

Asymmetries in isiZulu possessor raising constructions

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1 Introduction

Like many other (Bantu and non-Bantu) languages, isiZulu (Nguni; S.42) has a type of double-object construction in which the first object (DP₁) is interpreted as standing in a possessor relation to the second object (DP₂) (Sabelo 1990):¹

- (1) i-n-doda i-phul-e u-m-fana i-n-galo
AUG-9-man 9.SM-break-PST AUG-1-boy AUG-9-arm
'The man broke the boy's arm.'
(lit.: 'The man broke the boy the arm.')
- (2) u-m-zingeli u-vul-e i-n-ja u-m-lomo
AUG-1-hunter 1.SM-open-PST AUG-9-dog AUG-3-mouth
'The hunter opened the dog's mouth.'
(lit.: 'The hunter opened the dog the mouth.')
- (3) u-pholish-e i-moto a-ma-sondo
1.SM-polish-PST AUG-9.car AUG-6-tire
'He polished the car's tires.'
(lit.: 'He polished the car the tires.')

Sentences such as (1)–(3) are referred to as “unmarked possessives” (Sabelo 1990), “external possession” (Payne and Barshi 1999), or “possessor raising” constructions (Landau 1999, Deal 2013), because the DP with the possessor theta role is not morphologically marked as a possessor (e.g. by a genitive/associative prefix), and not realised inside the possessum-DP (DP₂), but externally, as an additional object (DP₁).

¹I thank Mthuli Buthelezi for providing the isiZulu-examples; all errors are mine. Glosses follow the Leipzig glossing rules. Additional abbreviations: ASP = aspect; AUG = augment (a determiner-like vowel prefixed to isiZulu nouns); DJ = disjunct; FV = final vowel; OM = object marker; SM = subject marker. Numbers indicate noun classes.

In prototypical possessor raising constructions (henceforth PRCs) in isiZulu and other Bantu languages, the possessum denotes a (body) part of the possessor (Hyman 1977, Van de Velde 2020), a relation that is often (but inaccurately – see (3)) described as “inalienable possession”. Another characteristic of PRCs in Bantu is that the verb can take an additional object-DP despite the absence of valence-increasing morphology (Simango 2007). The verbs in (1)–(3) subcategorise only for the possessum-DP and appear without applicative or causative suffixes, but the PRCs are nevertheless realised as double-object constructions.

In this short article, I address the fact that isiZulu is asymmetrical with respect to the properties of the two objects in PRCs, even though the language is otherwise symmetrical in double-object constructions.

2 Object asymmetries

Keach and Rochemont (1994: 83–84) show that in Kiswahili PRCs, the possessor object can be object-marked and passivised, but the possessum-DP cannot (see also Henderson 2014 for closely related Chimwiini):

- (4) a. Juma a-li-m-kata Asha kidole
 1.Juma 1.SM-PST-1.OM-cut 1.Asha 7.finger
 ‘Juma cut Asha’s finger.’
 b. *Juma a-li-(ki)-kata Asha kidole
 1.Juma 1.SM-PST-7.OM-cut 1.Asha 7.finger
- (5) a. Asha a-li-kat-wa kidole na Juma
 1.Asha 1.SM-PST-cut-PASS 7.finger by 1.Juma
 ‘Asha’s finger was cut by Juma.’
 b. *kidole ki-li-kat-wa Asha na Juma
 7.finger 7.SM-PST-cut-PASS 1.Asha by 1.Juma

The asymmetry illustrated in (4) and (5) is expected, because Kiswahili is generally an asymmetrical language (Marten et al. 2007, Mursell 2018). Only DP₁, but not DP₂, of a double-object construction can be object-marked and passivised (Marten et al. 2007: 326–327):

- (6) a. Juma a-li-m-pik-i-a Asha chakula cha
 1.Juma 1.SM-PST-1.OM-cook-APPL-FV 1.Asha 7.food of
 asubuhi
 morning
 ‘Juma is cooking breakfast for Asha.’

