

ABSTRACT

Title of dissertation: THE LANDSCAPE OF APPLICATIVES

Youngmi Jeong, Doctor of Philosophy, 2006

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The present thesis is concerned with the syntax of constructions variously referred to as ‘applicative’, ‘ditransitive’, or ‘multiple object’ constructions: constructions that contain arguments that transcend the traditional subject-object characterization. The present thesis is also concerned with how the syntax of such constructions yields the interpretive effects that previous research has identified.

In this thesis I try to remedy the inadequacies and limitations of previous accounts. As far as the syntax of applicatives is concerned, my analysis necessitates the rejection of phase-based derivation, and requires an emphasis on anti-locality, a rethinking of the phenomenon of successive cyclicity, and a renewed appreciation for the relevance of case and category in the context of multiple object constructions. The system I end up with is more relativized than previous accounts, as it makes use of more factors to capture the syntax of applicatives.

In addition to providing a more adequate characterization of the syntax of applicative constructions, I develop a semantic analysis of double-object/low applicative constructions. Specifically, I argue that such constructions involve object-sharing, captured via theta-driven movement, a derivational process that they share with serial verbs and resultative constructions.

If correct, the present thesis offers empirical arguments for various theoretical options currently entertained in the minimalist program, among which movement into theta-position, multiple agree, anti-locality, and early successive cyclic movement (i.e., movement taking place before the final landing site is introduced into the structure).

THE LANDSCAPE OF APPLICATIVES

by

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CHAPTER ONE

Introduction

The present thesis is concerned with the syntax of constructions variously referred to as ‘applicative’, ‘ditransitive’, or ‘multiple object’ constructions: constructions that contain arguments that transcend the traditional subject-object characterization. The present thesis is also concerned with how the syntax of such constructions yields the interpretive effects that previous research has identified.

Although the literature abounds with proposals in the domain of multiple object constructions, it can be shown that none of the existing accounts is fully satisfactory. However, I believe that sufficient progress has been made in recent years to render a comprehensive characterization within reach.

Because many relevant facts in the domain of applicatives come from languages that are typologically very different from English and other extensively studied languages, this thesis is by necessity very oriented toward cross-linguistic comparisons.

To carry out such comparisons I adopt the most recent version of generative grammar known as the minimalist program. It is not my intention to provide a thorough overview of the minimalist framework. The interested readers are referred to Hornstein, Nunes, and Grohmann (2006), and Lasnik, Uriagereka, and Boeckx

(2005) for such overviews. For my own purposes, it suffices to adopt the following hypotheses:

- (i) The language faculty contains only two levels of representation, Logical Form (LF) and Phonetic Form (PF). LF and PF are interface levels, i.e., points of contact between language and systems of thought (LF) and articulation (PF).
- (ii) In the absence of traditional levels of representation such as D-Structure and S-Structure, all move operations – overt and covert – are subject to the same syntactic principles. Also, in the absence of the theta-criterion, movement into theta-position is licit.
- (iii) Linguistic representations are the result of Merge and Move. Merge (a.k.a. external merge) takes previously unconnected syntactic objects and puts them together under a labeled node. Move (a.k.a. internal merge) essentially recombines, or rearranges previously merged elements.

- (iv) The operation Move in particular is subject to locality principles such as Relativized Minimality, which prohibits the formation of long syntactic dependencies if shorter dependencies could be established.

- (v) Move operations are subject to Last Resort and must result in feature-checking.

The five statements just formulated will be assumed throughout, and auxiliary assumptions will make crucial reference to them. When specific technical notions are needed in the following pages, I will introduce them so as to make the thesis relatively self-contained, and easier to read.

The present work is organized as follows. In Chapter 2 I outline the empirical domain of the thesis, illustrating the range of multiple object structures in natural languages. I also discuss some recent hypotheses in the domain of applicatives which, in my opinion, go some way toward deriving/explaining the properties of such constructions. I close the chapter by pointing out problems for these recent hypotheses. Chapter 3 aims at solving such problems by combining syntactic properties such as successive cyclicity, anti-locality, case-licensing, scrambling, and arguing against phase-based locality. Chapter 4 shows how current conceptions of English-type double object constructions fail to capture a key aspect of their semantics. After characterizing this key aspect, I propose a way to capture it that

leaves everything else about applicatives I have said in this thesis unchanged. My proposal relates low applicatives to serial verb and resultative constructions in terms of object sharing. If correct, the analysis I develop here provides an additional argument for the claim that movement into theta-position is licit.

To sum up, the goals of this thesis are (i) to refine the syntax of applicatives and multiple object structures more generally and (ii) show how the syntax of such constructions can illuminate the semantic characteristics that they exhibit. Put differently, the goals of the thesis are to provide a formal typology of applicatives and show how that typology coupled with independently motivated principles of syntax and interpretation yield a coherent picture, or landscape for applicatives, consistent with minimalist assumptions.

CHAPTER TWO

Applicatives: The lay of the land

In this introductory chapter, I first outline the empirical domain of the thesis, illustrating the range of multiple object structures in natural languages (section 2.1). Next I discuss some recent hypotheses in the domain of applicatives which in my opinion go some way toward deriving/explaining the properties of such constructions (section 2.2). Specifically, I will show that there is a growing consensus regarding the syntax of such constructions and the basic mapping of that syntax onto semantics. Theoretically, such consensus is a welcome result, as applicatives, which, as many have argued include the infamous double object construction in English, have been among the most disputed syntactic constructions in generative grammar. In concluding this chapter, I argue that the consensus around applicatives is very interesting and appealing, but in some sense incomplete (section 2.3). It will be my ambition in the subsequent chapters of this thesis to refine the syntax of applicatives to achieve a more complete picture in this domain. But let me first say what I mean by applicative constructions.

2.1 Introducing applicatives: typological considerations

The applicative is usually understood as a construction in which a verb bears a specific morpheme which licenses an oblique, or non-core, argument that would not otherwise be considered a part of the verb's argument structure.¹ The term 'applicative' originated as early as 17th century when missionary grammars of Uto-Aztecan languages designated as 'verbos applicativos' a verbal form which indicated that the verb was intended toward another person (Carochi 1645/1983:63). Later the terms 'applicative' or 'applied' (Marantz 1993:119) were used in the study of Bantu languages to refer to a special verbal inflection adding an extra, 'affected' object to the argument structure of the verb. See (1) and (2).

(1) N - ä - ĩ - lyì - à k-élyá [Chaga]
 FOC-1SUB-PR-eat-FV 7-food
 'He/She is eating food'

(2) a. N - ä - ĩ - lyì - í - à **m-kà** k-élyá
 FOC-1SUB-PR-eat-APPL-FV **1-wife** 7-food
 'He is eating food for his **wife**'

¹ For this reason applied arguments are sometimes thought of as adjuncts. Languages with overt applicative morphemes show that treating applied arguments as adjuncts is on the wrong track, since unlike standard adjuncts, applied arguments appear to bind into arguments, raise to SpecIP and trigger agreement, affect the verb's morphological make-up, and participate in structural case marking – phenomena that will figure prominently in this chapter and the next. Based on such argument-like behaviors, I regard applied objects as arguments.

- b. N - ä - ĩ - zric - í - à mbùyà
 FOC-1SUB-PR-run-APPL-FV 9-friend
 ‘He is running for a friend’

(Bresnan and Moshi 1990:149)

If the base verb is transitive (1), the applicative marker may supertransitivize it and produce a double object construction like (2a). On the other hand, if the base verb is intransitive, the applicative morpheme adds the transitive flavor on it like (2b).

By extension, the term ‘applicative’ can also be used for oblique/indirect objects of the verb that precede the direct object in languages even without an overt applicative marker. Marantz (1993) proposes that the English double object constructions and constructions with dative/accusative affected arguments in a wide variety of languages are actually applicative constructions with a non-overt applicative marker. See (3).

- (3) a. I read a letter
 b. I read a letter to Mary
 c. I read *Mary* a letter

The applicative construction was also referred to as prepositional, benefactive, indirective, and instrumental, depending on the type of applicative.

