Movement from the Double Object Construction Is Not Fully Symmetrical

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A movement asymmetry arises in some languages that are otherwise symmetrical for both A- and Ā-movement in the double object construction, including Norwegian, North-West British English, and a range of Bantu languages including Zulu and Lubukusu: a Theme object can be Ā-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 Impenetrability 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 observed in Italian, a language in which only Theme passives are possible. 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, Ā-movement, phase theory, symmetry, double object construction

1 Introduction

The two internal arguments of a ditransitive predicate, the "Recipient" and the "Theme," are often both referred to as "objects."[1] However, it is well-known that the alignment of these two "objects"

[1] Throughout the article, we refer to the lower object in a double object construction as the Theme (Th) and the higher object as the Recipient (R), even if we are fully aware that high applicatives typically introduce Benefactive, Malefactive, and other roles. The term *Recipient* in this article is a shorthand for the different thematic roles of the applied object.

varies crosslinguistically: in some languages/constructions, only one of the Recipient or Theme in a ditransitive behaves like the object of a transitive, whereas in others, both have these object properties. The latter type constitutes the so-called "symmetrical" double object construction (DOC).

Such symmetry is visible in A-movement (as well as other tests such as pronominalization, reflexivization, and word order). In typically symmetrical languages, either object is available for promotion to subject in a passive (see Baker 1988, Bresnan and Moshi 1990, Woolford 1993, McGinnis 1998, 2001, Anagnostopoulou 2003, Haddican and Holmberg 2012, 2015). 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.).

(1) *Norwegian*   (symmetrical)
    a. [Recipient passive]
       Jon ble gitt   boka.
       Jon was given the.book
    b. [Theme passive]
       Boka   ble gitt   Jon.
       the.book was given Jon
       (Haddican and Holmberg 2015:145)

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, Chicheŵa, Danish, Italian, German, etc.).[2]

(2) *Standard English*[3]   (asymmetrical)
    a.   John was given the book.
    b. *The book was given John.

In many DOCs (symmetrical and asymmetrical), both Recipient and Theme are free to undergo *wh*-movement.

(3) *Norwegian*   (symmetrical)
    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 Jon?'

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[2] It is generally the case that only languages that 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 the term *double object construction* that includes languages with dative recipients (see Harley and Miyagawa 2017 for recent discussion).

[3] There is, however, substantial variation across English varieties concerning symmetry (Siewierska and Hollmann 2007, Haddican 2010, Haddican and Holmberg 2012, Myler 2013, Biggs 2016). We return to this issue in section 2.1.

There are languages, however, where only one of the Recipient or Theme can be relativized or questioned. In Chicheŵa, for example, only the Theme can be relativized in a DOC.[4]

(4) *Chicheŵa*   (asymmetrical)
a. *Iyi   ndi-yo mfumu i-mene ndi-ku-ganiz-a   kuti Mavuto
  1.PROXDEM COP-1 1.chief 1-REL 1SG.SM-PRS-think-FV COMP 1.Mavuto
  a-na-umb-ir-a   mtsuko.
  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-ku-ganiz-a   kuti Mavuto
  3.DEM COP-3 3.waterpot 3-REL   1SG.SM-PRS-think-FV COMP 1.Mavuto
  a-na-umb-ir-a   mfumu.
  1SM-PST-mold-APPL-FV 1.chief
  'This is the waterpot which I think Mavuto molded for the chief.'
  (Baker 1988:355)

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 Ā-movement. A caveat is necessary here, though: while 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 (see Baker 1988, Bresnan and Moshi 1990, Rugemalira 1991, Alsina and Mchombo 1993, Marantz 1993, Woolford 1993, Schadeberg 1995, Simango 1995, Ngonyani 1996, 1998, Nakamura 1997, McGinnis 1998, 2001, Anagnostopoulou 2003, Zeller and Ngoboka 2006, Haddican and Holmberg 2012, 2015, 2018, Jerro 2015, 2016, Van der Wal 2017). Putting this variation aside, however, our focus in what follows is on a pervasive pattern of asymmetry that emerges in contexts where otherwise licit A- and Ā-movements are combined. In many unrelated languages, Ā-extraction of the Recipient ceases to be symmetrical in Theme passives (*'Who was the book given?'), while it is fully acceptable in active contexts. This is a curious asymmetry because Ā-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 Ā-movement interact in intricate and potentially universal ways, independently of language-specific parameter settings regarding extraction possibilities.

The remainder of the article is structured as follows. Section 2 presents data from a number of otherwise symmetrical languages where the asymmetry in question arises (e.g., Norwegian, North-West English, Zulu, and Lubukusu). Section 3 proposes a phase-based analysis of this emergent asymmetry, based on the interaction of A- and Ā-movement. Section 4 presents evidence for the same asymmetry in an asymmetrical language, Italian, and discusses the theoretical implica-

[4] Chicheŵa is also an asymmetrical language for A-movement, but symmetry and asymmetry in the A- and Ā-domains have been claimed to operate independently of one another (Marantz 1993, Nakamura 1997).

tions of this. Sections 5 and 6 present two extensions of the analysis, into object marking and full symmetry, respectively. Section 7 concludes.

2 Combining Passive and Ā-Movement

2.1 Norwegian and North-West English

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

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

(6) *Extraction contrasts: Passive and relative*
    a. [R-relative, R-passive]
       mannen som ble gitt   boka
       the.man that was given the.book
    b. [Th-relative, R-passive]
       boka   som mannen ble gitt
       the.book that the.man was given
    c. [Th-relative, Th-passive]
       boka   som ble gitt   mannen
       the.book that was given the.man
    d. [*R-relative, Th-passive]
       *mannen som boka   ble gitt
        the.man that the.book was given

The only combination that is systematically and robustly rejected in Norwegian is Ā-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 in terms of both A- and Ā-movement and bans the crucial kinds of movement. In this variety of English, only the Recipient can undergo passivization and only the Theme can be Ā-extracted in a DOC.[5]

(7) *Standard English*   (asymmetrical)
    a.   John was sent the book.
    b. *The book was sent John.
    c. *Who did you give the book?
    d.   Which book did you give John?

This is not the case in all varieties of British English, however (see Siewierska and Hollmann 2007, Haddican 2010, Haddican and Holmberg 2012, Myler 2013, Biggs 2016). In some North-West varieties, both Theme passives and Recipient *wh*-questions are possible.

(8) *Baseline examples (* in Standard English)*
    a.   [*wh*-R]
         Who did you give/send/hand a book?
    b. [Th-passive]
         A book was given/sent/handed him (by Mary).

Interestingly, in these varieties we find the same asymmetry that we observed in Norwegian where A- and Ā-movement are combined (Neil Myler, pers. comm.).[6]

(9) *Extraction contrasts: Passive and* wh-*movement*
    a.   [*wh*-R, R-passive]
         Who was given/sent/handed the book?
    b. [*wh*-Th, R-passive]
         Which book was John given/sent/handed?
    c. [*wh*-Th, Th-passive]
         Which book was given/sent/handed John?
    d. [**wh*-R, Th-passive]
         *Who was the book given/sent/handed (by Mary)?

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

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[5] It is not our aim here to provide an explanation of the English or Chicheŵa facts, but see Douglas 2016, 2017 for one possible analysis.
   [6] In the Liverpool dialect of English, (9d) is grammatical (Alison Biggs, pers. comm.). However, as Biggs (2016) convincingly shows, Theme passives in this variety are derived from a prepositional dative construction with a covert preposition. Therefore, this does not represent a counterexample to the DOMA (see (17) in the text), as there is no ban on *wh*-Recipients in Theme passives in the prepositional dative, for the reasons we discuss in section 3.5.

2.2 Zulu and Lubukusu

The Bantu languages Zulu (South Africa) and Lubukusu (Kenya) show the same restriction observed in Norwegian and North-West English, as do Xhosa (Visser 1986), Swati (Woolford 1995), Haya (Duranti and Byarushengo 1977), Fuliiru (Van Otterloo 2011), Sotho (Morolong and Hyman 1977), and Tswana (Creissels 2002). These languages are also symmetrical for both passivization, illustrated in (10) and (12), and relativization/clefts, illustrated in (11) and (13).[7]

(10) *Zulu: Symmetrical passive*
　　a. In-cwadi y-a-fund-el-w-a　　　　　　aba-ntwana.
　　　　9-book　9SM-REM.PST-read-APPL-PASS-FV 2-children
　　　　'The book was read *(to) the children.'
　　b. Aba-ntwana b-a-fund-el-w-a　　　　　　in-cwadi.
　　　　2-children　2SM-REM.PST-read-APPL-PASS-FV 9-book
　　　　'The children were read a book.'
　　　　(Adams 2010:11)

(11) *Zulu: Symmetrical relative*
　　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?'
　　　　(Adams 2010:116)

(12) *Lubukusu: Symmetrical passive*
　　a. Baa-sooreri ba-a-eeb-w-a　　　chi-khaafu.
　　　　2-boys　　2SM-PST-give-PASS-FV 10-cows
　　　　'The boys were given cows.'
　　b. Chi-khaafu cha-a-eeb-w-a　　　　　baa-sooreri.
　　　　10-cows　　10SM-PST-give-PASS-FV 2-boys
　　　　'Cows were given to the boys.'
　　　　(Justine Sikuku, pers. comm.)

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[7] As mentioned, 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 last-mentioned 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, Alsina and Mchombo 1993, Ngonyani 1996, 1998, Moshi 1998, Ngonyani and Githinji 2006, Zeller and 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 a DOC; see (23) and Ngoboka 2016).

