

Movement from the double object construction is not fully symmetrical

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Abstract

There is a movement asymmetry which appears in ditransitive constructions in some languages that are symmetrical for both A- and A-bar movement in the double object construction (DOC), including Norwegian, North-West British English, and a range of Bantu languages including Zulu and Lubukusu: a Theme object can be A-bar-moved out of a Recipient (Goal) passive, but not vice versa. Our explanation of this asymmetry is based on phase theory, more specifically a stricter version of the Phase Interpretability Condition proposed by Chomsky (2001). The effect is that, in a Theme passive, a Recipient object destined for the C-domain gets trapped within the lower v-related phase by movement of the Theme. The same effect is seen in Italian, a language in which only Theme passives are possible. Moreover, a similar effect is also found in some Bantu languages in connection with object marking/agreement: object agreement with the Theme in a Recipient passive is possible, but not vice versa. We show that this, too, can be understood within the theory that we articulate.

Keywords: passive, A-bar movement, phase theory, symmetry, double object construction

1 Introduction

The multiple internal arguments of a ditransitive predicate, the ‘Recipient’ and the ‘Theme’, are often both referred to as ‘objects’. However, it is well known that these two ‘objects’ show cross-linguistic variation regarding their alignment: in some languages/constructions, only one of the Recipient or Theme in a ditransitive behaves like the object of a transitive, whereas in other cases both share these object properties. The latter type constitutes the so-called ‘symmetrical’ double object construction.

Such symmetry is visible in A movement (as well as other tests such as pronominalisation, reflexives, and word order). In typically symmetrical languages, either object is available for promotion to subject in a passive (see Baker 1988, Bresnan & Moshi 1990, McGinnis 1998, 2001, Woolford 1993, Haddican and Holmberg 2012, 2015, Anagnostopoulou 2003). Thus, in Norwegian, *either* the Recipient *or* the Theme can be passivized (and the same holds for Swedish, some British English dialects, Kinyarwanda, Zulu, Luganda, etc.).

Norwegian (Haddican and Holmberg 2015)

symmetric

- (1) a. Jon ble gitt boka. (Recipient-passive)
Jon was given the.book
b. Boka ble gitt Jon. (Theme-passive)
the.book was given Jon

Where the DOC is asymmetrical, on the other hand, only one of the Recipient or Theme can be passivized, as in Standard English (and also Fula, Swahili, Chichewa, Danish, Italian, German, etc.).¹

Standard English² asymmetric

- (2) a. John was given the book.
 b. *The book was given John.

In many DOC constructions (symmetrical and asymmetrical), *both* Recipient *and* Theme are free to undergo Wh-movement:

Norwegian symmetric

- (3) a. Hvem ga du boka?
 who gave you the.book
 ‘Who did you give the book to?’
 b. Hvilken bok ga du Jon?
 which book gave you Jon
 ‘Which book did you give John?’

There are languages, however, where only one of the Recipient or Theme can be relativized or questioned. In Chichewa, for example, only the Recipient can be relativized in a DOC construction:³

Chichewa (Baker 1988: 355) asymmetric

- (4) a. *Iyi ndi-yo mfumu i-mene ndi-ku-ganiz-a kuti
 1.PROXDEM COP-1 1.chief 1-REL 1SG.SM-PRES-think-FV COMP
 Mavuto a-na-umb-ir-a mtsuko.
 1.Mavuto 1SM-PST-mold-APPL-FV 3.waterpot
 ‘This is the chief whom I think Mavuto molded the waterpot for.’
 b. Uwu ndi-wo mtsuko u-mene ndi-kupganiz-a kuti
 3.DEM COP-3 3.waterpot 3-REL 1SG.SM-PRES-think-FV COMP
 Mavuto a-na-umb-ir-a mfumu.
 1.Mavuto 1SM-PST-mold-APPL-FV 1.chief
 ‘This is the waterpot which I think Mavuto molded for the chief.’

In this way, we can identify a class of symmetrical contexts in which both objects of a given DOC behave similarly with respect to both A and A-bar movement. A caveat is necessary here, though: although it is common to refer to whole languages as being ‘symmetrical’ or ‘asymmetrical’, it is by now fairly clear that languages can also be partly symmetrical, in a number of different ways, which we abstract away from here

¹ It is generally the case that only languages which do not use dative in ditransitives (and so have what is traditionally called a ‘double object construction’) display symmetry in A-movement, but there are languages (e.g. Icelandic, Japanese) in which dative recipients can be promoted to subject. Throughout, we adopt a thematic definition of ‘double object construction’ which is inclusive of languages with dative recipients (see Harley & Miyagawa 2016 for recent discussion).

² There is, however, substantial across English varieties concerning symmetry (Siewierska & Hollman 2007, Haddican 2010, Haddican and Holmberg 2012, Myler 2013, Biggs 2014). We return to this issue in section 2.1.

³ Chichewa is otherwise also an asymmetric language; symmetry/asymmetry in the A- and A-bar domains have been claimed to operate independently of one another (Marantz 1993, Nakamura 1997).

(see again Baker 1988, Bresnan & Moshi 1990, Rugemalira 1991, Marantz 1993, Alsina & Mchombo 1993, Woolford 1993, Simango 1995, Schadeberg 1995, Nakamura 1997, Ngonyani 1996, 1998, McGinnis 1998, 2001, Zeller & Ngoboka 2006, Jerro 2015, 2016, Haddican and Holmberg 2012, 2015, forthcoming, Anagnostopoulou 2003, van der Wal forthcoming). Putting this variation aside, however, our focus in what follows is on a pervasive pattern of asymmetry which emerges in otherwise symmetrical contexts when A and A-bar movements are combined. In many unrelated languages, A-bar extraction of the Recipient ceases to be symmetrical in Theme passives (*‘who was the book given?’), when it is fully acceptable in active contexts. This is a curious asymmetry because A-bar extraction of the Theme in a Recipient-passive is fine in these same languages/contexts (‘Which book were the kids given?’). This suggests that A and A-bar movement interact in intricate and potentially universal ways, independently of language-specific parameter settings regarding extraction possibilities.

The remainder of the paper is structured as follows. Section 2 presents data from a number of otherwise symmetrical languages where the asymmetry in question arises (e.g. Norwegian, NW English, Zulu and Lubukusu). Section 3 proposes a phase-based analysis of this emergent asymmetry, based on the interaction of A- and A-bar movement. Section 4 presents evidence for the same asymmetry in an asymmetrical language, Italian, and discusses the theoretical implications of this. Finally, section 5 addresses a number of potential counterexamples.

2 Combining passive and A-bar movement

Although Norwegian is symmetrical for both passivization and A-bar movement (see (1) and (3) above), this language shows an asymmetry when these two kinds of movement are combined. The four logical possibilities of passivisation and A-bar extraction of the Recipient and the Theme are illustrated for Wh-questions and relativisation in (5) and (6), respectively (R = Recipient, Th = Theme).

2.1 Norwegian and NW English

Extraction contrasts: passive and Wh-movement

- | | | | |
|-----|----|---------------------------|---------------------|
| (5) | a. | Hvem ble gitt boka? | [R-wh, R-passive] |
| | | who was given the.book | |
| | b. | Hvilken bok ble Jon gitt? | [Th-wh, R-passive] |
| | | which book was Jon given | |
| | c. | Hvilken bok ble gitt Jon? | [Th-wh, Th-passive] |
| | | which book was given Jon | |
| | d. | *Hvem ble boka gitt? | [*R-wh, Th-passive] |
| | | who was the.book given | |

Extraction contrasts: passive and relative

- | | | | |
|-----|----|---------------------------------|----------------------------|
| (6) | a. | mannen som ble gitt boka | [R-relative, R-passive] |
| | | the.man that was given the.book | |
| | b. | boka som mannen ble gitt | [Th-relative, R-passive,] |
| | | the.book that the.man was given | |

- c. boka som ble gitt mannen [Th, relative, Th-passive]
 the.book that was given the.man
- d. *mannen som boka ble gitt [*R-relative, Th-passive]
 the.man that the.book was given

The only combination which is systematically and robustly rejected in Norwegian is A-bar movement of the Recipient combined with a passive of the Theme (as was first noticed by Lundquist (2004) for Swedish).

Now consider English. Standard English is not a relevant language for our purposes as it is asymmetrical both in terms of A and A-bar movement. In this variety of English, only the Recipient can undergo passivisation and only the Theme can be A-bar extracted in a DOC:⁴

- | | |
|--|------------|
| Standard English | asymmetric |
| (7) a. John was sent the book. | |
| b. *The book was sent John. | |
| (8) a. *Who did you give the book? | |
| b. Which book did you give John? | |

This is not the case in all varieties of British English, however (see Siewierska & Hollman 2007, Haddican 2010, Haddican and Holmberg 2012, Myler 2013, Biggs 2014). In some North-West varieties, both Theme passives and Recipient wh-questions are possible.

Baseline examples (* in Standard English)

- | | |
|--|--------------|
| (9) a. Who did you give/send/hand a book? | [R-wh] |
| b. A book was given/sent/handed him (by Mary). | [Th-passive] |

Interestingly, in these varieties, we find the same asymmetry that we observed in Norwegian where A- and A-bar movement are combined (Neil Myler, p.c.):⁵

Extraction contrasts: passive and Wh-movement

- | | |
|---|---------------------|
| (10) a. Who was given/sent/handed the book? | [R-wh, R-passive] |
| b. Which book was John given/sent/handed? | [Th-wh, R-passive] |
| c. Which book was given/sent/handed John? | [Th-wh, Th-passive] |

⁴ It is not our aim here to provide an explanation of this fact, but see Douglas (2017) for one possible analysis. Note, moreover, that it appears to be a rare restriction crosslinguistically, unlike the widespread asymmetry that we discuss at length below.

⁵ In the Liverpool dialect of English, (8d) is grammatical (Alison Biggs, personal communication). However, as Biggs (2013) convincingly shows, T-passives in this variety are derived from a prepositional dative construction with a covert preposition. As such, this does not represent a counterexample to DOMA as there is no ban on R-wh in T-passives in the Prepositional Dative, for the reasons we discuss in section 3.5.

- d. *Who was the book given/sent/handed (by Mary)? [*R-wh, Th-passive]

In both otherwise symmetrical varieties (Norwegian and NW English), then, an asymmetry emerges when we combine A-movement of the Theme with A-bar movement of the Recipient.

2.2 Zulu and Lubukusu

The Bantu languages Zulu (South-Africa) and Lubukusu (Kenya) show the same restriction observed in Norwegian and NW English, as do Xhosa (Visser 1986), Swati (Woolford 1995), Haya (Duranti & Byarushengo 1977), Fuliiru (Van Otterloo 2011), Sotho (Morolong & Hyman 1977), and Tswana (Creissels 2002). These languages are also symmetrical for both passivisation, illustrated in (11) and (13), and relativisation, illustrated in (12) and (14).⁶ We test relativisation rather than Wh extraction here, because these languages are Wh-in-situ.

Zulu (Adams 2010: 11): symmetrical passive

- (11) a. In-cwadi y-a-fund-el-w-a aba-ntwana.
 9-book 9SM-REM.PST-read-APPL-PASS-FS 2-children
 ‘The book was read (for) the children.’
- b. Aba-ntwana b-a-fund-el-w-a in-cwadi.
 2-children 2SM-REM.PST-read-APPL-PASS-FS 9-book
 ‘The children were read a book.’

Zulu (Adams 2010: 116): symmetrical relative

- (12) a. Ng-ubani a-u-m-theng-el-a in-cwadi?
 COP-1a.who RM-2SG.SM-1OM-buy-APPL-FV 9-book
 ‘Who did you buy a book for?’
 (lit. ‘It is who that you bought them a book?’)
- b. Y-ini a-u-yi-theng-el-a u-Thandi?
 COP-9.what RM-2SG.SM-9OM-buy-APPL-FV 1a-Thandi
 ‘What did you buy for Thandi?’
 (lit. It is what that you bought it for Thandi?)

Lubukusu (Justine Sikuku, p.c. July 2015): symmetrical passive

- (13) a. Baa-sooreri ba-a-eeb-w-a chi-khaafu
 2.boys 2SM-PAST-10OM-give-PASS-FV 10-cows
 ‘The boys were given cows’

⁶ We call these languages ‘symmetrical’ even though there does not seem to be a language that behaves fully symmetrically for all tests, for all predicates, for all combinations of operations, or for all combinations of semantic roles in multitransitives. Especially concerning the latter factor, it should be noted that the current study is restricted to ditransitives with a benefactive or recipient role, excluding the variation for instruments and locatives, which are known to vary across Bantu languages. See among others Kimenyi (1980), Baker (1988), Ngonyani (1996, 1998), Moshi (1998), Alsina & Mchombo (1993), Ngonyani & Githinji (2006), Zeller & Ngoboka (2006), Jerro (2015, 2016). The reason we leave these for now, apart from the comparability with languages like Norwegian, is that we cannot be certain about the underlying structure of these ditransitives (as a Prepositional Dative or DOC, see (24) and Ngoboka 2016).