Standard applicative constructions are those in which an affix is attached to the verb, allowing an extra nominal to appear in the VP in addition to those inherently selected by the verb. Baker (1988), Bresnan and Moshi (1990), and Alsina and Mchombo (1993) assume that such extra arguments are typically interpreted as benefactive or instrumental. The applicative construction can also be associated with other thematic roles such as malefactive, instrumental, goal, locative, and source. See the following examples.

- (4) Nd-áká-úray-*ír* -á *nyoká* pa-dombó [Chaga]
 I-PST-steal-APPL-FV **1-mother** 9-money
 ‘I stole money from my **mother**’ (Pylkkänen 2002)
- (5) Mavuto a - na - umb - *ir* - a *mpeni* mtsuko [Chichewa]
 Mavuto SP-PST- mold-APPL-ASP **knife** waterpot
 ‘Mavuto molded the waterpot with **a knife**’ (Baker 1988:230)
- (6) M-chawi a - li - *wa* -tup - *ia* ma-pande ma-kubwa [Swahili]
 1-wizard 1-PST-**them**-throw-APPL 6-block 6-big
 ‘The wizard hurled great blocks at **them**’ (Marantz 1993:127)

(7) *poro cise e-horari* [Ainu]

big house APPL-live

‘He lives in **a big house**’

(Peterson 1999:33)

(8) Bvut - *ir* - a *mw-ana* banga [Chisona]

PR-snatch-APPL-FV **1-child** 5-knife

‘Snatch the knife from **the child**’

(Mabugu 2000)

As mentioned earlier, an applicative marker, when attached to a verb, has a transitivity effect on the verb, adding an extra argument, thereby increasing a predicate valency. Because of its additive nature, Machobane (1989) assumed that the applicative suffix is a transitivity marker: transitivity increase an unergative verb and ditransitivity decrease a transitive one. Applied arguments, like other objects, can trigger agreement on the verb, as the following examples attest.

(9) a. N - ä - ĩ - lyi - *í* - à *m-kà* k-élyá [Chaga]

FOC-1SUB-PR-eat-APPL-FV **1-wife** 7-food

‘He is eating food for his **wife**’

b. N - ä - ĩ - '*m* - ly - *í* - à k-élyá

FOC-1SUB-PR-1OBJ-eat-APPL-FV 7-food

‘He is eating food for him/her ’

(Bresnan and Moshi 1990:49)

- (10) a. Chitsiru chi-na - *wa* -gul - *ir* - a mpatso [Chichewa]
 fool SP-PST-OP-buy-APPL-FV gift
 ‘The fool bought them a gift’
- b. *Chitsiru chi-na - *i* - gul - *ir* - a atsikana
 fool SP-PST-OP-buy-APPL-FV girls
 ‘The fool bought the girls it’ (Marantz 1993:127)

In Chaga (9b) the verbal object prefix is an incorporated pronoun in complementary distribution with the lexical noun object in (9a). The examples show that the object agreement of the verb is with the applicative object, not with direct object.

As we have just seen, in Bantu languages both applied objects and direct objects are not morphologically distinct (see Marantz 1993:114). This is similar to English double object constructions, but it differs from dative constructions in languages without an overt applicative suffix. And also many Bantu languages use the applicative marker *-i/-ir* constantly regardless of the thematic roles applied objects bear. By contrast, there are cases when distinct applicative markers are employed to indicate a variety of thematic roles that applied objects have (see Payne 1990 for detail).

2.2 Two kinds of applicatives

So, as we can see, there is a whole range of thematic and morphological variation involving applicative constructions. Fortunately for us, research of the past 15 years have identified a series of principled, systematic differences among applicatives, that is, cluster of properties that allow us to distinguish between two types of applicatives. (I hasten to add that the same research has failed to identify why some languages (such as English) lack, say, high DP-applicatives. I will remain silent on this issue.)

Two comprehensive studies of this difference are Baker (1988) and Bresnan and Moshi (1990). Both Baker and Bresnan and Moshi discussed two types of ‘languages’: so-called symmetric and asymmetric languages. Here is a brief discussion of the major differences between the two types.

There are a number of asymmetries in the syntax of applicatives, both within and across languages.² Asymmetric applicatives are characterized by asymmetric

² Kimenyi (1980) and McGinnis (2001) report symmetric and asymmetric behaviors within a language: symmetric benefactives and asymmetric locatives in Kinyarwanda.

(i) Transitivity

Benefactives

- a. Umugóre a-rá-som-er-a umuhuûngu igitabo.
woman SP-PR-read-APPL-ASP boy book
‘The woman is reading a book for the boy’
- b. Umugabo a-rá-som-er-a umugóre.
man SP-PR-read-APPL-ASP woman
‘The man is reading for the woman’

Locatives

- a. Umuhuûngu á-r-íig-ir-á-ho ishuûri imibáre.
boy SP-PR-study-APPL-ASP-LOC school mathematics
‘The boy is studying mathematics at school’
- b. *Umuhuûngu á-r-íig-ir-á-ho ishuûri.
boy SP-PR-study-APPL-ASP-LOC school
‘The boy is studying at school’

behavior between the direct object and the applied object in such a way that only the applied object shows true object properties. In contrast, in symmetric applicatives, both the applied object and direct object behave as true objects (a fact which, incidentally, argues against treating applied objects as adjuncts, cf. fn. 1). An example of the kind of variation that arises can be seen in the differences in the verbal

-
- (ii) Object agreement/incorporation with the verb
- Benefactives
- a. Umugóre a-rá-mu_i-he-er-a t_i ímbwa íbíryo.
 woman SP-PR-OP-give-APPL-ASP dog food
 ‘The woman is giving food to the dog for him’
- b. Umugó re a-rá-bi_i-he-er-a umugabo ímbwa t_i .
 woman SP-PR-OP-give-APPL-ASP man dog
 ‘The woman is giving it to the dog for the man’
- Locatives
- a. Úmwáalímu y-a-ry_i-oohere-jé-ho t_i igitabo.
 teacher SP-PST-OP-send-ASP-LOC book
 ‘The teacher sent the book to it’
- b. *Úmwáalímu y-a-cy_i-oohere-jé-ho ishúûri t_i .
 teacher SP-PST-OP-send-ASP-LOC school
 ‘The teacher sent it to school’
- (iii) Passives
- Benefactives
- a. Umukoóbwa_i a-ra-andik-ir-w-a t_i íbáruwa n’úmuhuúngu.
 girl SP-PR-write-APPL-PASS-ASP letter by boy
 ‘The girl is having the letter written for her by the boy’
- b. Íbáruwa_i i-ra-andik-ir-w-a umukoóbwa t_i n’úmuhuúngu.
 letter SP-PR-write-APPL-PASS-ASP girl by boy
 ‘The letter is written for the girl by the boy’
- Locatives
- a. Ishuûri_i ry-oohere-j-w-é-ho t_i igitabo n’úmwáalímu.
 school SP-send-ASP-PASS-ASP-LOC book by teacher
 ‘The school was sent the book by the teacher’
- b. *Igitabo_i cy-oohere-j-w-é-ho ishúûri t_i n’úmwáalímu.
 book SP-send-ASP-PASS-ASP-LOC school by teacher
 ‘The book was sent to school by the teacher’

Other languages that have been documented as having both types of applicatives are Spanish (Cuervo 2003), Romanian (Diaconescu 2004), and Chichewa (Pylkkänen 2002). Chapter three will discuss some additional languages that display both types of applicatives.

agreement pattern, which I mentioned briefly in the previous section. See (11), repeated from (10), and (12).