(13) *Lubukusu: Symmetrical relative*

　　a. Chi-khaafu ni-cho kuuka　　　a-a-elesy-a　　baa-sooreri chi-li　e-luuchi.
　　　 10-cows　　REL-10 1.grandfather 1SM-PST-give-FV 2-boys　　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 ba-li　e-luuchi.
　　　 2-boys　　　REL-2 1.grandfather 1SM-PST-give-FV 10-cow　　 2SM-be at-river
　　　 'The boys who Grandfather gave the cows to are at the river.'
　　　 (Wasike 2007:52)

Once again, in both languages, when the Theme is passivized, the Recipient cannot be relativized (whereas the reverse is fully grammatical).

(14) *Zulu: Extraction contrasts*
　　 [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
　　　 'The meat that Mother is being cooked is tasty.'

　　b. I-mali　　aba-ntwana a-ba-yi-nik-w-a-yo　　　　　　　 ng-e-ya-mi.
　　　 9-money 2-children　RM-2SM-9OM-give-PASS-FV-RS COP-9.REL-9.POSS-1SG
　　　 'The money that the children are given is mine.'
　　　 (Zeller 2011)

(15) *Zulu*
　　 [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
　　　 Int. 'Mother for whom the meat is being cooked is tired.'

　　b. *Aba-ntwana i-mali　　 e-ba-nik-w-a-yo　　　　　　　ba-ya-jabul-a.
　　　 2-children　 9-money REL.9SM-2OM-give-PASS-FV-RS 2SM-DJ-be.happy-FV
　　　 Int. 'The children to whom the money is given are happy.'
　　　 (Zeller 2011)

(16) *Lubukusu*

　　a. [Th-relative, R-passive]
　　　 chi-khaafu 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-khaafu cha-a-eeb-w-a
　　　　2-boys　　　REL-2 10-cows　10SM-PST-give-PASS-FV
　　　　'the boys who the cows were given to'
　　　　(Justine Sikuku, pers. comm.)

We summarize this asymmetry as the constraint in (17) (using *extraction* as a cover term for Ā-movement to the C-domain).[8]

(17) *Double Object Movement Asymmetry (DOMA)*
    ✓Theme extraction out of a Recipient passive ('Which book were the children given?')
    ✗Recipient extraction out of a Theme passive (*'Which children was the book given?')

The question we address next is how we can account for the DOMA in a language that is otherwise symmetrical. Under the standard view, A-movement and Ā-movement do not interact (see Rizzi 1990) and so the 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, Mateo Pedro, and Preminger (2014), and Van Urk (2015).[9]

3 Analysis: Flexible Licensing, Phasehood, and Locality

3.1 Thematic Structure

It is important to first 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 here, 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 and Miyagawa 2017).

(18) *Double object construction (DOC)*
    V Recipient Theme
    I gave the children the book.

(19) *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, nonagentive causer subjects, including inanimate subjects, are possible only in the DOC, not in the PDC.

(20) 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 possible only in the PDC, not in the DOC.

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[8] Duranti and Byarushengo (1977:68) note this pattern in a slightly different way as the Human Constraint: "In a sentence with more than one DO [direct object], the advancement to subject of a DO with a nonhuman referent affects the objecthood of any other present DO with a human referent." For further discussion of the possible influence of animacy, see Morolong and Hyman 1977 and the online appendix to this article (https://www.mitpressjournals.org/doi/suppl/10.1162/ling_a_00322).

[9] In what follows, we will treat relativization as derived by Ā-movement to Spec,CP, 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).

(21) 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 and Jung 2015).

(22) 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), and Bruening (2001, 2010), we assume that the DOC and the PDC have distinct underlying structures, as represented in (23) (but see Larson 1988, Baker 1996, and Ormazabal and Romero 2010, 2012 for theories in which they are derived from the same underlying structure).[10] For DOCs, we assume the structure in (23a): the Theme is merged with and assigned its θ-role by V, while the Recipient is assigned its θ-role by an Appl(icative) head merged with VP. In other approaches to the DOC, the Recipient and the Theme are contained in a small-clause-like constituent, which is the complement of the verb (Harley 1995, 2002, Pesetsky 1995, Anagnostopoulou 2003, Pylkkä-nen 2008, Harley and Jung 2015). The structure in (23a) diverges from these in assuming a VP-shell approach (Marantz 1993). In terms of the DOMA, it is not crucial which of these two approaches to DOCs we assume, as long as the Recipient is introduced by a functional head above the Theme, although obviously details may differ.[11]

(23) *The two base-generated structures for ditransitives*
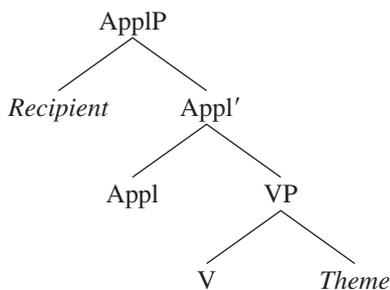
    a. Double object   b. Prepositional dative

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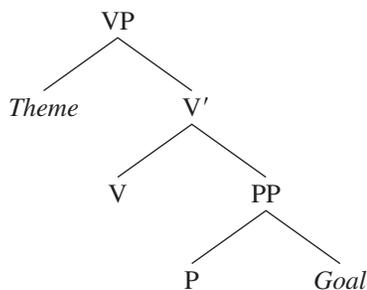
[10] A reviewer points out that several reconstruction tests show that the Theme can reconstruct below the Recipient in the PDC. Compare (i) and (ii).

(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 (23b), 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 (23b); the other is a DOC in disguise, with a Recipient that c-commands the Theme from a right-specifier position. If (ii) is a DOC in disguise, this would explain the binding of the reciprocal.

[11] Pylkkänen's (2008) low-applicative analysis creates potential problems for antilocality, notably, so we do not adopt it here.

For current purposes, 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 3.5.
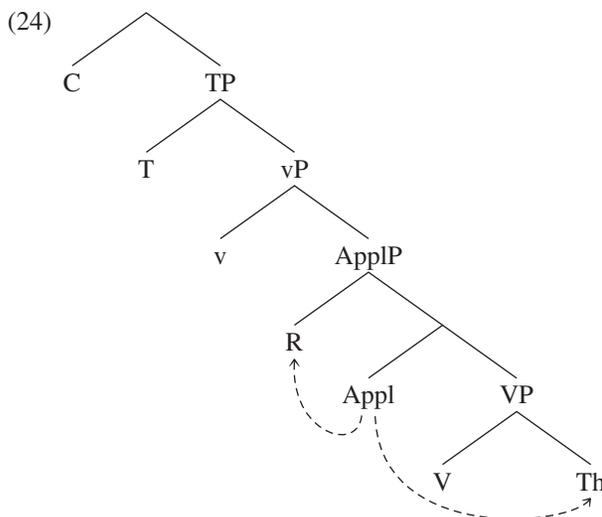
With these basics in place, we can proceed to our theoretical proposal. Fundamentally, any ultimate asymmetry in the DOC must be due, at least in part, to the fact that the Recipient asymmetrically c-commands the Theme in its base-generated position. Another relevant factor, we claim, is the derivational nature of structure building whereby A-movement into the T-domain precedes Ā-movement into the C-domain. The final property of syntax that contributes to the DOMA, we propose, is that the derivation proceeds in phases (Chomsky 2001, 2008). We contend that these three 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 Ā-movement in section 2 (the DOMA), as we demonstrate below.

In the following section, we show how A-movement symmetry can be derived in the DOC without violating locality or other syntactic conditions. We then show how a version of phase theory can explain the 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 two factors: the first is the fact that Appl can assign Case to either the Theme or the Recipient, as represented in (24) (see Van der Wal 2017, Haddican and Holmberg 2018),[12] and the second is movement of the Theme to the phase edge.

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[12] A relevant question at this point is whether these two modes of Case assignment are distinct or not. In some approaches, Case assignment to an immediate specifier is called "inherent," Case assignment to an immediate complement under selection is called "lexical," and Case assignment under Agree is called "structural" (Woolford 2006). Other approaches 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 we discuss, the latter approach seems tenable, as Case is assigned either upward or downward 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, Mateo Pedro, and Preminger 2014 for ergative systems in which v appears to assign Case to both the internal and the external argument). We therefore remain agnostic regarding the status of these two modes of Case assignment. In any event, this issue, while interesting, does not substantively affect the current proposal.

(24)

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              C        TP
                      T    vP
                          v    ApplP
                             R
                              Appl    VP
                                     V    Th
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If Appl assigns Case to the Theme, the Recipient 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, Spec,TP. This is the only option in asymmetrical languages. In symmetrical languages, however, Appl can alternatively assign Case to the Recipient in its specifier, with two consequences. First, the Recipient will be deactivated if Appl assigns Case to it, assuming that assignment of Case deactivates a DP (Chomsky 2001). Second, it leaves the Theme with an unvalued [uCase] feature. In the active, this means that v can probe the Theme and assign objective Case to it.[13] In the passive, the Theme, having an unvalued [uCase] feature, moves to the phase edge in the outer specifier of Appl. In section 3.3, we explain why Appl is a phase head in the passive, and we discuss the obligatory movement of XPs with unvalued features to the phase edge, following Bošković (2007). For now, the important point is that the Theme can, in this circumstance, also be probed by T without violating locality.

This analysis of flexible licensing by Appl also accounts for an object-marking symmetry observed in the Bantu languages discussed here: when the language allows one object marker only, either object can trigger marking in active contexts (Van der Wal 2017). See the discussion in section 6 for languages allowing more than one object marker.

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[13] If defective intervention does not hold, as argued for clause-internal movement by Broekhuis (2007), Bobaljik (2008), Hartman (2012), and Bruening (2014), then the Recipient will not intervene in this operation. Defective intervention obtains when, in the 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 argue that the cases of putative defective intervention discussed in the literature are ruled out for other reasons. If defective intervention turns out to be a real phenomenon, however, and relevant for (24), an additional leapfrogging movement would be necessary to move the Theme past the Recipient (McGinnis 2001, Jeong 2007, Pylkkänen 2008, Legate 2014, Sheehan 2017). As long as ApplP is not a phase, this will not have any impact on extraction possibilities, unlike the intermediate movement we describe below in the text.

