

# Exceptional Properties of the Reflexive in Bantu Languages

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## ABSTRACT

This article provides an overview of the numerous exceptional morphosyntactic and phonological properties of the reflexive compared to other object prefixes in Bantu languages. These properties are considered in light of Marlo's (2014, 2015, to appear) micro-typological studies of Bantu object marking, and the proposal that the 1sg object prefix and the reflexive may be in a position closer to the verb stem than other object prefixes.

*Keywords:* Bantu, derivation, object marking, reflexive, tone.

## 1. INTRODUCTION

In many Bantu languages, object prefixes (OPs), which are marked for person-number and noun class, immediately precede the verb stem. The reflexive prefix, which indexes the subject but does not show overt morphosyntactic agreement with person-number or noun class features of the subject, also immediately precedes the stem. Some researchers have considered the reflexive to be one of the OPs (e.g. Harjula 2004: 127, Mchombo 1993, Meeussen 1967), but more recently others have not (e.g. Buell 2005, Muriungi 2008, Sikuku 2012).

The main goal of this paper is to bring together for the first time the many exceptional properties of the reflexive from a wide range of Bantu languages. As detailed in recent research on Bantu morphosyntactic variation (Marlo 2014, 2015, to appear), the reflexive and the 1sg OP commonly differ from other OPs in a number of respects. These differences include (i) the phonological shape of the reflexive compared to other OPs, (ii) the position of the reflexive with respect to other OPs, (iii) the (in)ability of the reflexive to co-occur with other OPs, and (iv) patterns of final vowel allomorphy in the imperative.

In light of these differences compared to other OPs, Marlo (2014, to appear) builds on prior analyses by Buell (2005), Muriungi (2008), and Sikuku (2012) that the reflexive and the 1sg OP occupy a morphosyntactic position closer to the verb stem (syntactically lower) than other OPs. The present paper reviews the previously identified exceptional properties of the reflexive and extends the database to include several other phenomena, including the ability of the reflexive to lexicalize with verb roots, semi-derivational properties of the reflexive, the ability of the reflexive to participate in nominalizations, and tonal properties of

the reflexive. Many of these additional properties are consistent with the analysis of the reflexive as lower than other OPs.

## 2. PHONOLOGICAL SHAPE OF THE REFLEXIVE

The reflexive, reconstructed to Proto-Bantu as *\*i-*, commonly diverges from other OPs in its phonological shape. In many languages, the reflexive is just a single vowel, while most other OPs have a CV- shape (Meeussen 1967: 110, Polak 1983: 297). Another OP with a commonly divergent shape is the 1sg OP, reconstructed to Proto-Bantu as *\*n-*, a single nasal segment or feature. The 1sg nasal OP commonly interacts phonologically with a following root-initial consonant (Hyman 2003, Odden to appear); these interactions may obscure the boundary between the 1sg OP and the verb stem (see Marlo 2014a). Unlike the 1sg OP, reflexive *\*i-* is syllabified distinctly from a stem-initial consonant, and thus does not interact with the verb stem in the same way as the 1sg OP. However, as Polak (1983: 297) observes, a reflexivized verb stem may be phonologically indistinguishable from a V-initial stem, and in some languages there is evidence that *i*-initial verbs have been reanalyzed as reflexive-initial (Marlo 2014b). Section 6 discusses cases where the reflexive appear to have been lexicalized as part of the verb stem.

## 3. POSITION OF THE REFLEXIVE

Some Bantu languages allow more than one OP (see Marlo 2015 for a typological survey of the number of object markers allowed in Bantu languages). In those that do, the reflexive and the 1sg OP are often (but not always)<sup>1</sup> required to surface after other OPs, immediately preceding the verb stem (Polak 1983: 297). Meeussen (1967: 110) reconstructs the Proto-Bantu reflexive as the innermost OP. This inner position of the reflexive following other OPs has been used as evidence that the reflexive is not a member of the OPs (Buell 2005, Muriungi 2008, Sikuku 2012).

As Marlo (2014a: 92–93) documents, there is variation across Bantu languages in the relative order of the two innermost OPs: the 1sg OP and the reflexive. As shown in (1), the reflexive follows the 1sg OP in Bukusu (Justine Sikuku, p.c.).<sup>2</sup> Other languages with this order include Kerewe (David Odden,

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<sup>1</sup> In Sambia (Riedel 2009: 140), the OP reflecting the primary object is ordered nearest the stem, and a 1sg OP is not treated differently from other OPs in this respect, so, e.g. in *a-za-ni-ku[ony-esh-a]* ‘s/he pointed me out to you’, the 2sg OP *ku-* is nearest the stem.

<sup>2</sup> A list of languages cited in this paper are provided in the appendix, along with their Guthrie classification from Maho (2009) and ISO code.

p.c.), Nyala West (Ebarb et al. in prep), Wang'a (Marlo field notes), and Rundi (Juvenal Ndayiragije, p.c.).