- b. Chi-kaafu cha-a-eeb-w-a baa-sooreri
 10-cows 10-PST-2OM-give-PASS-FV 2-boys
 ‘Cows were given to the boys’

Lubukusu (Wasike 2007:52): symmetrical relative

- (14) a. Chi-khaafu ni-cho kuuka a-a-elesy-a baa-sooreri
 10-cows REL-10 1.grandfather 1SM-PST-give-FV 2-boys
 chi-li e-luuchi.
 10SM-be at-river
 ‘The cows which grandfather gave the boys are at the river.’
- b. Baa-sooreri ni-bo kuuka a-a-elesy-a chi-khaafu
 2-boys REL-2 1.grandfather 1SM-PST-give-FV 10-cow
 ba-li e-luuchi.
 2sm-be at-river
 ‘The boys who grandfather gave the cows are at the river.’

Once again, in both languages, when the theme is passivised, the recipient cannot be relativised (whereas the reverse is fully grammatical):

Zulu (Zeller 2011): extraction contrasts

(15) [Th-relative, R passive]

- a. I-nyama u-mama a-yi-phek-el-w-a-yo i-mnandi.
 9-meat 1a-mother REL.1SM-9OM-cook-APPL-PASS-FV-RS 9SM-tasty
 (lit) ‘The meat that mother is being cooked (it) for is tasty.’
- b. I-mali aba-ntwana a-ba-yi-nik-w-a-yo
 9-money 2.children RM-2SM-9OM-give-PASS-FV-RS
 ng-e-ya-mi.
 COP-9.REL-9.POSS-1SG
 (lit.) ‘The money that the children are given (it) is mine.’

(16) [R-relative, Th passive]

- a. * U-mama i-nyama e-m-phek-el-w-a-yo u-kathele.
 1a-mother 9-meat REL.9SM-1OM-cook-APPL-PASS-FV-RS 1SM-tired
 ‘Mother for whom the meat is being cooked (it) is tired.’
- b. * Aba-ntwana i-mali e-ba-nik-w-a-yo
 2-children 9-money REL.9SM-2OM-give-PASS-FV-RS
 ba-ya-jabul-a.
 2SM-DJ-be.happy-FV
 ‘The children to whom the money is given are happy.’

Lubukusu (Justine Sikuku p.c. July 2015)

(17) a. [Th-relative, R passive]

- chi-kaafu ni-cho baa-sooreri ba-a-eeb-w-a
 10-cows REL-10 2-boys 2SM-PST-give-PASS-FV
 ‘the cows that the boys were given’

b. [R-relative, Th passive]

* baa-sooreri ni-bo chi-kaafu cha-a-eeb-w-a
2-boys REL-2 10-cows 10SM-PST-give-PASS-FV
'the boys who the cows were given to'

We summarise this asymmetry as the constraint in (18) (in the following we use *extraction* as a cover term for A-bar movement to the C-domain):⁷

- (18) Double object movement asymmetry (DOMA)
✓ Th-extraction out of an R-passive ('Which book were the children given?')
× R-extraction out of a Th-passive (* 'Which children was the book given?')

The question we address below is how we can account for DOMA in a language that is otherwise symmetrical. Under the standard view, A-movement and A-bar movement do not interact (see Rizzi 1990) and so DOMA is unexpected. Given the facts we have just presented, however, it seems necessary to revisit this view in line with proposals by Aldridge (2004), Coon et al. (2014) and van Urk (2015).⁸

3 Analysis: flexible licensing, phasehood and locality

3.1 Two theories that do not work

Before we present our account of the DOMA, it is worthwhile considering why Doggett's (2004) 'inverse DOC' account and Chomsky's (2008) feature inheritance can both derive symmetry, but fail to make the correct predictions regarding DOMA.

Symmetry with regard to A-movement/passive in the DOC is expected in languages where there are two 'base orders' in the predicate phrase. Icelandic would be a case in point. Alongside the typical double object base structure where the Recipient asymmetrically c-commands the Theme, Icelandic allows an 'inverse DOC' where the Theme asymmetrically c-commands the Recipient within the predicate, provided the Recipient is focused/heavy, as discussed by Holmberg and Platzack (1995: 206). The set of verbs that allow this, including the verb *gefa* 'give', are precisely those verbs that (somewhat marginally) allow Theme passives alongside Recipient passives. Doggett (2004) argues, on the basis of facts from Icelandic (following Holmberg and Platzack) and some other languages, that languages that allow Theme passives with ditransitive verbs have the option of a thematic 'inverse DOC' structure within the predicate phrase, although in some of these languages (British English, Norwegian, Swedish) this would not be directly observable. This theory does not predict the DOMA. The prediction is, rather, that both combinations of A and A-bar movement of the Recipient and the Theme will be either equally good or equally bad. This is because, on Doggett's approach, in Theme passives, the Theme is base generated above the Recipient while in Recipient passives this structure is

⁷ Duranti & Byarushengo (1977: 68) note this pattern in a slightly different way as the 'Human Constraint': "In a sentence with more than one DO, the advancement to subject of a DO with a nonhuman referent affects the objecthood of any other present DO with a human referent." We discuss the possible influence of animacy in section 6.2 below.

⁸ In the following we will treat relativization as derived by A-bar movement to specCP, without taking a stand on whether the moved constituent is the relativized NP itself, as under the raising analysis of relatives, or a null operator (Bhatt 2002).

reversed. Any interaction between A- and A-bar movement is therefore predicted to work in parallel in either case. As the DOMA shows, this is not the case.

Chomsky (2008) outlines a theory whereby all the formal features that trigger and govern syntactic derivation enter the syntax with the phase head, for every phase in the derivation of a linguistic expression. The relevant phase head in our case would be C. According to Chomsky (2008), once C is merged, a subset of the formal features of C are transmitted from C to T, including the unvalued ϕ -features and an EPP feature. Once the phase head is merged and the formal features distributed, all syntactic operations within the relevant phase happen simultaneously; C and T operate in tandem. Under this theory DOMA is entirely unexpected. If C can attract object α , and T can attract object β , then the opposite should be possible as well, provided α and β have the appropriate features. We would claim that the facts listed above in (5, 6...), to be discussed in more detail in the rest of the paper, provide a challenge for the theory in Chomsky (2008). The facts are best understood, we think, within a model where syntactic operations are sequentially ordered, and specifically, where features of T trigger movement independently of C.

3.2 Thematic structure

It is important to specify what structure we take to underlie the ditransitives under investigation. We distinguish between two underlying structures for ditransitives: the double object construction (DOC) that we focus on in this paper, and the prepositional dative construction (PDC), which has different thematic properties. The difference is illustrated here for English, but the same distinction obtains in a number of languages (Harley & Miyagawa 2017):

(19) Double object construction (DOC)

V Recipient Theme

I gave the children the book.

(20) Prepositional dative construction (PDC)

V Theme Goal

I gave the book to the children.

The two can be distinguished by two animacy-related tests (Oehrle 1976). First, non-agentive causer subjects, including inanimate subjects, are possible only in the DOC and not in the PDC:

- (21) a. This book gave me an idea.
b. * This book gave an idea to me.

Second, where a relationship of *alienable* possession is concerned, inanimate goals/recipients are only possible in the PDC and not in the DOC:

- (22) a. * I sent his house a book.
b. I sent a book to his house.

Where the relationship between recipient and theme is one of *inalienable* possession, however, inanimate recipients are possible (Harley & Jung 2015):

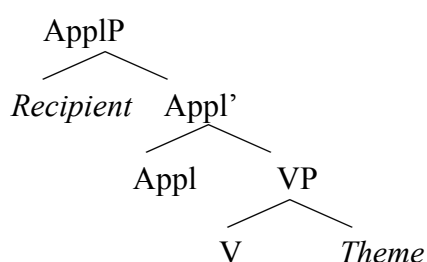
- (23) a. John gave the house a lick of paint.

- b. * John gave a lick of paint to the house.

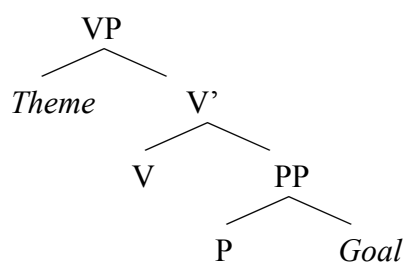
Following Harley (1995, 2002), Holmberg and Platzack (1995), Pesetsky (1995), Bruening (2001, 2010) we assume that the DOC and PDC have distinct underlying structures, as represented in (24); but see Larson (1988), Baker (1996), and Ormazabal & Romero (2010, 2016) for theories in which they are derived from the same underlying structure.⁹ For DOCs, we assume the structure in (24a): the Theme is merged with, and assigned its theta-role by V, while the Recipient is assigned its theta-role by an Applicative head merged with VP. There is a family of structural descriptions of the DOC that have been proposed in the literature in which the two objects form a small-clause-like constituent where there is a head which in many languages is abstract, and which assigns theta-role and Case to one of the two objects (Pesetsky 1995, Harley 1995, 2002, Anagnostopoulou 2003, Pylkkänen 2008, Harley and Jung 2015). The structure in (24a) belongs to this family. It should not be crucial which version of this general structural description we assume here, as long as the Recipient is introduced by a functional head above the Theme,¹⁰ although obviously there may be differences in the details.

(24) The two base-generated structures for ditransitives

a. DOC



b. Prepositional dative



For the current paper, we are primarily concerned with the DOC, as diagnosed by the animacy tests outlined above. We return to the status of the PDC in section 3.6.

With these basics in place, we can now proceed to our theoretical proposal. Fundamentally, any ultimate asymmetry in the DOC is due to the fact that the Recipient asymmetrically c-commands the Theme in its base-generated position. As regards movement, asymmetry can also be a consequence of the derivational nature of structure-building whereby A-movement into the T-domain precedes A-bar movement to the C-domain. Another property of syntax which also contributes to DOMA, we propose, is that the derivation proceeds in phases (Chomsky 2001, 2008). It is our contention that these factors can have the effect that a constituent destined for movement can get trapped in a lower phase. This is what happens in the

⁹ A referee for *Linguistic Inquiry* points out that several reconstruction tests show that the theme can reconstruct below the recipient in the PDC. Compare (i) and (ii).

(i) John introduced the kids to each other/*each other the kids.

(ii) ?John gave each other's pictures to the kids. (Kitagawa 1994)

The PDC in (i) behaves as expected under (24b), but the one in (ii) does not. If Bruening (2010) is right, there are two derivations of the word order in a PDC. One is the structure in (24b), the other is a DOC in disguise, with a Recipient which c-commands the Theme from a right-specifier position. If (ii) is a DOC in disguise this would explain the binding of the reciprocal.

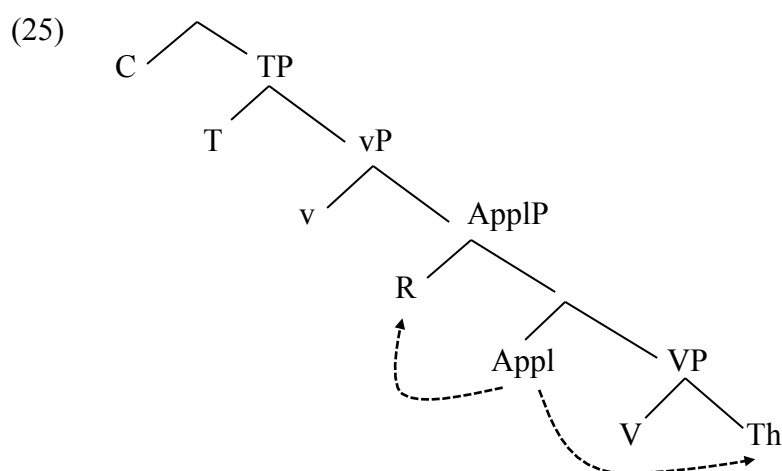
¹⁰ Because of locality we cannot adopt Pylkkänen's (2008) low applicative analysis for the ditransitive structures we are discussing.

ungrammatical combinations of A and A-bar movement in section 2 (DOMA), as we demonstrate below.

In the following section, we show how A-movement symmetry is derived in the DOC without violating locality or other syntactic conditions. We then go on to show how a version of phase theory can explain DOMA.

3.3 Deriving symmetry

We adopt the fairly standard view that in a passive, one of the internal arguments is probed by T to become the structural subject. Under locality, this should be the highest active argument in a ditransitive predicate. The question for symmetrical passives is thus how T can reach the Theme when the higher Recipient intervenes in the DOC. We propose that this double object symmetry, where it occurs, results from the fact that Appl can assign Case to either the Theme or the Recipient, as represented in (20) (see Haddican and Holmberg, forthcoming; Van der Wal forthcoming).¹¹



If Appl assigns Case to the Theme (Th), the Recipient (R) will get Case from v, in active sentences. In passive sentences, where v assigns no Case, T will probe the Recipient, assign nominative Case to it, and attract it to the sentential subject position specTP. Assuming, with Chomsky (2001), that assignment of Case deactivates a DP, the Recipient will be deactivated if Appl assigns Case to it. This means that v can probe the Theme, across the Recipient, in the active predicate, and assign objective Case to it.¹² Likewise in the passive, the deactivated Recipient will, in principle, allow

¹¹ A relevant question at this point is whether these two modes of Case assignment are distinct or not. In some approaches, Case-assignment upwards is labelled ‘inherent’ and Case-assignment under Agree is referred to as ‘structural’. There are also approaches, however, which seek to remove this distinction so that the direction of Case assignment reduces to other factors, such as the order of operations (see Assmann et al. 2013). In the contexts which we discuss, such an approach seems tenable as Case is assigned either upwards or downwards but never in both directions by the same functional head. However, it has been argued quite convincingly, in other contexts, that the same functional head *can* assign Case in both directions (see Aldridge 2004, Legate 2008, Coon et al. 2014 for ergative systems in which v appears to assign Case to both the internal and the external argument). We therefore remain agnostic as to the status of these two modes of Case assignment. In any case, this issue, while interesting, does not substantively affect the current proposal.

