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 a range of different languages, including languages that are known to be symmetrical for both A- and A-bar movement in the double object construction (DOC): A Theme object can be extracted (A-bar-moved) out of a Recipient (Goal) passive, but a Recipient cannot be extracted from a Theme passive. We assume that the DOC has the format [$_{\text{ApplP}}$ Recipient [$_{\text{Appl'}}$ Appl [$_{\text{VP}}$ V Theme]]]], where languages vary in the Case-assigning properties of Appl. In symmetrical languages Appl can assign Case to either Recipient or Theme. We propose that ApplP, not vP, is the lower, thematic phase in passives, as Appl is the highest functional thematic head introducing an argument, and that there is a single escape hatch from phases. In Theme passives, the Theme moves initially to the edge of ApplP, and subsequently to specTP. This blocks A-bar movement of the Recipient, which gets transferred along with the lower phase. In the Recipient passive, the Recipient moves to specTP before transfer of the lower phase, and the Theme argument remains accessible as it occupies the outer specifier of ApplP. The languages discussed include Norwegian, Northwest British English, Lubukusu, Zulu, Sesotho, and Italian.

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 an intransitive, 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 and A-bar movement (as well as other tests such as pronominalisation, reflexives, and word order). In typically symmetrical languages, either object is available for A-movement, as in a passive (see Baker 1988, Bresnan & Moshi 1990, McGinnis 1998, 2001, Woolford 1993, Haddican and Holmberg 2012, 2015, Anagnostopoulou 2003). Thus, in Norwegian, *both* the Recipient *and* the Theme can be passivized, though not at the same time (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

In asymmetrical languages, 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 English[2] asymmetric

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

A similar split is visible for A-bar movement, whereby in symmetrical languages 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?

Again, in asymmetrical languages only one of the Recipient *or* Theme can undergo Wh-movement:[3]

Standard English asymmetric

(4) a. *Who did you give the book?
b. Which book did you give John?

It thus seems to be the case that some languages are fully symmetrical, that is, that both objects behave similarly with respect to A and A-bar movement. Indeed, although it is common to refer to whole languages as being 'symmetrical' or 'asymmetrical', it is becoming increasingly clear that languages can also be partly symmetrical, in a number of ways (see again Baker 1988, Bresnan & Moshi 1990, McGinnis 1998, 2001, Woolford 1993, Haddican and Holmberg 2012, 2015, forthcoming, Anagnostopoulou 2003, van der Wal 2016). In what follows, we discuss a pervasive pattern of asymmetry in symmetrical languages whereby A-bar extraction in symmetrical languages ceases to be symmetrical in passives. More concretely, extraction of the Theme from a Recipient-passive is fine ('which book were the kids given?'), but extraction of the Recipient from a Theme-passive is not ('*who was the book given?').

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

[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-extraction, but there are exceptions to this (e.g. Icelandic, Japanese). In the text we adopt a thematic definition of 'double object construction' which means that languages with dative recipients can have one as well (see Harley & Miyagawa 2016 for recent discussion).

[2] There is variation in English varieties concerning symmetry (Siewierska & Hollman 2007, Haddican 2010, Haddican and Holmberg 2012, Myler 2013, Biggs 2014).

[3] We have no deep explanation for this effect in English, but note that it appears to be a rare restriction crosslinguistically, unlike the widespread asymmetry that we discuss at length below.

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), it 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.

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).

Interestingly, we find the same asymmetry in some English varieties that are otherwise symmetrical for both A- and A-bar movement (Neil Myler, p.c.):

Baseline examples (* in Standard English)

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

Extraction contrasts: passive and Wh-movement

(8) 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]

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

In both otherwise symmetrical languages, then, an asymmetry emerges when we combine certain kinds of A- and A-bar movement.

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 (9) and (11), and relativisation, illustrated in (10) and (12). We test relativisation rather than Wh extraction here, because these languages are Wh-in-situ.

Zulu (Adams 2010: 11): symmetrical passive

(9) 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

(10) 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

(11) 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'

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

(12) 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.'

However, 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
(13) [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.'

(14) [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)
(15) 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 (16) (in the following we use *extraction* as a cover term for A-bar movement to the C-domain):[4]

(16) 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. Given the standard view, A-movement and A-bar movement do not interact (see Rizzi 1990) and so DOMA is unexpected. It seems necessary to revisit this view in line with proposals by Aldridge (2004), Coon et al. (2014) and van Urk (2015).[5]

3 Analysis: flexible licensing, phasehood and locality

3.1 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, which has different thematic properties. The difference is illustrated here for English, but the same distinction obtains in a number of languages (see Harley & Miyagawa 2016):

(17) Double object construction:
V Recipient Theme
I gave the children the book.

(18) Prepositional dative
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 prepositional dative construction:

(19) 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 prepositional dative construction and not in the DOC:

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

[4] Duranti & Byarushengo (1977: 68) already 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 6.3 below.

[5] 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).

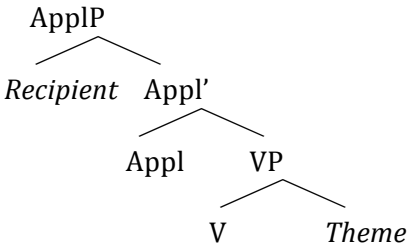
Where the relationship between recipient and theme is one of *inalienable* possession, however, inanimate recipients are possible (Harley & Jung 2015):

(21) a. John gave the house a lick of paint.
b. * John gave a lick of paint to the house.

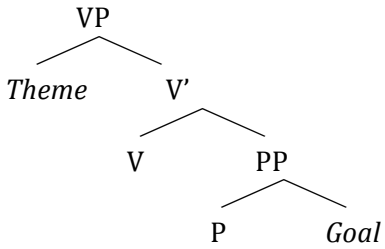
Following Harley (1995, 2002), Holmberg and Platzack (1995), Pesetsky (1995) we assume that the double object construction and prepositional dative have distinct underlying structures, as represented in (22); but see Larson (1988), Baker (1996), (Bruening (2010) and Ormazabal & Romero (2010) for theories in which they are derived from the same underlying structure. For DOCs, we assume the structure in (22a): 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 (22a) 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, although obviously there may be differences in the details.