- (1) 1sg > reflexive *Bukusu*  
 wekesa a-a-**nj-i**[siim-isy-a]  
 Wekesa 1-PST-**1SG-REFL**[like-CAUS-FV]  
 ‘Wekesa made me like myself’

However, as shown in (2), the reflexive precedes the 1sg OP in other languages such as Tharaka (Muriungi 2008: 122), Kikuyu (Barlow 1951: 122), and Tswana (Cole 1955: 234, cf. Chebanne 1992).

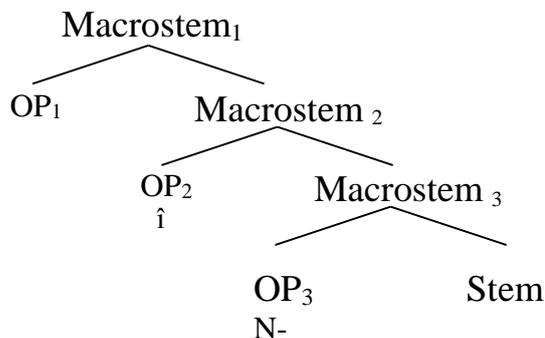
- (2) Reflexive > 1sg *Tharaka*  
 a-gû-**î-n**[kum-îr-i-a]  
 1-TNS-**REFL-1SG**[be.proud-APPL-CAUS-FV]  
 ‘s/he has been proud to the detriment of me’

As shown in (3), a third possibility is for both orders of 1sg and reflexive to be acceptable, as they are in Tiriki (Marlo field notes).

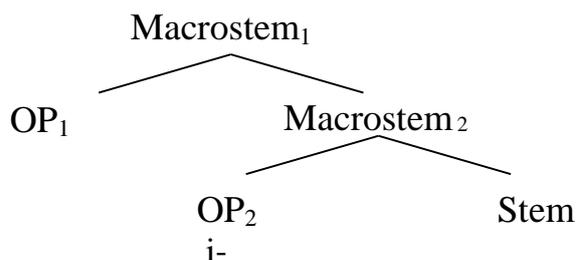
- (3) Reflexive >/< 1sg *Tiriki*  
 a. a-l-**îi-m**[bek-er-a]                      b. a-laá-**nz-i**[vek-er-a]  
 1-FUT-**REFL-1SG**[shave- APPL-FV]        1-FUT-**1SG-REFL**[shave-APPL-FV]  
 ‘he will shave himself for me’            ‘he will shave himself for me’

Following Baker’s (1985) Mirror Principle, Muriungi (2008: 121–122) takes the reflexive > 1sg order in Tharaka as evidence that the 1sg OP occupies a lower structural position than the reflexive, which itself is lower than other OPs. I adapt Muriungi’s analysis of Tharaka in (4) and extend it to Bukusu in (5). In Bukusu, the reflexive is the structurally lowest OP, and 1sg *N-* is not assigned a special position compared to other OPs.

- (4) Reflexive *î-*, 1sg *N-*, and other OPs in Tharaka



(5) Reflexive below other OPs in Bukusu



One explanation has been given for the inner order of the reflexive and the 1sg OP is that reflexive and 1sg are highest on person-number and animacy-topicality hierarchies, which influence the order of OPs in some languages (see Marlo 2014 and references therein). There are also languages such as Ruri (Massamba 1982: 52) where grammatical relations or thematic roles determine the order of the OPs, and yet special ordering requirements on the 1sg OP override the general principles: even though the primary object (theme) normally follows the secondary object (beneficiary), the 1sg OP must always appear closest to the stem.

Not all Bantu languages index objects in the pre-stem position (Beaudoin-Lietz et al. 2004, Marlo 2015). In a few languages, including Duala, Myene, and Yanzi (Polak 1986: 374), the reflexive is the only object marker that precedes the stem; other OMs follow the verb as enclitics or full pronouns.

#### 4. CO-OCCURRENCE WITH OPS

Marlo (2014) argues that one consequence of the inner position of the reflexive and 1sg OP is the special ability of these markers to co-occur with one more OP than is usually allowed (Polak 1986: 403). In Nyaturu, for example, non-reflexive, non-1sg OPs may not co-occur with a second OP (Hualde 1989: 183–185, Olson 1964, Polak 1986, Schlindwein 1986). However, a second OP may co-occur with 1sg *N-* (6b) and with reflexive *i-* (6c).

(6) Combinations of two OPs in Nyaturu

- |  |  |
|--|--|
| <p>a. *n-a-ɔ-va[rɔy-ɪ-aa]<br/>1SG-PST-14-2[cook-APPL-FV]<br/>‘I cooked it (cl. 14) for them’</p> | <p>*ɔ-kì-mù[pá-à]<br/>INF-7-1[give-FV]<br/>‘to give it (cl. 7) to him’</p> |
| <p>b. w-a-ɔ-n[dɔy-ɪ-aa]<br/>1-PST-14-1SG[cook-APPL-FV]<br/>‘he cooked it (cl. 14) for me’</p>    | <p>ɔ-kì-m[pá-à]<br/>INF-7-1SG[give-FV]<br/>‘to give it (cl. 7) to me’</p>  |

- c. à-mw-ì[ràfiìy-à]  
 1-1-REFL[swear-FV]  
 ‘he has sworn himself to him’

Marlo (2014a) identifies a number of other languages with parallel properties: Fuliiru (Van Otterloo 2011: 40–41), Kamba (Angelina Kioko, p.c.), Marachi (Marlo 2007), Nyala West (Marlo 2007), Shi (Polak-Bynon 1975: 210–212), and Wanga (Marlo field notes)<sup>3</sup>. In some languages, only the 1sg OP or the reflexive may co-occur with an additional OP. For example, 1sg *n-* can co-occur with a second OP in Khayo, but reflexive *i-* cannot (Marlo 2009: 92). Similarly, in Yaka two OPs are allowed only when one is 1sg (Kidima 1987: 186).