¹² This is if defective intervention does not hold, as argued for clause-internal movement by Bobaljik (2008), Broekhuis (2007), Hartman (2012), and Bruening (2014). Defective intervention is when, in a configuration [... α ... β ... γ ...], β blocks a relation (agreement or movement) between α and γ even though β could not itself take part in the relation, not having the requisite unvalued features. The references listed demonstrate that the cases of putative defective intervention discussed in the literature

T to probe the Theme, and trigger A-movement of the Theme across the Recipient. As we will discuss below, though, there are other syntactic factors which somewhat complicate the general picture.

This analysis of flexible licensing by Appl also accounts for an symmetry noticed in our Bantu languages for object marking: when the language allows one object marker only, either object can trigger object marking in active contexts (Van der Wal forthcoming). See the discussion in section 6.1 for languages allowing more than one object marker.

Zulu (Zeller 2011, see also Zeller 2012)

- (26) a. UJohn u-nik-a abantwana imali.
1a.John 1SM-give-FV 2.children 9.money
'John is giving the children money.'
- b. UJohn u-**ba**-nik-a imali (abantwana).
1a.John 1SM-2OM-give-FV 9.money 2.children
'John is giving them money (the children).'
- c. UJohn u-**yi**-nik-a abantwana (imali).
1a.John 1SM-9OM-give-FV 2.children 9.money
'John is giving it to the children (the money).'

Lubukusu (Diercks & Sikuku 2015:38)

- (27) a. N-a-**mu**-w-a sii-tabu.
1SG.SM-PST-1OM-give-FV 7-book
'I gave him the book.'
- b. N-a-**si**-w-a Wekesa.
1SG.SM-PST-7OM-give-FV 1.Wekesa
'I gave it to Wekesa.'

Assuming the structure in (24), and that object marking is the spell-out of ϕ -agreement between little *v* and an object (see Iorio 2014 and Van der Wal 2015), there are two possible derivations. If the applicative head agrees with the Theme, then *v* will agree with the Recipient; this is the situation in asymmetrical languages where only the Recipient can be object-marked. The Swahili example in (28) and the derivation in (29) illustrate this for the Applicative introducing a Recipient argument. In Swahili, then, only the Recipient can be either object marked or passivized.

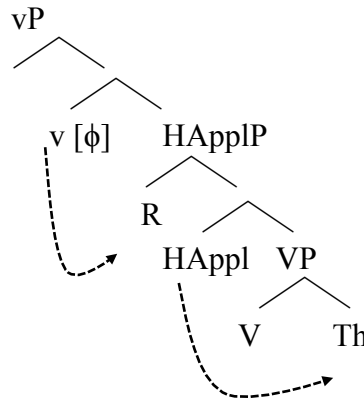
Swahili

- (28) a. A-li-**m**-pa kitabu.
1SM-PAST-1OM-give 7.book
'She gave him a book.'

are ruled out for other reasons. If defective intervention turns out to be a real phenomenon after all, and relevant for (25), an additional leapfrogging movement would be necessary to move the Theme past the Recipient (McGinnis 2001, Pykkänen 2008, Jeong 2007, Legate 2014, Sheehan 2016). As long as Appl is not a phase, then this will not have any impact on extraction possibilities, unlike the intermediate movement we describe below.

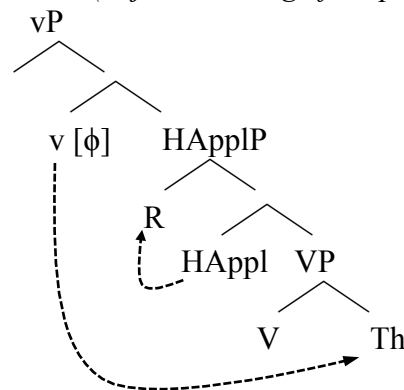
- b. * A-li-**ki**-pa Juma.
1SM-PAST-7OM-give 1.Juma
'She gave it to Juma.'

(29) *v* agrees with *R* (and can spell out as object-marker)



Symmetrical languages with a single object marker (i.e. ϕ features only on *v*) additionally have the option of the applicative head assigning inherent Case to the Recipient, along with a theta-role. In this scenario, the Recipient is thereby deactivated, allowing the Theme object to be probed by *v* (see also footnote 11). In such cases, *v* will agree with the Theme, and this Agree relation is potentially spelled out as an object marker, as represented in (30).

(30) *v* agrees with *Th* (object-marking of *Th* possible)



The proposed flexibility of the applicative head to license either the Theme or the Recipient gives rise to symmetrical passives and symmetrical object marking in active clauses (see Haddican and Holmberg, forthcoming, and Van der Wal, forthcoming).

3.4 Deriving the emergent asymmetry: ApplP as a phase

We propose that DOMA derives from the fact that phases are contextually determined. Concretely, we propose that in the passive DOC, vP is not a phase (cf. Chomsky 2008, Legate 2012, contra Legate 2003) but ApplP is (cf. McGinnis 2001). This follows from our definition of the lower clausal phase, the thematic phase in (31):

- (31) α is a phase head if α is a functional head and introduces the highest argument of a predicate.¹³

See Bošković (2014) for a related proposal (to be discussed in section 3.5). This means that, in an active monotransitive or ditransitive predicate, v is a phase head, as it introduces an external argument (an agent, holder, or causer). In the passive of a monotransitive verb, there is no low phase head, as passive v does not introduce an argument (we reject the proposal by Collins 2005 that passives have an external argument, optionally realized as a PP – see Legate 2014). But in the passive of the DOC there is the functional head Appl introducing the Recipient, in the model we have adopted. According to (31), ApplP is thereby a phase in the passive, though not in the active DOC.

Crucially, we adopt a version of the Phase Impenetrability Condition in Chomsky (2001), called PIC2 by Citko (2014: 33).

- (32) Given a structure $[_{ZP} Z \dots [_{XP} X [_{HP} \alpha [H YP]]]]$ where H and Z are phase heads, the domain of H is not accessible to operations at ZP; only H and its edge are accessible to such operations.

The ‘domain of H’ is the complement of H, i.e. YP in (32). In the case where Z is C and H is v , (32) entails that when C is merged, VP is transferred to the phonological and semantic interfaces, and is thereafter not accessible for syntactic operations or relations. The standard notion is that the edge of H is any specifier or adjunct of H/HP. We claim that the DOMA facts discussed here indicate that we need a stricter version of what counts as the edge of a phase, as follows (see Aldridge 2004, 2008 and Bošković 2016):

- (33) The edge of a phase is the outermost specifier of the phase head.

Again, we will return to Bošković’s (2014, 2016) proposal at the end of the present section. We further adopt Bošković’s (2007) greed-based approach to successive cyclicity whereby any XP bearing an unvalued feature can and must raise to the phase edge if said feature cannot be valued phase-internally. The ultimate motivation for this is the need for convergence: material containing uninterpretable features cannot be transferred to the interfaces. In our analysis, this means that the Theme must raise to the outer specifier of the lower phase (spec v in an active clause, specAppl in a passive) if its [uCase] feature has not been valued within vP /ApplP,¹⁴ or if it has some

¹³ Chomsky (2008) proposes that the phases are “CP and v^*P , where [...] v^* is the functional head associated with full argument structure, transitive and experiencer constructions, and is one of several choices for v ”. One interpretation of this, which is probably the intended interpretation, is that only active voice has a functional head “associated with full argument structure”. However, once we take the DOC into consideration, and we assume a functional head which introduces the Recipient in the DOC, then, as made clear in the text, the predicate will contain a functional head associated with full argument structure. Note additionally that (31) does not say ‘if and only if’. There are phase heads which do not introduce arguments (do not assign theta roles), including C.

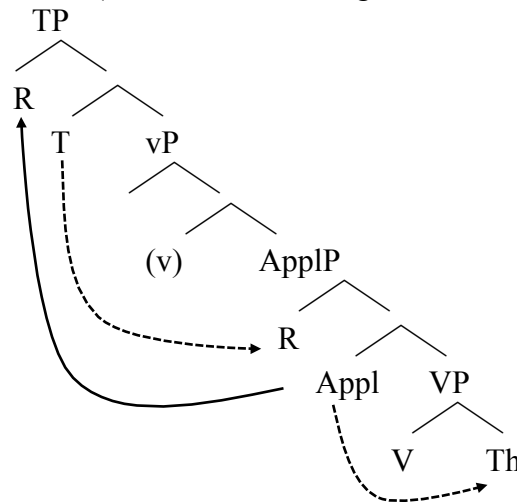
¹⁴ Whether some or all Bantu languages have a [uCase] feature is a matter of some debate; see Diercks (2012), Van der Wal (2015a) and Sheehan and van der Wal (To appear). The applied tests in this recent literature concerns nominative Case mostly, and in this paper Case is taken to still be relevant in the lower domain, even in the languages that do not show evidence for the presence of nominative Case (see also Halpert 2012, Carstens & Mletshe 2015). If Case turns out to not be present in the language at all, there still is a nominal-licensing requirement (perhaps related to topicality, cf. Morimoto 2006) and the feature driving movement of the Theme would then be related to this other type of licensing.

other uninterpretable feature such as a [uWh] feature, which we assume that Wh-phrases have, following Bošković (2007). Given the absence of look-ahead in the derivational model we adopt, movement of the XP bearing an unvalued feature to the phase edge happens blindly at the completion of vP/AppIP. The blindness of this movement will prove crucial to our analysis.

The DOMA (see (18)) then comes out as a consequence of these independent grammatical mechanisms, one of which is parametric (the Case-assignment property of Appl), and the rest of which are, by hypothesis, universal. In the following we show the step-by-step derivation for the Recipient passive and Theme passive first, and then demonstrate how the DOMA arises.

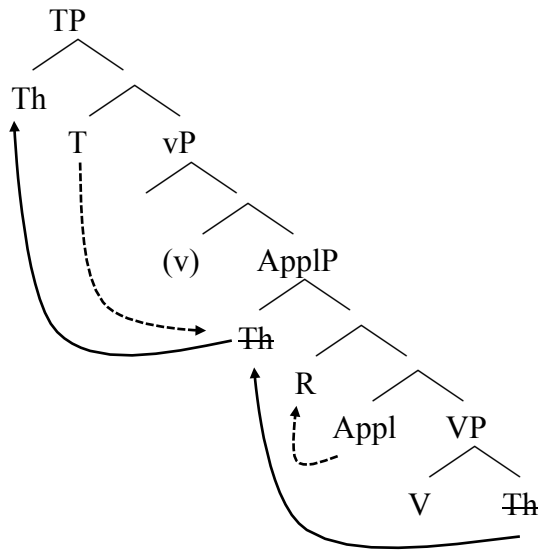
In a recipient passive, Appl assigns Case to the Theme, T agrees with the Recipient, assigns nominative Case to it, and attracts it to specT, as represented in (34). In all trees, dotted lines/arrows represent Agree and solid arrows represent movement.

(34) *Simple R-passive* ('The children were given the book')



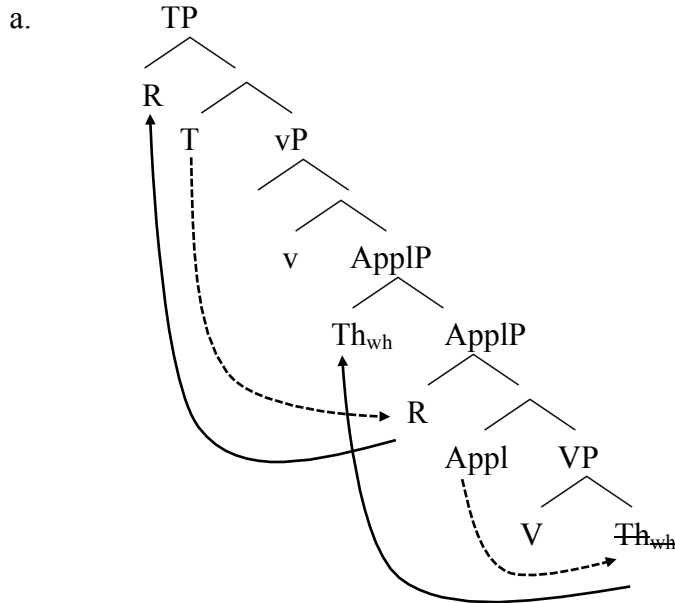
In a Theme passive, Appl assigns Case to the Recipient. The [uCase] feature on the Theme forces it to move to the edge of the ApplP phase (outer specAppl), where T agrees with it, assigns nominative Case to it, and attracts it to specT, as in (35). We note that given our adoption of a version of PIC2, T could actually still probe Th even if it did not raise through the phase edge (assuming there is no defective intervention, see footnote 10). In the absence of lookahead, however, movement of Th to specAppl happens blindly upon completion of the lower phase and before transfer.