(25) *Zulu*

    a. U-John u-nik-a   aba-ntwana i-mali.
      1a-John 1SM-give-FV 2-children 9-money
      'John is giving the children money.'

    b. U-John u-**ba**-nik-a   i-mali   (aba-ntwana).
      1a-John 1SM-2OM-give-FV 9-money 2-children
      'John is giving them money (the children).'

    c. U-John u-**yi**-nik-a   aba-ntwana (i-mali).
      1a-John 1SM-9OM-give-FV 2-children   9-money
      'John is giving it to the children (the money).'
      (Zeller 2011; see also Zeller 2012)

(26) *Lubukusu*

    a. N-á-**mu**-a   sii-taβu.
      1SG.SM-REM.PST-1OM-give.FV 7-book
      'I gave him the book.'

    b. N-á-**si**-a   Wekesa.
      1SG.SM-REM.PST-7OM-give.FV 1.Wekesa
      'I gave it to Wekesa.'
      (Sikuku, Diercks, and Marlo 2018)

Assuming (a) the structure in (23a) and (b) that object marking is the spell-out of ɸ-agreement between little v and an object (see Iorio 2014, Van der Wal 2015a), there are two possible derivations. If the Appl head agrees with the Theme, then v will agree with the Recipient; this is the derivation in asymmetrical languages where only the Recipient can be object-marked. The Swahili example in (27) and the derivation in (28) illustrate this for the Appl head introducing a Recipient argument. In Swahili, then, only the Recipient can be either object-marked or passivized.
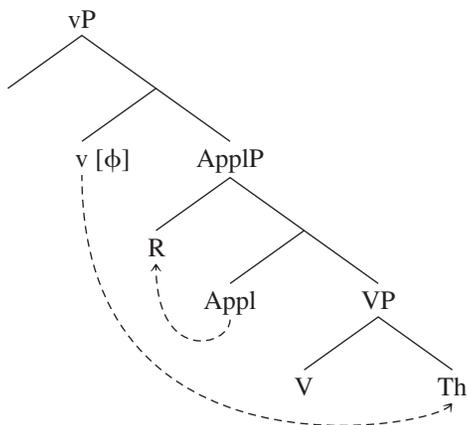
(27) *Swahili*

    a. A-li-**m**-pa   kitabu.
        1SM-PST-1OM-give 7.book
        'She gave him a book.'

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

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

```
                    vP
                   /  \
                  /    \
              v [φ]    ApplP
                \      /   \
                 \    /     \
                  `->R       \
                      \       \
                     Appl      VP
                       \      /  \
                        \    /    \
                         `->V      Th
                                   ^
```
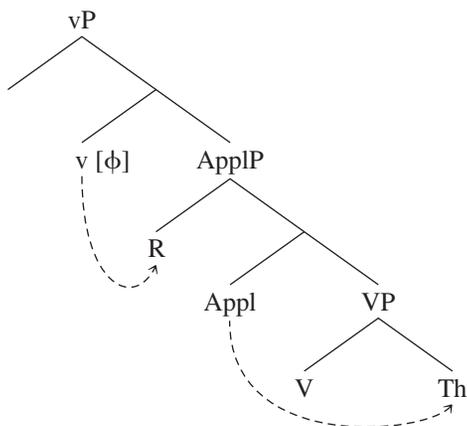
Symmetrical languages with a single object marker (i.e., φ-features only on v) additionally have the option of the Appl head assigning Case to the Recipient, along with a θ-role. In this scenario, the Recipient is thereby deactivated, allowing the Theme object to be probed by v (see also footnote 11). In such cases, v will agree with the Theme, and this Agree relation is potentially spelled out as an object marker, as represented in (29).

(29) *v agrees with Th (object marking of Th possible)*

```
                    vP
                   /  \
                  /    \
              v [φ]    ApplP
                \      /   \
                 \    /     \
                  `  R       \
                      ^       \
                     Appl      VP
                       \      /  \
                        \    /    \
                         `->V      Th
                                   ^
```

The proposed flexibility of the Appl head to license either the Theme or the Recipient gives rise to symmetrical passives and symmetrical object marking in active clauses (see Van der Wal 2017, Haddican and Holmberg 2018).

3.3 Deriving the Emergent Asymmetry: ApplP as a Phase

We propose that the DOMA derives from the fact that phases are contextually determined (see Bošković 2014, 2015, 2016). Concretely, we propose that in the passive DOC, it is ApplP that

is a phase (see also McGinnis 2001). This follows if we adopt Bošković's (2015) definition of phase. Assuming that the clause is partitioned into a thematic and a nonthematic domain, corresponding to two sentential phases, the highest head in each domain will be a phase head (Bošković 2015:617). (30) is a corollary of this definition.

(30) α is the head of a phase Ph making up a thematic domain if and only if α is the highest head introducing an argument in Ph.

In active monotransitive and ditransitive sentences, v is the phase head of the thematic domain. In monotransitive passive and unaccusative sentences, V is the phase head of the thematic domain, as the highest head introducing an argument (if we reject Collins's (2005) proposal that passives have an external argument, optionally realized as a PP; see Legate 2014).[14] But in passives of ditransitives, in the model we are assuming, Appl is the phase head, as the highest head introducing an argument. In short, ApplP is a phase in the passive but not the active DOC.[15]

Crucially, we adopt a version of Chomsky's (2001) Phase Impenetrability Condition called *PIC2* (see Müller 2004, M. Richards 2011, Citko 2014).

(31) Given a structure $[_{ZP}$ Z . . . $[_{XP}$ X $[_{HP}$ α [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—YP in (31). In the case where Z is C and H is v, (31) 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, Bošković 2016); the definition will be discussed and modified in section 3.4.2):

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

Again, we will return to Bošković's (2014, 2015, 2016) proposal in section 3.4.2. 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,

---

[14] The hypothesis that VP can be a phase appears to be compatible with the facts pointed out by Legate (2003), which suggest that there is also a V-related phase edge for passives and unaccusatives. However, the details need consideration.

[15] Like Bošković (2015), we remain agnostic regarding whether passive predicates have a head v or not. If they do, it is a nonthematic v, which is thus outside the thematic domain.

Spec,Appl in a passive) if its [uCase] feature has not been valued within vP/ApplP,[16] or if it has some other uninterpretable feature such as [u*wh*], which we assume that *wh*-phrases have, following Bošković (2007). Given the absence of lookahead 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.

The DOMA 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 what follows, we first show the step-by-step derivation for the Recipient passive and Theme passive and then demonstrate how the DOMA arises.

In a Recipient passive, Appl assigns Case to the Theme, and T agrees with the Recipient, assigns nominative Case to it, and attracts it to Spec,T, as represented in (33). (In all trees, dashed arrows represent Agree and solid arrows represent movement.)

(33) *Simple Recipient passive* ('The children were given the book')
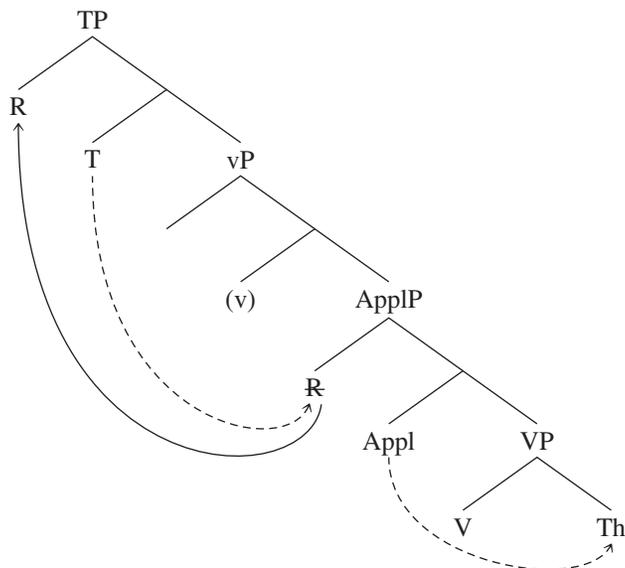
In a Theme passive, Appl assigns Case to the Recipient. The [uCase] feature on the Theme forces it to move to the edge of the ApplP phase (outer Spec,Appl), where T agrees with it, assigns

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[16] Whether some or all Bantu languages have a [uCase] feature is a matter of some debate (see Diercks 2012, Van der Wal 2015b, Sheehan and Van der Wal 2016, 2018). The applied tests in this recent literature concern nominative Case mostly, and in this article 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 and Mletshe 2015). If Case turns out not to be present in a given language at all, there still is a nominal-licensing requirement (perhaps related to topicality; see Morimoto 2006) and the feature driving movement of the Theme would then be related to this other type of licensing.

nominative Case to it, and attracts it to Spec,T, as in (34). We note that given our adoption of (a modified version of) the PIC2, T could actually still probe the Theme even if it did not raise through the phase edge (assuming there is no defective intervention; see footnote 13). In the absence of lookahead, however, movement of the Theme to Spec,ApplP happens blindly upon completion of the lower phase and before transfer.

