OM-doubled object DPs *are* vP-internal in emphatic contexts.

However, some background information and logic must be discussed before introducing the diagnostic. In §5.1 and §5.2 I provide some background on Bantu language tone systems and how Wanga fits into that typology. In §5.3 I then introduce the diagnostic

²²Recall from §3.3 that this dislocation is not the same as the dislocation in Zulu and Zeller’s (2012, 2014, 2015) analysis. Zeller analyzed dislocation in Zulu as A-bar movement, where I am arguing that dislocation in Wanga is base-generation at the peripheries.

itself, with §5.3.1 going deeper into Wanga tonology to acknowledge the caveats that arise when determining viable data. In §5.3.2, I present the diagnostic results and how they are consistent with both a pronoun analysis in neutral discourse-contexts and an agreement analysis in emphatic contexts.

5.1 An introduction to Bantu and Luyia/Wanga tone tonology

Before introducing the tone diagnostic I will first provide some relevant background on Bantu/Luhyia/Wanga tonology. This section introduces the typology of Bantu tone systems, and then goes into the specifics of Wanga's tonology. The content from this section, and my understanding of tones in Bantu languages, is based on information from §6 of the Yip (2002) *Tone* textbook, which overviews the tonology of African languages. I also draw extensively from Green et al. (Forthcoming), which is an extensive work documenting and analyzing Wanga's tonology. This section also benefits greatly from two presentations, Green & Marlo (2016) and Green (2016).²³ This section also benefits from some past work on Luyia tonology, namely Ebarb et al. (2014); Wanga, as part of the Luyia macrolanguage, features heavily. The summary I provide here provides just the essential knowledge needed for how my tone diagnostic works: See Green et al. (Forthcoming) for a thorough account of Wanga tonology.

I want to first introduce a key generalization from Yip (2002). Namely, Yip mentions that the 'most striking' property of Bantu tones is their affinity to move. The readiness for tonal mobility in Bantu means that tones that begin (underlyingly) on one morpheme often spread to adjacent morphemes, or simply surface on a completely different morpheme altogether (p.132-133). The complex agglutinative nature of the morphology of Bantu languages gives rise to a host of possibilities and mechanisms that drive this tonal mobility. Bantu tonal mobility is essentially the backbone of the logic of my diagnostic and why tone can (and should) be used as a syntactic tool. It gives rise to one of the most important findings (for my purposes) regarding Bantu tonology: 'Tonal association is often not controlled by lexical association to a TBU (tone-bearing unit; often the syllable nucleus), but by general phonological constraints such as alignment with word edges, prominent syllables, or phrasal boundaries' Yip (2002, p.132). Recall that diagnosing the status of object markers is tied often to the position of an OM-doubled object DP. At this point, I hopefully have shown that, time and time again, there is precedent for tonal rules applying across phrase boundaries: Therefore, testing the presence or absence of a tone rule that only spreads within the phrase on postverbal doubled objects should tell us if the postverbal material is within the verb phrase or vP-external (the specifics will become clear imminently).

As for the tone systems themselves, Bantu languages generally have a two-way tone contrast which surfaces phonetically as High versus Low but phonologically often as High (H) versus the absence of tone (Ø). (Yip, 2002, p.133). Crucially, verbs are also marked as either /H/ or /L/.

²³I would again like to thank the authors, Michael Marlo and Michael Green, for their kindness in providing me with lots of relevant resources and guidance in handling Wanga tonology.

Further, writing on Luyia languages, Ebarb et al. (2014) explains that all Luyia languages' verbal inflection is characterized by the realization of Melodic High tones (henceforth MH) on specific positions of the macrostem. The macrostem is defined as the verb stem including its preceding object markers as well as any preceding affixes (Green et al., Forthcoming, p.134).²⁴ The position on the macrostem of MHs (should MH surface at all) is determined through various factors, such as the underlying lexical tone (e.g. is the verb classified as /H/ or /L/ underlyingly), vowel length/number of syllables within the stem, the object marker and subject marker, and certain suffixes. The Melodic High is subject to rules that apply only when the verb is phrase-medial: This is the focus of my diagnostic.

For clarity in the coming sections, I note here that Wanga has been analyzed to have a 'Reversive' tone system, meaning the underlying verb contrast is not /H/ vs /L/ but in fact /L/ vs /Ø/ (toneless).

Moving on, I introduce the mechanics of the Melodic High which are crucial for my diagnostic and what to look for when employing it.

5.2 The new diagnostic: Utilizing the mechanics of the Melodic High tone in Wanga to determine if postverbal material is within the verb phrase

I mentioned above in §5.1 that Wanga verbs are inflected by a Melodic High tone (MH) on certain positions of the macrostem depending on phonological factors that include prefixal morphology, stem lengths, syllable lengths, and certain suffixes. The fact that verbal morphology has an affect leads Green et al. (Forthcoming) to separate Wanga verbs into certain 'tone patterns' based on the tense/aspect/mood/polarity (TAMP) context the verb appears in, as TAMP constructions are dependent on various morpheme combinations on the verb. These tone patterns also dictate the position that the MH is attached to the verb. Green et al. propose a rule 'Melodic High Association' (MHA) which attaches the MH to various positions of the stem depending on the verb's TAMP affixation. The properties of the Melodic High are central to my diagnostic.

To summarize the diagnostic here, the Melodic High is subject to some phrase-medial tone rules. The specific rule I utilize for my diagnostic is called Melodic High Deletion. In essence, Green et al. (Forthcoming, pp. 178-179) explain that the Melodic High surfaces if the verb is phrase-final, but is deleted if the verb is phrase-medial. This means material such as postverbal objects, postverbal adverbs, and any other vP-internal material ends up deleting the MH inflected on the verb.