(22) The two base-generated structures for ditransitives

a. DOC



b. Prepositional dative



For the current paper, we are only concerned with the DOC, as diagnosed by the animacy tests outlined above.

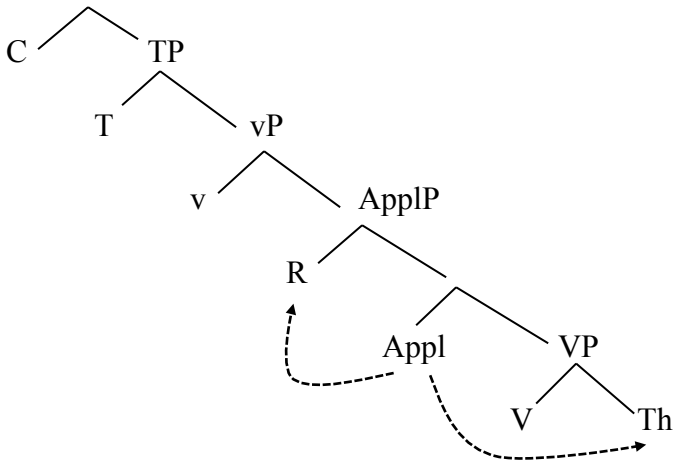
With these basics in place, we can now proceed to our theoretical proposal. Fundamentally, any ultimate asymmetry in the DOC is due to the fact that the Recipient asymmetrically c-commands the Theme in its base-generated position. As regards movement, asymmetry might also be a consequence of the derivational 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 ungrammatical combinations of A and A-bar movement in section 2, as we will demonstrate below.

In the following section we show how 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.

3.2 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 (18) (see Haddican and Holmberg, forthcoming; Van der Wal 2016).

(23)



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 theta-role to an external argument and no case to an internal argument, 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.[6] Likewise in the passive, the deactivated Recipient will in principle allow 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 the symmetry noticed in our Bantu languages for object marking: either object can trigger object marking in active contexts (Van der Wal 2016).

Zulu (Zeller 2011, see also Zeller 2012)

(24) a. UJohn u-nik-a abantwana imali.
1a.John 1SM-give-FV 2.children 9.money
'John is giving the children money.'

[6] This is assuming that defective intervention does not hold, which has been argued for clause-internal movement by Anagnostopoulou (2003) and Bobaljik (2008), Broekhuis (2007), Hartman (2012), and in general by Bruening (2014). Alternatively, if it does hold, an additional leapfrogging movement would be necessary to move the Theme past the Recipient (Bobaljik 1995, McGinnis 2001, Pylkkänen 2008, Jeong 2007, 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. 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)

(25) 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.'

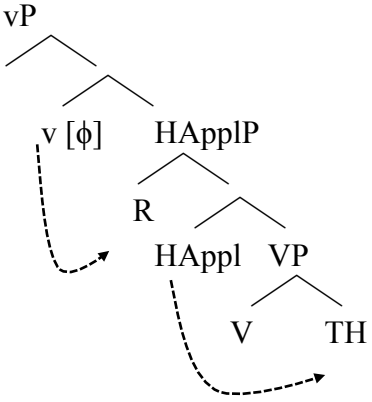
Assuming the structure in (22), and assuming that object marking is the spell-out of ϕ-agreement between little v and an object (see Iorio 2014 and Van der Wal 2015), there are two possible derivations. If the applicative head agrees with the Theme, then v will agree with the Recipient; this is the situation in asymmetrical languages where only the Recipient can be object-marked. The Swahili example in (26) and the derivation in (27) illustrate this for the high Applicative introducing a Recipient argument.

Swahili

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

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

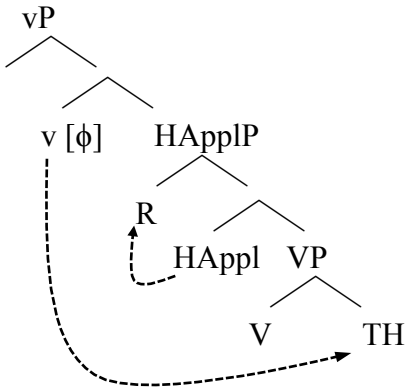
(27) *v agrees with R (and can spell out as object-marker)*



Symmetrical languages additionally have the option of the applicative head assigning inherent Case to the Recipient, along with a theta-role. In this case, the Recipient is thereby deactivated, allowing the Theme object to be probed by v. In such cases, v

will agree with the Theme in both Case and ϕ-features, and this Agree relation will potentially be spelled out as an object marker, as represented in (28).

(28) *v agrees with TH (object-marking of TH possible)*



The proposed flexibility of the applicative head to license either the Theme or the Recipient derives symmetrical passives and symmetrical object marking in active clauses (see Haddican and Holmberg, forthcoming, and Van der Wal 2016).

3.3 Deriving the emergent asymmetry: ApplP as a phase

We propose that DOMA derives from the fact that phases are contextually determined (see also Bošković 2009, 2015). 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 (29):

(29) α is a phase head if α is a functional head and introduces the highest argument of a predicate.[7]

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 (29), ApplP is thereby a phase in the passive, though not in the active DOC.

Crucially, we adopt the version of the Phase Impenetrability Condition in Chomsky (2001), whereby a phase-head is transferred to the interfaces when the next highest phase head is merged (PIC2). This entails that elements inside the lower phase are still accessible until C is merged. When C is merged, only the outer specifier, the phase edge, is accessible for further syntactic operations (Aldridge 2004, 2008, Bošković 2015).

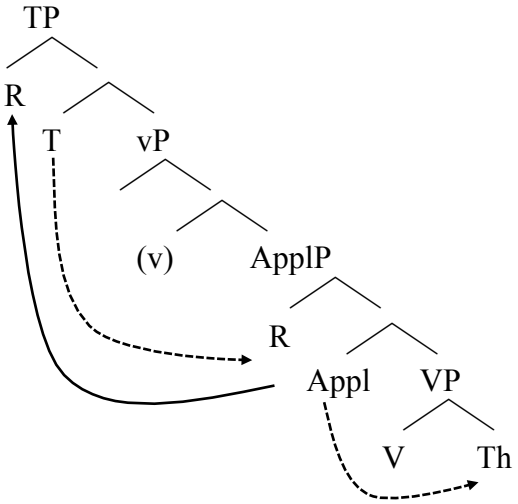
[7] Chomsky (2008) proposes that the phases are "CP and v*P, where [...] v* is the functional head associated with full argument structure, transitive and experiencer constructions, and is one of several choices for v". One interpretation of this, which is probably the intended interpretation, is that 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.