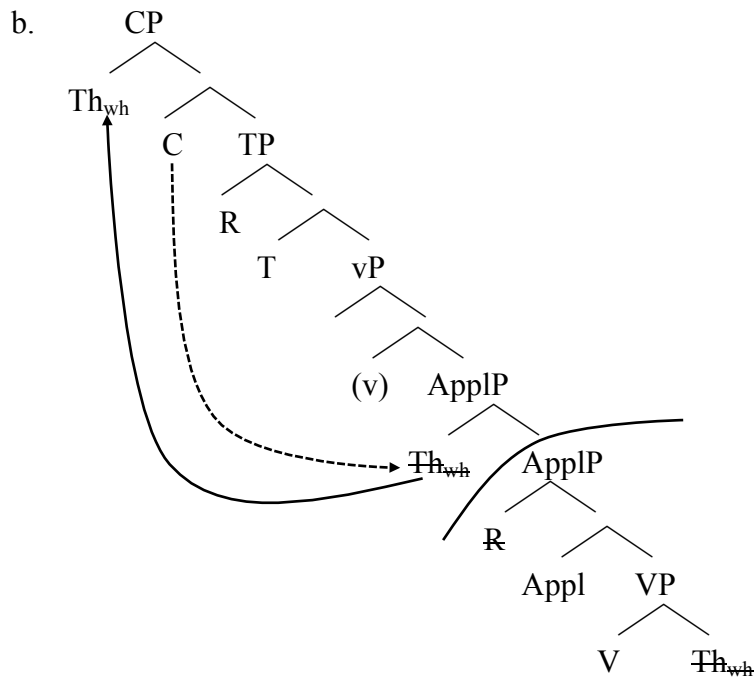
(35) *Simple Th passive* ('The book was given the children')



Now consider what happens with A-bar movement from these passive clauses. In the Recipient passive, Appl assigns Case to the Theme and T agrees with and attracts the Recipient. Because the Theme also has a [uWh] feature, however, it moves to the phase edge, i.e. the outer specAppl, as in (36a). When C is merged, the lower phase ApplP is transferred leaving only the outermost specifier behind, so only the Theme remains, and can move to the C-domain, see (36b).

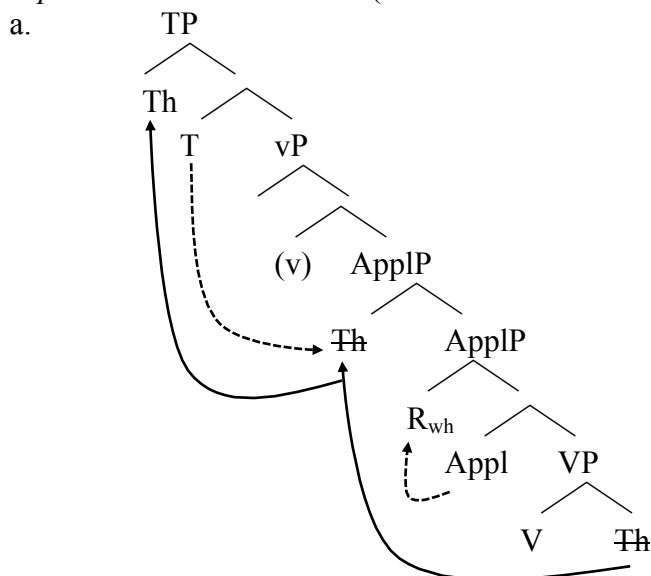
(36) *R-passive with Th extraction* ('Which book were the children given?')



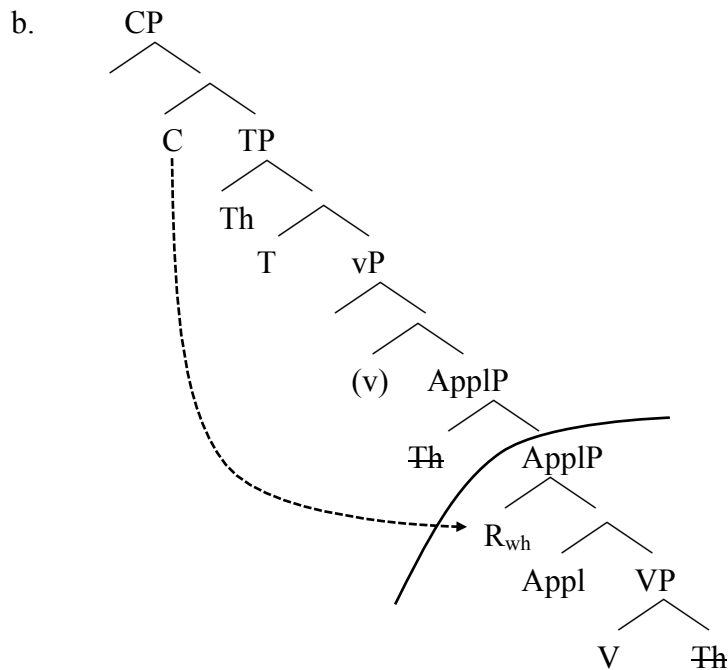


Finally, consider the case of Theme passives with A-bar movement of the Recipient, the combination ruled out by DOMA. As in the simple Theme passive (36), Appl assigns Case to the Recipient and the Theme raises to the phase edge, the outer specAppl, because of its [uCase] feature, from where it is probed by T. This time the Recipient has an unvalued Wh feature [uWh]. When C is merged, all but the outer specifier of the lower phase head Appl is transferred, including the Wh-Recipient, which can thus no longer be probed by C, (37b).¹⁵ The derivation crashes due to the unvalued wh-feature on the Recipient which is transferred along with ApplP.

(37) *Th-passive with R extraction* ('Which children was the book given?')



¹⁵ Note that movement of the inner specifier of Appl to a higher specifier position of ApplP, to avoid too early transfer, is ruled out by antilocality, a condition which rules out movement which does not cross a maximal category boundary (Bošković 1994, Abels 2003, Grohmann 2003).



We can thus account for the asymmetry found in otherwise symmetrical languages (DOMA). If (a) Appl assigns Case to the Recipient, (b) Appl is a phase head in the passive, as the highest functional head of the predicate introducing an argument, and (c) only the outermost specifier of a phase remains after transfer, the Recipient will get transferred along with ApplP as soon as C is merged, and before it can be probed by C. This is legitimate when the Recipient is Case-licensed and non-interrogative, but leads to a crash if the Recipient bears an unvalued (uWh) feature.¹⁶

It should be noted, at this point, that the DOMA arises in essentially the same way as syntactic ergativity under the analyses put forth by Aldridge (2004, 2008) (see also Coon et al. 2014 for a related but distinct proposal). Under Aldridge's proposal, movement of the internal argument to specvP has the effect of trapping the external

¹⁶ If we are right, movement of the Theme to the edge of the lower phase ApplP in the Theme passive of the DOC is the crucial operation which blocks wh-movement of the Recipient, Consider (ii), though.

- (i) There were four students given scholarships.
- (ii) *How many students were there given scholarships?

Holmberg (2002) discusses this and analogous constructions in the Scandinavian languages and English, arguing that (ii) is ill-formed because the Recipient wh-phrase is trapped in the lower phase, just as it is in Theme passives (as we now know), but in (ii) it is not because of Theme movement to the edge of the phase. Sentence (ii) is a special case of a more general pattern, though. Chomsky (2001) discusses the case of (iv):

- (iii) There were many fish caught last night.
- (iv) *How many fish were there caught?

Chomsky (2001) argues that the movement of the object to preverbal position in (iii) is a postsyntactic operation (he names it Th-EX), which therefore cannot feed wh-movement in (iv). Holmberg (2002) argues, on the basis of facts from varieties of Scandinavian, that the movement deriving (iii) is syntactic, and that (iv), just like (ii) is ill-formed because the wh-Recipient gets transferred with the lower phase. However, the theory in Holmberg (2002) cannot straightforwardly be applied to the DOMA. We therefore choose to leave (i, ii, iii, and v) and their relation to DOMA for future research.

(ergative) argument inside the vP phase. According to Aldridge, accusative languages lack an extraction restriction on transitive subjects because either they lack object movement to specvP or they have A-movement of the subject to specTP, mitigating the blocking effect. The DOMA then, is effectively the same interaction observed in syntactically ergative languages but applied to ApplP rather than vP. This is a welcome result as it generalises to accusative languages an effect which was previously thought to be more limited. In syntactically ergative languages, the Theme raises obligatorily to specvP past another argument in transitive contexts (because of the parameterised grammar of these languages). In theme passives of ditransitives, on the other hand, the Theme only raises to the phase edge past another argument in Theme passives. The effect, while grammatically parallel, is therefore more limited in its scope.

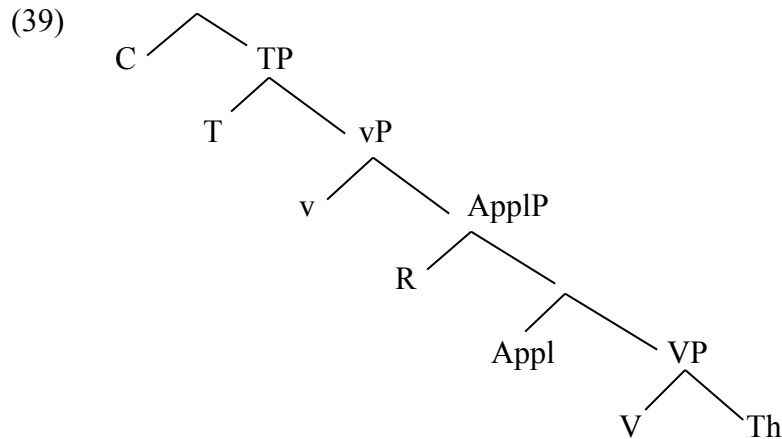
3.5 On Bošković (2014, 2016)

Bošković (2014) proposes a theory which has some features in common with the theory articulated above, and which at first blush looks like a possible alternative to our account of DOMA. It is based primarily on the observation that extraction of modifiers from noun phrases is possible in many languages without articles, for instance Serbo-Croatian, but typically impossible in languages with articles, for instance English, as shown in (1).

- (38) a. Ponosnog_i sam video [t_i oca]. [Serbo-Croatian]
 proud is seen father
 'I saw the/a proud father.'
 b. *Proud I saw the/a father.' [English]

Bošković proposes to explain this contrast on the basis of the following theoretical assumptions: (a) the highest head in what he calls the extended domain of a lexical head (V, N, A, P) is a phase head, (b) only languages with articles have a D-layer in argument noun phrases, and (c) antilocality (Abels 2003, Grohmann 2003) disallows movement of a specifier or adjunct in the projection line of an extended domain to a higher specifier or adjunct position in the same domain. In English, for example, D is the highest head in the nominal phase and adjectives are adjuncts to NP. Extraction from a phase requires prior movement to the edge of that phase, due to the PIC. Thus, in order to be extracted, an adjective needs to first move to specDP in English. This movement is, however, disallowed by antilocality. In Serbo-Croatian, where there is no D, the adjective originates at the edge of the NP phase, and is therefore extractable.

Applying these assumptions to our observations concerning passives of ditransitives, assume, as we have done, that the structure of the DOC is (39):



By Bošković’s assumption (a), *v* (not Appl) is the phase head in passives. To extract the Recipient in a Theme passive, where movement via specTP is not an option, the Recipient will first have to move to the edge of the phase, that is vP. But this is prevented by antilocality. The Recipient is therefore trapped in the ApplP, getting transferred before it can move, as under our theory. In the Recipient passive, the Recipient moves to specTP, while the Theme moves first to the edge of vP, allowed by antilocality, and from there to specCP, as in our theory. Bošković’s approach therefore seems to provide an alternative account for DOMA. However, Bošković’s theory also predicts that extraction of the Recipient will be ruled out in active DOCs. Take (37) to represent an active DOC with a subject (not shown) in specvP. Movement of the Recipient via the edge of vP is again prevented by antilocality, and movement via specTP is obviously not an option (the subject moves there). But as we have pointed out above, extraction of the Recipient is commonplace in many languages, including all symmetric languages discussed in this paper, as shown in section 2. Consider for example Norwegian and Lubukusu:

- (40) a. Hvem har du gitt boka? [Norwegian]
 who have you given the.book
 ‘Who did you give the book to?’
- b. Baa-sooreri ni-bo kuuka a-a-elesy-a [Lubukusu]
 2-boys REL-2 1.grandfather 1SM-PST-give-FV
 chi-khaafu ba-li e-luuchi.
 10-cow 2SM-be at-river
 ‘The boys who grandfather gave the cows are at the river.’ (Wasike 2007:52)

We take this to mean that although Bošković’s (2014, 2016) theory provides a potential account for why the Recipient cannot be extracted in a Theme passive, it does so in the wrong way, namely by ruling out extraction of the Recipient from the lower phase altogether.