As has been a major theme of this paper, the status of OMs in Bantu languages is often determined by whether OM-doubling is a) allowed, and b) if the OM-doubled objects are *in situ* is in the vP. A pronoun analysis relies upon the OM occupying argument position, blocking any object DPs from surfacing, and therefore blocking OM-doubling. This is unless the object is base-generated outside of vP, as I argued can be the case in Wanga in

²⁴Green et al. (Forthcoming) also note that that this definition excludes any morphemes that precede OMs; these morphemes—tense, aspect, subject, and negation prefixes—are typically referred to as the 'pre-stem.'

§3.3. Meanwhile, the analysis that OMs are a reflex of A-bar movement (as i.a. Zeller (2012) argues) requires doubled objects to have originated at LF from an *in situ* position, but also sees the object dislocated. The most robust analysis in the literature of *in situ* OM-doubled objects that are not dislocated is that the OM is an agreement marker. All of this can be determined on the sole basis of determining the position of the doubled object at LF and PF: Looking at Melodic High Deletion and other syntactic facts (i.e. word order) can tell us both of these things. If an OM-doubled object surfaces as non-dislocated, and triggers MHD, then that is compelling evidence that the object is both *in situ* in the vP, and therefore favors an agreement analysis of the OM. I will show this to be the case for OMs in emphatic contexts Wanga.

In short, I find that postverbal objects trigger MHD in doubling constructions in emphatic contexts (§5.3). Meanwhile, I also show that my pronoun-analysis of OMs in neutral discourse contexts for Wanga is upheld in that the doubled objects do *not* trigger MHD, bolstering the analysis in §3.3 that doubled objects are base-generated at the peripheries, not *in situ* in the vP.

However, before showing this more systematically, there are other mechanisms that affect the realization the MH. As I will show, certain conditions must be met to find contexts where MHD can be observed at all.

First, recall from earlier in this section that verbs in Wanga have been split into distinct verb tone patterns depending on their morphology, per Green et al. (Forthcoming). The table below shows examples of each verb tone pattern identified by Green et. al in Wanga. Note that, while 15 paradigmatic examples are shown below, these patterns in all account for 31 TAMP contexts as some TAMP contexts share the same morphemes, or share morphemes with the same phonology; i.e. syllable structure and underlying tone (Green & Marlo, 2016, p.2).

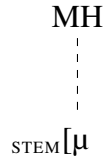
(66) Paradigmatic examples of major Wanga verb patterns (from Green & Marlo (2016, pp. 2-3), updated/altered to adhere to latest analysis in Green et al. (Forthcoming))

Pattern	/Ø/ stem	/L/ stem
1a (Hodiernal Perfect)	a{[káβúúl-e]} 'he divided'	a{[βukuul-e]} 'he took'
1b (Remote Past)	ja-á{[léxuul-a]} 'he released'	βa-á{[βukaan-a]} 'they met'
1c (Past Habitual)	ja-a{[límaang-a]} 'he used to dig'	ja-a{[βékaang-a]} 'he used to shave'
1d (Remote Future)	a-li-xa{[βálál-e]} 'he will set out to dry'	a-li-xa{[βúkul-e]} 'he will take'
2a (Indefinite Future)	a-li{[saám-b-ul-a]} 'he will de-roof'	a-li{[fuum-ám-á]} he will invert
2b (Habitual)	a{mu[lolaang-a]} βwaanɣu 'he sees him quickly'	a{mu[léferaang-a]} βwaanɣu 'he forgives him quickly'
2c (Consecutive)	...ná-á' {[léxúúl-a]} 'and then he released'	...ná-á' {[βukúl-á]} 'and then he took'
3 (Present Negative)	ʃa-a{saám-b-ul-a} tá 'he doesn't remove the roof'	ʃa-a{[βukul-a]} tá 'he doesn't take'
4 (Subjunctive)	xu{[lexúúl-e]} 'let's release'	xu{[karáándʒ-e]} 'let's fry'
5a (Imperative Singular)	{[lexuul-á]} 'release!'	{[fuundixá]} 'tie a knot!'
5b (Imperative Plural)	{[lexuul-á]} 'release!'	{[fuumam-e]} 'invert!'
6a (Near Future)	a-lá{[púríx-á]} 'he will fly'	a-la{[fúú' m-ám-á]} 'he will invert'
6b (Immediate Past)	j-a-xá{[βáám-b-úl-á]} 'he just unfolded'	j-a-xa{[ká'ráang-á]} 'he just fried'
7a (Past Conditional)	βala{[lexuul-a]} 'if they had released'	βala{[βukula]} 'if they had taken'
7b (Conditional Future)	jaxa{[tʃeend-e]} 'he will walk'	jaxa{[teeʃ-e]} 'he will cook'
8a (Conditional Future Negative)	ʃijaxá{[lím-é]} tá 'he won't dig'	ʃijaxa{[βé' tʃ-é]} tá 'he won't shave'
8b (Remote Past Negative)	ʃi-j-á' {[βjéétsék-ál-á]} tá 'he didn't drag'	ʃi-j-á' {[βukáán-á]} tá 'he didn't meet'
8c (Past Habitual Negative)	ʃi-j-á' {[pú' ríx-áang-á]} tá 'he didn't used to fly'	ʃi-j-á' {[té' x-áang-á]} tá 'he didn't used to cook'

Many things affect the diverse tonology in the above table. First, notice that the above graph is separated into /Ø/ or /L/ stems. As previously mentioned, Wanga verbs have been

analyzed to be underlyingly toneless (/Ø/) or Low (/L/). This classification affects the first TBU (syllable) of the stem: The first syllable of the stem (σ_1) is either toneless or harbors an underlying /L/ tone. This underlying /L/ tone does not usually surface however (I leave the specifics of that analysis to Green et al. (Forthcoming)). This can have an effect on the Melodic High that is realized on the verb. For example, in Pattern 1 verbs, MHA targets the first syllable of the stem with the MH.