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 (specv in an active clause, specAppl in a passive) if its [uCase] feature has not been valued within vP/ApplP,[8] or if it has some 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/ApplP. The blindness of this movement will prove crucial to our analysis.

DOMA (see (16)) 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 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, (30). In all trees, dotted lines/arrows represent Agree and solid arrows represent movement.

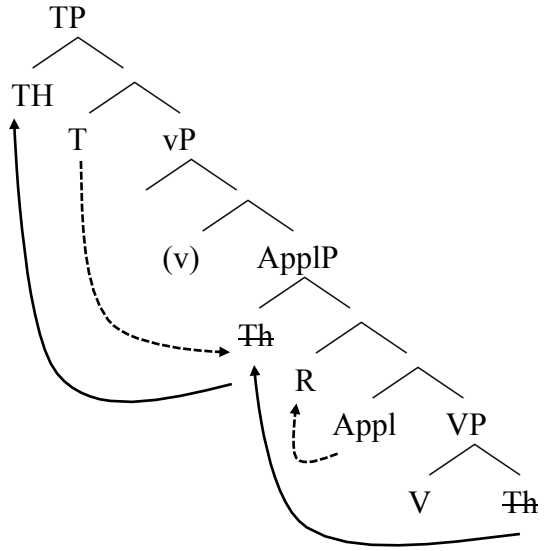
(30) *Simple R-passive* ('The children were given the book')



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 (31). We note that given our adoption of PIC2, T could actually still probe Th even if it did not raise through the phase edge. In the absence of lookahead, however, movement of Th to specApplP happens blindly upon completion of the lower phase.

[8] 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 (submitted). 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). 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.

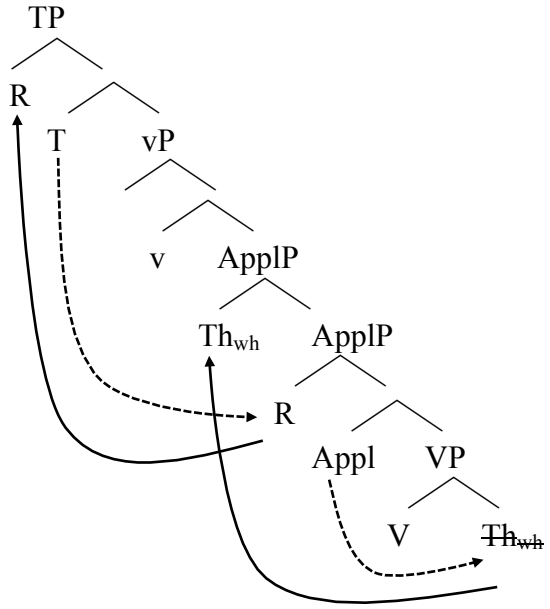
(31) *Simple Th passive* ('The book was given the children')



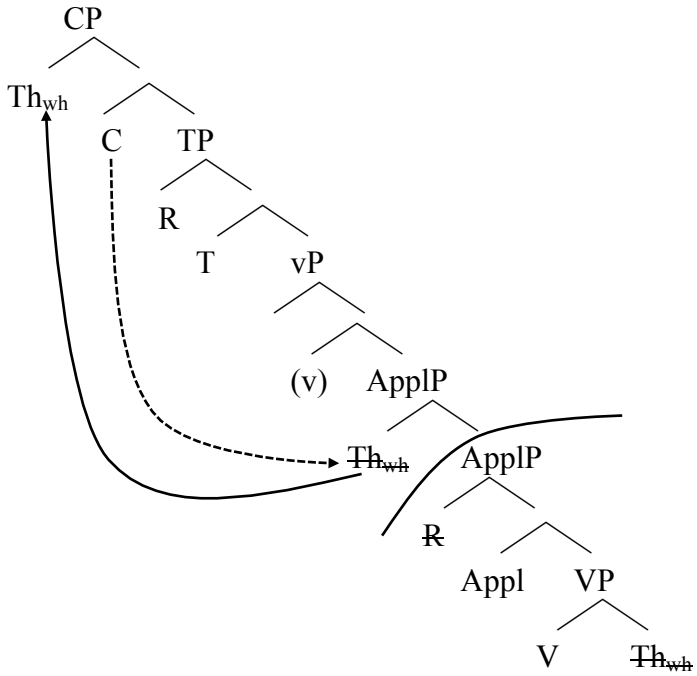
Now consider what happens with A-bar movement from these passive clauses. In the Recipient passive, Appl assigns Case to the Theme and T agrees with and attracts the Recipient. Because the Theme also has a [uWh] feature, however, it moves to the phase edge, i.e. the outer specAppl, as in (32a). When C is merged, all but the outer specifier of the lower phase head Appl is transferred to the interfaces, but the Theme, as the outer edge of ApplP, remains, and can move to the C-domain, see (32b).

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

a.



b.

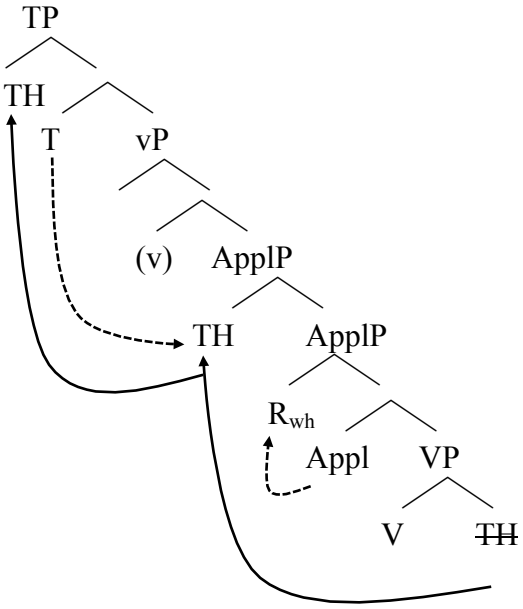


Finally, consider the case of Theme passives with A-bar movement of the Recipient, the combination ruled out by DOMA. As above in the simple Theme passive (32), Appl assigns Case to the Recipient and the Theme raises to the phase edge, outer specAppl, because of its [uCase] feature, from where it is probed by T. This time the Recipient has an unvalued Wh feature [uWh], but since it is already in specAppl it cannot move to an outer specifier of ApplP (33a), in view of antilocality (Abels 2003). 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, (33b). In this way movement of the Theme to the phase edge has the effect of trapping the Recipient inside ApplP (see also Aldridge 2004, 2008, Coon et al. 2014, Bošković 2015).[9]