In Bukusu, which is closely related to Khayo, reflexive *i-* can co-occur with a second OP, but 1sg *n-* cannot (Diercks & Sikuku 2013, Sikuku 2012, Aggrey Wasike, p.c.). This is shown by the examples in (7). Other languages that allow two OPs only when one is the reflexive are Bakweri (Hawkinson 1986: 151–152), Havu (Polak 1986: 404), Kikuyu (Barlow 1951: 266), Lozi (Polak 1986: 404), and Tharaka (Muriungi 2008: 90, 121–122). Similarly, in Rundi (Meeussen 1959: 102) and Ruwund (Nash 1992: 571), three OPs are possible when one is the reflexive *i-*; normally at most two OPs can co-occur in those languages.

(7) Two OPs with reflexive *i-* in Bukusu

- a. \*wamalwa     a-a-mu-ba[siim-isy-a]  
 Wamalwa     1-PST-1-2[cook-CAUS-FV]  
 ‘Wamalwa made him like them’
- b. wekesa             a-a-m[b-a]             sii-tabu  
 Wekesa             1-PST-1SG[give-FV]     7-book  
 ‘Wekesa gave me the book’
- \*wekesa             a-a-si-m[b-a]  
 Wekesa             1-PST-7-1SG[give-FV]  
 ‘Wekesa gave me it (cl. 7)’
- c. wekesa             a-a-mu-i[siim-isy-a]  
 Wekesa             1-PST-1-REFL[like-CAUS-FV]  
 ‘Wekesa made him like himself’

As discussed in Marlo (2014a), these patterns support the analysis of the reflexive and 1sg OP as being in a lower morphosyntactic position than other OPs. The core

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<sup>3</sup> More recent field work on Wanga suggests that two OPs are possible in the language in a wider range of contexts than previously thought.

idea behind the proposed analysis is that the reflexive and 1sg morpheme do not vie for the same position as the other OPs, and thus do not preclude another OP.

A further property of the reflexive in Bukusu (Sikuku 2012) and Ruwund (Nash 1992: 571), shown in (8), is that there may be multiple instances of the reflexive, each representing a distinct thematic/grammatical role.

(8) Two instances of the reflexive

a. xalayi      a-a-i-i[siim-isy-a]      *Bukusu*  
Khalayi      1-PST-REFL-REFL[like-CAUS-FV]  
‘Khalayi made herself like herself’

b. kw-ii-yii[kis-ish]      *Ruwund*  
INF-REFL-REFL[dirty-CAUS]  
‘to cause oneself to dirty oneself’

An underexplored issue is whether the ability of the reflexive to co-occur with a second instance of the reflexive distinguishes it from other OPs. There are very few examples in the literature with multiple identical OPs. An example from Kuria (Mary Paster & Ricardo Ranero, p.c.) with two cl. 9 OPs is given in (9). One difference between this example and the forms with multiple reflexives in (8) is that the two OPs index different entities. If they referred to the same entity then normally one of the objects would be expected to be expressed with a reflexive.

(9) Two cl. 9 OPs in Kuria

n-aa-chí-mó-gé-gé-bá[háá-yééy-e]      *Kuria*  
1SG-PST-10-1-9-9-2[give-APPL.APPL.CAUS-PFV]  
‘I made them (cl. 2) give it (cl. 10) to it (cl. 9) using it (cl. 9) on behalf of him’

While the reflexive and 1sg OP are commonly more permissive than other OPs in their ability to co-occur with another OP, in some languages the reflexive is exceptionally more restrictive than other OPs. For example, two OPs are normally allowed in Kela (Forges 1977: 87) and Sambia (Riedel 2009: 87–88), but the reflexive may not co-occur with another OP in these languages.

## 5. ALLOMORPHY OF THE FINAL VOWEL IN THE IMPERATIVE

Another morphosyntactic phenomenon that supports the analysis of the reflexive and (especially) the 1sg OP as lower than other OPs is a common pattern of allomorphy of the final vowel in the imperative, whereby bare verbs in the imperative end in the final vowel *-a*, verbs with most OPs end with the final vowel *-e*, but verbs with the 1sg OP end with *-a*. This pattern, which is reconstructed to Proto-Bantu (Meeussen 1962: 74, 1967: 112), is shown in (10) for Rundi

(Ndayiragije 2003: 183–185). Many other languages have this exact pattern; see Marlo (2014) for a list.

(10) Allomorphy of the final vowel in Rundi

[vun-a]	amagúfa	‘break the bone!’
tu[vun-e]		‘break us!’
i[vun-e]		‘break yourself!’
m[peb-a]	(/N[heb-a]/)	‘abandon me!’