(34) *Simple Theme passive* ('The book was given the children')[17]
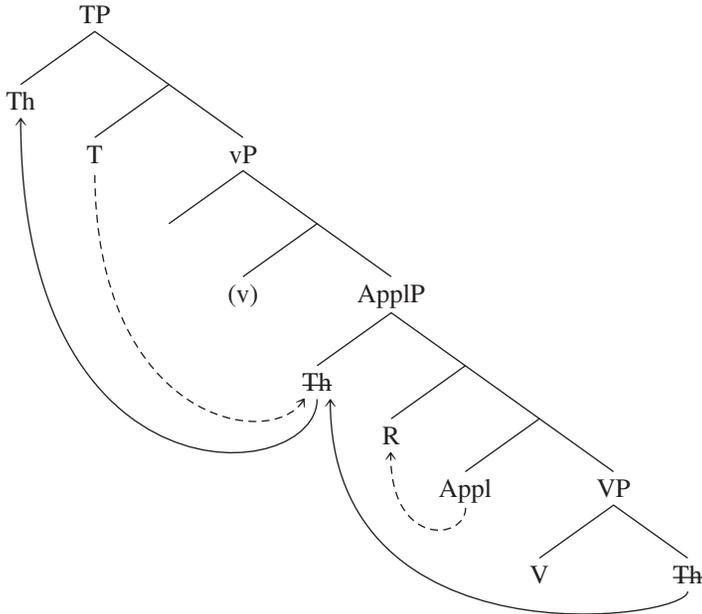
Now consider what happens with Ā-movement from these passive clauses. In the Recipient passive, Appl assigns Case to the Theme and T agrees with and attracts the Recipient. Because the Theme also has a [u*wh*] feature, however, it moves to the phase edge (i.e., the outer Spec,Appl), as in (35a). When 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 (35b).

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[17] Recall that this example is ungrammatical in Standard English but grammatical in some British varieties as well as in the other languages under discussion here. We use English words for ease of exposition.

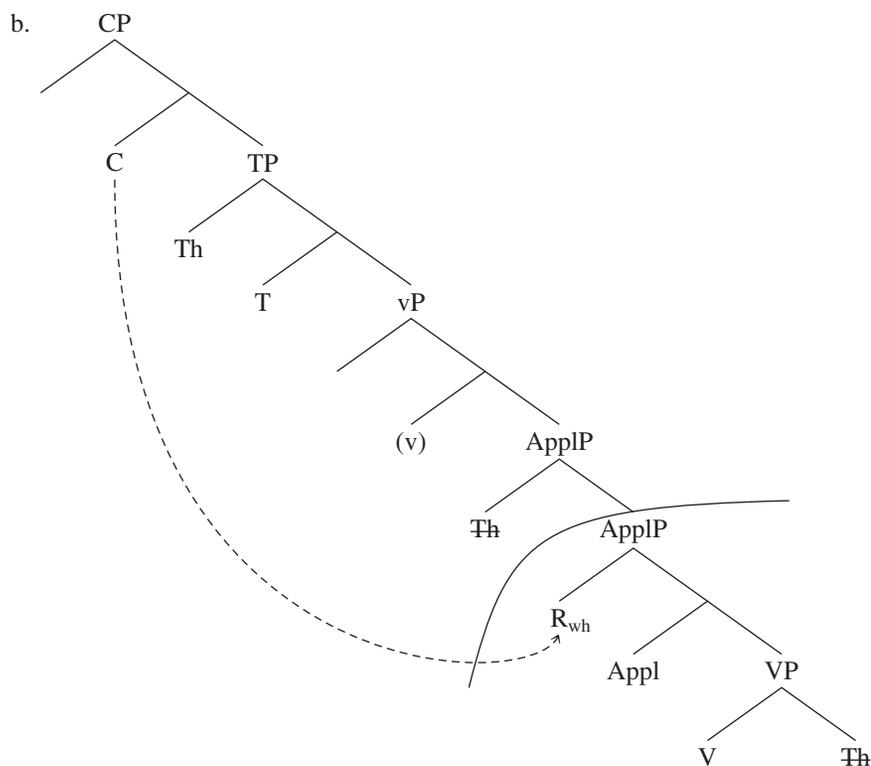(35) *Recipient passive with Theme extraction* ('Which book were the children given?')

a.

b.
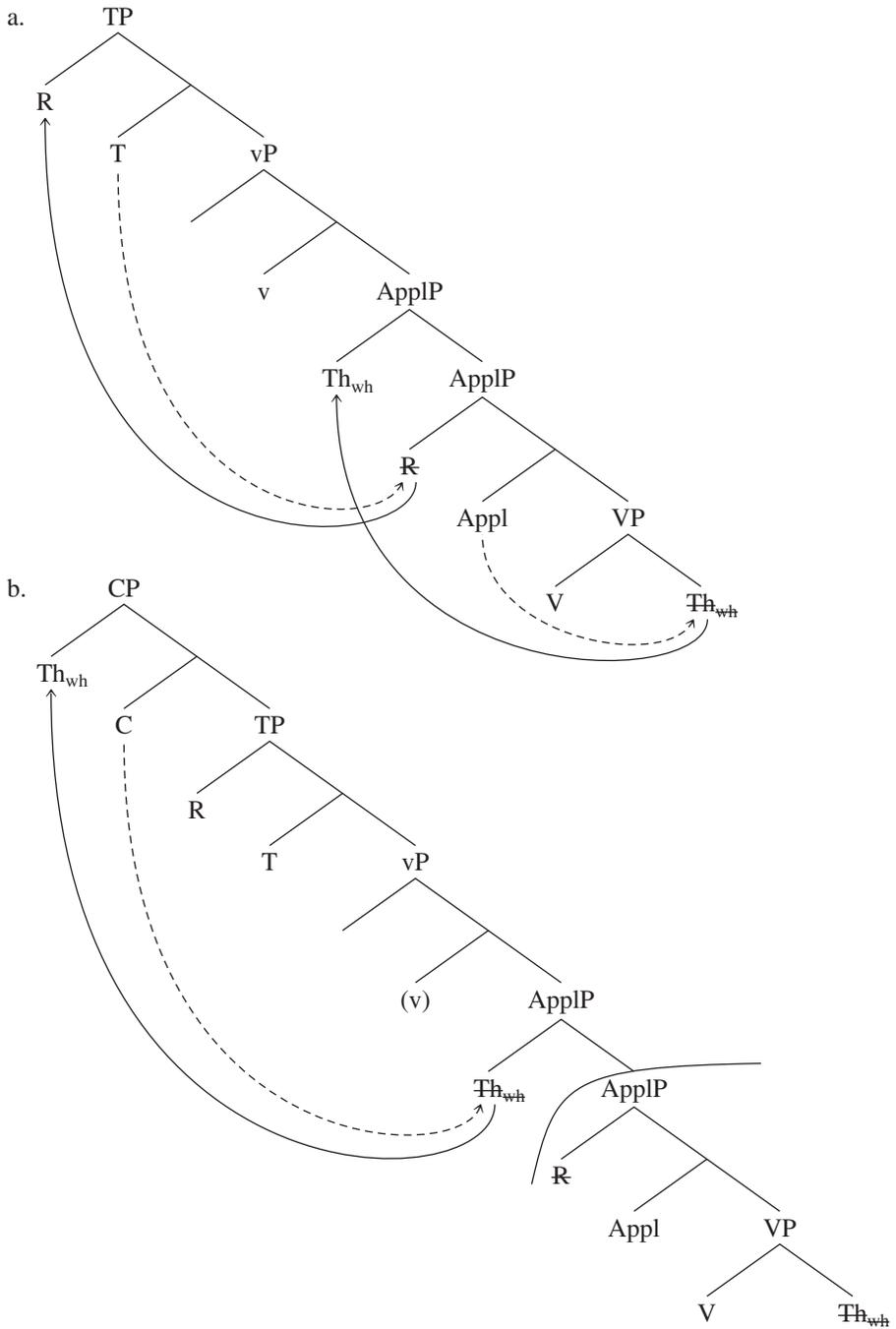
Finally, consider the case of Theme passives with Ā-movement of the Recipient, the combination ruled out by the DOMA. As in the simple Theme passive (34), Appl assigns Case to the Recipient and the Theme raises to the phase edge, the outer Spec,Appl, because of its [uCase] feature, from which position it is probed by T. This time the Recipient has an unvalued *wh*-feature [u*wh*]. 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, (36b).[18] The derivation crashes due to the unvalued *wh*-feature on the Recipient, which is transferred along with ApplP.

(36) *Theme passive with Recipient extraction* ('Which children was the book given?')

a.

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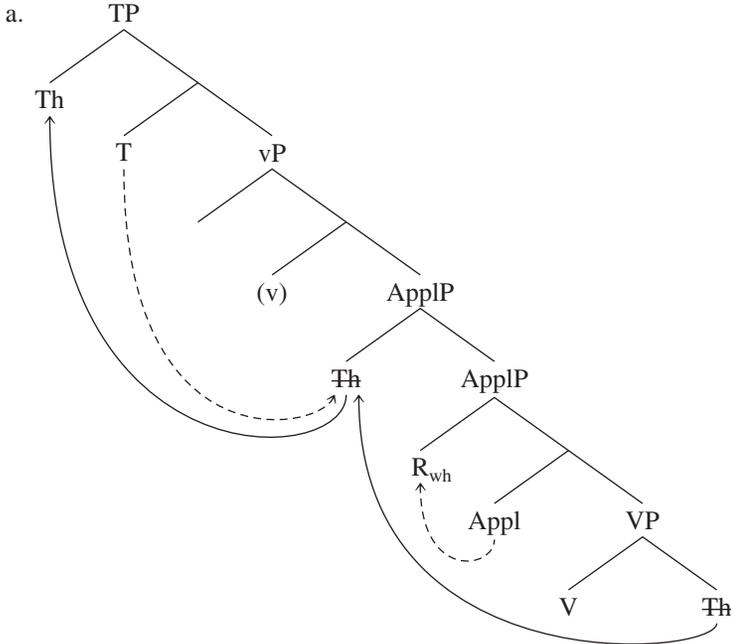
[18] Note that movement of the inner specifier of Appl to a higher specifier position of ApplP, to avoid too early transfer, is ruled out by antilocality, a condition that rules out movement that does not cross a maximal category boundary (Bošković 1994, Abels 2003, Grohmann 2003).

b.

```
        CP
       /  \
      /    \
     /      \
    C        TP
    :       /  \
    :      /    \
    :     Th     \
    :           /  \
    :          T    vP
    :              /  \
    :             /    \
    :            /      \
    :          (v)      ApplP
    :                  /   \
    :                 /     \
    :                Th      ApplP ────────
    :                       /   \
    :                      /     \
    :                    R_wh    ApplP
    :                 ↗        /   \
    :. . . . . . . . .       Appl   VP
                                   /  \
                                  V    Th
```

We can thus account for the asymmetry found in otherwise symmetrical languages (the DOMA). If (a) Appl assigns Case to the Recipient, (b) Appl is a phase head in the passive, as the highest head in the thematic domain introducing an argument, and (c) only the outermost specifier of a phase remains after transfer, the Recipient will be 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 noninterrogative, but leads to a crash if the Recipient bears an unvalued ([uwh]) feature.