Bošković (2016) is relevant in the present context for another reason as well. Recall that our account of the DOMA is based on the condition that only the outermost specifier is the edge of a phase, and therefore remains accessible after transfer of the phase. This condition is at the centre of Bošković’s (2016) theory. In his own words: “In constructions where more than one element is located at the edge

of the same phase, only the highest edge is available for movement and anaphor binding.” (Bošković 2016: 16). However, Bošković (2016: 16-19) specifically argues that a trace does not count for this condition, contrary to what we have assumed above. Consider again our (35b). We claim that movement of the Theme to the outermost edge of ApplP serves to trap the Recipient in the lower phase (ApplP) as it means that the Recipient gets transferred along with ApplP before it can be probed and attracted by C. However, according to Bošković (2016), the fact that the Theme moves on to specTP, leaving only a trace at the edge of ApplP, would mean that the Recipient once again comes to occupy the phase edge and so can be probed and attracted by C (contrary to the DOMA).

The evidence that Bošković provides for the caveat that a trace does not count as highest edge comes from (a) extraction of multiple modifiers of NP in (primarily) Serbo-Croatian, (b) binding of an anaphoric modifier of NP in Serbo-Croatian, and (c) interaction of wh-movement and object shift in Dutch ditransitives. Multiple modifier extraction from NP is exemplified in (41).

Serbo-Croatian (Bošković 2016)

- (41) a. Prodaje onu staru kuću.
 sells that old house
 ‘He/she sells that old house.’
 b. Onu_i staru_j prodaje t_i t_j kuću.
 that old sells house
 ‘He/she sells that old house.’
 c. *Staru onu prodaje kuću.

To recap, only the outermost modifier can be extracted from NP, but if the outermost modifier moves, then the next modifier can move as well, by the caveat that a trace does not count as the highest edge. As shown by (41c), the extracted modifiers must end up in their original linear order. This is ensured by ‘tucking in’ the inner modifier under the outer modifier (Bošković 2016, Richards 2001). Note that this means that the inner modifier moves across the trace of the higher modifier, but not across the chain made up of the moved outer modifier and its trace.¹⁷

This is also the configuration in certain other constructions discussed in the literature where movement of an intervening constituent β in a configuration $[\alpha \dots \beta \dots \gamma]$ makes agreement, movement or binding possible between α and γ , for example (42) (discussed by Bošković 2016: note 20).

Italian

- (42) a. *Gianni_i sembra a María [t_i essere stanco].
 Gianni seems to María to.be tired
 b. A María_j, Gianni sembra t_j [t_i essere stanco].
 to María Gianni seems to.be tired

In (42a), the experiencer object blocks raising of the embedded subject. In (42b),

¹⁷ This would also address the concern of one of the referees for *Linguistic Inquiry* that condition (33) would rule out multiple wh-movement in languages that have it (including most or all Slavic languages). Richards (2001) argues that multiple wh-movement is derived by tucking in, in which case it is not automatically ruled out by (33) under our interpretation. Whether this will account for all of the variation found among the multiple wh-movement languages (see Bošković 2002) is a question we will not try to address.

where the experiencer has moved, its trace does not block subject raising. Again, the raising crosses only the trace, not the chain made up of the moved experiencer and its trace. See Holmberg & Hróarsdóttir (2004) and Chomsky (2005, 2008) for other such cases.¹⁸

Compare this with the structure in (37b): Here probing of the Recipient by C would cross not just the trace of the moved outer specifier, the Theme object, but the head of the chain as well, in specTP. We claim that the Theme, in spite of moving from specvP to specTP, does count as the outer specifier of the ApplP phase for any syntactic relation crossing not just the trace, but the head of the chain as well. In short, a trace is syntactically inert, a chain is not.

The interaction between object shift and wh-movement in Dutch, adduced by Bošković (2016) as evidence that a trace does not count as the edge of a phase, does, on the face of it, look like a more straightforward counterexample for our account of DOMA.

Dutch

- (43) a. *Wat_i zal Jan waarschijnlijk [Marie [t_i geven]]?
 what will Jan probably Marie give
- b. Wat_i zal Jan Marie_j waarschijnlijk [t_j [t_i geven]]??
 what will Jan Marie probably give
 ‘What will Jan probably give Marie?’
 (den Dikken 1995: 198)

Under Bošković’s analysis, in (41a) the Recipient *Marie* blocks movement of the wh-Theme by virtue of the condition that only the outermost edge remains after transfer of a phase (the vP phase, in his terms), but in (41b), where the Recipient has shifted out of vP, it no longer counts as the highest edge. In this case, unlike in (41) and (42), movement of the Theme crosses not just the trace of the Recipient but the shifted head of the chain, *Marie*, as well.

We suggest that the contrast between (43a,b) is, however, not a matter of locality involving phase edges, but instead matter of information-structural effects of syntactic structure. An argument DP left behind in vP, as the Recipient is in (43a), will be interpreted as focus/new information, but a DP Recipient in a DOC cannot be focused; only a PP can (Zwart 2011: 58-61). This is why the Recipient has to shift out of vP in (43a,b).¹⁹

¹⁸ The binding facts that Bošković (2016) discusses exhibit essentially the same configuration: A subject cannot bind an anaphoric possessive NP-modifier across a higher modifier, the adjective *omiljenu* ‘favourite’. However, if the intervening modifier moves to the C-domain, the subject can bind the anaphoric possessor.

- (i) *Marija je prodala omiljenu svoju knjigu.
 Marija is sold favourite her(anaphor) book
- (ii) Omiljenu_j je Marija prodala [t_j svoju knjigu].
 favourite is Marija sold her(anaphor) book
 ‘Marija sold her favourite book.’

The binding relation in (ii) crosses the trace of the intervening adjective only, not the head of the chain.

¹⁹ We have benefited from discussion with Jan-Wouter Zwart about these issues. Bošković (2016: 17) includes (iii) as evidence that object shift of the Recipient is optional. In this case, the Recipient can be old information, yet remain in vP.

- (iii) Jan zal waarschijnlijk Marie het boek geven.

In sum, we suggest that the outer-specifier condition in Boskovic (2016) is the same condition as the one we claim is part of the explanation of the DOMA, but with partly different effects depending on the structure it applies to.

3.6 No DOMA in the Prepositional Dative Construction

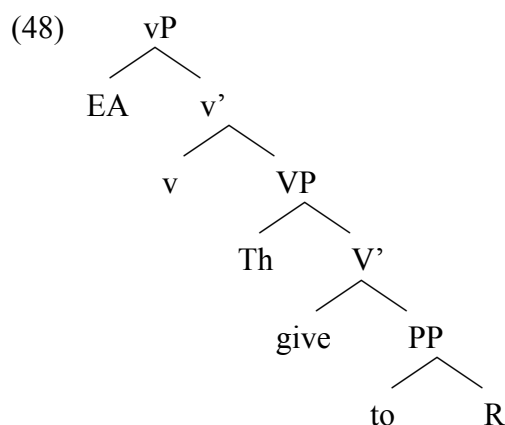
The Prepositional Dative Construction (PDC) is always asymmetric for A-movement; there is a Th-passive but no R-passive. This is presumably because the Recipient is assigned Case by the preposition, and is therefore is not a possible goal for T.²⁰

- (44) The book was given to John.
 (45) *John was given a book to.

The Th-passive may be combined with A-bar movement of the Recipient, with P-stranding (in some languages including English) or pied-piping the PP (most languages). That is to say that there is no counterpart of DOMA in the PDC.

- (46) Who was the book given to?
 (47) To who was the book given?

Although the precise analysis of the PDC has long been controversial (see Larson 1988, Pesetsky 1995, Harley 2002, 2007, Bruening 2010, Hallman 2015, Harley and Miyagawa 2016) there is a degree of consensus that the analysis in (48) is essentially right, for the active PDC.



Here v, V, and P and their arguments make up the full argument structure of the predicate. As the highest argument-introducing functional head, v is the phase head. Movement of V to v yields the typical word order seen in English. There is question whether PP in the PDC is a phase.

Jan will probably Marie the book give
 'Jan will probably give Mary the book.'

This, we suggest, is because in this case the Theme is focused, allowing the non-focused Recipient to remain in vP.

²⁰ Note that English, like Scandinavian languages but unlike many other languages, does actually permit pseudo-passives whereby the object of a preposition is promoted to subject:

- (i) This book was referred to by all the students.

As Hornstein and Weinberg (1981) show, this is only possible where the verb and preposition are string adjacent, which would not be the case in the Prepositional Dative.

In the passive, *v* loses its capacity to assign a role and a Case, and will no longer be phase-head. As a lexical head, *V* will not be a phase head either. Thus, either the passive PDC has no lower phase, like a monotransitive passive in the present theory, or the PP is a lower phase (see Bošković 2014 for discussion). In either case, *wh*-movement of the Recipient in the Theme passive presents no problems. If PP is a phase, the *wh*-Recipient will move initially to the edge of PP, remaining accessible for movement to the C-domain when C is merged and PP gets transferred.²¹ If PP is not a phase, there is no transfer when C is merged, and the *wh*-Recipient will be accessible. This thus accounts for the patterns found in the PDC.

4 Extension 1: asymmetry in the active (Italian)

4.1 The Italian double object construction

Italian (like Greek and French, Anagnostopoulou 2005) seems to have a DOC as diagnosed by the possibility of an inanimate causer subject (see section 3.1 above).

- (49) a. Questo libro mi ha dato alcune idee.
 this book me has given some ideas
 ‘This book gave me some ideas.’
 (*‘This book gave some ideas to me.’)
- b. Questa relazione mi ha insegnato l'arte della pazienza.
 this relationship has taught me the art of patience
 ‘This relationship has taught me the art of patience.’
 (*‘This relationship has taught the art of patience to me.’)

Further evidence that this is indeed the case comes from the fact that the second part of the DOMA also holds in Italian, as we show here.

We assume that the Recipient always receives inherent dative Case, spelled out as *a*, in the Italian DOC (Woolford 2006, Anagnostopoulou 2003 for Greek), and is introduced by a homophonous preposition *a* in the prepositional dative (PDC). This entails that the Recipient never has an active [uCase] feature and can never be probed by T in a passive clause. The result is that Italian DOCs (50b), like prepositional datives (50a), permit only Theme passivization.

- (50) a. *Th-passive PDC*
 Questi libri sono stati dati a Maria dal professore.
 these books are been given to Maria by.the teacher
 ‘These books were given to Maria by the teacher.’
- b. *Th-passive DOC*
 Queste idee sono state date a Maria da questo libro.
 these ideas are been given to Maria by this book
 ‘These ideas were given to Marie by this book.’

Although the Recipient is not available for A-movement, in an active clause, both causer and agent constructions allow *Wh*-movement of Recipients:

²¹ If (48) represents the full structure of the PP, antilocality (Bošković 1994, Abels 2003, Grohmann 2003) will prevent movement of R to the edge of the PP. However, there is good reason to think that PP has more structure, with at least two layers of structure (cf. Cinque 2010, Svenonius 2010), in which case anti-locality will not be an issue.

- (51) a. A chi darà un regalo Maria?
to who give.fut a present Maria
'Who will Maria give a present to?'
- b. A chi ha dato alcune/delle/qualche idee questo libro?
to who has given some ideas this book
*'Who has this book given some ideas to?'
- c. A chi ha insegnato qualcosa di importante la prima relazione?
to who has taught something of important the first relationship
*'Who has his first relationship taught something important to?'

The availability of both Theme passives and A-bar extraction of Recipients in Italian allows us to check whether the two can be combined, testing the applicability of the combination ruled out by the DOMA in an asymmetrical language.

4.2 Passive and Wh-movement

Interestingly, again, the same restriction emerges (for almost all speakers tested) when we try to combine Theme passivization with Wh-movement of the Recipient in the DOC construction (52). Note that the presence of a causer subject ensures that we have an example of DOC rather than PDC:

- (52) *Th-passive, R-extraction, DOC*
- a. *A chi saranno date alcune idee da questo libro?
To who will.be given some ideas by this book
- b. *A chi è stato insegnato qualcosa di importante dalla sua prima relazione?
To who is been taught something of important by.the his first relationship

Crucially, this restriction arises only in the DOC and not in the PDC as it arises only where the by phrase is present and contains a non-agentive subject. That this is the relevant condition is clear from the reactions of informants to examples like (52a-b): "No. I reject the books as a giver." and "'Prima relazione' assumes an improbable agentive reading." or "OK without the by phrase". As predicted, moreover, the same speakers allow Recipient extraction from a Theme-passive if the matrix subject is clearly agentive, i.e. if we are dealing with a PDC, with left dislocation of the subject strongly preferred (probably for processing reasons).²²

- (53) *Th-passive, R-wh, PDC*
- a. ??A chi è stato dato questo libro dal professore?
To who is been given this book by.the teacher
- b. ?A chi questo libro è stato dato dal professore?
To who this book is been given by the teacher
'Who was this book given to by the teacher?'

²² With the examples in (50), left dislocation of the subject does not help, and respondents replied that there was no way to save them (except by omission of the by-phrase).

- c. Questo libro, a chi è stato dato dal professore?
 This book, to who is been given by.the teacher
 ‘This book, who was it given to by the teacher?’

This is the same gap observed in Norwegian, NW English, Lubukusu and Zulu, labelled DOMA and repeated in (54), with the exception that, for independent reasons, Italian does not allow Recipient passives.

- (54) Double object movement asymmetry (DOMA)
~~✓ R-passive and Th-extraction (‘Which book were the children given?’)~~
 × Th-passive and R-extraction (* ‘Which children was the book given?’)