A rare but important variant on the usual pattern of final vowel allomorphy in the imperative is found in Bukusu. As shown in (11), it is reflexive *i-* in Bukusu which exceptionally triggers the final vowel *-a* (Maurice Sifuna, p.c., Justine Sikuku, p.c., Sikuku 2012). Other OPs, including the 1sg OP, trigger the final vowel *-e*. Recall from (7) that the reflexive also exceptionally licenses a second OP in Bukusu.

(11) Allomorphy of the final vowel in Bukusu

a.	[bek-a]	‘shave!’
b.	mu[bek-e]	‘shave him!’
c.	m[bek-e]	‘shave me!’
d.	i[bek-a]	‘shave yourself!’
e.	*i[bek-e]	‘shave yourself!’

The essence of Marlo’s (2014) analysis of these patterns, following Muriungi’s (2008) account of final vowel allomorphy in Tharaka, is that the final vowel *-a* is selected by a default spell-out rule, while final *-e* is spelled out when there is material above a specific point in the clausal hierarchy. In Bukusu, that relevant point in the syntactic tree is the constituent that includes the reflexive and the verb stem, while in most other languages, it is the constituent that includes the 1sg OP and the verb stem.

## 6. LEXICALIZATION

Polak (1983: 297) describes the reflexive as “intimately tied to” the verb root, and in some cases inseparable from the verb root. This characterization—which is consistent with the proposal that the reflexive is structurally low compared to other OPs—is supported by the fact that the reflexive is commonly lexicalized with the verb root in Bantu languages. In Nyaturu, for example, the reflexive imparts an idiosyncratic, specialized meaning to a number of verbs in (12a), and several other verbs in (12b) have an obligatory reflexive prefix but no corresponding stems lacking the reflexive (Olson 1964: 173).

(12) Idiosyncratic reflexives and reflexive-only verbs in Nyaturu

a.	i[many-I-a]	‘be accustomed to’	[many-a]	‘know’
	i[rúm-a]	‘practice adultery’	[rum-a]	‘seek’
	i[húk-a]	‘press forward’	[huk-a]	‘jerk’
	i[tóm-I-a]	‘serve’	[tóm-a]	‘send’
b.	i[héng-a]	‘look at, inspect’	i[hém-a]	‘draw in the stomach’
	i[sím-I-a]	‘be in doubt’	i[ney-a]	‘avoid’
	i[kót-a]	‘be satiated’	i[dzó-a]	‘be full’

Cole (1955: 233) provides similar data from Tswana, and Ashton et al. (1954: 132–133) show a handful of reflexive verbs in Ganda with no “simple” form. The phenomenon whereby certain verbs have only a reflexive form is common, found in other Bantu languages, including Mongo (Hulstaert 1965: 327), Nilamba, Shi, and Sukuma, as is the phenomenon where the reflexive form of verbs has an idiosyncratic meaning (Polak 1983, 1986). Polak (1983) notes that these widespread patterns of reflexive lexicalization may have already existed in Proto-Bantu.

Such forms suggest that the reflexive prefix may form a single unit with the verb root that has synchronically lost the internal prefix+root structure. It may be possible to determine whether the stem boundary is maintained in such cases if a language has different phonological effects depending on whether segments combine with a following prefix vowel vs. a root vowel, though I am unaware of specific diagnostics concerning the languages above. See Marlo (to appear) for discussion of reduplication in Kuria, where it is shown that *i*-initial have been reanalyzed as reflexive-initial, resulting in differences between *i*-initial verb roots and other V-initial roots in their behavior under reduplication.

The lexicalized reflexive examples from Zulu in (13) are notable because the reflexive has a CV- shape in Zulu, whereas it has a V- shape in many other languages (Polak 1983: 297, cf. Buell 2005: 29–30).

(13) Lexicalization of reflexive *zi-* in Zulu

uku[dl-a]	‘to eat’	uku-zi[dl-a]	‘to be proud’
uku[bus-a]	‘to govern’	uku-zi[bus-a]	‘to be comfortable’

While reflexive lexicalization is common and widespread, it is rarely reported that non-reflexive CV- OPs can be lexicalized with a (C-initial) verb stem, as in the following examples from Rwanda (Polak 1986: 404–405).

(14) Lexicalization of non-reflexive OPs in Rwanda

rù-bón-	‘be slandered’	<	rù- ‘cl. 11’	bón-	‘see’
kà-bàmb-	‘become mad’	<	kà- ‘cl. 12’	bàmb-	‘fix with a peg’

It is not known if there is phonological evidence that would tell whether the historical reflexive in (13) and historical OPs in (14) act synchronically as though they are part of the stem.