(67) Melodic High Association for Pattern 1 Verbs (Green et al., Forthcoming, p. 203)



The verb below in (68a) is underlyingly /Ø/ with no tone already associated with the first mora of the stem, while the verb in (68b) is underlyingly /L/, meaning an L is associated the first mora of the stem. This blocks MHA from applying.

(68) Green et al. (Forthcoming, p.166)

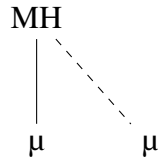
- a. xu[ts-íɪ-e]
/xu-tsi-ir-e/
1PL-go-PFT-FV
'We have gone.' [Hodiernal Perfect; P1a]
- b. xu[l-iiɪ-e]
/xu-li-ir-e/
1PL-eat-PFT-FV
'We have eaten.' [Hodiernal Perfect; P1a]

Therefore, it is not trivial when determining the underlying class of the verb for testing MHD. It is for the reasons above why I avoid any verb that is underlyingly /L/ so that the realization of MH is maximally clear, and therefore MHD is more easily observable.

There are other factors that affect the MH which should be kept in mind. For example, some contexts simply don't ever see an MH surfacing. Meanwhile, when MH does surface, there are a few more general tone rules that apply that can either shroud the ability to see MHD or strengthen MHD. I introduce these rules here; they will be helpful to refer back to as go through the results of testing MHD on object marking constructions in §5.3.

The first rule which often applies after MHA inflects the verb with an MH is dubbed Melodic Doubling (MD), which sees the MH spreading rightward.

(69) Melodic Doubling (Green et al., Forthcoming, p.167)



The shape of the syllable therefore affects the application of MD; in the Hodiernal Perfect (Pattern 1a) where MHA targets the first syllable of the mora, if that syllable is short, MD spreads to the second syllable.

(70) Green et al. (Forthcoming, p.168)

a[lím-íɪ-e]
/a-lim-ir-e/

2SG-cultivate-PFT-FV
'He has cultivated.' [Hodiernal Perfect; P1a]

If the the mora targeted by MHA is part of a long-voweled syllable then the mora which MH is spread to via MD is just the latter-half of the syllable (moraiically, so to speak).

(71) Green et al. (Forthcoming, p.168)

a[fwíimb-uɪ-e]
/a-fwiimb-iir-e/

2SG-de.roof-PFT-FV
'He has de-roofed.' [Hodiernal Perfect; P1a]

However, a new mechanism applies if the mora targeted by MHA is a single short vowel but the proceeding syllable contains a long vowel. Green et al. (Forthcoming, p.170) discusses High Decontouring (HD), a mechanism in which Wanga almost universally disallows surface HL tone sequences (HL → HH). The example below shows MD applying to a verb of the type just mentioned (where the first MHA-targeted mora is short but the second syllable is long).

(72) Green et al. (Forthcoming, p.167)

a. MHA targets μ_1 ; MD spreads the MH rightward to σ_2 ; but, HD doesn't apply

*a[léxúu-íɪ-e]
/a-lexuul-ir-e/

2SG-release-PFT-FV
'He has released' [Hodiernal Perfect; P1a]

b. MHA targets μ_1 ; MD spreads the MH; HD applies

a[léxúú-íɪ-e]
/a-lexuul-ir-e/

1.SU-release-PFT-FV
'He has released'

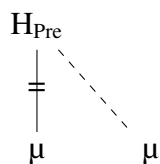
Green et al. go on to note that, even in patterns where MD doesn't apply (Pattern 1c and Pattern 3), High Decontouring still disallows long vowels from exhibiting a *[v́v], spreading the syllable rightward one mora to form [v́v]. But, High Decontouring itself would not spread a high tone beyond the syllable for which it is attached.

What is interesting to note is that, when MHD applies, it deletes any iterations of the MH that have spread rightward via Melodic Doubling or other tone rules that spread the MH. This makes it beneficial to use multisyllabic verb-stems to test MHD.

Before getting back to MHD, there are some more relevant tone rules which I will introduce here as they will make future examples more clear.

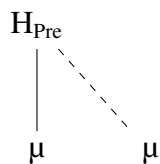
One such rule, Prefix Hop (PH), applies to the lexical H tone on a tense prefix or object prefix (OM). In general, the H of an /H/ prefix spreads rightwards one mora (whether onto the stem or onto another prefix), but sees the H on the /H/ prefix 'delink' (meaning the H is no longer pronounced on the prefix itself).

(73) Prefix Hop (Green et al., Forthcoming, p.171)



However, this form of PH can only occur once per word. If there are two prefixes underlying /H/, PH only acts on the leftmost /H/ prefix; the subsequent /H/ prefixes undergoes a 'weak' PH that does not delink.

(74) Weak Prefix Hop (Green et al., Forthcoming, p.172)



PH is observed to occur in all Wanga verb patterns except a single TAMP context associated with Pattern 8b.

Reverse Meeussen's Rule (RMR) is yet another general tone rule, but this one is triggered by the MH itself. In essence, RMR blocks adjacent H tones that arise as a result of a H tone on a prefix followed by an MH on the first stem mora. This means that an MHA rule that targets the first stem mora triggers RMR, deleting the prefix's H tone (Green et al., Forthcoming, p. 173).