4.3 Italian phasehood

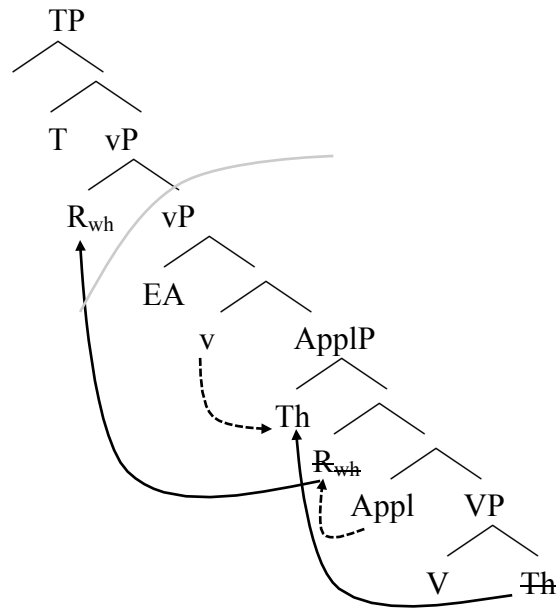
A remaining question is what happens in active clauses in Italian. The Recipient in a DOC always receives dative case from Appl in Italian. It appears that in active clauses, the Theme always moves to the edge of ApplP, as a matter of parametric choice (i.e. Appl has an EPP-feature) and receives Case from v. This is shown by the word order and c-command relations Theme>Recipient (for the same speakers whose judgements are reported above). In (55a), the pronoun (*il*) *suo* is a variable bound by the QP ‘each imperfection’. In (55b) the pronoun cannot have this interpretation. This follows if the Theme always c-commands the Recipient in the Italian DOC.

- (55) a. L’ispezione ha mostrato [ogni imperfezione]_i al suo_i responsabile.
 the inspection has shown each imperfection to.the his responsible
 ‘The inspection showed the person responsible for it each imperfection.’
 b. *L’ispezione ha mostrato le sue_i imperfezioni a [ogni professore]_i.
 the inspection has shown the his imperfections to each teacher
 ‘The inspection showed every teacher his/her own imperfections.’

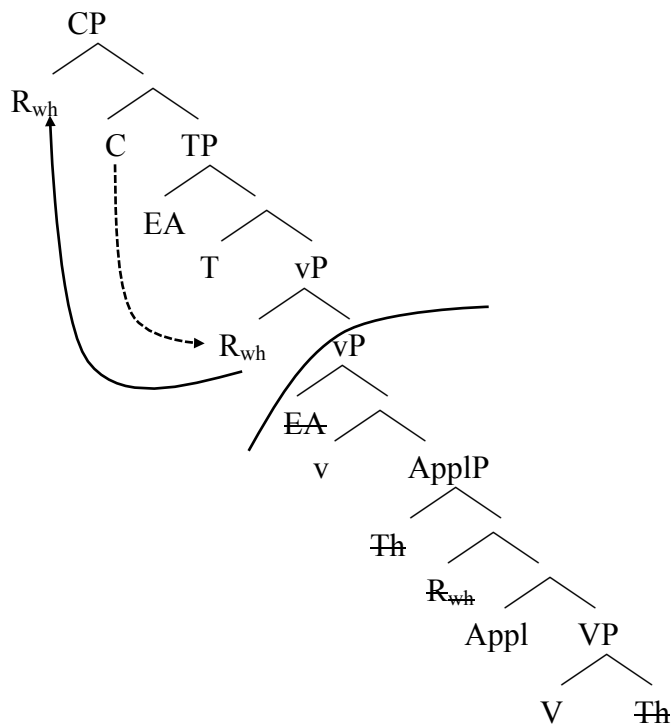
If ApplP were a phase in active contexts, given that the Theme always raises to specApplP, we would predict a general restriction on Recipient extraction in Italian DOCs, contrary to fact. However, if only vP is a phase in active contexts, and ApplP is not (as entailed by our definition of phase head in (31)), the analysis of the DOMA in section 3.3. can be straightforwardly extended to Italian.

Below, we show the active derivations for Recipient extraction in Italian, taking as our starting point that Appl is not a phase but v is, in active contexts. As motivated above, Appl always licenses the Recipient, and the Theme moves to specApplP to receive Case from v, as represented in (56a). If the Recipient has a [uWh] feature, it will move to the outer specifier of the lower phase, which is specvP in the active. From here it is still accessible when the higher phase head C is merged and the rest of the lower phase is transferred (56b). The same analysis holds for Theme extraction in the active: it will move via the edge of vP.

(56) a.



b.



However, in a Theme passive, the derivation will proceed exactly as in Norwegian. The Recipient receives Case from Appl and the Theme raises to specAppl because of its [uCase] feature. This movement serves to trap the Recipient in specAppl for the reasons outlined above. The Italian facts can therefore be taken as further evidence in favour of our account of the DOMA and more importantly for the claim that ApplP is a phase in passive but not active contexts. In active contexts in Italian, movement of the Theme to specApplP does not affect A-bar extraction possibilities, but in the passive it does. This is also the reason why syntactic ergativity is a more pervasive effect than the DOMA (which we see only in Theme passives). If the relevant “crossing” configuration arises in vP, there will be an A-bar extraction restriction in

active contexts, if it arises only in ApplP, the effect will only be observed in passives, where ApplP becomes a phase.

5 Extension 2: object marking in passives

Zulu and Lubukusu, being ‘symmetrical’ languages,²³ allow either object in a DOC to be object-marked by a prefix on the verb, as shown above in (26) and (27), repeated below as (57) and (58).

Zulu (Zeller 2011, see also Zeller 2012)

- (57) a. UJohn u-nik-a abantwana imali.
1a.John 1SM-give-FV 2.children 9.money
‘John is giving the children money.’
- b. UJohn u-**ba**-nik-a imali (abantwana).
1a.John 1SM-2OM-give-FV 9.money 2.children
‘John is giving them money (the children).’
- c. UJohn u-**yi**-nik-a abantwana (imali).
1a.John 1SM-9OM-give-FV 2.children 9.money
‘John is giving it to the children (the money).’

Lubukusu (Diercks & Sikuku 2015:38)

- (58) a. N-**a**-mu-w-a sii-tabu.
1SG.SM-1OM-give-FV 7-book
‘I gave him the book.’
- b. N-a-**si**-w-a Wekesa.
1SG.SM-PST-7OM-give-FV 1.Wekesa
‘I gave it to Wekesa.’

However, in passive clauses an asymmetry again emerges: the Theme can be object-marked in a Recipient-passive, but the Recipient cannot be object-marked in a Theme-passive, as illustrated in (59) and (60).

Zulu (Adams 2010: 26)

- (59) a. *R-passive with Th object-marked*
Aba-ntwana ba-ya-**yi**-fund-el-w-a in-cwadi.
2-child 2SM-PRES.DJ-9OM-read-APPL-PASS-FV 9-book
‘The children are being read the book.’
- b. *Th-passive with R object-marked*
* In-cwadi i-ya-**ba**-fund-el-w-a aba-ntwana.
9-book 9SM-PRES.DJ-2OM-read-APPL-PASS-FV 2-children
int. ‘The book is being read to the children.’

Lubukusu (Justine Sikuku p.c. July 2015)

- (60) a. *R-passive with Th object-marked*

²³ See footnote 6 – we leave to one side the variation in symmetry for different semantic roles (e.g., instruments, locatives).

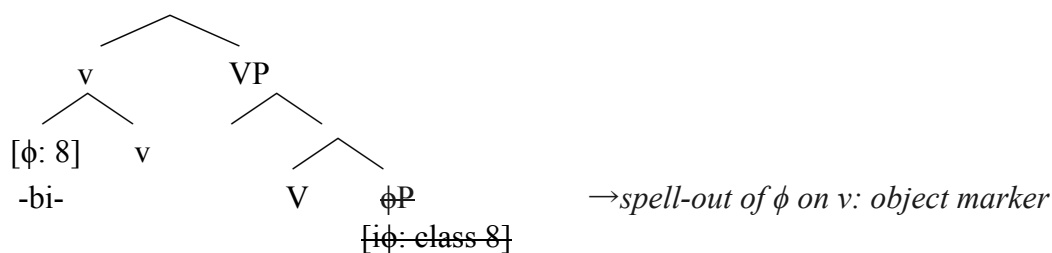
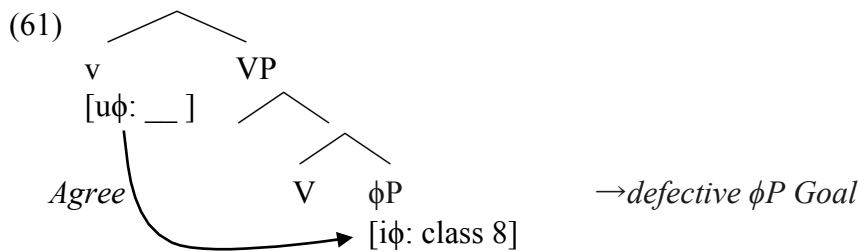
Baa-sooreri ba-a-**chi**-eeb-w-a (chi-khaafu)
 2.boys 2SM-PAST-10OM-give-PASS-FV 10-cows
 ‘The boys were given them (cows)’

b. *Th-passive with R object-marked*

?? Chi-kaafu cha-a-**ba**-eeb-w-a (baa-sooreri)
 10-cows 10SM-PST-2OM-give-PASS-FV 2-boys
 ‘Cows were given to them (the boys)’

These facts follow from the theory we have articulated above, according to which ApplP, not vP, is a phase in the passive DOC. Being a phase, Appl in the passive also has a ϕ probe. We discuss the theoretical implications of this proposal below and first demonstrate how this derives the Zulu and Lubukusu facts.

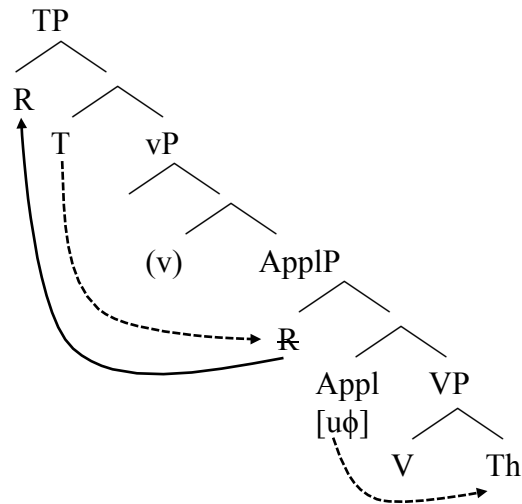
We take Roberts’ (2010) approach to object marking as agreement with a defective Goal (see Iorio 2014 and Van der Wal 2015b for this account applied to object marking in Bantu languages). Roberts (2010) proposes that a Goal is defective if it has a subset of the features of the Probe, as will be the case if an object is a ϕ P pronoun but not if it is a full DP. Since Probe and Goal in such a configuration share the same features, it is indistinguishable from a chain, and in chains normally only the highest copy is spelled out; copies other than the highest copy in a chain are deleted at PF.²⁴ Applied to object marking, this means that in an active clause the ϕ Probe on v will be spelled out as an object marker if the Goal object is defective (any coreferring DPs can be present but only as dislocated constituents):



In the passive, not v but Appl is the phase head and has a ϕ probe. The derivation then proceeds as follows. In a Recipient passive, Appl agrees for Case and ϕ -features with the Theme, and T agrees with and attracts the Recipient, as represented in (62). If the Theme is a defective Goal, then the spell out of the Theme’s ϕ features on Appl is visible as an object marker on the verb. This derives the grammatical object marking of the Theme in a Recipient passive.

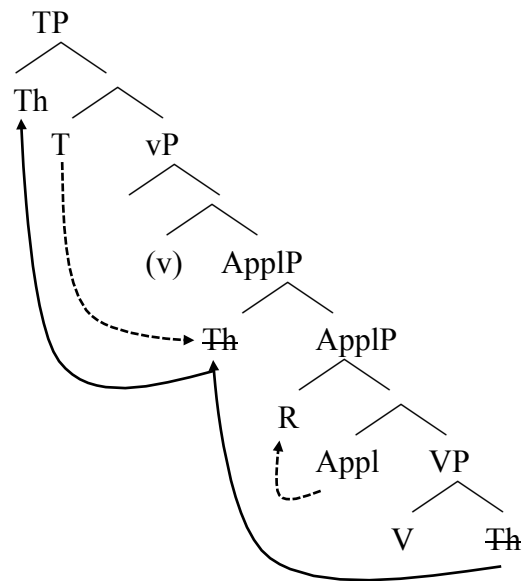
²⁴ The co-occurrence of an object marker and overt DP object (so-called “doubling” object marking) is explained by a bigDP structure of doubled objects, whereby the object marker spells out agreement with the extra layer of ϕ features, separately from the DP - see Van der Wal (2015b).

(62)



In a Theme passive, Appl agrees for Case and ϕ features with the Recipient in its specifier, the Theme with its [uCase] feature moves to the outer spec of ApplP, where it is probed by T and raises to specT, as in (63). Under the defective Goal approach to object marking, the highest copy in the chain (formed by the Recipient and the Appl probe) will be the Recipient phrase itself and not Appl. This means that the object marker cannot be spelled out, deriving the ungrammaticality of object-marking the Recipient in a Theme passive.