## 7. ‘SEMI-DERIVATIONAL’ PROPERTIES OF THE REFLEXIVE AND CO-OCCURRENCE WITH OTHER SUFFIXES

Another way in which the reflexive commonly differs from other OPs concerns its ‘semi-derivational’ status (Polak 1983). The reflexive frequently has a relationship with the reciprocal. In a number of languages, including Bangubangu, Bolia, Chokwe, Ganda (Mary Paster, p.c.), Hehe, Holu, Kaonde, Lunda (Kawasha 2002: 52), some dialects of Mongo (Hulstaert 1965: 327), Nyaturu, Sukuma, and Sumbwa, the reflexive can impart a reciprocal meaning (Polak 1983: 297). Some languages, including Ewondo and Tsogo, have the reverse pattern in which the reciprocal suffix *-an* is used to express a reflexive meaning (Polak 1983: 297). In some cases, there are alternations between the reflexive and the reciprocal suffix *-an*. In Sanga, the reflexive and reciprocal morphemes are reportedly in free variation to express a reciprocal meaning, e.g., [təd-an-] ~ i[təd-] ‘watch each other’. In Hemba, expressing a reciprocal meaning requires the simultaneous presence of reflexive *i-*, reciprocal *-en*, and causative *-y*: *ku-i[anguz-en-y-a]* ‘to help each other’, cf. *ku[angul-a]* ‘to help’.

The fact that the reflexive can co-occur with the reciprocal is sometimes contrasted with the patterns of other OPs, which cannot co-occur with this suffix. This is shown in (15) for Rundi (Ndayiragije 2003: 190–191).

### (15) Co-occurrence of reflexive and reciprocal in Rundi

- a. abo bagoré ba-a[tamb-an-ye]  
these women 2-TNS[dance-REC-FV]  
‘these women danced with each other’

Bukurú a-zoo[sohok-an-a] na Butoyí  
Bukuru 1-TNS[go.out-REC-FV] with Butoyi  
‘Bukuru will go out with Butoyi’

- b. abo bagoré ba-a-i[tamb-an-ye]  
these women 2-TNS-REFL[dance-REC-FV]  
‘these women danced alone’

Bukurú a-zoo-i[sohok-an-a]  
Bukuru 1-TNS-REFL[go.out-REC-FV]  
‘Bukuru will go out alone’

- c. \*abo bagoré ba-a-mu/ku/tu/ba[tamb-an-ye]  
‘these women 2-TNS-1/2SG/1PL/2[dance-REC-FV]  
‘these women danced with him/you/us/them’
- \*Bukurú a-zoo-mu/ku/tu/ba[sohok-an-a]  
Bukuru 1-TNS-1/2SG/1PL/2[go.out-rec-FV]  
‘these women danced with him/you/us/them’

The example in (16) shows that it is also possible to combine the reflexive with the reciprocal in Bukusu (Sikuku 2012).

- (16) Co-occurrence of the reflexive and reciprocal in Bukusu
- babaana ba-a-e[siim-an-isy-a]  
children 2-PST-REFL[like-REC-CAUS-FV]  
‘the children made themselves like each other’

Ndayiragije’s (2003) analysis of the Rundi data relates the unique ability of the reflexive to cooccur with the reciprocal to the fact that OPs mark noun class and person-number differences, while the reflexive does not vary along these lines. Sikuku (2012) analyzes this difference in terms of the lower syntactic position of the reflexive compared to other OPs, associated with a voice projection.

The reflexive also co-occurs with other suffixes, yielding idiosyncratic meanings that vary from language to language. For example, In Kerewe, reflexive *e-* combines with the causative to create an idiosyncratic ‘pretend to’ reading (David Odden, p.c.), as shown in (17).

- (17) Reflexive *e-* + causative = ‘pretend to’ in Kerewe
- |   |   |
|---|---|
| ba-k-ée[fúúndikiz-y-a]<br>2-PST-REFL[cover-CAUS-FV] | tu-k-ée[kúkuumb-y-a]<br>1PL-PST-REFL[cover-CAUS-FV] |
| ‘they pretended to cover’                           | ‘we pretended to sweep’                             |

Similarly, the reflexive combines with the applicative in Shi to give a specialized meaning, e.g., *óo-ku-ci-i[geend-er-a]* ‘to go away without care for others (even if they are in need)’, cf. [*géend-*] ‘go’ (Polak-Bynon 1975). Another parallel pattern is found in Saamia, as shown in the examples in (18), where reflexive *e-* co-occurs with the causative suffix *-y* especially under reduplication to yield a meaning ‘for no reason’ (Botne et al. 2006: 81–83, Grimes 2002).

- (18) Reflexive *e-* + causative *-y* + reduplication = ‘for no reason’ in Saamia
- |    |                     |   |
|----|---------------------|---|
| a. | [imb-a]             | ‘sing’                                      |
|    | [imb-a-imb-a]       | ‘sing the same song over and over’          |
|    | e[imb-a][imb-y-a]   | ‘sing different songs over and over f.n.r.’ |
|    | e[imb-y-a][imb-y-a] | ‘sing the same song over and over f.n.r.’   |
| b. | [lom-a][lom-a]      | ‘talk’                                      |
|    | e[lom-a][lom-y-a]   | ‘talk in a rambling manner f.n.r.’          |
|    | e[lom-y-a][lom-y-a] | ‘talk continuously f.n.r.’                  |

Other non-reduplicated examples from Saamia in (19) show the co-occurrence of the reflexive and the causative without a consistent semantic difference.