Global High Deletion (GHD) is a unique rule in that, in two verb tone patterns, prefixal High tones (and therefore any subsequent rules that act upon them, such as PH) are not expressed (Green et al., Forthcoming, p. 175).

Another unique occurrence seen in Pattern 6 verbs is Unbounded Spread (US), in which a H tone that arises via MHA targeting the final vowel (FV) of the verb spreads *leftwards* to every mora on the verb, including prefixes (Green et al., Forthcoming, p. 177).

And, finally, on p. 177 Green et al. introduce Downstep (DS). DS occurs between adjacent H tone spans, which sees the second H in adjacent H tones pronounced at a slightly lower pitch than the first, if certain structural conditions are met (there are many different types of instances of DS). This is represented simply as HH → H'H.

With that, I conclude my general introduction to Wanga tonology based on Green et al. and the mechanisms which lead to the surface tones based on some intra-verbal tone rules. I now reintroduce the diagnostic itself in more depth.

5.3 The new diagnostic: Determining if postverbal material is *in situ* using Melodic High Deletion

There are two phrase-medial tone rules that Green et al. propose; As I mentioned in the previous section, my diagnostic is based upon Melodic High Deletion (MHD). To restate, in some verb patterns, the MH is expressed when the verb is phrase-final, but the MH is lost when the verb appears phrase-medially (Green et al., Forthcoming, pp. 178-179).

The following example shows a Pattern 1d phrase-final verb where MHA targets the first stem mora, and MD and HD apply in sequence to extend the MH rightward. The H tone of the inceptive prefix (-*xa-*) is also presumably deleted through RMR.²⁵

(75) Green et al. (Forthcoming, p. 179)

a-li-xa[léxúúl-e]
 1.SU-FUT-INCPT-release-FV
 ‘He will release’ [Remote Future; P1d]
 Underlyingly: /a-li-xá-lexuul-e/

The same verb sees its MH lost (RMR still seems to apply, deleting the /H/ prefix from surfacing H, but HD and MH do not apply).

(76) Green et al. (Forthcoming, p. 179)

a-li-xa[léxúúl-e] βwaaŋgu
 1.SU-FUT-INCPT-release-FV quickly
 ‘He will release quickly’ [Remote Future; P1d]
 Underlyingly: /a-li-xá-lexuul-e βwaaŋgu/

²⁵These facts are empirically motivated. Green et al. do later mention on p. 239 that the MH is likely present in early word formation and triggers RMR, while MD and HD are applied later in the derivation. This means that the presence of the MH at an intermediate stage allows the prefixal H on -*xa-* to be deleted via RMR, while the MH itself fails to surface.

Therefore, my diagnostic aims to utilize MHD to see if OM-doubled objects in emphatic contexts still trigger MHD. If MHD is triggered by OM-doubled objects, it means that the verb is phrase-medial, implying the doubled object is also *in situ* within the vP. This would help affirm that the Wanga OM is an agreement marker in emphatic contexts. If the doubled object does *not* trigger MHD, the verb would be assumed to be phrase-final, and the object dislocated: This favors a pronoun analysis as the OM would occupy the argument position at LF, blocking a lexical object DP from ever being present *in situ*. I find that OM-doubled objects trigger MHD in emphatic contexts, leading me to the same analysis as Sikuku & Diercks for Bukusu: Wanga has two OMs, one which is a pronoun in discourse-neutral contexts (see §3.3), and one which is an agreement-marker in emphatic contexts.²⁶

The following subsection I dedicate to going through the relevant verb tone patterns and identifying appropriate contexts to test for MHD.

5.3.1 Choosing viable verb patterns to test MHD

Green et al. mention that MHD does not apply to every verb pattern or TAMP construction. They state that MHD specifically affects verbs in Patterns 1d, 2a, and 2b, as well as verbs in all contexts in Patterns 6, 7, and 8. In this section, I go through each of those patterns and identify which ones are most viable for MHD (some must be ruled out due to too much interplay with other tone rules, or just other general mechanisms that could confuse the results—for example, Global High Deletion).

First, Pattern 1 verbs are characterized by an absolute MHA rule that targets the first mora of the stem. Pattern 1d, a potential MHD candidate, is found only in the Remote Future tense and is characterized by the tense prefix *-li-* and an aspectual inceptive prefix *-xá-*. Pattern 1d verbs undergo Melodic High Association with the stem-initial mora, as well as Melodic Doubling, Decontouring, Prefix Hop, and Reverse Meeussen’s rule (Green et al., Forthcoming, p.215). This is a viable candidate for MHD.

Pattern 2 verbs are also viable MHD candidates. They are characterized by a Melodic High (MH) that targets the leftmost unoccupied mora of the stem. This means that the MH will target the stem-initial mora in /Ø/ verbs, or the second-or-third stem mora in /L/ verbs (Green et al., Forthcoming, p.231).

The TBU targeted by the MH in /L/ verbs is dependent on the association of lexical L tones as well as verb-internal syllable structure. It is therefore relevant here to mention that I only intend to use /Ø/ verbs for the MHD diagnostic as they are not complicated by the any lexical L tones.