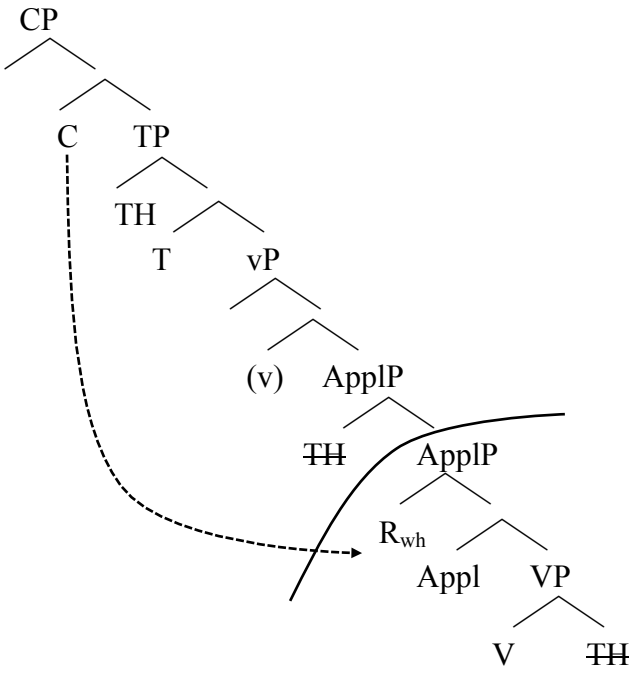
[9] Despite strong similiarities with Bošković's (2015) proposal, what we propose here is slightly different as the trace of Theme in specApplP still functions as the phase edge. In Bošković's system traces do not count.

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

a.



b.



We can thus account for the asymmetry found in otherwise symmetrical languages (DOMA). If (a) the Recipient originates in specApplP and (b) in a Theme passive the Theme raises to specApplP because of its [uCase] feature, then the proposed assumptions about phase theory (PIC2 and (29)) entail that in a passive the Recipient is trapped in the ApplP phase.

It should be noted, at this point, that the DOMA has much in common with syntactic ergativity, a restriction ruling out the straightforward A-bar extraction of transitive ergative subjects in many (but not all) ergative contexts. While the DOMA arises where movement of the Theme traps the Recipient, syntactic ergativity arises, according to Aldridge (2004, 2008) and Coon et al. (2014), where movement of the Theme in a monotransitive traps the transitive subject. Both phenomena crucially involve obligatory movement of a lower argument to the phase edge. This is a

welcome result as it suggests that the same trapping effect proposed for vP by Aldridge (2004) can be generalised to other phases. In accusative languages, where Themes are assigned a case inside vP, we see this effect only as the DOMA, as this is the only case where they (i) fail to receive a 'low' case and (ii) must undergo movement to the phase edge.

3.4 No DOMA in the prepositional dative construction

As shown in (34), we do not see any DOMA in the prepositional dative construction (PrepDC) when passive and A-bar movement are combined. (34d) may be a case of "R-extraction out of a Th-passive" (see (16)), but is perfectly well formed.

(34) a. They gave the book to John.
b. The book was given to John.
c. Who did they give the book to?
d. Who was the book given to?

Although the analysis of the PrepDC has long been controversial (see Larson 1988, Pesetsky 1995, Harley 2002, 2007), we take it that Bruening (2010) has argued convincingly that it has the underlying structure shown in (35) (see also Harley and Jung 2015))

(35) $[_{vP}$ they [v $[_{VP}$ the book $[_{V'}$ give $[_{PP}$ to John]]]

This vP would be the lower phase in (34a). In the passive version (34b), vP ceases to be a phase. The head introducing the highest argument is therefore V. Since V is not a functional head, the consequence is that the sentence has no lower phase (see the definition of the lower, thematic phase head in (29)). The derivation of (34d), combining a theme passive with Wh-movement of the goal/recipient is therefore straightforward.

(36) $[_{CP}$ who C $[_{TP}$ the book T $[_{vP}$ (v) $[_{VP}$ <the book> $[_{V'}$ given $[_{PP}$ to <who>]]]]]

The theme undergoes passive A-movement to specTP. With no lower phase boundary, C probes the Wh-goal/recipient directly in situ, and the A-bar movement is directly to specCP.

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).

(36) 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.

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 (PrepDC). 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 (37b), like prepositional datives (37a), permit only Theme passivization (i.e. an indirective alignment for ditransitives).

(37) a. Questi libri sono stati dati a Maria dal professore. [Th-passive PrepDC]
these books are been given to Maria by.the teacher
‘These books were given to Maria by the teacher.’

b. Queste idee sono state date a Maria da questo libro. [Th-passive DOC]
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:

(38) 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 possibility of both Theme passives and A-bar extraction of Recipients 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 most speakers) when we try to combine passivization with Wh-movement of the Recipient in the DOC construction (39) The presence of a causer subject ensures that we have an example of DOC rathe than PrepDC:

(39) *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 PrepDC 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 (39a-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 PrepDC, with left dislocation of the subject strongly preferred (probably for processing reasons).[10]

(40) *Th-passive, R-wh, PrepDC*

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?'

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 (41), with the exception that, for independent reasons, Italian does not allow Recipient passives.