- (19) Idiosyncratic semantics of reflexive *e-* + causative *-y* in Saamia
- |              |                            |           |                   |
|--------------|----------------------------|-----------|-------------------|
| e[boos-a]    | ‘mutter to oneself’        | [bool-a]  | ‘say, tell’       |
| e[dubul-y-a] | ‘swim’                     | [dubul-a] | ‘stir up water’   |
| e[ibul-y-a]  | ‘resemble one’s offspring’ | [ibul-a]  | ‘give birth to’   |
| e[tʃex-y-a]  | ‘giggle’                   | [tʃex-a]  | ‘laugh’           |
| e[kalam-y-a] | ‘put o.s. on one’s back’   | [kalam-a] | ‘lie on the back’ |
| e[lis-a]     | ‘complain’                 | [lir-a]   | ‘cry’             |

Finally, we find examples in Saamia where the reflexive is associated with ‘middle voice’ (20a) and ‘anti-causative’ (20b) functions (Botne et al. 2006: 40–43).

- (20) ‘Middle voice’ and ‘anti-causative’ forms of the reflexive in Saamia
- |    |              |                |               |                 |
|----|--------------|----------------|---------------|-----------------|
| a. | e[deex-a]    | ‘cook (intr.)’ | [deex-a]      | ‘cook (tr.)’    |
|    | e[ker-a]     | ‘fit (intr.)’  | [ker-a]       | ‘measure’       |
| b. | e[kod-a]     | ‘be bent’      | [kod-y-a]     | ‘bend’          |
|    | e[siindux-a] | ‘be startled’  | [siindus-a]   | ‘measure’       |
|    | e[xuyuung-a] | ‘be round’     | [xuyuung-y-a] | ‘make round’    |
|    | e[alis-a]    | ‘lie down’     | [alis-a]      | ‘make lie down’ |

Other object prefixes are not known to have similar derivational properties.

## 8. NOMINALIZATION OF THE REFLEXIVE

An additional asymmetry between the reflexive and other OPs concerns the ability of the reflexive to be nominalized in some languages, while other OPs generally cannot be nominalized. In the Rundi forms in (21), the reflexive can appear in a cl. 9 noun derived from a verb, but the cl. 2 OP cannot (Ndayiragije 2003: 175–178). This restriction generally does not hold in cl. 15 infinitives, which can normally host any type of OP.

(21) Infinitival and cl. 9 nominalizations in Rundi

- |    |                                   |                            |                                   |
|----|-----------------------------------|----------------------------|-----------------------------------|
| a. | ku[ <i>fat-a</i> ]                | abâna                      |                                   |
|    | 15[ <i>take.care.of-FV</i> ]      |                            |                                   |
|    |                                   | ‘to take care of children’ |                                   |
| b. | ku-î[ <i>fat-a</i> ]              |                            | in-î[ <i>fat-o</i> ]              |
|    | 15-REFL[ <i>take.care.of-FV</i> ] |                            | 9-REFL[ <i>take.care.of-NOM</i> ] |
|    | ‘to take care of oneself’         |                            | ‘self-care’                       |
| c. | ku-ba[ <i>fat-a</i> ]             |                            | *in-ba-fato                       |
|    | 15-2[ <i>take.care.of-FV</i> ]    |                            | 9-2[ <i>take.care.of-NOM</i> ]    |
|    | ‘to take care of them’            |                            | ‘them-care’                       |

As in Rundi, there is a difference between the reflexive and other OPs in nominalization in Bukusu. As shown in (22), reflexive *i-* can appear in cl. 5 *lii-* nominals, but other OPs cannot (Sikuku 2012). However, both the reflexive and other OPs are possible in cl. 15 infinitival forms, as in (23). David Odden (p.c.) notes that the same asymmetry is also found in Kerewe.

(22) Cl. 5 nominalizations in Bukusu

- |    |                                 |       |                                 |
|----|---------------------------------|-------|---------------------------------|
| a. | lil-ii[ <i>siim-isy-a</i> ]     | li-li | lii-lume                        |
|    | 5-REFL[ <i>please-CAUS-FV</i> ] | 5-be  | 5-difficult                     |
|    |                                 |       | ‘pleasing oneself is difficult’ |
| b. | lii(-*mu)[ <i>siim-isy-a</i> ]  | li-li | lii-lume                        |
|    | 5(-1)[ <i>please-CAUS-FV</i> ]  | 5-be  | 5-difficult                     |
|    |                                 |       | ‘pleasing him is difficult’     |

(23) Infinitival nominalizations in Bukusu

- |    |                           |       |                            |
|----|---------------------------|-------|----------------------------|
| a. | xuu-mu[ <i>siim-a</i> ]   | xu-li | xuu-layi                   |
|    | 15-1[ <i>like-FV</i> ]    | 15-be | 15-good                    |
|    |                           |       | ‘praising him is good’     |
| b. | xuxw-ii[ <i>siim-a</i> ]  | xu-li | xuu-layi                   |
|    | 15-REFL[ <i>like-FV</i> ] | 15-be | 15-good                    |
|    |                           |       | ‘praising oneself is good’ |

Shi (Polak-Bynon 1975: 186–187) is characterized by the bimorphemic reflexive marker *ci-i-*, and one or both pieces of the reflexive are found in a number of nominalizations, such as those of (24).