Pattern 2a (Indefinite Future; Hesternal Perfect; Present; Present Progressive; Persistent) and Pattern 2b (Habitual) are specifically highlighted by Green et al. as potential

²⁶There is another tone rule affecting Wanga phrase-medial verbs per Green et al. (Forthcoming, p. 180): High Tone Anticipation (HTA). This is the same rule utilized by Bresnan & Mchombo (1987) that I mentioned in §4. Essentially, in Wanga, HTA states that the H tone of a verbal modifier (such as adverbs or a negative particle) spreads leftward onto toneless TBUs of a preceding verb stem. However, Green et al. explain that HTA can only apply in contexts where MHD has blocked the expression of an MH. This would make it redundant to test for HTA, as MHD would have had to occur anyway.

targets for MHD. Pattern 2a is exemplified by a toneless future tense prefix *-li-* (Green et al., Forthcoming, pp. 237-238) and is subject to various general tone rules, as well as the other phrase-medial rule (HTA).

With that, at this point it is worth highlighting the effects of HTA on phrasal verbs as a point of caution, as it could confuse the ability to accurately observe MHD. After general tone rules and MHD applies in phrase-medial contexts, if the verb is followed by a modifier with a high tone, that high tone spreads leftward onto the verb. Take the following examples from p. 238, which shows a non high-toned modifier that doesn't trigger HTA followed by a high-toned modifier that does trigger HTA (keep in mind that MHD has already deleted all H tones in both examples):

- (77) a. a-li[lexuul-a] βwaŋgu: he will release quickly
b. a-li[léxúúl-á] káála: he will release slowly

Therefore, for clarity, when running my diagnostic I will only include postverbal objects that do not exhibit any High tones, as HTA could hinder my ability to identify the presence of MHD from occurring.

Pattern 2b verbs, meanwhile, exemplified only by the Habitual, are *not* viable contexts for my MHD diagnosis. This is because Green et al. (Forthcoming, p. 239) explain that the MH is not expressed on any Pattern 2b verb. This doesn't mean MHD doesn't occur, but just that the MH is deleted at some point during the derivation, which would make it harder to see MHD.

I also rule out Pattern 6 and Pattern 7 verbs as candidates for my diagnostic. While Pattern 6 verbs do exhibit an MH, and do undergo MHD phrase-medially, the nature of the Pattern 6 verb could be problematic for clarity: It is the only verb pattern that targets the final vowel of the stem which subsequently spreads *leftward* (Green et al., Forthcoming, p. 275). Meanwhile, while there is derivational evidence of MHD in Pattern 7 verbs, it is the only verb pattern in Wanga which *never* exhibits any surfacing High tones Green et al. (Forthcoming, p. 291). Further, Pattern 7 verbs undergo Global High Deletion which applies *after* MHD in the derivation, making it impossible to see the effects of MHD on the surface, rendering it impractical for the MHD diagnostic.

Pattern 8 verbs are also impractical, and I rule them out for the diagnostic. While Pattern 8 verbs do exhibit surfacing prefixal H tones (ruling out a GHD rule), the MH itself fails to surface in all instances, making it impossible to show contrast between phrase-medial and phrase-final verbs with respect to the presence or absence of the MHD; this is despite, again, the MH being present at an early stage of the derivation (Green et al., Forthcoming, p. 301).

With that, I am left with two verb patterns to utilize for the MHD diagnostic: Pattern 1d and Pattern 2a. As a reminder, Pattern 1d is only found in the Remote Future tense, while Pattern 2a is found in the Indefinite Future tense as well as four other TAMP contexts; however, Green et al. use the Indefinite Future as their exemplary P2a context, so for continuity I will do the same.

5.3.2 Results of the diagnostic: OM-doubled objects trigger MHD in emphatic contexts

I will now show that MHD is triggered by OM-doubled objects in emphatic contexts, while MHD is not triggered by material that is not in the verb phrase; that is, when the verb is phrase-final. In other words, this implies that OM-doubled objects are *in situ* in the verb phrase, as MHD is only triggered when the verb is phrase-medial, per the definition of MHD from Green et al. (Forthcoming).

Again, I will be working with Pattern 1d and Pattern 2a verbs, exemplified by the Remote Future and Indefinite Future. As the previous section noted, the verbal morphology affects the realization of the MH and therefore affects our understanding of the deletion of the MH: Combinations of different morphemes and their respective underlying tones (or lack of) dictate what tones are actually targeted by MHD.

In that vein, the remote future tense is defined by the toneless future tense prefix *-li-* and the /H/ aspectual inceptive prefix *-khá-*. Green et al. (Forthcoming, p. 224) describe the Remote Future as identifying ‘events that are expected to begin at some point beyond the following day, i.e., after tomorrow.

The indefinite future tense is characterized by the toneless future tense prefix *-li-*. It describes actions occurring at some point in time after the present, without describing any other aspectual information Green et al. (Forthcoming, p. 233).

Further, object markers are underlyingly associated with a tone, as per Green et al. (Forthcoming, p. 189). However, with the exception of a /L/ reflexive OM, all others are /H/; I will only be employing constructions with /H/ object markers.

Another strategy I also make use of here is that I will only test verbs with multisyllabic stems, where possible. This is because the MH is realized more clearly on multisyllabic verbs due to the various spreading rules that the MH is subject to; this will make it easier to see the realization of MHD²⁷

As two final notes, I will continue to use orthography rather than IPA, but maintain the use of doubled vowels to show vowels that are long (as that more clearly demonstrates moras per syllable). I also only use verbs of the /Ø/ class to avoid interplay with any /L/ tones.

To begin looking at MHD, take the following phrase-final verb in the Remote Future. The underlying H tone for the inceptive *-kha-* has been deleted by Reverse Meeussen’s Rule after the Melodic High is associated with the first mora of the stem (the defining feature of Pattern 1 verbs). Then, the MH spreads rightward by one syllable via Melodic Doubling and Decontouring (see §5.1).