(41) 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, an asymmetrical indirective language (in the sense of Comrie et al. 2010). The Recipient in a DOC always receives inherent dative case from Appl. In active clauses, the Theme always moves to specApplP, as a matter of parametric choice (i.e. Appl has an EPP-feature) and receives Case from v. This is evidenced in the word order and c-command relations Theme>Recipient (for the same speakers whose judgements are reported above). In (36a), the pronoun (*il*) *suo* is a variable bound by the QP 'each imperfection'. In (36b) the pronoun cannot have this interpretation. This follows if the QP c-commands the DP headed by the pronoun.

(42) a. L'ispezione ha mostrato [ogni imperfezione]$_1$ al suo$_1$ responsabile.
the inspection has shown each imperfection to.the his responsible
'The inspection showed the person responsible for it each imperfection.'

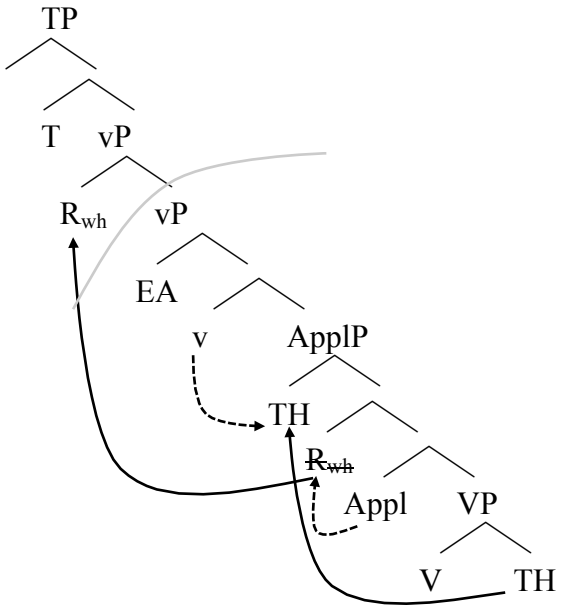
[10] With the examples in (39), left dislocation of the subject does not help, and respondents replied that there was no way to save them (except omission of the by-phrase).

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.'

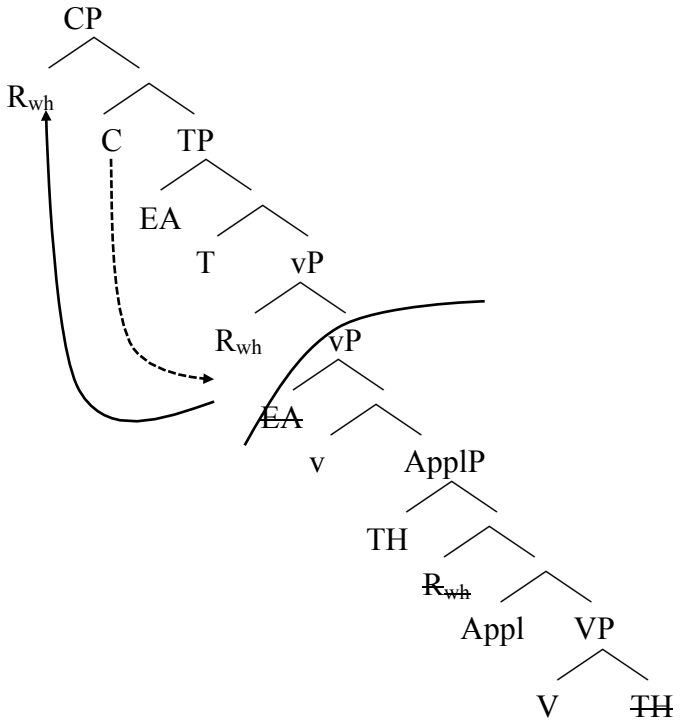
If ApplP were a phase in active contexts, given that the Theme always raises to specApplP, we would predict a general restriction on Recipient extraction in Italian DOCs, contrary to fact. However, if only vP is a phase in active contexts, and ApplP is not (as entailed by our definition of thematic phase in (29)), 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. As motivated above, Appl always licenses the Recipient, and the Theme moves to specApplP to receive Case from v, as represented in (43a). 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 (43b). The same analysis naturally holds for Theme extraction in the active.

(43) 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 specApplP because of its [uCase] feature. This movement serves to trap the Recipient in specApplP for the reasons outlined above. The Italian facts can therefore be taken as further evidence in favour of our account of the DOMA and by implication 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.

5 Extension 2: object marking in passives

Zulu and Lubukusu, being 'symmetrical' languages, allow either object in a DOC to be object-marked by a prefix on the verb, as shown above in (24) and (25), repeated below as (44) and (45).

Zulu (Zeller 2011, see also Zeller 2012)

(44) 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)

(45) 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 (46) and (47).

Zulu (Adams 2010: 26)

(46) 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)

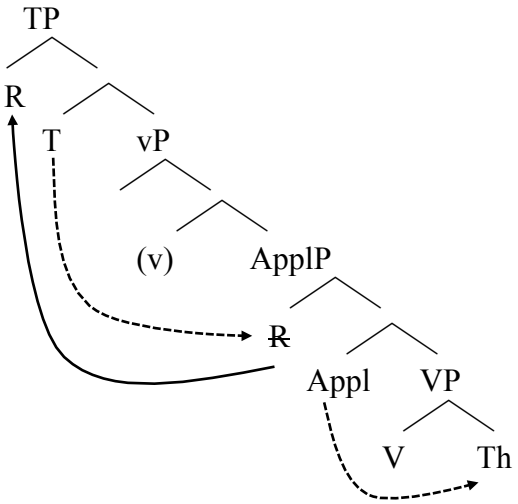
(47) a. *R-passive with Th object-marked*
Baa-sooreri ba-a-**chi**-eeb-w-a (chi-khaafu)
2.boys 2SM-PAST-10OM-give-PASS-FV 10-cows
'The boys were given them (cows)'

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, including (29, 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.