(24) Nominalizations in Shi

- |   |  |
|---|--|
| a. óobw-ì[bon-e]<br>‘pride’<br><br>óomw-íí[goondool-a]<br>‘bean sprout’<br><br>óobw-ii[rhoohy-ée]<br>‘humility’ | óoku-ci-ì[bon-a]<br>‘to be proud’<br><br>óoku-ci-í[goondool-a]<br>‘to stretch’<br><br>ooku[rhooh-a]<br>‘to be small’ |
| b. óobu-ci-í[yuundzuz-ée]<br>‘regret’   | óoku-ci-í[yuundzuz-aa]<br>‘to regret’  |

Mongo (Hulstaert 1965: 104, 326) has nominalizations with reflexive *ya-*, listed in (25a). Surprisingly, there are also nominalizations that involve other OPs, given in (25b), bucking the usual trend that such forms are impossible outside of the infinitive.

(25) Nominalizations in Mongo

Root	Meaning	Nominalization	Meaning
a. -bom-	‘tuer’	e-ya[om-elo]	‘action de se tuer, suicide’
-kɔt-	‘blesser’	e-ya[kɔt-elo]	‘action de se couper’
b. -kay-	‘donner’	e-n[kay-elo]	‘action de me donner’
-kúnd-	‘frapper’	e-to[kúnd-elo]	‘action de nous frapper’
-lík-	‘jeter’	y-o[lík-elo]	‘action de lui lancer’
-kɔt-	‘blesser’	y-a[kɔt-elo]	‘action de les blesser’

The patterns of nominalization found in Bukusu, Kerewe, Mongo, Rundi, and Shi contrast with Chewa (Ndayiragije 2003: 174–176), in which no OPs, including reflexive *dzi-*, can be nominalized.

(26) No OPs in nominalizations in Chewa

- |  |  |
|--|--|
| a. [sonkh-a]<br>m[sónkh-o]<br>*m-zi[sónkh-o]           | ‘contribute’<br>‘contribution’<br>( <i>zi</i> = object prefix) |
| b. [phunzits-a]<br>m[phunzits-i]<br>*m-dzi[phunzits-i] | ‘teach’<br>‘teaching’<br>( <i>dzi</i> = reflexive)             |

As in his analysis of the co-occurrence possibilities of OPs with reciprocal *-an*, Ndayiragije (2003) relates the special ability of the reflexive to be nominalized in Rundi to its underspecified nature with respect to noun class and person-number features. Buell (2005: 32–34, 41–43) critically discusses this proposal, arguing that a superior analysis is in terms of the lower structural position of the reflexive compared to the OPs.

## 9. TONE

A final property of the reflexive which may distinguish it from other OPs is tone. Object prefixes play a significant, and sometimes complex, role in the tonal patterns of verbs in Bantu languages (see Kisseberth & Odden 2003, Marlo 2013, Marlo & Odden to appear). OPs can generally be ascribed an underlying tone, /H/ or /L/ (or /Ø/), and in most cases, the tone of an OP has only local effects, for example, interacting with the tone of the following root or preceding prefix (or possibly an inflectional tone of the verb stem).<sup>4</sup>

The object prefix + verb stem constituent sometimes acts as a domain for tonal processes, called the ‘macrostem’ (see Marlo 2013 and references therein), such as the assignment of inflectional tones and repairs to potential OCP violations, i.e. cases where there are adjacent H tones. In languages like Yao (Hyman & Ngunga 1994, Odden 1998), where some inflectional tone assignment rules apply to the stem domain and others apply to the macrostem domain, OPs are implicated in the inflectional tonal system, even though the OP morphemes themselves are underlyingly toneless.

A second way in which OPs play a more direct role in inflectional tone is in Imperative and Subjunctive contexts (Devos and Van Olmen 2013, Marlo 2013), where the OP + Imperative/Subjunctive combination is commonly treated as a tonally distinct construction that cannot be compositionally derived from the underlying tone of the OP and the tone of the Imperative/Subjunctive in forms lacking an OP. In addition to triggering a significant tonal alternation, the Imperative + OP construction also generally involves a change of the final vowel from *-a* in bare imperatives to *-e* in forms with an OP, as noted above in section 5. In some cases (e.g. Mwera, Shambaa, Shona), the Imperative/Subjunctive + OP construction is marked by the addition of an inflectional H suffix to the verb stem.

While there are some contexts where all OPs interact with the system of inflectional tones on verbs, the reflexive more commonly has inflectional tonal properties than do other OPs. In particular, the reflexive often adds an inflectional tonal suffix to the stem, as it does in Chewa (Kanerva 1990: 25–26), Marachi (Marlo 2007), Matumbi (Kisseberth & Odden 1980, Odden 1984b, 1989, 1996), Nyala West (Marlo 2007), and Shona (Odden 1981, 1984a, to appear). The H introduced by the reflexive in Nkore is similar in that it behaves more like an inflectional tone than an OP tone in its resistance to deletion by an OCP restriction against multiple Hs within the macrostem (Poletto 1998).