(11) a. Chitsiru chi-na - *wa_i* -gul - *ir* - a *t_i* mpatso [Chichewa]
 fool SP-PST-OP-buy-APPL-FV gift

‘The fool bought them a gift’

b. *Chitsiru chi-na - *i_i* - gul - *ir* - a atsikana *t_i*
 fool SP-PST-OP-buy-APPL-FV girls

‘The fool bought the girls it’ (Marantz 1993:127)

(12) a. Umugóre a-rá-*mu_i*-he-er-a *t_i* ímbwa ibíryo [Kinyarwanda]
 woman SP-PR-OP-give-APPL-ASP dog food

‘The woman is giving food to the dog for him’

b. Umugóre a-rá-*bi_i*-he-er-a umugabo ímbwa *t_i*
 woman SP-PR-OP-give-APPL-ASP man dog

‘The woman is giving it to the dog for the man’ (Kimenyi 1980)

Another well-known difference between the two types of applicatives is in their transitivity properties. An applied argument in symmetric applicatives can be added to a transitive (13a) or intransitive (13b) predicate, while in asymmetric applicatives an applied argument can be added to a transitive predicate (14a), but not to an unergative one (14b).

- (13) a. Umugóre a-rá-som-er-a **umuhuôngu** igitabo [Kinyarwanda]
 woman SP-PR-read-APPL-ASP boy book
 ‘The woman is reading a book for the boy’
- b. Umugabo a-rá-som-er-a **umugóre.**
 man SP-PR-read-APPL-ASP woman
 ‘The man is reading for the woman’ (Kimenyi 1980)
- (14) a. I bake **him** a cake
 b. *I ran **him**

The most recognized and attested difference is in the A-movement properties of the two types of applicatives. In the passive of a symmetric applicative, either the applied object (15c) or direct object (15b) can raise to the subject position. By contrast, asymmetric applicatives take only the applied object as the subject in a passive like (16) and (17).

- (15) a. N - ä - ï - lyì - í - à *m-kà* k-élyá [Chaga]
 FOC-1SUB-PR-eat-APPL-FV **1-wife** 7-food
 ‘He is eating food for his **wife**’
- b. K-ely k - i - lyi - i - o m-ka *t*
 7-food 7SUB-PR-eat-APPL-PASS 1-wife
 ‘The food is being eaten for the wife’

- c. M-ka n - a - i -lyi - i - o t k-elya
 1-wife FOC-1SUB-PR-eat-APPL-PASS 7-food
 ‘The wife is having the food eaten for her’

(Bresnan and Moshi 1990:51)

- (16) a. John baked Bill a cake
 b. Bill was baked *t* a cake
 c. *A cake was baked Bill *t*

- (17) a. Honum var gefin *t* bokin [Icelandic]
 him.DAT was given the book.NOM
 ‘He was given the book’

- b. *Bokin var gefin honum *t*
 the book.NOM was given him.DAT
 ‘The book was given to him’ (McGinnis 2001:5)

Along with these syntactic differences in the realm of applicatives, there is a semantic/thematic difference whose importance has only been noted recently. In particular, Pylkkänen (2002) argues that semantically there are two types of applicatives, which she calls high applicatives and low applicatives. The high applicative head (HAppl) denotes a relation between an event and an individual,

while the low applicative head (LAppl) denotes a relation between two individuals. I return to Pylkkänen’s distinction in section 2.3.3 below.

Summing up this section, the aforementioned distinguishing properties of symmetric and asymmetric applicatives are illustrated in the following table.

(18)

Asymmetric	Symmetric
Direct object does not show object properties (agreement, passives)	Both direct and applied object show object properties (agreement, passives)
Applied object related to direct object (potential possessor)	Applied object related to the event denoted by a VP
Transitivity restriction on verb	No transitivity restriction on verb

2.3 Previous approaches to applicative constructions³

2.3.1 Baker’s incorporation approach

Baker was among the first who tried to explain the nature of the applicatives, especially in the languages with overt morpheme applicative constructions.⁴ In his

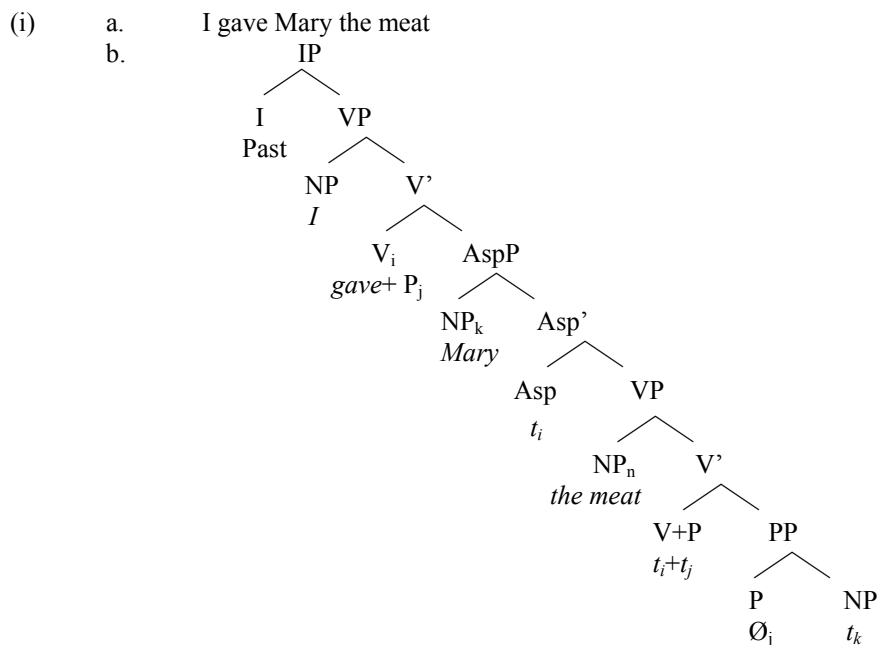
³ Current work on applicatives owes a lot empirically to relational grammar approaches (RG). RG, which takes grammatical relations as primitives, treats an applicative process in such a way that a benefactive oblique turns to, or rather is promoted to a direct object (see Chung 1976, Aissen 1983, among others). Though RG paved the way toward a theoretical understanding of applicatives, it is silent on any of the differences between asymmetric and symmetric observed in the previous section. As the distinction is central to this thesis, I do not go into any details of RG accounts.

⁴ Later in his 1996 paper, following Marantz (1993), Baker extended the strategy used for languages with an overt applicative morpheme to languages like English, which does not show an overt form of applicative markers. Baker derives the English dative shift as in Larson (1988) in such a way that what

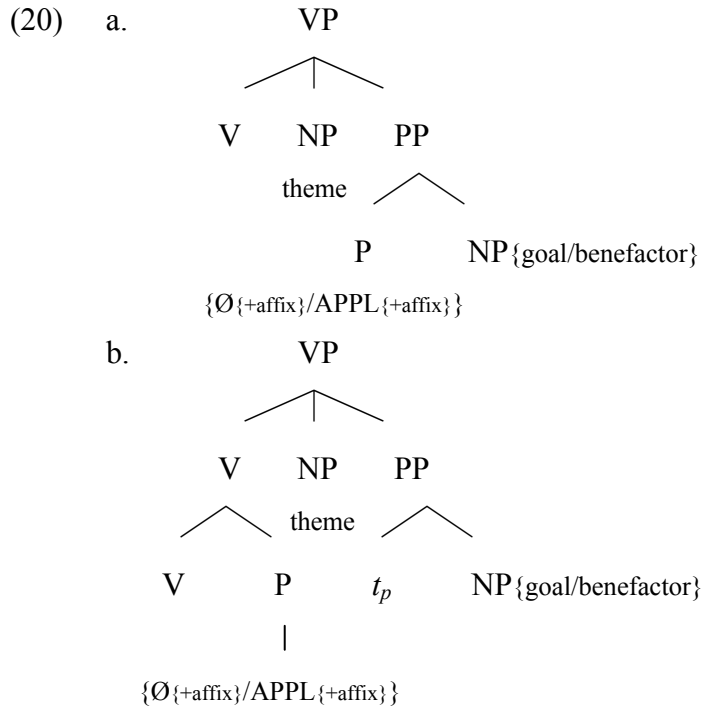
1988 book, Baker distinguishes between the benefactive applicative markers in languages like Chichewa, which assign inherent case (not structural case), and the benefactive applicative markers in Kinyarwanda, which assign structural case and inherent case. So, for Baker (1988), there are two types of languages:

- (19) a. Chichewa-type languages, where only one object of applicative verbs may display object properties;
- b. Kinyarwanda-type languages, where both objects display object properties

Larson calls ‘dative-case absorption’ is an instance of Preposition Incorporation. When the preposition is incorporated, it can no longer license case on its object; therefore the goal argument must move to a position where it could check structural accusative case: outside the inner VP. Following Travis (1991) he assumes the position is the specifier of an Aspect Phrase. As a result of this movement, the goal argument comes to be before the theme, and asymmetrically c-commands it. In contrast, the theme NP is generated as the specifier of VP and remains there.