At this point, it should be noted that the DOMA arises in essentially the same way as syntactic ergativity under the analyses put forth by Aldridge (2004, 2008) (see also Coon, Mateo Pedro, and Preminger 2014 for a related but distinct proposal). Under Aldridge's proposal, movement of the internal argument to Spec,vP has the effect of trapping the external (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 Spec,vP or they have A-movement of the subject to Spec,TP, 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 generalizes to accusative languages an effect that was previously thought to be limited to ergative systems. In syntactically ergative contexts, the Theme raises obligatorily to Spec,vP past another argument in transitive contexts (because of the parameterized grammar of these languages). With 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, hence less easy to observe.

3.4 Alternative Analyses

3.4.1 Doggett 2004 and Chomsky 2008   Now that we have presented 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 the 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 Falk (1990) and Holmberg and Platzack (1995:206). The 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. Instead, it predicts that both combinations of A- and Ā-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 reversed. Any interaction between A- and Ā-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 are distributed, all syntactic operations within the relevant phase happen simultaneously; C and T operate in tandem. Under this theory, the 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. The data pattern forming the basis for the DOMA provides a challenge for this theory. 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.

3.4.2 Bošković 2014, 2015, 2016   In a series of publications, Bošković (2007, 2014, 2015, 2016) develops a theory that has important elements in common with ours. We have adopted the definition of phasehood in Bošković 2015, 2016 (see (32)), which, when applied to ditransitives, has the effect that Appl is a phase head in passive but not active ditransitives. Another proposal,

articulated in Bošković 2007, which is crucial for our account of the DOMA, is that constituents moved out of a phase have an unvalued feature triggering their initial movement to the phase edge. Yet another crucial component of our account of the DOMA is that only the outermost specifier of a phase head is the edge of the phase, which therefore remains accessible after phasal transfer. This condition is at the center of Bošković's (2016) theory. In his own words: "[I]n 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 proposed above. Consider again our (36b). 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 is 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 Spec,TP, 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 (2016) 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. As shown by (37), Serbo-Croatian allows extraction of attributive adjectives from object NP.

(37) *Serbo-Croatian*
    Ponosnog$_i$ sam video [t$_i$ oca].
    proud   am seen   father
    'I saw the/a proud father.'
    (Bošković 2016:3)

In Bošković's (2016) theory, it is crucial that nominal arguments in Serbo-Croatian and other article-less languages are bare NPs, not DPs (see Bošković 2009). This means, given the definition of phase in Bošković 2016 (and 2015—more pertinent for our account of the DOMA), that NP is a phase in Serbo-Croatian, being the highest projection in the nominal domain (while DP, not NP, is a phase in English and other languages with articles). Multiple modifier extraction from NP is exemplified in (38). (38a) shows a modified NP without extraction. In (38b), a demonstrative and an adjective are both extracted. (38c) shows that adjective extraction is impossible unless the demonstrative is extracted, too.

(38) *Serbo-Croatian*
    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.
>   (Bošković 2016:21)

The generalization is that only the outermost modifier can be extracted from NP (by hypothesis, a phase), but if the outermost modifier moves, then the next modifier can move as well, by the caveat that a trace does not count as an edge (demonstratives are modifiers of NP in Serbo-Croatian; Bošković 2016). As shown by (38c), the extracted modifiers must end up in their original linear order. This is ensured by "tucking in" the inner modifier under the outer modifier (N. Richards 2001, Bošković 2016). 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.

This is also the configuration in certain other constructions discussed in the literature where movement of an intervening constituent β in a configuration $[\alpha \ldots \beta \ldots \gamma]$ makes agreement, movement, or binding possible between α and γ, for example (39) (discussed in Bošković 2016: 18n20, drawing on an original observation in Rizzi 1986).

(39) *Italian*
    a. *Gianni$_i$ sembra a Maria [t$_i$ essere stanco].
        Gianni seems to Maria   to.be tired
    b. A Maria$_j$, Gianni$_i$ sembra t$_j$ [t$_i$ essere stanco].
        to Maria Gianni seems   to.be tired

In (39a), the experiencer object blocks raising of the embedded subject. In (39b), 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 and Hróarsdóttir 2004 and Chomsky 2005, 2008 for other such cases.[19]

Compare this with the structure in (36b): 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 Spec,TP. We claim that in spite of moving from Spec,vP to Spec,TP, the Theme does

---

[19] 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* 'favorite'. However, if the intervening modifier moves to the C-domain, the subject can bind the anaphoric possessor.

(i) *Serbo-Croatian*
    a. *Marija je prodala omiljenu svoju   knjigu.
        Marija is sold   favorite her(anaphor) book
    b. Omiljenu$_i$ je Marija prodala [t$_i$ svoju   knjigu].
        favorite   is Marija sold   her(anaphor) book
        'Marija sold her favorite book.'
        (Bošković 2016:23)

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

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.[20]

On the face of it, 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 look like a more straightforward counterexample for our account of the DOMA.

(40) *Dutch*
    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 (40a) 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 (40b), where the Recipient has shifted out of vP, it no longer counts as the highest edge. In this case, unlike in (37) and (39), 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 (40a) and (40b) is, however, not a matter of locality involving phase edges, but a matter of information-structural effects of syntactic structure. An argument DP left behind in vP, as the Recipient is in (40a), will be interpreted as focus/new information, but a Recipient DP 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 (40a–b).[21]

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[20] A reviewer points out that this suggests that the DOMA could be explained in terms of a condition ruling out nested (as opposed to crossing) dependencies/chains. In the ungrammatical structures, movement of the two objects derives nested chains; in the grammatical ones, it derives crossed chains.

    (i) *[$_{CP}$ R$_i$ [$_{TP}$ Th$_k$ . . . [$_{ApplP}$ t$_k$ . . . t$_i$ . . .]]]
    (ii) [$_{CP}$ Th$_k$ [$_{TP}$ R$_i$ . . . [$_{ApplP}$ t$_k$ . . . t$_i$ . . .]]]

In this light, the DOMA would not be dependent on a strictly sequential bottom-up model of syntax, but could be modeled in, for example, Chomsky's (2008) theory (see section 3.4.1). This is an interesting idea with wide-ranging consequences that may be worth exploring. However, the condition would need to be formulated so that it does not define movement across an in-situ argument (a chain whose head and tail are the same item), as a case of nested chains, incorrectly ruling out grammatical examples like (iii).

    (iii) What$_i$ did John give Mary$_k$ t$_i$?

This may well be a major problem for this hypothesis.

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

    (i) *Dutch*
      . . . dat Jan waarschijnlijk Marie het boek geeft.
         that Jan probably   Marie the book gives
      ' . . . that Jan probably gives Marie the book.'
      (Bošković 2016:17)

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

The upshot is that we replace our preliminary definition (32) of the edge of a phase by (41).

(41) When a phase Ph is transferred, an adjunct or specifier α of Ph remains accessible for the head H of the next phase Ph + 1 if and only if there is no specifier or adjunct β of Ph that c-commands α, where the head of the chain of which β is a member is c-commanded by H.

In (38b), for instance, only the trace of the demonstrative intervenes between the attracting head and the adjective; the head of the demonstrative chain does not. In (36b), on the other hand, the head and the trace of the Theme chain intervene between C and the Recipient.[22]

3.5 No DOMA in the Prepositional Dative Construction

The PDC is always asymmetrical for A-movement; there is a Theme passive but no Recipient passive. This is presumably because the Recipient is assigned Case by the preposition and is therefore not a possible goal for T.[23]

(42) The book was given to John.

(43) *John was given a book to.

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

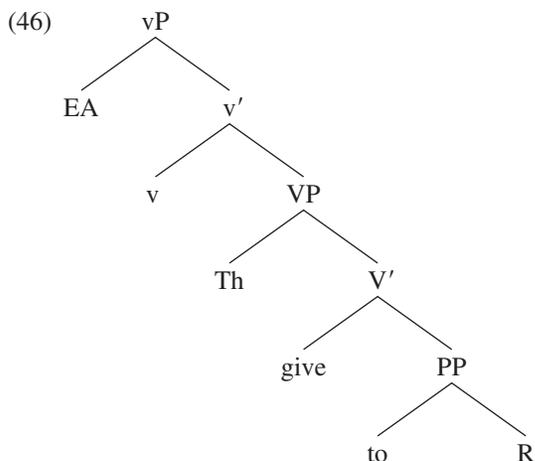(44) Who was the book given to?

(45) To who(m) 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 2017), there is a degree of consensus that the analysis in (46) is essentially right, for the active PDC. (EA = external argument)

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[22] The restatement (41) of what counts as an edge should also address the concern of an anonymous reviewer that the earlier condition (32) would rule out multiple *wh*-movement in languages that have it (including most or all Slavic languages). N. Richards (2001) argues that multiple *wh*-movement is derived by tucking-in, in which case it will be compatible with (41). 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.

[23] Note that English, like Scandinavian languages but unlike many other languages, does actually permit pseudopassives 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 the preposition are string-adjacent, which would not be the case in the PDC.