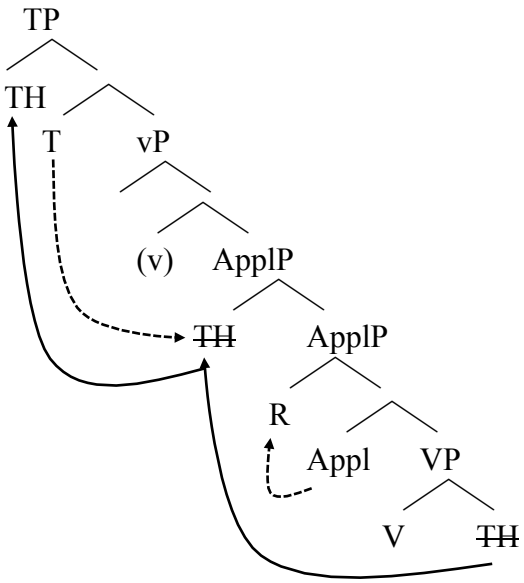
In a Recipient passive, Appl agrees for Case and φ-features with the Theme, and then T agrees with and raises the Recipient, as represented in (48). Object marking results from Appl's φ-agreement with the Theme, under Roberts' (2010) approach to object marking as agreement with a defective Goal (see Iorio 2014 and Van der Wal 2015b for this account applied to object marking in Bantu languages). If the Theme is a defective Goal, that is, if it has a subset of the features on Appl, then Appl and the Theme effectively form a chain, only the highest copy of which will be spelled out; copies other than the highest copy in a chain are deleted at PF. This 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.

(48)



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 (49). 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 the Appl probe, which means that the object marker cannot be spelled out, deriving the ungrammaticality of object-marking the Recipient in a Theme passive.

(49) *



Positing uϕ 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 DOMA

6.1 A note on English

Although the theory articulated here has a formal account of A-movement symmetry and asymmetry, and can explain the DOMA, it does not, in fact, offer any obvious formal account of the A-bar movement asymmetry observed in standard English, exemplified in (4), repeated here.

(50) a. *Who did you give the book?
b. Which book did you give John?

Douglas (2015) claims that this effect can be assimilated to that-trace effects, both of which can be attributed to antilocality, more specifically, the ban on spec-to-spec movement (see also Erlewine 2016). Put simply, what goes wrong in (50) is that movement from specApplP to specvP is banned:

(51) [$_{vP}$ who you v [$_{ApplP}$ t_{who} ApplP …]]

Although this account has its attractions, it appears to imply that the effect should be universal, contrary to fact. It seems to be a property of many symmetrical languages that no such restriction holds and it is hard to see how such an account could be parameterised to accommodate this fact. We therefore leave the explanation for this restriction as a matter for future research.

6.2 Full symmetry: Kinyarwanda and Luganda

The Bantu languages Kinyarwanda (Rwanda) and Luganda (Uganda) are symmetrical for object marking, passive (52) and relatives (53), but the DOMA does not hold, as illustrated in (54) and (55) for the respective languages.

Kinyarwanda (Ngoboka 2005: 88, glosses adapted)
(52) *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.'

(53) *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'

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

a. Abáana améezá 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. Améézá 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

(55) *symmetrical passive & relative*

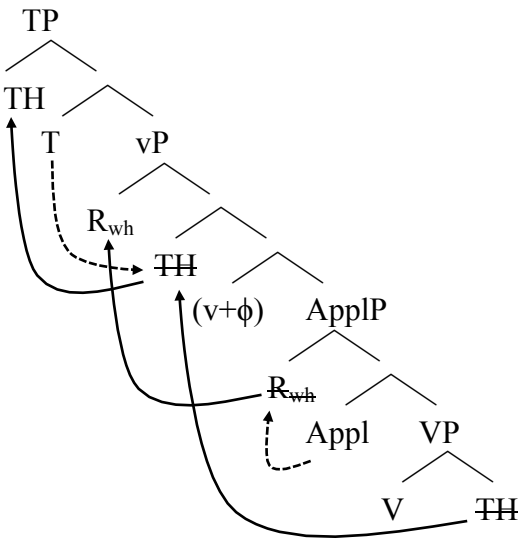
a. N-jagala engoye abaana z-e ba-a-gul-ir-w-a.
1SG.SM-want 10.clothes 2.children 10-REL 2SM-PAST-buy-APPL-PASS-FV
'I want the clothes that the children were bought.'

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).'

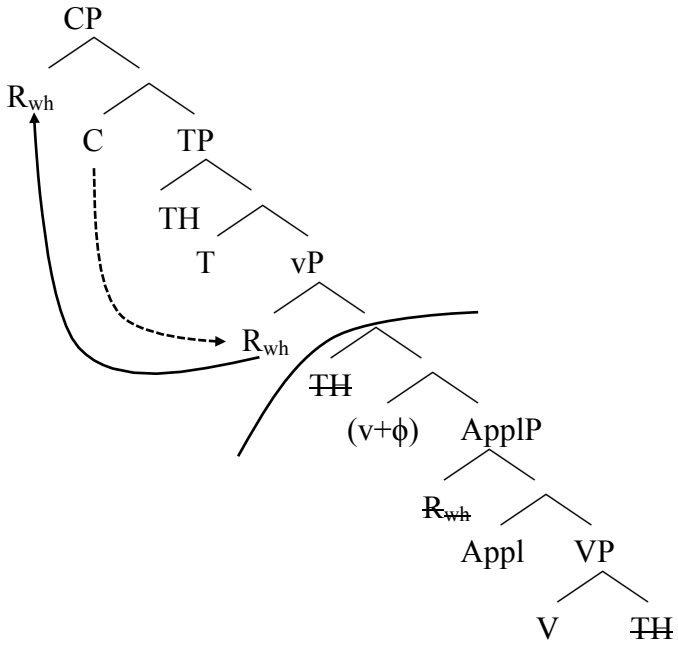
A crucial difference between Zulu and Lubukusu on the one hand, and Kinyarwanda and Luganda on the other hand, is that the former allow only one object marker (i.e. ϕ features only on v) whereas the latter allow multiple object markers (i.e. ϕ features on multiple lower functional heads). We speculate 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). This in turn creates an edge for both the Theme and the Recipient to escape the lower phase: The argument with [uCase] thus moves to specvP, followed by the argument with [uWh], and either Wh object can still be reached upon merging C and closing the lower v phase. The DOMA-violating derivation is illustrated in (56), where first the Theme and then the Recipient moves to specvP, from where the Theme can be reached by T for Case assignment. When C is merged, the lower phase is closed off but the Recipient now being in specvP is still visible for C. This is different for languages where Appl is a phase in the passive, where the Recipient is already in the phase-edge and hence cannot be moved to be in reach of C.