- b. *Juma a-li-ki-pik-i-a Asha chakula cha
 1.Juma 1.SM-PST-7.OM-cook-APPL-FV 1.Asha 7.food of
 asubuhi
 morning
- (7) a. Asha a-li-pik-il-iw-a chakula cha asubuhi na
 1.Asha 1.SM-PST-cook-APPL-PASS-FV 7.food of morning by
 Juma
 1.Juma
 ‘Asha was cooked breakfast for by Juma.’
- b. *chakula cha asubuhi ki-li-pik-il-iw-a Asha na
 7.food of morning 7.SM-PST-cook-APPL-PASS-FV 1.Asha by
 Juma
 1.Juma

In contrast to Kiswahili, isiZulu is symmetrical. Both objects (DP₁ and DP₂) of a ditransitive verb can be object-marked and passivised (Adams 2010, Zeller 2012):

- (8) u-John u-nik-a a-ba-ntwana i-mali
 AUG-1a.John 1.SM-give-FV AUG-2-child AUG-9.money
 ‘John is giving the children money.’
- (9) a. u-John u-ba-nik-a i-mali a-ba-ntwana
 AUG-1a.John 1.SM-2.OM-give-FV AUG-9.money AUG-2-child
 ‘John is giving the children money.’
- b. u-John u-yi-nik-a a-ba-ntwana i-mali
 AUG-1a.John 1.SM-9.OM-give-PST AUG-2-child AUG-9.money
 ‘John is giving the children money.’
- (10) a. a-ba-ntwana ba-nik-w-a i-mali
 AUG-2-child 2.SM-give-PASS-FV AUG-9.money
 ‘The children are given money.’
- b. i-mali i-nik-w-a a-ba-ntwana
 AUG-9.money 9.SM-give-PASS-FV AUG-2-child
 ‘The money is given to the children.’

Nevertheless, isiZulu is asymmetrical in PRCs (Bosch 1985, Zeller 2012). As in Kiswahili, object marking and passivisation are only possible with DP₁ (the possessor), but not with DP₂ (the possessum):

- (11) a. i-n-doda i-m-phul-e i-n-galo u-m-fana
 AUG-9-man 9.SM-1.OM-break-PST AUG-9-arm AUG-1-boy
 ‘The man broke the boy’s arm.’

- b. *i-n-doda i-yi-phul-e u-m-fana i-n-galo
AUG-9-man 9.SM-9.OM-break-PST AUG-1-boy AUG-9-arm
- (12) a. u-m-fana u-phul-w-e i-n-galo y-i-n-doda
AUG-1-boy 1.SM-break-PASS-PST AUG-9-arm by-AUG-9-man
'The boy's arm was broken by the man.'
- b. *i-n-galo i-phul-w-e u-m-fana y-i-n-doda
AUG-9-arm 9.SM-break-PASS-PST AUG-1-boy by-AUG-9-man
- (13) a. u-yi-pholish-e a-ma-sondo i-moto
1.SM-9.OM-polish-PST AUG-6-tire AUG-9.car
'He polished the car's tires.'
- b. *u-wa-pholish-e i-moto a-ma-sondo
1.SM-6.OM-polish-PST AUG-9.car AUG-6-tire
- (14) a. i-moto i-pholish-w-e a-ma-sondo
AUG-9.car 9.SM-polish-PASS-PST AUG-6-tire
'The car's tires were polished.'
- b. *a-ma-sondo a-pholish-w-e i-moto
AUG-6-tire 6.SM-polish-PASS-PST AUG-9.car

The same contrast between PRCs and ordinary double-object constructions has been observed for the symmetrical Bantu languages Haya and Sesotho, which are also asymmetrical in PRCs (Hyman 1977, Hyman and Duranti 1982). This raises the question of whether the inability to object-mark or passivise the possessum-DP could be a universal property of PRCs, which is independent of the properties of other double-object constructions in a language. However, the Bantu language Kinyarwanda contradicts this hypothesis. Kinyarwanda is a symmetrical language like isiZulu, Haya and Sesotho, and allows object marking and passivisation of both DP₁ (the Recipient) and DP₂ (the Theme) of a ditransitive verb such as *ha*, 'give' in (15). Object marking and passivisation of DP₂ are illustrated by (16) and (17) (Kimenyi 1980: 127, Jean Paul Ngoboka p.c.):

- (15) umu-gabo y-a-haa-ye umu-góre igi-tabo
1-man 1.SM-PST-give-ASP 1-woman 7-book
'The man gave the woman the book.'
- (16) umu-gabo y-a-ki-haa-ye umu-góre
1-man 1.SM-7.OM-PST-give-ASP 1-woman
'The man gave it to the woman.'
- (17) igi-tabo cy-a-haa-w-e umu-goré n'ûmu-gabo
7-book 7.SM-PST-give-PASS-ASP 1-woman by-1-man
'The book was given to the woman by the man.'