(46)

```
                    vP
                 /      \
              EA         v′
                      /      \
                    v         VP
                           /      \
                         Th        V′
                               /       \
                            give        PP
                                      /     \
                                    to       R
```

Here v, V, 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. Whether PP in the PDC is a phase is in question.

In the passive, v loses its capacity to assign a role and a Case, and will no longer be the phase head. Instead, as the highest thematic head, V will be the phase head. PP may also be a phase (see Bošković 2014 for discussion), but regardless of its status *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 edge of VP when V is merged and PP is transferred, and from there to Spec,CP when C is merged.[24] If PP is not a phase, there is no transfer when V is merged, and the *wh*-Recipient will move directly to the edge of VP, and from there to Spec,CP. This accounts for the patterns found in the PDC and the lack of the DOMA in this domain.

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).

(47) 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.')

---

[24] If (46) represents the full structure of the PP, antilocality (Bošković 1994, Abels 2003) will prevent movement of R to the edge of the PP. However, there is good reason to think that PP has more structure (in fact, at least two layers; see Cinque 2010, Svenonius 2010), in which case antilocality will not be an issue.

    b. Questa relazione   mi ha insegnato l'arte della pazienza.
       this   relationship me=has taught   the art of.the 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; and see Anagnostopoulou 2003 for Greek), and that it 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 (48b), like PDCs (48a), permit only Theme passivization.

(48) a. *Prepositional dative construction*
     [Th-passive]
     Questi   libri sono stati   dati   a Maria dal   professore.
     these.MPL books are   been.MPL given.MPL to Maria by.the teacher
     'These books were given to Maria by the teacher.'
   b. *Double object construction*
     [Th-passive]
     Queste   idee sono state   date   a Maria da questo libro.
     these.FPL ideas are   been.FPL given.FPL to Maria by this   book
     'These ideas were given to Maria 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.

(49) a. A chi darà   un   regalo Maria?
     to who give.3SG.FUT a.MSG 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/some/some.FPL ideas this.MSG 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/her first relationship taught something important to?'

The availability of both Theme passives and Ā-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 (50). We assume

that the presence of a causer subject ensures that we are dealing with an example of the DOC rather than the PDC.

(50) *Double object construction*
[Th-passive, R-extraction]
a. *A chi saranno   date   alcune idee   da questo libro?
   to who be.3PL.FUT given.FPL some.FPL ideas.FPL by this   book
b. *A chi è stato   insegnato qualcosa di importante dalla sua
   to who is been.MSG taught.MSG something of important   by.the POSS.3SG
   prima relazione?
   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 nonagentive subject. That this is the relevant condition is clear from the reactions of speakers to examples like (50a–b): "No. I reject the books as a giver"; "'Prima relazione' assumes an improbable agentive reading"; "OK without the by phrase." Moreover, as predicted, the same speakers allow Recipient extraction from a Theme passive if the matrix subject is clearly agentive—that is, if we are dealing with a PDC, with left-dislocation of the subject strongly preferred (probably for processing reasons).[25]

(51) *Prepositional dative construction*
[Th-passive, *wh*-R]
a. ??A chi è stato   dato   questo libro dal   professore?
    to who is been.MSG given.MSG this.MSG book by.the teacher
b. ?A chi questo libro è stato   dato   dal   professore?
   to who this.MSG book is been.MSG given.MSG by.the teacher
   'Who was this book given to by the teacher?'
c. Questo libro, a chi è stato   dato   dal   professore?
   this.MSG book to who is been.MSG given.MSG by.the teacher
   'This book, who was it given to by the teacher?'

This is the same gap observed in Norwegian, North-West English, Lubukusu, and Zulu, labeled the DOMA in (17) and repeated in (52), with the exception that, for independent reasons, Italian does not allow Recipient passives.

(52) *Double Object Movement Asymmetry (DOMA)*
✓Theme extraction out of a Recipient passive ('Which book were the children given?')
✗Recipient extraction out of a Theme passive (*'Which children was the book given?')

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[25] With (50a–b), left-dislocation of the subject does not help, and respondents replied that there was no way to save them (except by omitting the 'by'-phrase).

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 judgments are reported above). In (53a), the pronoun (*il*) *suo* is a variable bound by the QP 'each imperfection'. In (53b), the pronoun cannot have this interpretation. This follows if the Theme always c-commands the Recipient in the Italian DOC.

(53) a. L'ispezione   ha mostrato [ogni imperfezione]$_i$ al   suo$_i$ responsabile.
        the inspection has shown   each imperfection   to.the its   responsible
        'The inspection showed each imperfection to the person responsible.'

   b. *L'ispezione   ha mostrato le   sue$_i$ imperfezioni a [ogni
        the inspection has shown   the.PL POSS.3SG.FPL imperfections to each
        professore]$_i$.
        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 Spec,ApplP, 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), the analysis of the DOMA in section 3.3 can be straightforwardly extended to Italian.

    In (54), 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 Spec,ApplP to receive Case from v, as represented in (54a). If the Recipient has a [u*wh*] feature, it will move to the outer specifier of the lower phase, which is Spec,vP 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 (54b). The same analysis holds for Theme extraction in the active: the Theme will move via the edge of vP.

(54) a.
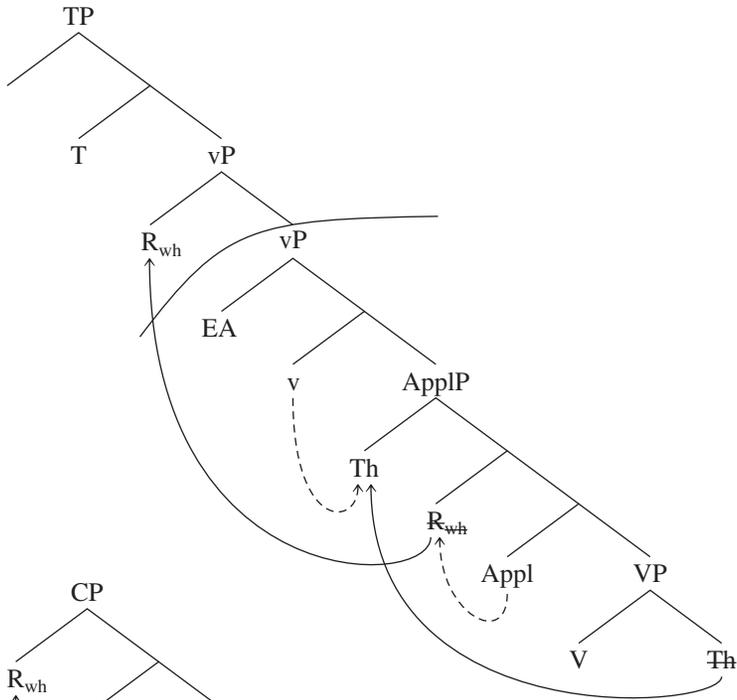
b.
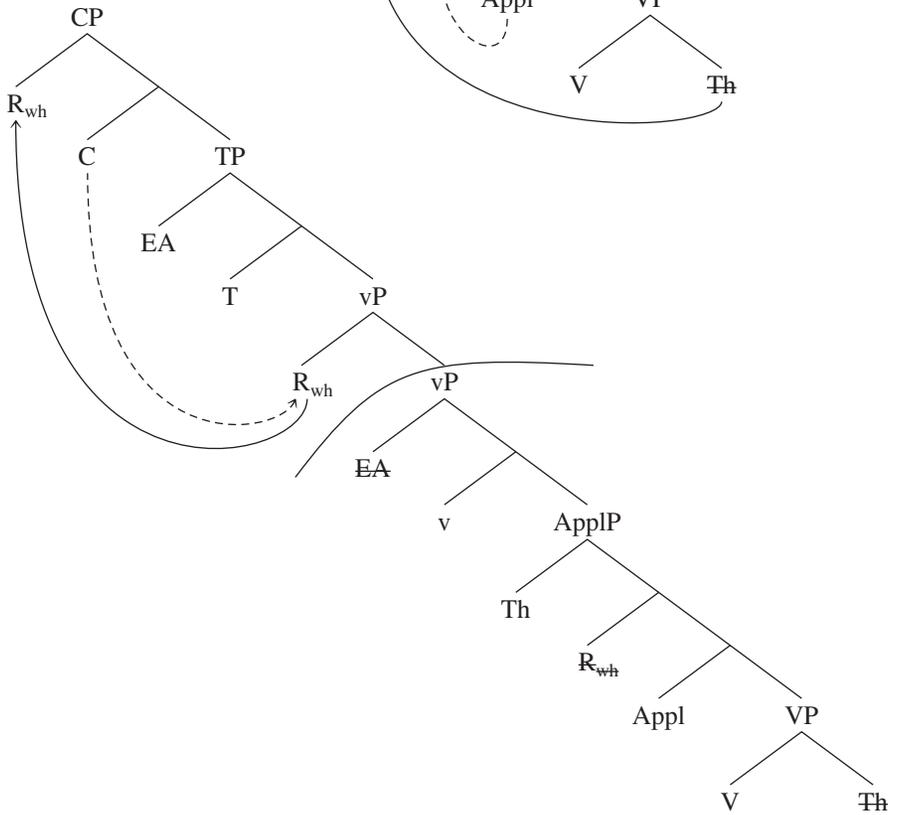
However, in a Theme passive, the derivation will proceed exactly as in Norwegian. The Recipient receives Case from Appl, and the Theme raises to Spec,Appl because of its [uCase] feature. This movement serves to trap the Recipient in Spec,Appl for the reasons outlined above.

The Italian facts can therefore be taken as further evidence for 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 Spec,ApplP does not affect Ā-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 is found only in Theme passives). If the relevant "crossing" configuration arises in transitive vPs, there will be an Ā-extraction restriction in active contexts; if it arises only in ApplP, the effect will be observed only in passives, where ApplP becomes a phase.