Baker analyzes the applicative construction as the incorporation of a preposition into the verb by head movement.



The object of the incorporated preposition is licensed in the way the direct object would normally be licensed. This object receives the case that would otherwise be assigned to the direct object, while the underlying direct object becomes an oblique because it is no longer licensed by the verb. Baker also claims applicative marking is allowed for transitive verbs and is generally prohibited from appearing with intransitive verbs. This is a natural result of his analysis since intransitive verbs generally have no Case to assign, so the applied object would end up with no case, not being able to be licensed.

The most salient property of applicative constructions, for Baker, is the rearrangement of argument structure such that the applied object takes precedence over the properties of the direct object, while the direct object is demoted to an oblique.

2.3.2 Lexical Functional Grammar (LFG)

LFG treats applicative constructions as a product of a morpholexical operation on argument structure, which inserts an internal object argument. Bresnan and Kanerva (1989) and Bresnan and Moshi (1990) assume a wide variety of relation-affecting phenomena, such as passives, causatives, statives, and so forth.

Assuming the Lexical Mapping Theory, argument structure is organized along an independently motivated hierarchy like (21).

(21) agent>beneficiary>goal>instrument>patient/theme>locative

Grammatical functions may have two basic properties: \pm restricted depending on whether a function can or cannot be associated with any kind of thematic role; and \pm objective depending on whether a function is a complement to a transitive verb or not. With this distinction, there are four basic grammatical functions, as in (22).

- (22) a. [-restricted, -objective] SUBJ ‘subject’
 b. [-restricted, +objective] OBJ ‘unrestricted object’
 c. [+restricted, -objective] OBL_{theta} ‘restricted object’
 d. [+restricted, +objective] OBL_{theta} ‘oblique object’

The third and fourth functions are for goals, instruments, locatives, and so on.

In LFG’s account, applicative constructions arise from a derived verb from which introduces a new object argument to the base verb.

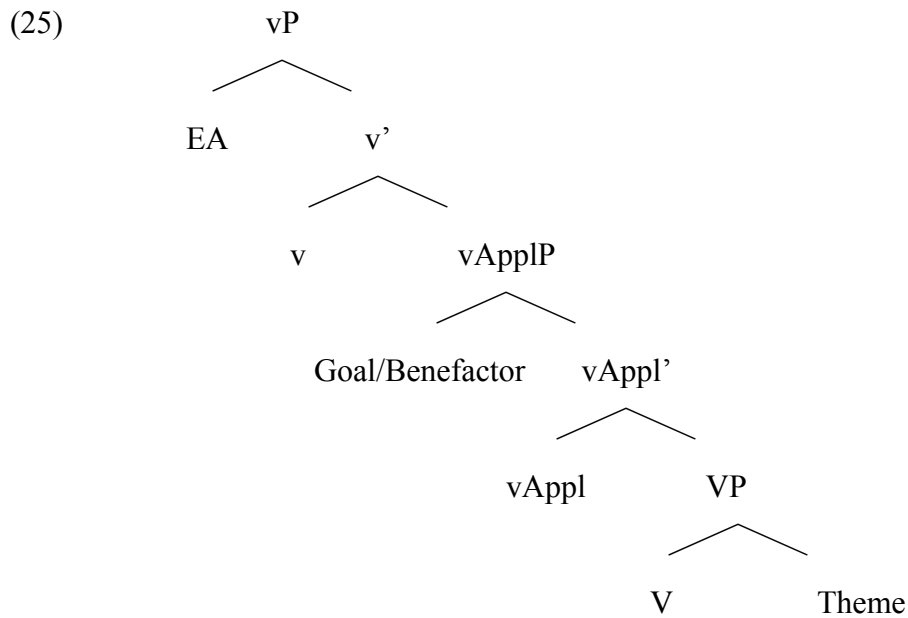
2.3.3 Pylkkänen’s lexical semantic approach

More recently, Pylkkänen (2002) proposes, based on lexical semantic considerations, a distinction between high and low applicatives. She points out that although applicative constructions express similar meanings across languages, not all applicative constructions are created equal in terms of semantic properties. For example, English and Chaga both have a double object construction with an applied benefactive argument, as in (23a) and (24a), respectively, but the similarity is just apparent: only in Chaga can an extra participant be added to an unergative verb (24b).

- (23) a. Jane baked Bill a cake
 b. *I ran him
 c. *He ate the wife food
 d. *John held Mary the bag

- (24) a. N - ä - ĩ - lyì - í - à m-kà k-élyá [Chaga]
 FOC-1SUB-PR-eat-APPL-FV 1-wife 7-food
 ‘He is eating food for his wife’
 b. N - ä - ĩ - zric - í - à mbùyà
 FOC-1SUB-PR-run-APPL-FV 9-friend
 ‘He is running for his friend’ (Pylkkänen 2002: 17)

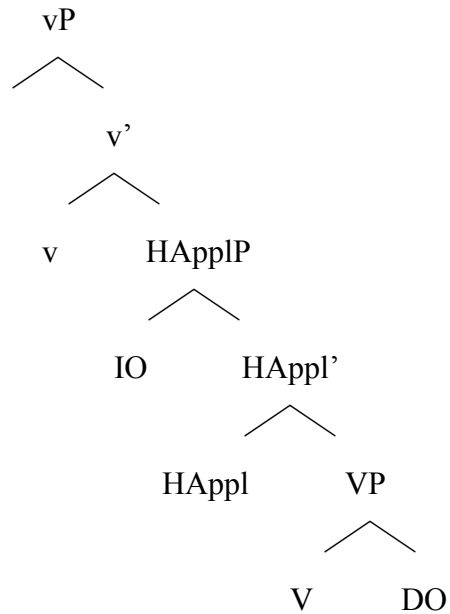
In his original discussion of Bantu applicatives and their affinity with English double object constructions, Marantz (1993) acknowledged the *similarity* between these two types of languages from the vantage point of double object constructions, (23a) and (24a). Marantz argues that in capturing the similarities between English double object constructions and applicative constructions found in Bantu languages, at least some indirect objects are semantically external to the event described by VP, and a goal/benefactive argument is merged in the specifier of a light applicative verb (vAPPL). In other words, applicative affixes are elements which take an event as their argument and introduce an individual which is thematically related to that event.



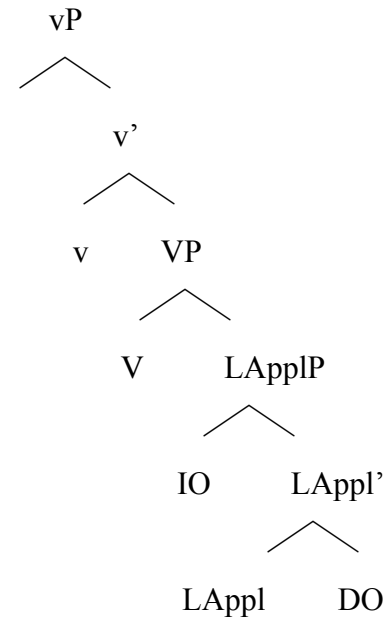
Building on Marantz's (1993) proposal, Pylkkänen (2002) further claims that Marantz's (1993) proposal is confined to those examples showing the similarity, so the coverage is not complete enough to embrace the cases where the obvious disparities witnessed in (23b-d) and (24b), and that the applicative constructions cross-linguistically fall into two different types: high applicatives, where the applicative head denotes a thematic relation between an individual and an event; low applicatives, where the applicative head denotes a possession relation between the applied/indirect object and the direct object. Following Marantz (1993) and in line with current literature on events which introduces arguments as specifiers of dedicated functional projections (Kratzer 1996, among others), Pylkkänen proposes to cash out the semantics of applicatives as follows: high applicative head (HAppl) merges with a VP complement and a DP specifier, yielding the structure in (26a),

while low applicative head (LAppl) merges with a DP complement and a DP specifier, yielding the structure in (26b).⁵

(26) a. High Applicatives



b. Low Applicatives



Pylkkänen proposes the following semantic characterizations for the High and Low applicative heads, respectively.