Importantly, PRCs in Kinyarwanda behave in the same way. The possessum (DP₂) can be object-marked and passivised, as shown in (19) and (20) (Kimenyi 1980: 103–104, Van de Velde 2020):

- (18) umu-góre y-a-shokoj-e umu-gabo umu-satsi
 1-woman 1.SM-PST-comb-ASP 1-man 3-hair
 ‘The woman combed the man’s hair.’
- (19) umu-góre y-a-wu-shokoj-e umu-gabo
 1-woman 1.SM-PST-3.OM-comb-ASP 1-man
 lit.: ‘The woman combed it the man.’
- (20) umu-satsi w-a-shokoj-w-e umu-gabo n’-ûmu-góre
 3-hair 3.SM-PST-comb-PASS-ASP 1-man by-1-woman
 ‘The man’s hair was combed by the woman.’

(19) and (20) show that there is no general constraint against the possessum-DP in PRCs adopting “primary” object properties. This conclusion gains further support from PRCs in German, in which the possessor is realised with dative case, while the possessum bears accusative:

- (21) [Der Mann]_{NOM} brach [dem Jungen]_{DAT} [den Arm]_{ACC}.
 the man broke the boy the arm
 ‘The man broke the boy’s arm.’

In German, only objects with accusative case can be passivised. Consequently, German allows only the possessum, and not the possessor, of a PRC to become the subject of a passive:

- (22) [Der Arm]_{NOM} wurde [dem Jungen]_{DAT} gebrochen.
 the arm was the boy broken
 ‘The boy’s arm was broken.’
- (23) *[Der Junge]_{NOM} wurde [den Arm]_{ACC} gebrochen.
 the boy was the arm broken

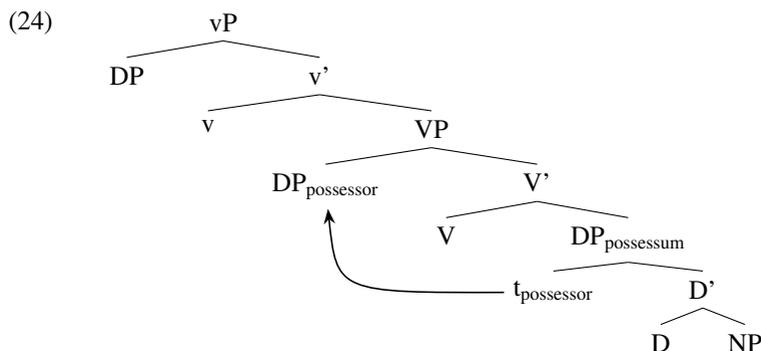
The examples from Kinyarwanda and German suggest that, whether or not a possessum-DP can adopt “primary” object properties depends on the behaviour of other double-object constructions in the language. This however leaves the isiZulu situation as a puzzle.

3 Possessor movement

A first step towards a solution is to ask in which way the syntax of PRCs differs from the syntax of other double-object constructions. If any structural differ-

ences can be identified, then perhaps the reason for the asymmetrical properties of isiZulu PRCs can be found there.

According to one prominent generative analysis, the syntax of PRCs is indeed different from the syntax of other double-object constructions. In this analysis, the possessor-DP is not base-generated in a possessum-external position, but originates inside the possessum-DP, where it receives the possessor theta role. From this position, it moves to the object position preceding the possessum. (24) illustrates the possessor movement analysis proposed in Landau (1999: 10), see also Deal (2013), Keach and Rochemont (1994), Lee-Schoenfeld (2006), a.o. for similar analyses:



According to (24), the syntax underlying PRCs differs from that of ordinary double-object constructions in that DP₁ (the possessor) is the head of a movement chain, and DP₂ (the possessum) includes the trace/copy of the moved possessor. In the next section, I discuss two possible explanations of the unexpected asymmetrical behaviour of isiZulu PRCs which exploit these differences.