5 Extension 2: Object Marking in Passives

Zulu and Lubukusu, being "symmetrical" languages,[26] allow either object in a DOC to be object-marked by a prefix on the verb, as shown in (25) and (26), repeated here as (55) and (56).

(55) *Zulu*

  a. U-John u-nik-a   aba-ntwana i-mali.
     1a-John 1SM-give-FV 2-children 9-money
     'John is giving the children money.'

  b. U-John u-**ba**-nik-a   i-mali   (aba-ntwana).
     1a-John 1SM-2OM-give-FV 9-money 2-children
     'John is giving them money (the children).'

  c. U-John u-**yi**-nik-a   aba-ntwana (i-mali).
     1a-John 1SM-9OM-give-FV 2-children   9-money
     'John is giving it to the children (the money).'
     (Zeller 2011; see also Zeller 2012)

(56) *Lubukusu*

  a. N-á-**mu**-a   sii-taβu.
     1SG.SM-REM.PST-1OM-give.FV 7-book
     'I gave him the book.'

  b. N-á-**si**-a   Wekesa.
     1SG.SM-REM.PST-7OM-give.FV 1.Wekesa
     'I gave it to Wekesa.'
     (Sikuku, Diercks, and Marlo 2018)

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[26] See footnote 7; we leave to one side the variation in symmetry for different semantic roles (e.g., instruments, locatives).

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 (57) and (58).[27]

(57) *Zulu*

    a. [R-passive with Th object-marked]

      Aba-ntwana ba-ya-**yi**-fund-el-w-a   in-cwadi.

      2-child   2SM-PRS.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-PRS.DJ-2OM-read-APPL-PASS-FV 2-children

       Int. 'The book is being read to the children.'

       (Adams 2010:26)

(58) *Lubukusu*

    a. [R-passive with Th object-marked]

      Baa-sooreri ba-a-**chi**-eeb-w-a   (chi-khaafu).

      2-boys   2SM-PST-10OM-give-PASS-FV 10-cows

      'The boys were given them (cows).'

    b. [Th-passive with R object-marked]

      ??Chi-khaafu 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).'

       (Justine Sikuku, pers. comm.)

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 has a ɸ probe. We discuss the theoretical implications of this proposal below after demonstrating how this derives the Zulu and Lubukusu facts.

    We take Roberts's (2010) approach to object marking as agreement with a defective goal (see Iorio 2014 and Van der Wal 2015a 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 ɸP pronoun but not if it is a full DP. Since probe and goal in such a configuration share the same features, the configuration is indistinguishable from a chain, and in chains normally only the highest copy is spelled out; copies other than the

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[27] See also Woolford 1993, 1995 and Alsina 1996 on the combination of passive and object marking in Bantu languages.

highest copy in a chain are deleted at PF.[28] 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), as illustrated in (59).

(59)

```
              v              VP
           [uϕ: __]
                          V        ϕP          → Defective ϕP goal
           Agree                  [iϕ: class 8]
```

```
              v              VP
           [ϕ: 8]      v
            -bi-
                          V        ϕP          → Spell-out of ϕ on v: Object marker
                                  [iϕ: class 8]
```
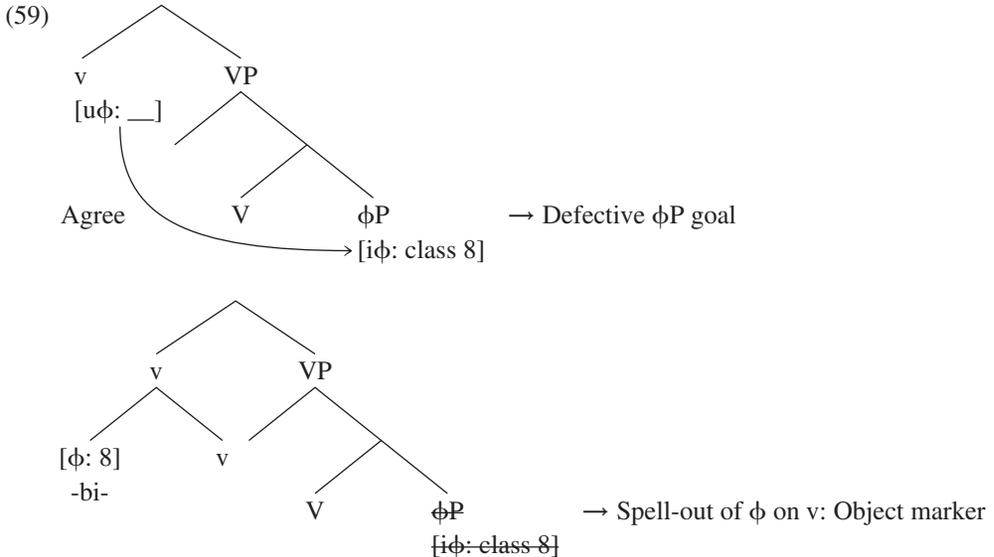
In the passive, not v but Appl is the phase head and has a ϕ probe. The derivation then proceeds as follows. In a Recipient passive, Appl agrees for Case and ϕ-features with the Theme, and T agrees with and attracts the Recipient, as represented in (60). If the Theme is a defective goal (i.e., pronoun), 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.

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[28] The cooccurrence of an object marker and an overt DP object (so-called "doubling" object marking) can be derived via a big-DP 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 2015a.

(60)
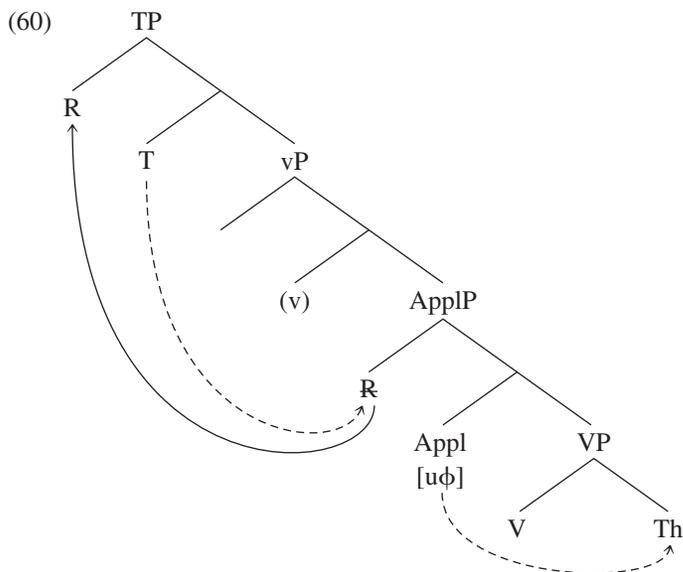
In a Theme passive, Appl agrees for Case and ɸ-features with the Recipient in its specifier. Then the Theme with its [uCase] feature moves to the outer specifier of ApplP, from which position it is probed by T and raises to Spec,TP, as in (61). The highest copy in the chain formed by the Recipient and the ɸ probe on Appl (not v, since it is a passive) will be the Recipient phrase itself and not the ɸ-features on Appl. Under the defective-goal approach to object marking, this means that the object marker cannot be spelled out in this situation, deriving the ungrammaticality of object-marking the Recipient in a Theme passive.

(61)   *   TP
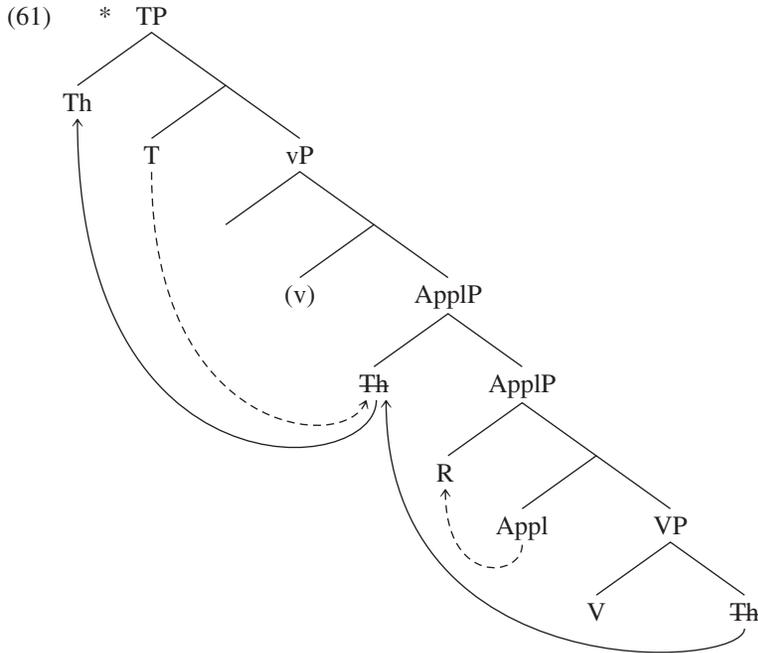
Positing unvalued φ-features and phasehood on the Appl head in passive clauses thus accounts for the asymmetries in passives, with respect to both movement and object marking.

6 Full Symmetry: Kinyarwanda and Luganda

The Bantu languages Kinyarwanda (Rwanda) and Luganda (Uganda) are symmetrical for object marking, passive (62), and relatives (63), and the DOMA does not hold, as illustrated in (64) and (65) for the two languages, respectively.[29]

(62) *Kinyarwanda*
 [Symmetrical passive, and object marking of either still possible]
 a. Umusore   y-a-hiing-i-ye   umugore umurima.
    1.young.man 1SM-PST-plow-APPL-ASP 1.woman 3.field
    'The young man plowed the field for the woman.'