- (78) Omumia a-li-kha-[lékhúú-1-e]
Omumia 1SM-FUT-INCPT-release-FV
‘Omumia will release’ [Remote Future; P1d]
Underlyingly: /a-li-khá-lekhuul-e/

²⁷This suggestion was kindly given to me by Green & Marlo through personal correspondence.

However, MHD applies if the verb is phrase-medial. Take the following examples where a postverbal object and postverbal manner-adverb trigger deletion of the Melodic High.

- (79) a. Omumia a-li-kha-[lekhuul-e] bwaangu
 Omumia 1SM-FUT-INCPT-release-FV quickly
 ‘Omumia will release quickly’ [Remote Future; P1d]
 Underlyingly: /a-li-khá-lekhuul-e bwaangu/
 b. Omumia a-li-kha-[lekhuul-e] omu-koye
 Omumia 1SM-FUT-INCPT-release-FV 3-rope
 ‘Omumia will release the rope’ [Remote Future; P1d]
 Underlyingly: /a-li-khá-lekhuul-e omu-koye/

The deletion of the MH on the first mora of the stem further disallows the spreading of the MH to the following syllables via Melodic Doubling and Decountouring.²⁸

However, MHD does not apply in OM-doubling constructions in neutral discourse contexts. This would imply that the OM-doubled object DP that follows the verb is not in the verb phrase, as the verb is phrase-final for MHD to apply.²⁹

- (80) Omumia a-li-kha-{kú-[¹lékhúúl-e]}, omu-koye
 Omumia 1SM-FUT-INCPT-3OM-release-FV, 3-rope
 ‘Omumia will release it, the rope’ [Remote Future; P1d]
 Underlyingly: /Omumia a-li-khá-kú-lekhuul-e, omu-koye

This example can be recreated in the other verb pattern I identified as a viable candidate for MHD, the Indefinite Future. The result holds, with the postverbal OM-doubled object DP failing to trigger MHD, again signifying that the verb is phrase-final.³⁰

- (81) Omumia a-lí-¹{í-[sáámbul-a]}, isukuli
 Omumia 1SM-INCPT-9OM-de.roof-FV, 9.school

²⁸Also bear in mind in (79) that Reverse Meeussen’s Rule still applies, hence the underlying H tone of the *-xa-* prefix failing to surface. Green et al. (Forthcoming) argue this is because RMR applies immediately after MHA attaches the MH to the first mora of the stem, deleting the prefixal H. Then, MHD applies, deleting the MH, blocking other rules that spread the MH (such as Melodic Doubling and High Decontouring) as they apply later in the derivation.

²⁹While not fully necessary to see the lack of MHD, here I further explain what is occurring tonologically in this example to indicate further confidence in these findings. Here, Reverse Meeussen’s Rule deletes the underlying H tone of the OM *-kú-*, but subsequently spreads the H tone of the inceptive prefix to the OM via Prefix Hop. RMR can only apply once, from right-to-left, so only the the right-most prefixal H on the OM is deleted, leaving the the H on the inceptive prefix subject to rules like Prefix Hop. Downstep (HH → H¹H) then applies between the OM and the MH-initial stem. MH is then spread rightward via Melodic Doubling and Decontouring), but not deleted via MHD, indicating, again, that the verb is phrase-final here.

³⁰Note that the Wanga word for school, *isukuli*, is a borrowing, so the normal noun-class prefix does not surface. The object marker used is seemingly from Class 9.

‘Omumia will de-roof it, the school’ [Indefinite Future; P2a]
 Underlyingly: /Omumia a-li-í-saambul-a, isukuli/³¹

Recall that you can also OM-double objects in neutral discourse contexts if the object is left-dislocated. The same result as above holds, with the verb behaving phrase-finally as it retains its MH. I.e., MHD doesn’t apply, signifying that the dislocated object did not originate from an *in situ* position in the verb phrase.

(82) isukuli, Omumia a-lí-¹{í-[sáambul-a]}
 9.school, Omumia 1SM-INCPT-9OM-de.roof-FV
 ‘The school, Omumia will de-roof it’ [Indefinite Future; P2a]
 Underlyingly: /Omumia a-li-í-saambul-a, isukuli/

These results are consistent with the analysis from §3.3 that OM-doubled objects in neutral discourse contexts are derived via base-generation at the edges. Because MHD fails to apply in both (81) and (82), that is further evidence that the verb is phrase-final. This, in turn, is additional evidence that the neutral discourse OM is a pronoun, as this is further evidence that the argument position is occupied by something that *isn’t* an object DP; namely, the OM itself.

However, interestingly, and in line with the conjectures made in this paper as well as with the analysis of Bukusu, Sikuku & Diercks (2021), I find that postverbal doubled objects in emphatic contexts *do* trigger MHD, indicative that they are in the verb phrase. The following example was prompted to elicit verum focus. Recall that verum is described commonly as focus on the truth of a proposition (Sikuku & Diercks (2021), Gutzmann et al. (2020)); it can be prompted by doubting the truth of a proposition.³²

(83) (Ta), Omumia a-li-kha-{kú-[lekhuul-e]} omu-koye
 (NEG), Omumia 1SM-FUT-INCPT-3OM-release-FV 3-rope
 ‘(No), Omumia WILL release the rope’ [Remote Future; P1d]
 Underlyingly: /Omumia a-li-khá-kú-lekhuul-e omukoye/

(84) (Ta), Omumia a-lí-¹{í-[saambul-a]} isukuli
 Omumia 1SM-INCPT-9.OM-de.roof-FV, 9.school
 ‘(No), Omumia WILL de-roof the school’ [Indefinite Future; P2a]
 Underlyingly: /Omumia a-li-í-saambul-a isukuli/

³¹In this example, the MH doesn’t spread to the second syllable of the stem. This is because Melodic Doubling only spreads the MH from the first mora to the second mora, which are both in the same syllable because the first syllable is long. Also note that there could be some tonal idiosyncracies at play given the fact that the object marker here is only a single vowel; therefore, some effects of vowel hiatus etc. between the OM and the preceding *-li-* prefix could be at play. This can be ignored as it doesn’t effect the realization of the MH, however.