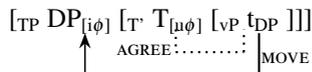
4 Explaining the asymmetry: Two accounts

4.1 The *Generalized Proper Binding Condition*

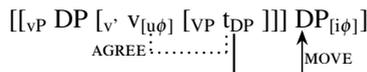
In isiZulu, object-marked and passivised DPs move out of the VP. In the passive, a VP-internal DP agrees with T and moves to the preverbal subject position ([Spec, T]). Object marking can be analysed as agreement between a DP and *v*; it is correlated with obligatory (right or left) dislocation of the object (Adams 2010, Zeller 2012, 2015a):²

²Evidence for the obligatory dislocation of object-marked DPs in isiZulu is provided by the fact that in double-object constructions, the canonical word order DP₁ > DP₂ changes to DP₂ > DP₁ if DP₁ is object-marked; compare e.g. (8) and (9-a) above. See Adams (2010) and Zeller

- (25) a. Passivisation:



- b. Object marking and right dislocation:



It follows that passivisation and object marking of the possessum in PRCs involve movement of the possessum-DP₂ out of the VP. But if the analysis in (24) is adopted for PRCs, then this moved DP₂ includes the trace/copy of the raised possessor-DP₁. Importantly, after movement of the possessum-DP₂ to a VP-external position, this trace/copy would no longer be c-commanded by its antecedent (the possessor-DP₁). As a result, object marking and passivisation of the possessum-DP₂ would be ruled out as violations of the *Generalized Proper Binding Condition* GPBC (Lasnik and Saito 1992), which states that traces must be bound at every stage of the derivation. In contrast, since DP₂ in non-possessor double-object constructions does not include a trace of DP₁, the GPBC has no bearing on object marking and passivisation in these constructions.

A potential problem for an analysis that rules out the ungrammatical isiZulu examples in (11-b)–(14-b) on the basis of the GPBC is raised by the grammaticality of the corresponding Kinyarwanda and German examples in (19), (20), and (22). Since PRCs in these languages are arguably also derived via possessor movement, it is unclear why the GPBC would not apply in these examples. However, note that the GPBC is systematically violated in German by remnant movement constructions such as (26), which has the syntax in (27) (see Grewendorf 2003, Müller 1998 for discussion):

- (26) Zu füttern hat den Hund keiner versucht.
 to feed has the dog no.one tried
 ‘No one tried to feed the dog.’

- (27) [_{CP-1} [_{CP-2} t_{DP} zu füttern] hat [_{DP} den Hund] keiner versucht t_{CP-2}]

In (26), the embedded object-DP *den Hund* has moved out of the embedded infinitive and scrambled in front of the matrix subject, while the infinitival CP, which includes the trace/copy of the scrambled object, has moved to [Spec, C] of the matrix clause. In light of the grammaticality of examples such as (26), one could conclude that the GPBC simply does not apply in German, which would also explain why (22) is grammatical. However, it then still remains

(2012) for additional evidence.

unclear why the GPBC does not rule out object marking and passivisation in Kinyarwanda PRCs.

4.2 “Mobility” features

An alternative analysis of the puzzling isiZulu asymmetries in PRCs is based on a proposal made in Bošković (2007). Bošković suggests that movement is not driven by attraction, but by an uninterpretable feature of the moving XP. Let me call this feature a “mobility feature” [MF]. In Zeller (2015a), I adopt Bošković’s proposal to account for the well-known correlation between agreement and DP-movement in isiZulu. I argue that a VP-internal DP with [MF] will be repelled from its base position and undergo movement to a VP-external position. Furthermore, I suggest that [MF] also activates a DP for agreement in isiZulu: $[u\phi]$ -features of a functional head can only see the $[i\phi]$ -features of a DP when this DP also has [MF]. A DP without [MF] will not only remain inside VP, but will also be invisible for a probing head.

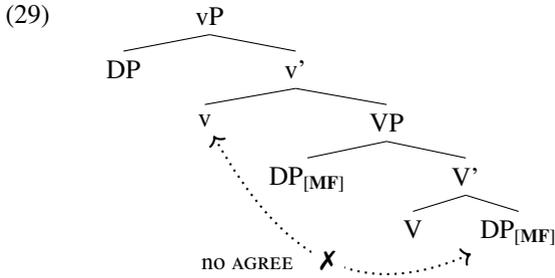
This proposal explains why DP₂ in ordinary double-object constructions in isiZulu can be object-marked and passivised without violating Locality, despite the presence of a higher DP₁ which c-commands DP₂. In sentences such as (9-b) and (10-b), where the Theme (DP₂) agrees with either v or T, the Recipient (DP₁) has remained inside the VP. This means that it does not have [MF], and is therefore not activated for agreement. The Theme, in contrast, bears [MF]; its $[i\phi]$ -features are visible, and because the Recipient is not activated, Locality is not violated when the Theme agrees with v or T. Therefore, the Theme can be passivised or object-marked. Furthermore, because of [MF], the Theme will also move to a VP-external position (as shown in (25)).