⁵ Both types of structures have been proposed elsewhere in the literature as potentially universal representations of the double-object construction: for example, by Marantz (1993) for (26a), and by Pesetsky (1995) for (26b).

(27) Semantics of High and Low applicatives

- a. High Appl (Chaga beneficiary applicative)

$\lambda x. \lambda e. \text{APPL}(e, x)$

- b. Low-AppI-TO (Recipient applicative, e.g., *John sent Mary a book*)

$\lambda x. \lambda y. \lambda f_{\langle e \langle s, t \rangle \rangle}. \lambda e. f(e, x) \ \& \ \text{theme}(e, x) \ \& \ \text{to-the-possession}(x, y)$

Let me try to unpack these formulas in plain English. Pylkkänen notices that an interpretation where the applied argument bears no relation to the direct object is impossible in the English double object construction. The example (23a) *Jane baked Bill a cake* means Jane did the baking for Bill so that he would have the cake. On the other hand, in Chaga applicative construction, *the wife* in (24a) stands in a benefactive relation to the event of eating but bears no relation to the object *food* of eating. This is so because *the wife* cannot become the possessor of *the food* as a result of somebody else eating it. The same holds for the Chichewa instrumental applicative (28a), repeated from (5), and Albanian applicative construction with a static verb (28b).

- (28) a. Mavuto a - na - umb - ir - a *mpeni* mtsu [Chichewa]
Mavuto SP-PST- mold-APPL-ASP knife waterpot
'Mavuto molded the waterpot with a knife' (Baker 1988:230)

- b. Agimi i mban Dritës çanten time [Albanian]
 Agimi.NOM CL holds D.DAT bag.ACC my
 ‘Agim holds my bag for Drita’ (McGinnis 2001:5)

In (28a) *the knife* bears an instrumental relation to the event of molding but no relation to *the waterpot*, and (28b) implies that *Drita* could put something in it by an event of (*Agim*) *holding (my bag)*.

Pylkkänen captures the thematic differences just discussed by letting the applied object merge within the projection hosting the direct object (creating a low applicative expressing a relations among individuals), or outside of the projection hosting the direct object (creating a high applicative, where the applied object will relate to an entire event).

The high and low applicative distinction, expressed in Phrase Structural terms, predicts the following:

- (29) i. Only high applicative heads should be able to combine with unergatives. Since low applicative heads denote a relation between the applied/indirect and direct object, they cannot appear in structures that lack a direct object. Pylkkänen (2002) assumes that high applicative heads are interpreted in the same way as the external argument introducing Voice (Kratzer 1996), i.e., via Event Identification with

the VP. High applicatives have no problem combining with static verbs such as *hold* since all they require is a predicate of events.

- ii. Low applicatives are VP internal. Since low applicatives imply transfer of possession, they cannot combine with verbs that are completely static: for example, an event of holding a bag does not result in the bag ending up in somebody's possession.

Since a relation between the applied object and the direct object is obligatory in English, examples which bear no such relationship are judged unacceptable by most speakers (but see Baker 1997). Hence the apparent similarity between the Chaga benefactive in (24a) and the English double object construction (23a) is just an illusion: though they look alike when it comes to a construction with an additional, extra argument within VP, their semantic interpretations are quite different.

2.3.4 A consensus: the ‘escape hatch’ treatment, and a way to derive it

In her analysis, Pylkkänen took the first step toward showing a correlation between high/low distinction and symmetric/asymmetric distinction. This direction was pursued further by McGinnis (2001), who tries to collapse the two distinctions and reduce symmetric/asymmetric to high/low. Conceptually this is very nice. Previous approaches have dealt with the asymmetric/symmetric distinction in terms of a formal

stipulation: that is, LFG's functional requirements (Bresnan and Moshi 1990), GB's Case properties or government domains (Baker 1988, Marantz 1984, 1993), or, as we will see shortly, Minimalism's "escape-hatch" specifier positions (Ura 1996, McGinnis 1998).

McGinnis (2001) gives us hope of having a better handle on the learnability question: how can a child figure out which one is which? Under her approach, the child can resort to semantic bootstrapping (see Pinker 1989) to derive a host of syntactic differences once combined with UG principles.

To understand McGinnis's proposal I suggest we first take a look at previous works on applicative constructions/double object constructions such as Ura (1996) and Anagnostopoulou (2003) (see also McGinnis 1998). As we will see, there is a certain convergence of these works on which syntactic principles lie behind much of the variable syntactic behavior of 'multiple object structures'. It is these principles that McGinnis (2001) will make use of in her attempt to derive the symmetric/asymmetric distinction from Pylkkänen's high/low distinction.

2.3.4.1 Anagnostopoulou's (2003) Parametric approach

Anagnostopoulou's (2003) proposal is couched within Chomsky's (1995) system. In Chomsky (1995), computational operations implementing displacement properties in a natural language are assumed to be Feature Attraction and Move. Feature Attraction

affects the phrase that has appropriate features and is closest to the target, as stated in (30).

(30) *Shortest Move/Closest Attract* (Chomsky 1995:297)

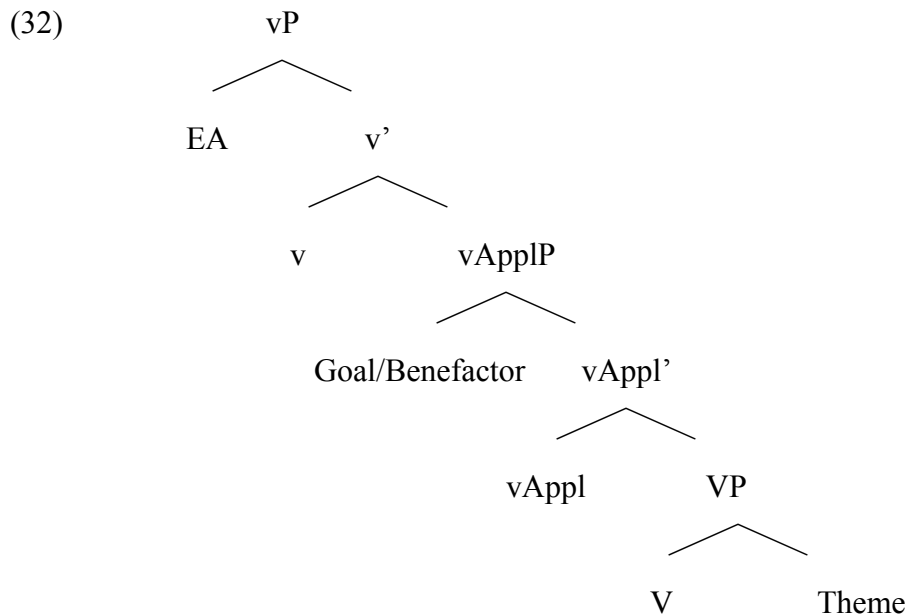
K attracts F if F is the closest feature that can enter into a checking relation with a sublabel of K

The closeness depends on the notion of a minimal domain, as specified in the version of the Minimal Link Condition, given in (31).

(31) If β c-commands α , and t is the target of movement, then β is closer to τ than α unless β is in the same minimal domain as (i) α or (ii) τ

Under (31), α can move across a c-commanding element β to the target τ if either (i) potential attractees α and β belong to the minimal domain of the same head or (ii) the intervening β and the target τ belong to the minimal domain of the same head. This way, the locality condition, i.e., Minimal Link Condition (MLC), is relativized to minimal domains and not just defined in terms of c-command in Chomsky's (1995) system.

As for the structure of the underlying double object construction, Anagnostopoulou adopts Marantz's (1993) proposal, given in (32), repeated from (25).