³²Keep in mind that both exhaustive focus and mirative focus are also indicative of emphatic contexts that license OM-doubling that appears agreement-like behavior (i.e., allows doubling more freely than in neutral discourse contexts). See §2.5.

Note how (83) contrasts with their neutral-discourse counterparts in (80) and (81). Further, attempting to left-dislocate an OM-doubled object in an emphatic context is infelicitous. Even with an ‘afterthought’ reading, which licenses OM-doubling in neutral discourse contexts, you do not get the emphatic reading. This, along with the fact that MHD is triggered in emphatic doubling constructions, implies a link/requirement for a postverbal, *in situ* object DP and an OM to yield the correct emphatic interpretation.

- (85) #isukuli(?,) Omumia a-li-i-sambuul-a
 9.school Omumia 1SM-FUT-9OM-de.roof
 Int.: # ‘The school, Omumia WILL de-roof’

Continuing, for completeness I also find that MHD is not triggered in emphatic contexts where you would not expect (recall that there only certain verb tone patterns where MHD is applicable). For example, take the following Remote Past example (Pattern 1b), where the MH is still realized despite any postverbal material. Note that the MH is still just the high tone on the first mora of the verb stem; the presence of the OM sees the MH copy & spread rightward. There are also other tone rules specific to this pattern that don’t require more exposition.

- (86) a. j-á-[lékhuul-a] bwaangu
 1.SM-PRET-release-FV quickly
 ‘She/he released quickly’ [Remote Past; P1b]
 Underlyingly: /a-á-lekhuul-a bwaangu/
 b. j-á-{kú¹-[lékhuul-e]} omu-koye
 1.SM-PRET-3OM-release-FV 3-rope
 ‘(Verum) she/he DID release the rope’
 Underlyingly: /a-á-kú-lekhuul-e omu-koye/

The fact that MHD fails to apply as expected here rules out any unknown tonal phenomena to OM-doubled constructions in emphatic contexts.

I further test that verbs behave phrase-medially in OM-doubling constructions in emphatic contexts through looking at relevant object-marking microparameters from Marten & Kula (2012) (first introduced in §2). First, I show that MHD applies consistently in emphatic OM-doubling constructions regardless of animacy. The following OM-doubling constructions are all verum-focused.

- (87) a. Omumia a-li-khá-{¹kú-[lékhúúl-e]}
 Omumia 1.SM-FUT-INCPT-3OM-release-FV
 ‘Omumia will release it’ [Remote Future; P1d] **Verb is phrase-final, no MHD**
 b. Non-animate:
 Omumia a-li-khá-{¹kú-[lekhuul-e]} omu-koye
 Omumia 1.SM-FUT-INCPT-3OM-release-FV 3-rope
 ‘Omumia WILL release the rope’ [Remote Future; P1d] **Verb is phrase-medial, MHD applies**

- c. Non-human animate:
 Omumia a-li-khá-{'í-[lékhúúl-e]} ing-ombe
 Omumia 1.SM-FUT-INCPT-9OM-release-FV 9-cow
 ‘Omumia WILL release the cow’ [Remote Future; P1d] **Verb is phrase-medial, MHD applies**
- d. Human animate:
 Omumia a-li-khá-{'mú-[lékhúúl-e]} om-wami
 Omumia 1.SM-FUT-INCPT-1OM-release-FV 1-boss
 ‘Omumia WILL release the boss’ [Remote Future; P1d] **Verb is phrase-medial, MHD applies**

I also find that these results hold in various ditransitive constructions with emphatic interpretations. The following example shows that MHD doesn’t apply when OMs replace both object DPs, but applies both without the presence of any OMs and when doubling the IO (which canonically appears immediately after the verb) MHD applies.³³

- (88) a. Omumia a-li-kha-bá-í-wérésj-a
 Omumia 1SM-FUT-INCPT-2OM-9OM-give-FV 2-children 9-cow
 ‘Omumia gave them (the children) it (the cow).’ **No objects, verb phrase-final; No MHD**
 Underlyingly: /a-li-khá-bá-weresj-a/
- b. Omumia a-li-khá-weresj-a aba-ana ing-ombe
 Omumia 1SM-FUT-INCPT-give-FV 2-children 9-cow
 ‘Omumia gave the children the cow.’ **No OMs, verb phrase-medial; MHD applies**
 Underlyingly: /a-li-khá-weresj-a aba-ana ing-ombe/
- c. Omumia a-li-khá-ba-weresj-a aba-ana ing-ombe
 Omumia 1SM-FUT-INCPT-2OM-give-FV 2-children 9-cow
- OM double IO, verb phrase-medial; MHD applies**
 ? ‘Omumia gave them the children the cow.’
 Underlyingly: /a-li-khá-bá-weresj-a aba-ana ing-ombe/

Further, it is possible to test if an OM-doubled DO triggers MHD. Like in English, it is possible to change a ditransitive from its canonical IO → DO word order by changing the form from Agent-Goal-Theme to Agent-Theme-Possessee, yielding a DO → IO order; e.g., ‘John gave the children the cow’ vs ‘John gave the cow to the children.’ The following shows this DO → IO word order triggering MHD regardless of OM-doubling, further signifying that both OM-doubled IOs and DOs are *in situ* in emphatic contexts.³⁴

³³These ditransitive constructions are glossed literally and marked as ‘?’ here just because the exact nature of the emphatic effects at play is still a bit of a mystery; however, from what I have seen so far, contexts that place verum/mirative/exhaustive focus on either IO/DO license OM-doubling of said object. See §2.7 for more discussion.