---

[29] Another language that 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) *Greek*
  Tinos   dothike   to vivlio?
  who.GEN gave.NACT the book
  'To whom was the book given?'
  (Anagnostopoulou 2003:221)

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

b. Umugore y-a-**wu**-hiing-i-w-e   n' umusore.
    1.woman 1SM-PST-3OM-plow-APPL-PASS-ASP by 1.young.man
    'The woman had it plowed for her by the young man.'
    Lit. 'The woman was it plowed for by the young man.'

c. Umurima w-a-**mu**-hiing-i-w-e   n' umusore.
    3.field   3SM-PST-1OM-plow-APPL-PASS-ASP by 1.young.man
    'The field was plowed (for) her by the young man.'
    (Ngoboka 2005:88, glosses adapted)

(63) *Kinyarwanda*
      [Symmetrical relative]
      a. imyeenda umugabo y-a-gur-i-ye   umwaana
          10.clothes 1.man   1SM.REL-PST-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-PST-buy-APPL-ASP 10.clothes
          'the child for whom the man bought clothes'
          (Ngoboka 2005:63)

(64) *Kinyarwanda*
      [Symmetrical passive and relative]
      a. Abáana   améezá a-záa-gur-ir-w-a   (barasiinziiriye).
          2.children 6.tables 6SM-FUT-buy-APPL-PASS-FV
          'The children for whom the tables will be bought (are sleeping now).'

      b. Améezá abáana   ba-záa-gur-ir-w-a   (azaagera ku ishuúri ejó).
          6.tables 2.children 2SM-FUT-buy-APPL-PASS-FV
          'The tables that the children will be bought (will arrive at the school tomorrow).'
          (Jean Paul Ngoboka, pers. comm.)
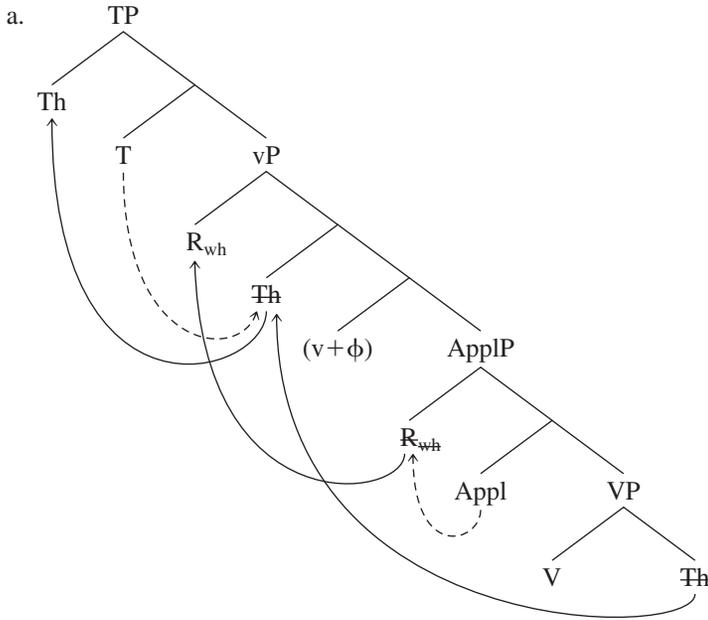
(65) *Luganda*
   [Symmetrical passive and relative]
      a. N-jagala   engoye   abaana z-e   ba-a-gul-ir-w-a.
          1SG.SM-want 10.clothes 2.children 10-REL 2SM-PST-buy-APPL-PASS-FV
          'I want the clothes that the children were bought.'

      b. N-jagala   abaana   engoye   b-e   z-a-gul-ir-w-a.
          1SG.SM-want 2.children 10.clothes 2-REL 10SM-PST-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, 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 Spec,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 *base-generated* in Spec,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 driven not by an attracting head for feature valuation but by unvalued features on the arguments themselves. There is, however, a difference between the two arguments: one moves for [uCase] (A) and the other for [u*wh*] (Ā). We suggest that the Ā-moving argument always forms the outer specifier, because it cannot tuck in under an A-moving argument (much like what McGinnis (1998) proposes for thematic specifiers; cf. N. Richards 2001). This means that either argument can become the subject and either argument can be relativized—exactly as the data above for Kinyarwanda and Luganda show. The DOMA-violating derivation with tucking-in is represented in (66).

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

a.

b.
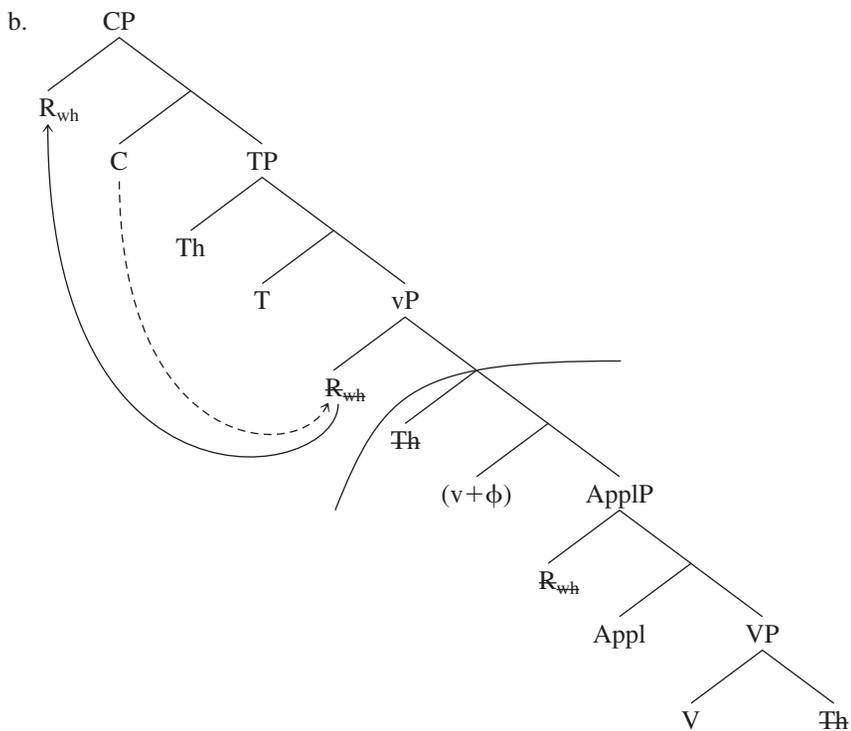
Now, why would v still be a phase in the passive in these languages, as opposed to other (Bantu) languages that do obey the DOMA? A crucial difference between Zulu and Lubukusu, on the one hand, and Kinyarwanda and Luganda, on the other hand, is that the former allow only one object marker (67), whereas the latter allow multiple object markers (68).

(67) *Zulu*
    a. *U-John u-**ba**-<u>zi</u>-nik-ile.
        1a-John 1SM-2OM-9OM-give-PFV
    b. *U-John u-<u>zi</u>-**ba**-nik-ile.
        1a-John 1SM-9OM-2OM-give-PFV
        Int. 'John gave them them.'
        (Zeller 2012:220)

(68) *Kinyarwanda*
    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).'
    (Baudoin-Lietz, Nurse, and Rose 2004:183)

This parametric variation is captured by the presence of φ-features on only v in the former type of language and on multiple lower functional heads in the latter type (see Van der Wal 2015a, to appear, for a featural account of object marking in Bantu), resulting in multiple object marking, as in (69). 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 (see also Chomsky 2008, Gallego 2010).

(69)

v
[uφ]

ApplP

R

Appl
[uφ]

VP

V

Th
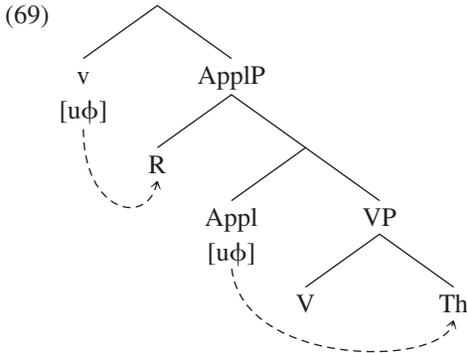
Kivunjo Chaga is another language that at first sight is completely symmetrical, this indeed being the language that Bresnan and Moshi (1990) analyze in their seminal article on object symmetry. They also provide data on the interaction of passive and other object properties, which show that Chaga, like Kinyarwanda and Luganda, does not obey the DOMA. If our analysis is on the right track, we expect Chaga to also allow multiple object markers, a prediction that is borne out; see the online appendix for data (https://www.mitpressjournals.org/doi/suppl/10.1162/ling_a_00322).

7 Conclusion

We have identified an asymmetry in languages that are (often) otherwise symmetrical in double object constructions, an asymmetry that appears in a combination of passivization and extraction for *wh*-questions or relativization.

(70) *Double object movement asymmetry (DOMA)*
       ✓ Theme extraction out of a Recipient passive ('Which book were the children given?')
       ✗ Recipient extraction out of a Theme 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 head introducing an argument. Given that only the outermost specifier of a phase remains after the phase is transferred, 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 face the same problem. It is possible for the Recipient to move to Spec,TP before the lower phase is transferred, whether or not the Theme is extracted.

A similar asymmetry is also seen in the interaction of passivization 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 proposed by 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 the 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 too, but Recipient extraction is fully grammatical.

Abbreviations and Symbols

Numerals refer to noun classes, but to persons when followed by SG/PL. Strikethrough indicates the origin of a moved phrase. Dashed arrows indicate Agree; solid arrows indicate Move.

APPL	applicative
ASP	aspect
CAUS	causative
COMP	complementizer
COP	copula
DJ	disjoint
DOC	double object construction
FPL	feminine plural
FUT	future
FV	final vowel
GEN	genitive
MPL	masculine plural
NACT	nonactive
OM	object marker
PASS	passive
PDC	prepositional dative construction
PFV	perfective
PIC	Phase Impenetrability Condition
POSS	possessive
PRS	present
PROXDEM	proximal demonstrative
PST	past
R	Recipient
REL	relative
REM.PST	remote past
RM	relative marker

RS	relative suffix
SG	singular
SM	subject marker
Th	Theme

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