In (32), the goal/benefactive argument is not in the same domain with the theme argument and is closer to the target T than the theme, hence the movement of the theme over the goal/benefactive is banned due to the Shortest Move, i.e., it is a non-local derivation, which leads to ungrammaticality.

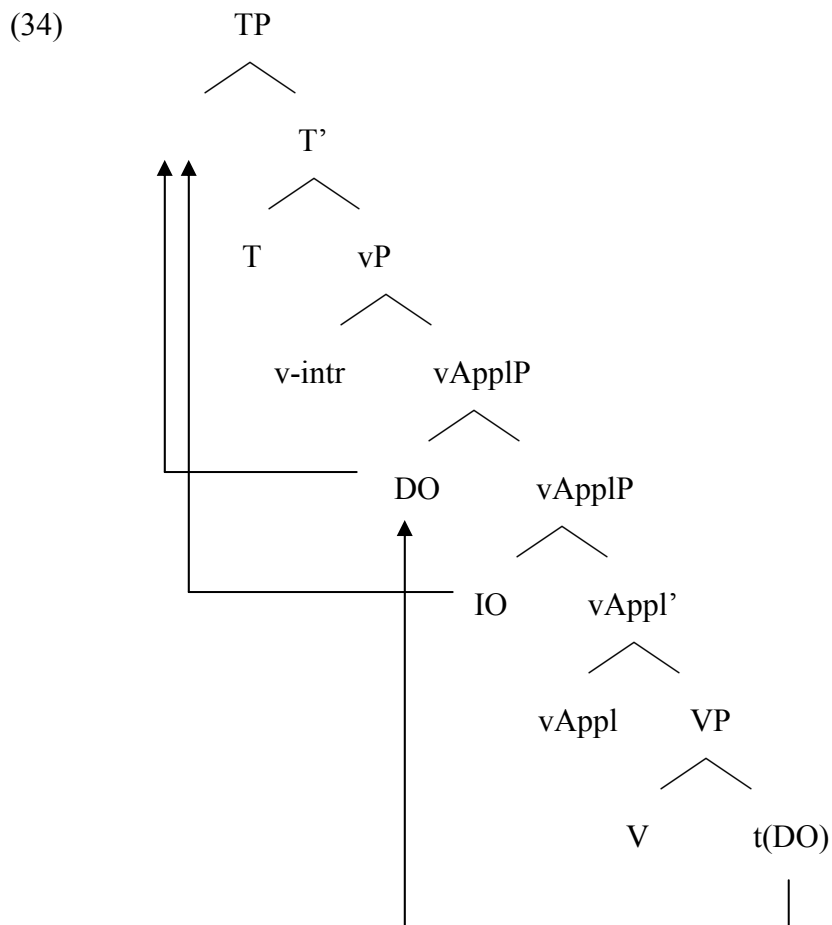
In symmetric applicatives/double object constructions, where both the theme and the goal/benefactive can be passivized, Anagnostopoulou proposes *The Specifier to vAppl parameter* to rule in the apparent non-local movement of the theme.⁶

⁶ No extra stipulation is needed for the movement of the goal/benefactive in symmetric passives, as that movement straightforwardly satisfies locality conditions.

(33) *The Specifier to vAppl parameter*

Symmetric movement languages license movement of DO to a specifier of vAPPL. In languages with asymmetric movement, movement of DO may not proceed via vAPPL.

According to (33), languages like Kinyarwanda, which allow both the direct and indirect objects to passivize, capitalize on the extra specifier position of vAPPL for the movement of a theme direct object, as illustrated in (34).



The intermediate movement of the theme direct object (DO) to the specifier of vAPPL on its way to the specifier of T makes DO and IO equidistant from the target T in Chomsky's (1995) system, in which multiple specifiers are treated as equidistant from the target of movement. Thus either the theme DO or the goal IO can be passivized in conformity with the locality. Unlike symmetric passive languages, asymmetric passive languages, however, do not have the option of passing through vAPPL by the parameter setting. Therefore the movement of the theme over the goal directly to T incurs violation of locality, i.e., Minimal Link Condition (MLC).

Anagnostopoulou's (2003) approach, which explains the asymmetries in passives with a parameter that boils down to whether a language has an escape hatch/extra specifier position or not in the realm of applicatives/double object constructions, is just a descriptive stipulation. Whether the parameter could be reduced to independent properties of asymmetric and symmetric passive languages is still open to question.

2.3.4.2 Ura's (1996) Object Shift approach⁷

Ura also links the factor distinguishing symmetric double object languages from asymmetric ones to the parametric availability of multiple specifiers. But unlike Anagnostopoulou's (2003) analysis, Ura's account postulates a strict correlation

⁷ Holmberg and Platzack (1995) and Vikner (1990) make use of Object Shift, a bit like Ura (1996), to allow DO over IO passivization.

between the availability of Object Shift (OS) and symmetric passivization. More specifically, Ura assumes that passivization is directly fed by OS with the qualification that OS may only target full DPs. Technically OS is implemented as movement to a layered specifier of the highest VP which at the same time serves as an escape hatch for successive cyclic raising to T in passives. So for Ura, the direct object can move to T only once the potentially intervening indirect object has been removed from its base position by OS. On this view, one is led to expect that whenever a language permits OS of full DP indirect objects, it also licenses symmetric passivization. This prediction is borne out in Swedish and Norwegian, in which OS of indirect object DPs is freely allowed.

(35) a. Han visade henn inte den [Swedish]
 he showed her not it
 ‘He didn’t show it to her’ (Hellan and Platzack 1999)

b. Jag gav Elsa inte den
 I gave Elsa not it
 ‘I didn’t give it to Elsa’
 (Anagnostopoulou 2003, credited to Holmberg)

(36) a. Jon ble gitt en bok [Swedish]
 John was given a book
 ‘John was given a book’

- b. En bok ble gitt Jon
 a book was given John
 *'A book was given John' (Holmberg and Platzack 1995)

Danish on the other hand lacks OS of full DP indirect objects, and accordingly falls in the group of asymmetric languages.

- (37) *Jeg gav Peter ikke bogen [Danish]
 I gave Peter not the book
 'I didn't give Peter the book' (Ura 1996:163)

- (38) a. Han blev tilbudt en stilling [Danish]
 'He was offered a job'
 b. *En stilling blev tilbudt ham
 'A job was offered to him' (McGinnis 1998:73)

Ura's account shares with Anagnostopoulou's the idea that DO movement to T° is impossible in the presence of IO unless DO can 'stop over', right above IO, and from there proceed to T°. I should note at this point that McGinnis proposes a similar approach to Ura (1996) and Anagnostopoulou (2003) in her 1998 dissertation. To account for passivization possibilities in ditransitive contexts across languages, McGinnis distinguishes between two derivations: *advancing* and *leapfrogging*.

Advancing refers to a situation where the surface subject has moved to T° directly.

This is the case when the argument generated highest within VP raises to T°.

Leapfrogging refers to the escape-hatch derivation discussed above.

2.3.4.3 McGinnis's (2001) phase-based approach

McGinnis (2001) attempts to derive the escape hatch effect by adopting Pylkkänen's (2002) theory of applicatives and Chomsky's (2000, 2001, 2004) theory of *phases*. As we will see, McGinnis's (2001) analysis is potentially⁸ superior to

⁸ I say 'potentially,' because for McGinnis's (2001) approach to be truly less stipulative than Anagnostopoulou's (2003) approach, we need to justify that phases are indeed motivated in the grammar, and the reason why the high applicative head is indeed a phase. McGinnis tries to provide independent evidence for the phasal status of the high applicative head. In particular, she points out that in addition to passivization, differences in phonological phrasing (discussed in Seidl 2001) and pronoun incorporation between the two types of languages and/or constructions follow nicely in the phase-analysis, as McGinnis (2001) points out: in Kinyarwanda benefactive applicatives (with the symmetric passive pattern), both the Goal and the Theme pronouns can be incorporated into the verb, while in locative applicatives (with asymmetric passive pattern), only the Goal can be incorporated. Also, from Bantu languages, there is evidence showing that in applicatives that have a symmetric passive (i.e., here, high applicative), the two objects are grouped together in phonological phrasing with the verb, while in those that have an asymmetric passive (i.e., low applicative, here), only the indirect object is phrased together with the verb and the direct object is in different phonological phrases. Considering that phases are a phonological unit too, the phase-theoretic account for the passivization asymmetry has advantage over Anagnostopoulou's (2003) parametric approach in that a wider range of phenomena can be treated in a uniform way.