³⁴The order of the OMs on the verb must always be OM_{IO} → OM_{DO}, however.

- (89) a. Omumia a-li-kha-weresj-a ing-ombe kho-baana
 Omumia 1SM-FUT-INCPT-give-FV 9-cow 2.POSS-children
 ‘Omumia gave the cow to the children.’ **No OMs, MHD applies**
 Underlyingly: /Omumia a-li-khá-weresj-a ing-ombe kho-baana
- b. Omumia a-li-khá-i-weresj-a ing-ombe kho-baana
 Omumia 1SM-FUT-INCPT-9OM-give-FV 9-cow 2.POSS-children
 ? ‘Omumia gave it the cow to the children.’ **OM-double DO, MHD still applies**
 Underlyingly: /Omumia a-li-khá-í-weresj-a ing-ombe kho-baana/

Further, while the emphatic interpretations of OM-doubling *both* objects in a ditransitive simultaneously is even more nebulous (but seemingly possible), I show that either order of objects in a ‘dual-doubling’ construction also triggers MHD.

- (90) a. Omumia a-li-kha-bá-¹í-weresj-a aba-ana ing-ombe
 Omumia 1SM-FUT-INCPT-2OM-9OM-give-FV 2-children 9-cow
 ? ‘Omumia gave them the children it the cow.’ **MHD applies**
 Underlyingly: /Omumia a-li-khá-bá-í-weresj-a abaana ingombe/
- b. Omumia a-li-kha-bá-¹í-weresj-a ing-ombo kho-baana
 Omumia 1SM-FUT-INCPT-2OM-9OM-give-FV 9-cow 2.POSS-children
 ? ‘Omumia gave it the cow to them the children.’

This MHD evidence all bolsters the conclusion that OM-doubling an *in situ* object DP is only possible in the emphatic interpretations I’ve discussed, which is therefore most readily analyzed as agreement. Meanwhile, the lack of MHD in neutral discourse contexts also upholds the analysis that OMs are pronouns occupying argument position in neutral discourse contexts, and that the ability to OM-double in such contexts is only when objects are base-generated at a periphery as an ‘afterthought’, as I laid out in §3.3.

Now, as for these ‘emphatic’ OMs, the most thorough analysis I can postulate is that doubling is derived through simple φ -feature agreement from some functional head above vP with the object that bears mirative/verum/exhaustive focus. However, as Sikuku & Diercks (2021) argue for Bukusu, a ‘full’ analysis needs extensive support from theories of semantics; given these emphatic interpretations are clearly at play in Wanga as well, a semantics-focused study of Wanga object marking is likely necessary for a more thorough analysis.

6 Conclusion and Discussion

Object marking is clearly a fruitful puzzle that is relevant to various linguistic systems, be it semantics, pragmatics, [morpho]syntax, or prosody. Here, I have documented object marking patterns in Wanga, a relatively understudied Luyia language of Western Kenya, and analyzed them using both syntactic diagnostics and a new prosodic diagnostic find that Wanga OMs are pronouns in neutral discourse contexts but are agreement markers in

certain emphatic contexts. I further argue that one of the contributions of this paper is it uses another system, prosody, to validate an analysis for another language, Bukusu, which shares many empirical similarities with Wanga, despite the Bukusu analysis being derived through purely syntactic diagnostic and, more prominently, semantic theory.

This manifests most interestingly when constructions in Wanga in which both objects are OM-doubled see the triggering of the phrase-medial MHD rule, indicating that the postverbal objects are *in situ*, favoring an agreement analysis of the OM; despite Bukusu not having this ‘double-doubling’ ability, the fact that Wanga and Bukusu are otherwise so empirically similar regarding OMing means that we can potentially apply this argument to Bukusu. While not a conclusion that one could come to lightly, in perhaps some way, it is interesting to see prosody upholding theories of semantics.

There are of course some shortcomings to this paper. The prosodic diagnostic was motivated well by our current understanding of Wanga’s tonology (Green et al., Forthcoming), and the results were very consistent. However, MHD would occasionally fail to apply where it was expected to, e.g. in normal, non-OMed transitives with a postverbal object. With that said, I don’t believe this had an effect on consistency. That is to say, post-verbal, vP-internal constituents were observed to trigger MHD the vast majority of the time while vP-external dislocated objects in discourse-neutral contexts never triggered MHD.

6.1 Areas of future Research

As I mentioned in §5.3.2, an object-marking study that focuses on semantics is likely necessary to fully understand and analyze the nature of the OM in emphatic contexts. Wanga could especially benefit from a semantically-inclined study of ‘double-doubling’ constructions where both objects in a ditransitive are OM-doubled: From what I have seen, it is seemingly rare to have a language that allows multiple OMs and OM-doubling, and there has perhaps never been any documentation of a language that only allows ‘double-doubling’ in certain pragmatic environments.

Further, I also did not explore OM-doubling in extracted-object constructions (e.g. relative clause constructions) due to the somewhat marginal acceptance of such constructions, and their confusing semantic nature making it difficult to elicit them naturally: This could certainly have negative effects on looking at the prosody of such constructions.

Finally, to confirm the presence/absence of MHD, a larger-scale acoustic study could be of some benefit.

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