(56) *Recipient extraction from a Theme relative in a language with ϕ on v and Appl*

a.



b.



6.3 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. Some of the observations they make initially look like a problem for our theory of the DOMA. Consider the following examples.

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

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

a. lijó tséò ngoaná á-lí-phehéts-o-éǹg
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-èǹg
1.child 1.REL 10.food 10SM-1OM-cook-PASS-REL
'the child that the food was cooked (for)'

The data in (57) look like an instance of the DOMA: Theme extraction from a Recipient passive is good, Recipient extraction from a Theme passive is bad. Consider (58), however.

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

a. * baná báò mokétéó-bá-bítselíts-o-éǹg
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. mokétéóò baná bá-ò-bítselíts-o-éǹg
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 (58a), Theme extraction from a Recipient passive is bad, and in (58b), Recipient extraction from a Theme passive is good. This is exactly the inverse of the DOMA discussed in previous sections. This suggests that the DOMA may be dependent on the relative animacy of the two objects, which is certainly not predicted by our account of the DOMA in the previous sections.

We therefore begin by testing whether we can see a similar effect in Norwegian. In (59), the Recipient is inanimate while the Theme is animate. Example (59a) is the active DOC, (59b) is a Recipient passive, while (59c) is a Theme passive. All the sentences are somewhat marginal, but roughly to the same degree.[11]

(59) *Norwegian: 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.'

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 (60) and (61) test for the DOMA.

(60) *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.'

(61) *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, (60) and (61) 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.

What is the crucial difference between Sesotho and Norwegian? Morolong and Hyman (1977) demonstrate that the following condition holds on the word order of ditransitive verb phrases in Sesotho:

[11] Many thanks to Kari Kinn for data and discussion.

> /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: (62) involves two objects distinct in humanness, whereas (63) shows the combination of two objects being either both non-human or both human.

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

(62) a. Ke phehétsé ngoaná lijó.
1SG.SM cook.APPL 1.child 5.food
'I cooked food for the child.'

b. * Ke phehétsé lijó ngoaná.
1SG.SM cook.APPL 5.food 1.child

c. Ke bítselítsé baná mokéte.
1SG.SM called.APPL 2.children 3.feast
'I called the children for the feast.'

d. * Ke bítselítsé mokéte baná.
1SG.SM called.APPL 3.feast 2.children

(63) a. Ke phehétsé mokété lijó.
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 bítselítsé 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 bítselítsé 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 (62a) and other sentences with R>TH order has the structure we have assumed throughout this paper for the DOC:

(64) $[_{vP}$ EA $[_{v'}$ v $[_{ApplP}$ R $[_{Appl'}$ 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 (64), the standard structure with the Recipient in specApplP c-commanding the Theme in VP, or the structure in (66), with the Theme in specApplP c-commanding the Recipient in VP. Appl would be the introducer of the second object, which may be the Recipient or the Theme.

(65) $[_{vP}$ EA $[_{v'}$ v $[_{VP}$ TH $[_{V'}$ V $[_{ApplP}$ Appl R]]]]]

If one of the objects but not the other is human, encoded as a syntactic feature, then that object will be in specApplP. If both are human, then either structure is allowed, and if neither is Human then, too, either structure is allowed. Crucially, though, Appl will always assign Case to the Recipient, upwards in (1), downwards in (2). In that respect, Appl does have a privileged relation to the Recipient.

Norwegian, English, and many other languages have two structures for ditransitive predicates, the DOC (with R>Th order) and the PrepDC (with Th>R order). As there is no sign 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 have not analyzed the Th>R construction as a PrepDC.

Under this analysis most of the facts fall into place. Consider first (57a): the Recipient is human and the Theme non-human, so this is an instance of (64), and the sentences exemplify the DOMA. The Recipient passive with Theme relativisation is unproblematic, but deriving (57b) 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 (58): In this case the Theme is human and the Recipient, the feast, is non-human. The only structure possible here is (65). Now consider how to derive a passive from (65). As (66) shows, a Theme passive is fine, but a Recipient passive is not.

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

(66) *inanimate Recipient passive with animate Theme*

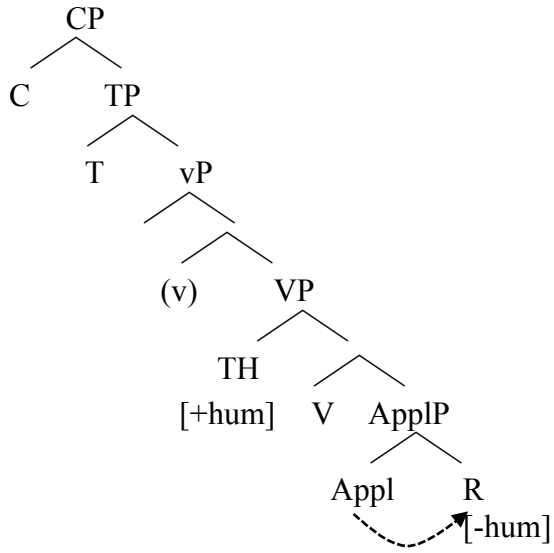
a. Baná bá-bítselíts-o-é mokété.
2.children 2SM-call-PASS-FV 3.feast
'The children were called for the feast.'

animate Theme passive with inanimate Recipient

b. * Mokété ó-bítselíts-o-é baná.
3.feast 3SM-call-PASS-FV 2.children
(lit. 'For the feast was called the children.')

The structure is (67).

(67)



The Theme passive is straightforwardly derived from (67): Appl assigns case to the Recipient and the Theme is probed by T and moves to specTP, resulting in (66a). The Recipient passive in (66b) 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 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 (58), the sentences which appeared to show 'inverse DOMA'. Example (58a) 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 (58b) is derived from the structure (67): 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.

As observed by Morolong and Hyman (1977), if the objects are equal in humanness, either object can be passivised or extracted, as shown in (68).