(63) *



Positing $u\phi$ features and phasehood on the Appl head in passive clauses thus accounts for the asymmetries in passives, both with respect to movement and object marking.

6 Further factors influencing the DOMA²⁵

6.1 Full symmetry: Kinyarwanda and Luganda

The Bantu languages Kinyarwanda (Rwanda) and Luganda (Uganda) are symmetrical for object marking, passive (64) and relatives (65), and the DOMA does not hold, as illustrated in (66) and (67) for the respective languages.

Kinyarwanda (Ngoboka 2005: 88, glosses adapted)

(64) *symmetrical passive, and object marking of either still possible*

- a. Umusore y-a-hiing-i-ye umugore umurima.
1.young.man 1SM-PST-plough-APPL-ASP 1.woman 3.field
'The young man ploughed the field for the woman.'
- b. Umugore y-a-wu-hiing-i-w-e n' umusore.
1.woman 1SM-PST-3OM-plough-APPL-PASS-ASP by 1.young.man
lit. 'The woman was it ploughed for by the young man.'
- c. Umurima w-a-mu-hiing-i-w-e n' umusore.
3.field 3SM-PST-1OM-plough-APPL-PASS-ASP by 1.young.man
'The field was ploughed (for) her by the young man.'

(65) *symmetrical relative* (Ngoboka 2005: 63)

- a. imyeenda umugabo y-a-gur-i-ye umwaana
10.clothes 1.man 1SM.REL-PAST-buy-APPL-ASP 1.child
'the clothes that the man bought for the child'
- b. umwaana umugabo y-a-gur-i-ye imyeenda
1.child 1.man 1SM.REL-PAST-buy-APPL-ASP 10.clothes
'the child for whom the man bought clothes'

(66) *symmetrical passive & relative* (Jean Paul Ngoboka, p.c. June 2015)

- a. Abáana améézà a-záa-gur-ir-w-a (barasiinziiriye).
2.children 6.table 6SM-FUT-buy-APPL-PASS-FV
'The children for whom the tables will be bought (are sleeping now).'
- b. Améézà abáana ba-záa-gur-ir-w-a (azaagera ku ishuúri ejó).
6.tables 2.children 2SM-FUT-buy-APPL-PASS-FV
'The tables that will be bought for the children (literally: ... that the children will be bought) (will arrive at the school tomorrow).'

Luganda

(67) *symmetrical passive & relative*

²⁵ Another language which appears to be problematic, which we do not discuss here, is Greek (see Anagnostopoulou 2003). In Greek, Wh-movement of a Recipient out of a Theme DOC passive is perfectly well formed:

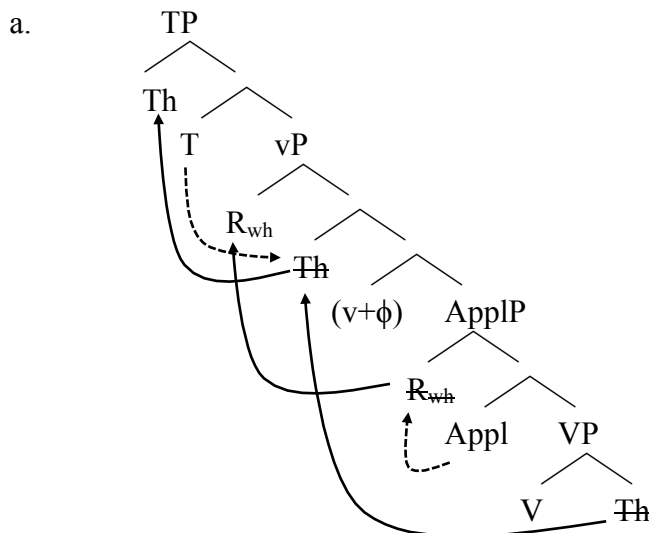
- (i) Tinos dothike to vivlio? [Greek: Anagnostopoulou 2003]
who.GEN gave-NAct the book
'To who was the book given?'

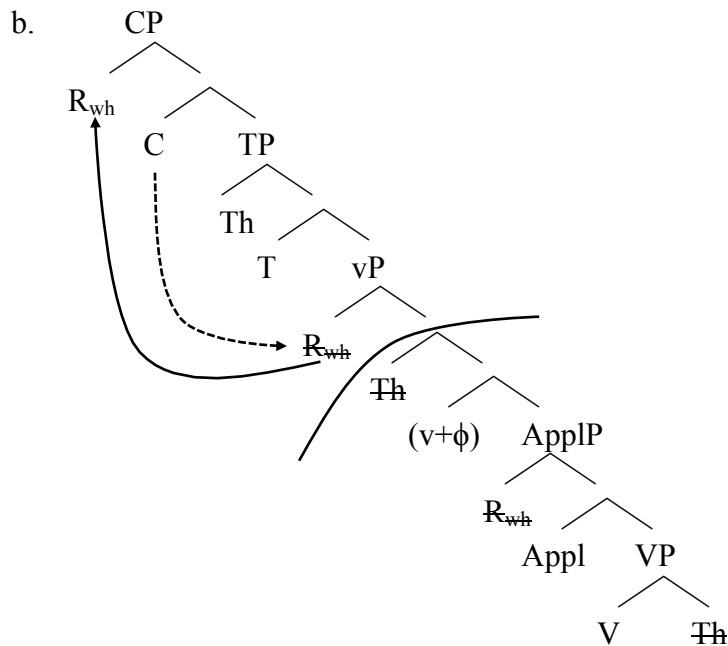
We have no good explanation for this fact at present and leave it as a matter for future research.

- a. N-jagala engoye abaana z-e ba-a-gul-ir-w-a.
 1SG.SM-want 10.clothes 2.children 10-REL 2SM-PAST-buy-APPL-PASS-FV
 ‘I want the clothes that the children were bought.’
- b. N-jagala abaana engoye b-e z-a-gul-ir-w-a.
 1SG.SM-want 2.children 10.clothes 2-REL 10SM-PAST-buy-APPL-PASS-FV
 ‘I want the children that the clothes were bought (for).’

We can potentially understand these data if we assume that even in the passive little *v* does not lose its phasehood in these languages. If *v* is a phase, it creates an edge for both the Theme and the Recipient to escape the lower phase; that is, both arguments are moved to the specifier of *v* and internally merged there. This contrasts with the scenario where Appl is a phase and *v* is not (as explained above), since in that case the Recipient is *generated* in the specifier of Appl (externally merged), and only the Theme *moves* to the specifier of the Appl phase head. When *both* arguments move, the Recipient and the Theme can merge in either order, presumably because the movement is not driven by an attracting head for feature valuation but by uFs on the arguments themselves. There is, however, a difference between the two arguments: one moves for uCase (A) and the other for uWh (A-bar). We suggest that the A-bar-moving argument always forms the outer specifier, because it cannot tuck in under an A-moving argument (much like McGinnis 1998 proposes for thematic specifiers, cf. Richards 1999, 2001). This means that either argument can become the subject and either argument can be relativised - exactly as the data for Kinyarwanda and Luganda above show. The DOMA-violating derivation with tucking in is represented in (68).

(68) *Recipient extraction from a Theme passive when v is still a phase*
(i.e. in a language with ϕ on v and Appl)





The question is now why *v* would still be a phase in the passive in these languages, as opposed to other (Bantu) languages that do obey the DOMA. A crucial difference between Zulu and Lubukusu on the one hand, and Kinyarwanda and Luganda on the other hand, is that the former allow only one object marker (69), whereas the latter allow multiple object markers (70).

Zulu (S42, Zeller 2012: 220)

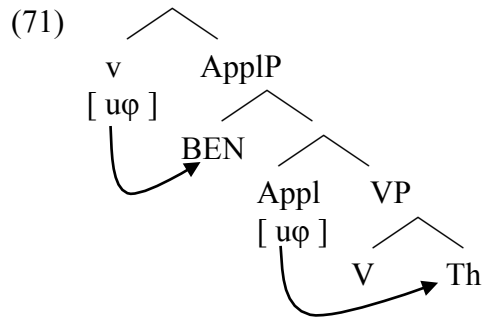
(69) a. * U-John u-**ba**-zi-nik-ile.
1a.John 1SM-2OM-9OM-give-FS

b. * U-John u-**zi**-**ba**-nik-ile.
1a.John 1SM-9OM-2OM-give-FS
int. 'John gave them to them.'

Kinyarwanda (JD62, Baudoin-Lietz et al. 2004: 183)

(70) Umugoré a-ra-na-ha-ki-zi-ba-ku-n-someesheesherereza.
1.woman 1SM-DJ-also-16OM-7OM-10OM-2OM-2SG.OM-1SG.OM-read.CAUS.CAUS.APPL.APPL
'The woman is also making us read it (book, cl. 7) with them (glasses, cl.10)
to you for me there (at the house, cl.16).'

This parametric variation is captured by the presence of ϕ features on only *v* for the former type of languages and ϕ features on multiple lower functional heads in the latter type of languages (see Van der Wal 2015 and submitted for a featural account of object marking in Bantu), resulting in multiple object marking, as in (71). We speculate that the independent presence of ϕ features on *v* and Appl in these languages is what prevents *v* from losing its phasehood in the passive (cf. Gallego 2010).



Kivunjo Chaga is another language that at first sight is completely symmetrical, this indeed being the language that Bresnan & Moshi (1990) analyse in their seminal paper on object symmetry. They also provide data on the interaction of passive and other object properties, which show that Chaga, like Kinyarwanda and Luganda, does not obey the DOMA (72).

Chaga (Bresnan & Moshi 1990: 165)

(72) *Th passive, R extraction*

M-ka k-í-lyì-í-¹ó nyí Mkàfit¹ínà.
 1-wife 7SM.REL-PRES-eat-APPL-PASS COP Mkafitina
 ‘The woman for/on whom it is being eaten is Mkafitina.’

If our analysis is on the right track, we expect Chaga to also allow multiple object markers, a prediction which is indeed borne out, as shown in (73).

Chaga (Moshi 1998: 142)

(73) Mangí n-á-lé-í-m-zrík-a.

1.chief FOC-1SM-PST-9OM-1OM-send-FV
 ‘The chief sent him with it.’

Unfortunately no data are available on the opposite combination of an R passive with Th extraction, which would be crucial to understand the full interaction, especially given the unexpected extraction asymmetry that Bresnan & Moshi (1990) show for Chaga active clauses, where only the Theme can be extracted (74). We therefore have to leave this matter for further research.

Chaga (Bresnan & Moshi 1990: 159)

(74) a. * M-ka a-i-lyi-i-a k-elya nyi-ichu.
 1-wife 1SM.REL-PRES-eat-APPL-FV 7-food COP-1.DEM
 int. ‘The wife for whom he is eating the food is this one.’

b. K-èlyá á-í-lyì-í-à m-kà ki-pùsù.
 7-food 1SM.REL-PRES-eat-APPL-FV 1-wife 7-rotten
 ‘The food which he is eating for the wife is rotten.’

6.2 Animacy effects: Sesotho

Morolong and Hyman (1977) present a detailed exposition of word order, including passives and relatives, in ditransitive applicative constructions in Sesotho, arguing that the relative animacy or humanness of the two objects is a crucial factor in

determining extraction possibilities. Some of their observations initially look like a problem for our theory of the DOMA. The data in (75) look like an instance of the DOMA: Theme extraction from a Recipient passive is good, Recipient extraction from a Theme passive is bad. Consider (76), however.

Sesotho (Morolong & Hyman 1977:209, glosses added)

(75) *inanimate Theme relative out of animate Recipient passive*

- a. lijó tséò ngoaná á-lí-phehéts-o-èng
 10.food 10.REL 1.child 1SM-10OM-cook-PASS-REL
 ‘the food that the child was cooked’

animate Recipient relative out of inanimate Theme passive

- b. * ngoaná éò lijó lí-mó-phehéts-ó-èng
 1.child 1.REL 10.food 10SM-10OM-cook-PASS-REL
 ‘the child that the food was cooked (for)’

(76) *animate Theme relative out of inanimate Recipient*

- a. * baná báò mokété ó-bá-bitselít-s-o-èng
 2.children 2.REL 3.feast 3SM-2OM-call-PASS-REL
 ‘the children that were called for the feast’
 lit. ‘the children that the feast was called’

inanimate Recipient relative out of animate Theme passive

- b. mokété óò baná bá-ò-bitselít-s-o-èng
 3.feast 3.REL 2.children 2SM-3OM-call-PASS-REL
 ‘the feast that the children were called for’

In these examples the Recipient is ‘the feast’, an inanimate entity, while the Theme is ‘the children’, an animate, human entity. In (76a), Theme extraction from a Recipient passive is bad, and in (76b), Recipient extraction from a Theme passive is good. This is the exact inverse of the DOMA discussed in previous sections. This suggests that in Sesotho the DOMA may be dependent on the relative animacy of the two objects, which is not predicted by the account provided for the DOMA in the previous sections.