In Kwanyama, the reflexive affects the tone of the verb root in unexpected ways. Non-reflexive OMs are either /H/ or /L/. The reflexive itself is /L/, but when it occurs with /L/ verbs, a H is introduced on the following verb root, which neutralizes the underlying contrast between /L/ and /H/ verbs. In combination with

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<sup>4</sup> For an overview on inflectional tones in Bantu languages, see Odden & Bickmore (2014), and the case studies in the same volume.

/H/ verbs, the reflexive is /L/, and there is no change to the verb root (Halme 2004: 75–76).

As with OP + Imperative/Subjunctive forms, the reflexive can also trigger non-tonal morphological changes on the verb. As shown in (27d), the Bakweri reflexive is expressed simultaneously by the prefix *á-*, the FV *-ε*, and a LH tonal suffix on the FV that replaces the inflectional tone that otherwise would have been assigned to the verb on the basis of tense/aspect and clause type (Marlo & Odden 2007, 2014). Other OPs in Bakweri are L, e.g. *mò-* (27b), or H, e.g. *vá-* (27c), and participate only in local tonal alternations, and do not affect the selection of final vowel suffix.

(27) Multiple exponents of the reflexive in Bakweri

- a. na[zung-a]        ‘I will rescue’
- b. na-mo[zung-a]   ‘I will rescue him’
- c. na-vá[zung-a]   ‘I will rescue them’
- d. na-á[zung-ě]    ‘I will rescue myself’

An additional case where the reflexive (and the 1sg OP) are tonally distinct from other OPs is Mozambican Yao (Hyman & Ngunga 1994). As Marlo (to appear) discusses, these differences are in part due to the unique structural position of the 1sg OP and the reflexive, lower than other OPs, and interestingly inflectional tonal rules that apply to the stem domain treat 1sg *N-* and reflexive *i-* as part of the “stem”. The reflexive, which has a bimorphemic structure *di-i-* has an additional difference compared to the 1sg OP and other OPs in that it is also associated with an additional H otherwise unexpected, which Marlo (to appear) suggests is an inflectional H, as found in many other languages.

To conclude this survey of the tonal properties of the reflexive, I note that the reflexive is not always tonally different from other OPs, and the tonal patterns do not always clearly indicate a different structural position for the reflexive. In Jita, for example, the reflexive is tonally just like other H-toned OPs (Laura Downing p.c.). In Khayo, the toneless reflexive is tonally different from other OPs, which are /H/, but the simplest analysis merely posits different lexical tonal specifications for the OPs (Marlo 2009). Haya is parallel to Khayo, but with the opposite tone values: the reflexive is /H/; other OPs are /Ø/ (Hyman & Byarushengo 1984).

## 10. CONCLUSION

The differences between other OPs and the reflexive in Bantu languages are extensive, as has been illustrated here. These numerous differences involve phonological features and various morphosyntactic and semantic properties. One opportunity for future research into these properties is that there are very few if

any languages with robust description for all of these properties. Micro-typological studies in Bantu morphosyntax and phonology are increasingly identifying parameters along which Bantu languages are similar and differ (see e.g. Marten et al 2007, Marten & Kula 2007, 2012, Marten & van der Wal 2014, Zeller 2014). I see the present work as making a contribution to the same comparative enterprise, identifying several specific phenomena involving the reflexive and other OPs (the number of OPs, allomorphy of the final vowel in the imperative, lexicalization, nominalization, etc.) that can be studied in individual languages in order to develop empirically richer future studies.

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APPENDIX: LANGUAGES CITED

Bakweri	A22	bri	Matumbi	P13	mgw
Bangubanbu	D27	bnx	Mongo	C61	lol
Bolia	C35b	bli	Mwera	P22	mwe
Bukusu	JE31c	bxx	Myene	B11	mye
Chewa	N31b	nya	Nilamba	F31	nim
Chokwe	K11	cjk	Nkore	JE13	nyn
Duala	A24	dua	Nyala West	JE18	nle
Ewondo	A72	ewo	Nyaturu	F32	rim
Fuliiru	JD63	flr	Rundi	JD62	run
Ganda	JE15	lug	Ruri	JE253	kya
Havu	JD52	hav	Ruwund	L53	rnd
Hehe	G62	heh	Saamia	JE34	lsm
Hemba	L31	hem	Sambaa	G23	ksb
Holu	L12b	hol	Shi	JD53	shr
Jita	JE25	jit	Shona	S10	sna
Kamba	E55	kam	Sukuma	F21	suk
Kaonde	L41	kqn	Sumbwa	F23	suw
Kela	C75	kel	Tharaka	E54	thk
Kerewe	JE24	ked	Tiriki	JE413	ida
Khayo	JE341	lko	Tsogo	B31	tsv
Kikuyu	E51	kik	Tswana	S31	tsn
Kuria	JE43	kuj	Wanga	JE32a	lwg
Kwanyama	R21	kua	Yaka	H31	yaf
Lozi	K21	loz	Yanzi	B85	yns
Lunda	L52	lun	Yao	P21	yao
Marachi	JE342	lri	Zulu	S42	zul