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

(68) *animate Recipient and Theme*

a. baná báò morena á-bá-bítselíts-o-éǹg
2.children 2.REL 1.chief 1SM-2OM-call-PASS-REL
'the children that the chief was called'

b. morena éò baná bá-mó-bítselíts-o-éǹg
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-éǹg
10.food 10.REL 3.feast 3SM-10OM-cook-PASS-REL
int. 'the food that the feast was cooked'

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

The constructions with animates are derived in our analysis as follows: (68a) 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. In contrast, (68b) is derived from the inverse DOC in (67): the Theme *baná* moves to specTP, and the Recipient to specCP via the edge of ApplP.

Our theory so far would predict the same two derivations to be possible for the constructions with two non-human objects in (68c,d), but they come out as ungrammatical. It seems likely that the reason why (68c,d) are ungrammatical is that Sesotho does not allow passives with a nonhuman subject. This, as we saw, also rules out (58a) and (66b). If so, the extraction of the other object in (68c,d) would be irrelevant for the grammaticality issue. As it stands, we have no non-ad-hoc way to derive this result, though, for (68c,d). As (63a,b) show, there is no ban against a nonhuman object in specApplP, as long as the other object is also Nonhuman. But a passive cannot be derived from this underlying structure. We have to leave this as an unsolved formal problem.

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 many question marks remain, the movement asymmetry that we have observed in many other languages is found in Sesotho as well, despite appearances: a Recipient extracted from a Theme passive, is ruled out while a Theme extracted from a Recipient passive is fine. Furthermore, the structural explanation that we have proposed is not undermined by the Sesotho facts, although it may be to some extent complicated.

6.4 A note on Wh-movement and passive in Greek

In Greek, the sentence in (69), featuring Wh-movement of a Recipient out of a Theme passive is perfectly well formed.

(69) Tinos dothike to vivlio? [Greek: Anagnostopulou 2003]
who.GEN gave-NAct the book
‘To who was the book given?’

At first blush this looks like a striking counterexample to the DOMA, in particular if we can rule out the analysis where it is derived from a PrepDC. Anagnostopoulou (2003) argues convincingly that it is derived from a DOC, where genitive has the function of dative case.

The finite verb in Greek undergoes movement to T. It is therefore hard to say exactly where the passivized theme is. However, the fact that it follows the sentence adverb in (70) indicates that it is inside the vP.

(70) Tinos dothike idhi to vivlio. [Greek]
who.GEN gave-NAct already the book
‘To who was the book already given?

Note that if the Theme is in situ, it should have no effect on Wh-movement, as the Wh-recipient will remain the outermost specifier of ApplP. On the other hand, given our assumption, the prediction is that the Theme cannot remain in situ in a passive, as its [uCase] feature should trigger movement to the phase edge, specApplP (assuming the Greek DOC to have the same structure as in the other languages discussed above).

As it happens, Wh-movement of a non-subject cannot be combined with subject movement to the preverbal position in direct questions in Greek, in actives or passives, giving the typical DOMA construction in the passive (due to the 'VSO-type' syntax of Greek finite clauses; see Alexiadou and Anagnostopoulou 1998). However, in instances of long-distance Wh-movement the subject can precede the finite verb, also in passives.[12]

(71) Pjanu$_i$ ipes oti i dulia tu$_i$ dhotike adika? [Greek]
who.GEN said.2SG that the job CL.GEN gave.NAct unfairly
'Who did you say that the job was given to unfairly?'

The corresponding construction is ill-formed in Norwegian, as we would predict, given DOMA.

(72) *Hvem sa du at jobben ble gitt på uregelmessige grunner. [Nor.]
Who said you that the.job was given on unfair premises

Note that the moved Recipient in (71) is doubled by a genitive clitic. Anagnostopoulou (2003) argues that the clitic plays a crucial role in connection with movement out of the predicate in the DOC, suggesting its position to be in T. We speculate, instead, that the clitic is the spell-out of a head between T and vP, which agrees with the Wh-Recipient. This provides an escape hatch for it outside vP but inside TP. This is just what it takes to avoid DOMA, allowing R-extraction from a Th-passive. The structure would be roughly (73).

(73) [$_{CP}$ pjanu$_i$ C … [$_{CP}$ t$_i$ oti [$_{TP}$ i dulia$_j$ T [$_{ClP}$ t$_i$ CL [$_{vP}$ dothike [$_{ApplP}$ t$_i$ …t$_j$]]]]]]

Crucially, the Recipient is extracted from inner specApplP to specClP before the ApplP phase is transferred (upon merger of the next phase head, C). For this reason, where C is merged it can still be attracted to specCP. The prediction is then that languages that clitic double recipients may be immune to DOMA. Initial data from Spanish support this hypothesis:

(74) a. A quién le serán dadas varias ideas
to whom CL.DAT be.FUT.3PL given.F.PL several ideas.F
por este libro.
by this book

b. A quién le fue enseñado algo importante
to whom CL.DAT was.3S taught something important
por su primera relación?
by 3S.POSS first relationship

[12] We are indebted to Elena Anagnostopulou (p.c.) for discussing these issues with us.

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:

(75) 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 predicate with a DOC, Appl (not v) is the phase head in passive predicate with a DOC, being the highest functional head introducing an argument. Given that only the outermost specifier of a phase remains after transfer/spell-out 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 waits until C is merged, the Recipient passive does not have the same problem. There is time for the Recipient to move to specTP before the lower phase gets transferred, whether or not the Theme is extracted.

Fundamentally the same 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. The explanation is the same: The recipient gets trapped and spelled-out with the lower phase in a passive where the Theme moves to the edge of the lower phase, as it must to get object-marked.

Italian looks initially like it has no DOC with lexical DPs, but only a PrepDC, as the unmarked order is Theme>Recipient. On closer inspection, however, Italian has a DOC, and does exhibit the DOMA, again explicable under the assumptions made. 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. Although the Sesotho facts initially appear not to conform to the DOMA, closer inspection indicates that it does. Greek is another language which initially appears to present a challenge for the theory. We suggest that Greek shows evidence of an extra escape hatch in the TP-domain, which nullifies the DOMA.

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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
COP	copula
DJ	disjoint
DOC	double object construction
FOC	focus
FV	final vowel
Nact	non-active
OM	object marker
PASS	passive
PST	past
PrepDC	prepositional dative construction
REL	relative
RS	relative suffix
SM	subject marker

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