Before addressing the special case of Sesotho, we first show that a similar effect is absent from Norwegian. In (59), the Recipient is inanimate while the Theme is animate. Example (77a) is the active DOC, (77b) is a Recipient passive, while (77c) is a Theme passive. All the sentences are somewhat marginal, but roughly to the same degree.²⁶

Norwegian

(77) *inanimate Recipient, animate Theme*

- a. De ga parken en gartner.
 they gave the.park a gardener
 ‘They gave the park a gardener.’
 b. Parken ble gitt en gartner.
 the.park was given a gardener
 ‘The park was given a gardener.’

²⁶ Many thanks to Kari Kinn for data and discussion.

- c. Gartneren ble gitt parken (for å gi den en ordentlig overhaling).
the.gardener was given the.park to give it a proper makeover
'The gardener was given to the park (to give it a proper makeover).'

The sentences (78) and (79) test for the DOMA.

- (78) *animate Theme movement out of inanimate Recipient passive*
Gartneren som parken ble gitt viste seg å være udugelig.
the.gardener that the.park was given showed SELF to be useless
'The gardener that the park was given turned out to be useless.'

- (79) *inanimate Recipient movement out of animate Theme passive*
*Parken som gartneren ble gitt var i svært dårlig tilstand.
the.park that the.gardener was given was in very bad state
intended: 'The park that the gardener was given to, ...'

These examples show no effect of animacy as in the corresponding Sesotho examples. Instead, (78) and (79) show the effect of the DOMA, just like the canonical examples in earlier sections with animate Recipient and inanimate Theme: Extraction of the Theme from a Recipient passive is good, extraction of the Recipient from a Theme passive is bad.

We therefore need to establish what is special about Sesotho as opposed to other languages like Norwegian. Morolong and Hyman (1977) demonstrate that the following condition holds on the word order of ditransitive verb phrases in Sesotho:

[W]hen two nouns follow the verb, one of which is human, the other of which is nonhuman, the human noun must, independent of its semantic case (BEN or ACC), directly follow the verb. When both nouns are nonhuman [...] or both nouns human /.../ both word orders are possible, [...].
(Morolong and Hyman 1977: 203)

This is shown by the following examples: (80) involves two objects distinct in humanness, whereas (81) shows the combination of two objects being either both non-human or both human.

Sesotho (Morolong & Hyman 1977: 202-203, glosses added)

- (80) a. Ke phehétse ngoana lijó.
1SG.SM cook.APPL 1.child 5.food
'I cooked food for the child.'
- b. *Ke phehétse lijó ngoana.
1SG.SM cook.APPL 5.food 1.child
- c. Ke bitselelitse bana mokéte.
1SG.SM called.APPL 2.children 3.feast
'I called the children for the feast.'
- d. *Ke bitselelitse mokéte bana.
1SG.SM called.APPL 3.feast 2.children

- (81) a. Ke phehétsé mokété lijó.²⁷
 1SG.SM cooked.APPL 3.feast 5.food
 ‘I cooked food for the feast.’
- b. Ke phehétsé lijó mokéte.
 1SG.SM cooked.APPL 5.food 3.feast
 ‘I cooked food for the feast.’
- c. Ke bitselítsé morena baná.
 1SG.SM called.APPL 1.chief 2.children
 ‘I called the chief for the children.’
 ‘I called the children for the chief.’
- d. Ke bitselítsé baná morena.
 1SG.SM called.APPL 2.children 1.chief
 ‘I called the chief for the children.’
 ‘I called the children for the chief.’

We assume that the verb phrase in (80a) and other sentences with R>Th order has the structure we have assumed throughout this paper for the DOC:

- (82) [_{VP} EA [_{V'} V [_{AppIP} R [_{AppI'} Appl [_{VP} V Th]]]]]

Our take on Morolong and Hyman’s (1977) word order condition is a structural condition that the human argument has to be the higher one of the internal arguments in the predicate, if they differ in animacy/humanness. More concretely, we hypothesise that the Sesotho ditransitive predicates can have the structure in (82), the standard structure with the Recipient in specAppIP c-commanding the Theme in VP, or the structure in (83), with the Theme in specAppIP c-commanding the Recipient in VP. In other words, Appl would be the introducer of the second object, which may be the Recipient or the Theme.

- (83) [_{VP} EA [_{V'} V [_{AppIP} Th [_{AppI'} Appl [_{VP} V R]]]]]

If one of the objects but not the other is human, encoded as a syntactic feature, then that object will be in specAppIP. If both are human, then either structure is allowed, and if neither is Human, then either structure is also allowed. Crucially, though, Appl will always assign Case to the Recipient, upwards in (82), downwards in (83). In that respect, Appl does have a privileged relation to the Recipient.

As discussed above, Norwegian, English, and many other languages have two structures for ditransitive predicates, the DOC (with R>Th order) and the PDC (with Th>R order). As there is no evidence of a preposition in the Th>R construction in Sesotho, and since the morphology of the verb is the same as in the R>Th construction, we do not consider the Th>R construction in Sesotho to be a PDC. Instead, it would be a case of inverse DOC, as found in Icelandic, for example

²⁷ In contrast to Morolong & Hyman (1977), the two Sesotho speakers we consulted did not find (78a,b) acceptable.

(though under different conditions than in Sesotho; see Holmberg and Platzack 1995: 205-207).

Under this analysis most of the facts fall into place. Consider first (75a): the Recipient is human and the Theme non-human, so this is an instance of (82), and the sentences exemplify the DOMA. The Recipient passive with Theme relativisation is unproblematic, but deriving (75b) is impossible because the Recipient gets trapped inside the lower phase when the Theme undergoes movement to specTP via the outer spec of ApplP, as detailed in sections 3 and 4 for a number of other languages.

Now consider (76): In this case the Theme is human and the Recipient (the feast), is non-human. The only structure possible here is (83) and the challenge is in deriving a passive from (83). As (84) shows, a Theme passive is fine, but a Recipient passive is not.²⁸

Sesotho (Morolong & Hyman 1977:203, glosses added)

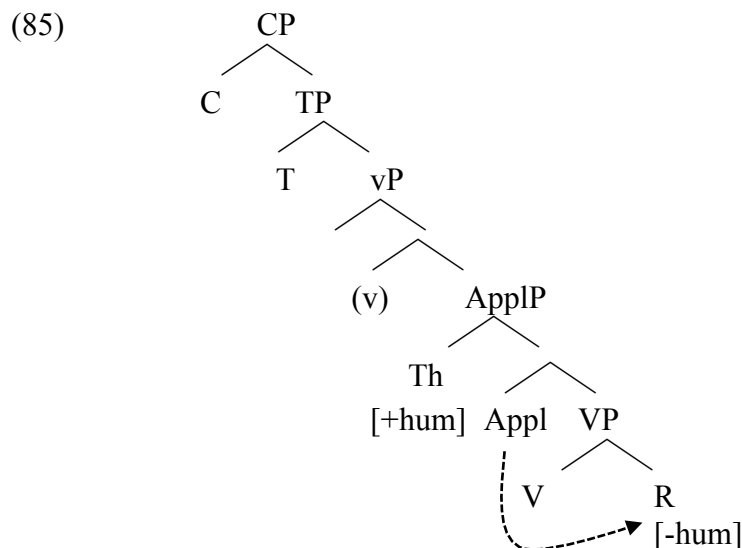
(84) *inanimate Recipient passive with animate Theme*

- a. Baná bá-bítselítso-é mokété.
 2.children 2SM-call-PASS-FV 3.feast
 ‘The children were called for the feast.’

animate Theme passive with inanimate Recipient

- b. *Mokété ó-bítselítso-é baná.
 3.feast 3SM-call-PASS-FV 2.children
 (lit. ‘For the feast was called the children.’)

The thematic structure for (81a-b) is as in (85).



The Theme passive is straightforwardly derived from (85): Appl assigns Case to the Recipient and the Theme is probed by T and moves to specTP, resulting in (84a). The Recipient passive in (84b) cannot be derived, though, since the Recipient is assigned Case by Appl, and is thereby deactivated and not probeable by T. Thus, in Sesotho a non-human Recipient cannot become the subject of a passive in the presence of a

²⁸ One of our Sotho speakers finds this sentence acceptable; the other indicates a strong preference to interpret (84b) as ‘The feast was called for the children’..

human Theme, due to the condition that requires the human object to be externally merged higher than the non-human one.

Now we need to return to (76), the sentences which appeared to show ‘inverse DOMA’. Example (76a) is ungrammatical because it is impossible in the first place to derive a Recipient passive with a non-human Recipient, making the extraction of the Theme irrelevant. The inverse in (76b) is derived from the structure (85): the human Theme is probed by T and moves to specTP. The Nonhuman Recipient moves initially to the outer spec of ApplP, and when C is merged, to specCP. The timing of the movements, the Theme moving to specTP before C is merged, ensures that the Recipient can move to specCP.

If the objects are equal in humanness, either object can be passivised or extracted, as shown in (86). It is interesting to note that (86c,d) are marked ungrammatical in Morolong and Hyman (1977), but the two speakers we consulted find them perfectly acceptable.

Sesotho (Morolong & Hyman 1977:209, glosses added and judgements adjusted)

(86) *animate Recipient and Theme*

a. baná báò morena á-bá-bítselfits-o-èng
 2.children 2.REL 1.chief 1SM-2OM-call-PASS-REL
 ‘the children that the chief was called’

b. morena èò baná bá-mó-bítselfits-o-èng
 1.chief 1.REL 2.children 2SM-1OM-call-PASS-REL
 ‘the chief for whom the children were called’

inanimate Recipient and Theme

c. lijó tséò mokété ó-lí-phehéts-o-èng
 10.food 10.REL 3.feast 3SM-10OM-cook-PASS-REL
 ‘the food that the feast was cooked’

d. mokété óò lijó lí-ó-phehéts-o-èng
 3.feast 3.REL 10.food 10SM-3OM-cook-PASS-REL
 ‘the feast for which the food was cooked’

These constructions are derived in our analysis as follows: (86a) is a straightforward DOC, where the Theme *morena* ‘(the) chief’ moves first to the outer spec of ApplP, the Recipient *baná* ‘(the) children’ is probed by T and moves to specTP, and when C is merged, the relativized Theme moves to specCP. The same holds for (86c). In contrast, (86b) is derived from the inverse DOC in (85): the Theme *baná* moves to specTP, and the Recipient *morena* moves to specCP via the edge of ApplP. And again the same holds for (86d).

In conclusion, what the case of Sesotho shows is that animacy or humanness can play a significant role in ditransitive constructions in some languages, while other languages (including Norwegian) show no effect, or at least no categorical effect of this feature in the corresponding constructions. Although questions remain, the movement asymmetry that we have observed in many other languages is found in Sesotho as well, despite appearances: a higher internal argument cannot be extracted from a passive in which the lower internal argument has been promoted to subject, whereas the opposite scenario is fine. Furthermore, the structural explanation that we

have proposed is not undermined by the Sesotho facts, although it is, to some extent, complicated by them.

7 Conclusion

We have identified an asymmetry in languages that are (often) otherwise symmetrical in double object constructions, which appears in a combination of passivisation and extraction for Wh questions or relativisation:

- (87) Double object movement asymmetry (DOMA)
✓ Th-extraction out of an R-passive (‘Which book were the children given?’)
× R-extraction out of a Th-passive (* ‘Which children was the book given?’)

This asymmetry follows from the interaction of variable phasehood and the derivational ordering of operations. While *v* is the phase head in an active DOC, Appl (not *v*) is the phase head in a passive DOC, because it is the highest functional head introducing an argument. Given that only the outermost specifier of a phase remains after transfer of the phase, a passivized Theme, moving initially to the edge of the phase ApplP, will prevent extraction of the Recipient which is the inner specifier of ApplP. Given that transfer of the lower phase only happens when C is merged, the Recipient passive does not have the same problem. It is possible for the Recipient to move to specTP before the lower phase gets transferred, whether or not the Theme is extracted.

A similar asymmetry is also seen in the interaction of passivisation and object marking in the Bantu languages Zulu and Lubukusu: the Theme can be object-marked in a Recipient-passive, but the Recipient cannot be object-marked in a Theme-passive. This, too, is a consequence of Appl being the phase head in the passive DOC, in the context of the theory of agreement in Roberts (2010).

Italian looks initially like it has no DOC with lexical DPs, but only a PDC, as the unmarked order is Theme>Recipient. On closer inspection, however, Italian has a DOC, and does exhibit the DOMA. This is relevant not only because it provides novel evidence that Italian has both the DOC and PDC, but also because it provides crucial evidence that ApplP behaves like a phase head only in passive contexts. In Italian, the Theme moves to spec ApplP in active contexts, but Recipient-extraction is fully grammatical. Facts from Sesotho show that we need to pay attention to animacy as another factor that may restrict the movement of the arguments of ditransitives in at least some languages.

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Abbreviations and symbols

Number refer to noun classes, but to persons when followed by sg/pl. Strikethrough indicates the origin of a moved phrase. Dotted arrows indicate Agree, solid arrows indicate move.

APPL	applicative
BEN	benefactive
COP	copula
DJ	disjoint
DOC	double object construction
FOC	focus
FV	final vowel
Nact	non-active
OM	object marker
PASS	passive
PST	past
PDC	prepositional dative construction
PIC	phrase impenetrability condition
R	recipient
REL	relative
RS	relative suffix
SM	subject marker
Th	Theme

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