Evidence for this proposal is provided by isiZulu double-object constructions in which both DP₁ and DP₂ have [MF] and move out of the VP via dislocation. In this scenario, both DPs are activated for agreement. Consequently, Locality effects arise (Zeller 2015a,b):

- (28) a. *ngi-ya-m-theng-el-a* *u-Sipho* *u-bisi*
 1SG-DJ-1.OM-buy-APPL-FV AUG-1a.Sipho AUG-11.milk
 ‘I am buying milk for Sipho.’
- b. **ngi-ya-lu-theng-el-a* *u-Sipho* *u-bisi*
 1SG-DJ-11.OM-buy-APPL-FV AUG-1a.Sipho AUG-11.milk

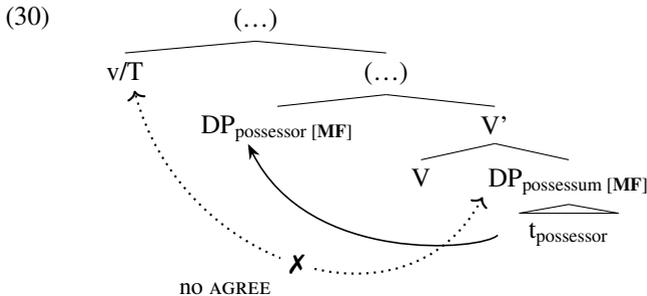
Note that the verbs in (28) are in the so-called disjoint form, which signals that the verb is final in the VP. This means that both objects in (28) are dislocated, which in turn implies that both DPs have [MF]. As a result, object agreement with the Theme-DP is ruled out in (28-b), because the [MF] of the higher Beneficiary-DP means that its $[i\phi]$ -features are visible to the probing

v-head and block agreement between v and the lower Theme-DP:



Passivisation and object marking of a lower DP₂ are hence impossible in isiZulu whenever [MF] is associated with a higher DP₁ that c-commands DP₂.

This analysis can now be extended to explain why object marking and passivisation of the possessum-DP₂ are never possible in PRCs. Recall that according to the possessor movement analysis in (24), the possessor-DP₁ in PRCs c-commands the possessum after moving out of the possessum-DP₂. Assuming that possessor movement is also triggered by [MF], and that [MF] on the possessor is not deleted after the DP has moved, it follows that in PRCs, the possessum-DP₂ is always c-commanded by a possessor-DP₁ with [MF]. Therefore, a higher Probe will never be able to find the possessum-DP₂ in a PRC in isiZulu, because the [iφ]-features of the possessor-DP₁ are always visible to the Probe, and the possessor will always be the closest Goal:



An analysis of PRCs in terms of movement, in combination with the idea that the feature that triggers movement of a DP also activates it for agreement, explains why isiZulu is symmetrical in double-object constructions, but asymmetrical in PRCs.

The cross-linguistic differences discussed in Section 2 can be explained if we

assume that Bantu languages differ with respect to the conditions which make the $[i\phi]$ -features of DPs visible to higher Probes. In one group of Bantu languages, which includes isiZulu as well as other symmetrical languages which are asymmetrical in PRCs (e.g. Sesotho and Haya), the ϕ -features of DPs need to be activated by [MF]. In another group of languages, which includes Swahili and Kinyarwanda, even DPs without [MF] are active and can act as Goals for agreement. In these languages, the syntactic properties of objects in PRCs then mirror those of objects in other double-object constructions.

5 Conclusions

The ban on object marking and passivisation in isiZulu PRCs can possibly be explained on the basis of a movement account, which assumes that the possessor-DP originates inside the possessum-DP and moves to a DP-external position. Future research needs to establish which one of the two possible implementations of this account that I discussed in this article can be substantiated through a more comprehensive analysis, or if an entirely different story needs to be told.

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