McGinnis (2001:7) then tries to derive the phasehood property of the high applicative head from broader generalizations, and one of her speculations is the following: the constituents represented as V or N are actually category-neutral lexical roots in the sense of Marantz (2000) and the head which assumes responsibility of determining the morphological category of a root might be a phase head. In this line of speculation, if the lexical root is the sister of D, it is nominal morphologically, whereas if it is the sister of *v* or of HAppl, it is morphologically verbal. In other words, D, *v* and HAppl may head a phase since they determine the morphological category of the root. I will not pursue McGinnis's attempt to derive phasehood here, as I know of no convincing attempt to derive phasehood for more established phases like C and *v*. I return to this important issue in chapter 3. For the time being, what is important to bear in mind is that McGinnis tries to derive the escape hatch strategy from the mechanics of phases and from Pylkkänen's high/low applicative distinction in phrase structural terms.

Anagnostopoulou's (2003) or Ura's approaches, as the escape hatch effect is reduced to independent properties of derivations rather than just stipulated as a language-specific parameter. Specifically, instead of treating all applicative objects alike, generated in a projection distinct from DO, and positing a parameter regulating the possibility of an escape hatch for DO, McGinnis will make use of two possible base generation sites for IO, only one of which will be associated with an escape hatch position by virtue of being a phase. It is important to realize that for McGinnis, the possible base generation sites for IO are not governed by a parameter, but are ultimately reducible to semantic distinctions (Pylkkänen's low/high applicative distinction).

McGinnis (2001) adopts the phase theory of Chomsky (2000, 2001, 2004). According to the phase theory, syntactic derivations proceeds in chunks, or *phases* and once a phase is complete, its complement domain is sent to phonological and semantic spell-out at once, before the syntactic computation proceeds to higher portions of the clause, thus the domain, i.e., the complement of a phase head, of a phase is not accessible to operations at/above the next higher phase and the only edge, i.e., the specifier and the head, of a phase is accessible to such operations (*Phase Impenetrability Condition*). Phases are defined as complete propositions, and as such the (strong) phase boundaries proposed by Chomsky are ϕ -complete transitive ν P and CP. Because of the Phase Impenetrability Condition, a constituent that does not move to the edge of a phase is trapped in its domain.

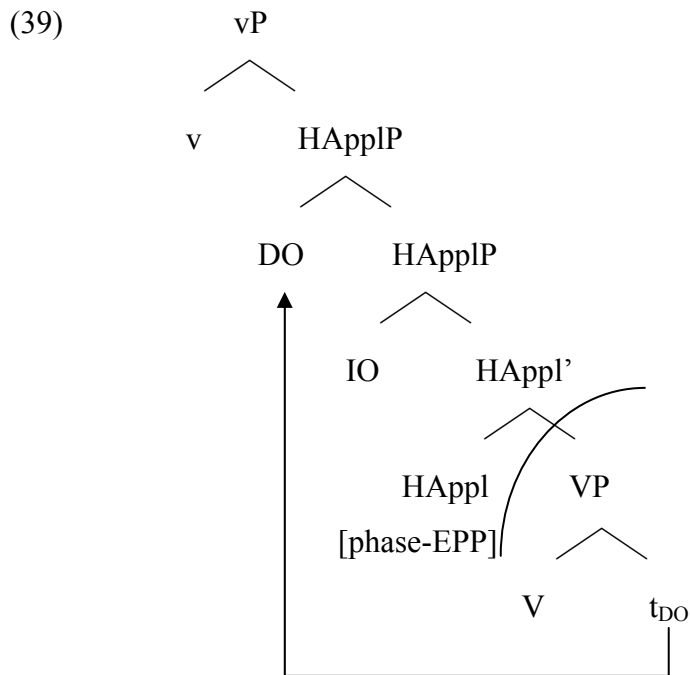
In Chomsky (1995), EPP is assumed to be a requirement on T that it should have its specifier position filled in by an element. EPP is reinterpreted as a generalized requirement of T and of phase heads ν and C to merge with a specifier in Chomsky's (2001) system. EPP is responsible for triggering the complex operation Move. A generalized EPP feature can be added to a phase head, providing an escape hatch for a lower argument to move to its edge. This generalized EPP on phase heads, ν and C, is called phase-EPP. A non-phase EPP feature (like that of T) is obligatory, whereas phase-EPP features are optional.

The central proposal of McGinnis (2001) is that the distinction between high and low applicatives that Pykkänen (2002) made corresponds to a phasal distinction. The latter underlies the asymmetries found in the realm of applicatives. Specifically, McGinnis proposes that the high applicative head is a phase. Being a phase head, the high applicative structure provides an escape hatch through the phase-EPP feature, which attracts an element to its edge (i.e., specifier). Not being a phase, the low applicative head lacks this option.

Let me consider the core derivations in detail. The derivation for symmetric passive languages is given in (39). In this structure, the lower Theme is embedded within the domain of the HApplP phase, and the HAppl, being a phase head with an EPP-feature, can attract the lower Theme into its specifier. From this position, the lower Theme, being a closer element to T,⁹ can move further into the subject position, yielding a Theme-passive. (Here I ignore the possibility that ν may be a phase, in

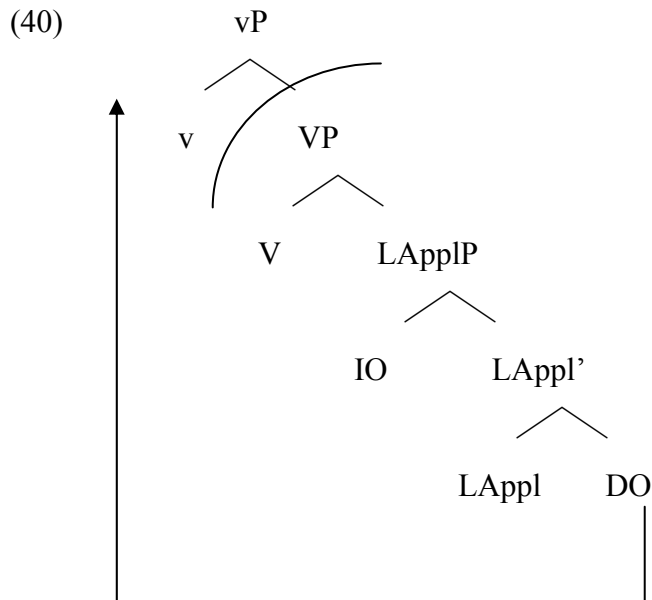
⁹ The notion of equidistance and minimal domains is dispensed with and locality is defined solely in terms of c-command in McGinnis (2001). Accordingly, only the applied object can move to the edge of ν P or T.

addition to HApplP. If it is, any element moving to T° will first have to be attracted to the edge of the vP-phase.) Alternatively, the applied object can move directly to T°, as it is directly merged into the edge of a phase, hence accessible to material outside the phase.



Asymmetric passive languages result from a low applicative structure, as in (40). Both the Goal and the Theme are embedded within the domain of the vP phase (this is McGinnis's assumption; nothing changes if there is no vP-phase in passives. I return to this issue in chapter 3). Within the phase, the Goal is higher than the Theme, and the low applicative head cannot provide an escape hatch, being a non-phase head.

Hence, movement of the lower Theme over the higher Goal results in a violation of locality (minimality).



The essence of McGinnis's accounts is that the asymmetric double object construction emerges when DO and IO compete for one position (access to the phase edge), whereas the symmetric double object construction arises when only one object, DO, has to raise to the edge of the phase, the other object, IO, being there already. It is interesting to note that McGinnis's proposal gives rise to a somewhat puzzling state of affairs: it is only when the two objects in a double object construction are base-generated further away from one another that they can behave symmetrically. If they are base-generated too close to one another, only one of them will be allowed to survive for further operation.

If McGinnis is right about her analysis of the symmetric/asymmetric distinction in the realm of double object constructions, she provides us with a very interesting case of a one-to-one mapping between syntax and semantics, a reduction of one asymmetry (syntax of passivization in DOCs) to another (thematic relations in DOCs). If only for this reason, I think it is worth trying to maintain McGinnis's account.

Before summarizing the section, there are two more points worth making on McGinnis's (2001) proposal. First I would like to briefly mention the implication of Pylkkänen's (2002) and McGinnis's (2001) analyses. Both of them share the idea on the semantic differences in relation to the structures of two types of applicatives, high applicatives and low applicatives. This leads us to predict that as long as the semantic part is respected, one may have more than one applicative, i.e. multiple applicatives, and there should be certain restrictions on the possible combinations of applicative heads. Indeed, as McGinnis (2004) notices, a high applicative head can merge with a VP containing a low applicative head, as with any other VP, which also denotes an event. In other words, a high applicative can merge as its complement with a theme, a low applicative, or another high applicative. In case of multiple high applicatives, you get a stack of HAppPs, and, as McGinnis would predict, either one of the high applicative can passivize over the other. However a low applicative head should not be able to merge with a high applicative head, both because the high applicative phrase does not denote an individual, and because the high applicative head would then have no event-denoting argument.

Notice also that McGinnis (2001), like Anagnostopoulou (2003), extends her proposal from ditransitive/applicative to experiencers, and claims that there are 2 types of experiencers (high/low), which account for (im)possibility of subject raising over experiencer.

Summarizing this section on Anagnostopoulou (2003), Ura (1996), and McGinnis (2001), we can see the following consensus forming from these studies: the general intuition is that in symmetric languages the two objects are at some point in the derivation in the same minimal domain, and either one is allowed to move further to a higher head (v or T), while in asymmetric languages there is no stage in the derivation at which the two objects reside in the same minimal domain, and movement is therefore both strictly local and order preserving. Since the goal in asymmetric languages systematically blocks passivization of the theme, the structure of the DOC must include a head which introduces the goal and which is distinct.

In addition, the studies reviewed here all tend to understand the relevant (a)symmetries in the syntax of applicatives without resorting to case. Anagnostopoulou (2003), especially, based on Greek, argues against two representative case-theoretic accounts by Larson (1988) and Baker (1988), showing that their accounts on the passivization typology grounded on the lack of case on either Goal or Theme argument at the end of the derivation cannot be extended to languages like Greek with designated morphological case for Goal (Genitive/Dative) and accusative case for Themes, i.e., languages in which all arguments satisfy their case requirements, but nevertheless do not license Theme-passivization. I will return

below and even more so in chapter 3 to this extremely rigid, exclusively phrase-structural/locality-based view on variation in the domain of applicatives.

2.3.5 Problems for the locality-based accounts of applicative (a)symmetries

In this section I point out several problems that arise in the context of purely locality-based accounts advocated by Anagnostopoulou (2003), Ura (1996), and McGinnis (2001, 2003, 2004). I pay special attention to McGinnis (2001, 2003, 2004) here as her attempt strikes me as the most promising and potentially most explanatory among the analyses forming the consensus discussed above. This section is important as it introduces issues that I will try to resolve in the remainder of this thesis.

The first problem I see for the growing consensus is that it leaves no natural place for case to be a major player in the system. All the authors under discussion resort in one way or another to case to account for quirks in the paradigm, but the role played by case comes out as nothing more than a ‘patch,’ an *ad hoc* strategy. Take Ura (1996). Ura (1996) makes the claim that there is a strict correlation between the availability of Object Shift (OS) and symmetric passivization, which makes it possible to group Swedish and Norwegian together on the one hand, and Danish on the other. In such a system, Icelandic is an oddball: like Swedish, it freely employs OS of IO and DO definite DPs, but unlike Swedish (and on a par with Danish) it does not allow symmetric passives. In the wake of this complication, Ura has to establish a

third group of languages. Interestingly, the newly created group is singled out in terms of case (specifically morphological case). Likewise, even though Anagnostopoulou argues against case-theoretic treatments of the core properties of ditransitives, she adopts (p. 34) Romero and Ormazabal's (1999) generalization based on case to account for which languages allow double object constructions with unaccusatives (Romero and Ormazabal argue that the languages that disallow such constructions are those that assign the same morphological case to IO and DO). Although Romero and Ormazabal's generalization does some work for Anagnostopoulou, she leaves it as an unexplained descriptive generalization. Likewise McGinnis (2004) departs from her pure 2003 approach and reverts to her 1998 work where case played a role in addition to phrase structural configurations. (As McGinnis 2004 does not focus on applicatives, but simply uses them to capture data pertaining to Rizzi's 1986 chain condition, it is not clear to me what remains of her 2003 assumptions in her 2004 system.)

In addition to offering no natural place for case, McGinnis's (2003) analysis faces other kinds of problems.

First, McGinnis (2001) extends her account of the symmetric/asymmetric DOC distinction to the cross-linguistically variable possibility of raising the subject of an embedded (non-finite) clause to SpecTP across an experiencer, as exemplified in (41).

(41) John seems to Mary [*t* to be the best]

As discussed by several authors (Anagnostopoulou 2003, Boeckx 2000, McGinnis 1998, among others), some languages, such as Icelandic or some varieties of French disallow this option. Consider (42).

(42) *Jean semble a Marie [*t* etre le meilleur]

‘Jean seems to Marie to be the best’

McGinnis claims that (41) is reducible to the case of symmetric passivization (i.e., high applicative structure) in DOC, while (42) is identical to the case of asymmetric passivization (i.e., low applicative structure) in DOC.

Although McGinnis may be right in claiming that there is a structural distinction between (41) and (42), it is important to note that here she departs from the one-to-one mapping between syntax and semantics that she is advocating. Unlike in instances of passivization in DOC, there doesn’t seem to be any semantic difference between (41) and (42) (or its acceptable version with a cliticized/wh-moved experiencer), certainly not one involving relation between individual and event vs. individuals. Unlike double object structures, experiencer constructions seem to behave uniformly, semantically speaking, across languages, although their syntaxes vary. Furthermore, their syntaxes vary in more subtle ways than McGinnis appears to predict. Indeed the syntax of experiencer constructions is trickier than just whether subject could raise over it or not. Successful raising depends on the shape of the experiencer (clitic/wh-trace vs. full DP) in some languages like Italian. McGinnis

cannot predict that. She would have to say that depending on whether the experiencer is a clitic or not, it's high or low. Though this may sound plausible syntactically (after all, clitics have a special syntactic behavior, distinct from corresponding full DPs), McGinnis would predict that the point at which the experiencer is merged covaries with their thematic properties, which I find very implausible. Experiencers, no matter how they are expressed morphologically, bear the same relation with the events expressed in the sentences in which they are used. Although one could say that the problem I just pointed out is a very minor one for McGinnis – she may just be wrong about her extension to experiencers, but right for applicatives, I think that the problem she faces in the content of experiencers illustrate the extreme rigidity of her ph(r)ase-structural account, which in this case appears not to leave enough room to maneuver as the facts appear to require.

Second, there appear to be instances of (semantically) low applicative structures giving rise to symmetric passivization. This is clearly unexpected under McGinnis's approach. See the following examples from Haya (43) and Kinyarwanda (44), involving a low applicative, expressing a direct semantic relation between the theme and the indirect object.

- (43) a. Kat' á-k-óólek' ómwáán' épîca [Haya]
 Kato he-PST-show child picture
 'Kato showed the child a picture'

- b. Omwááni a-k-óólek-w-a kat' t_i épîca.
 child he-PST-show-PASS-FV Kato picture
 'The child was shown the picture by Kato'
- c. Epíc' $_i$ é-k-óólek-w-a (*Kat') ómwána t_i .
 picture he-PST-show-PASS-FV Kato child
 'The picture was shown to the child (by Kato)'

(Bissell-Doggett 2004, McGinnis 2004)

In (43b), the dative argument can raise to subject position, and more interestingly, the theme also can raise to subject under certain circumstances – it can raise if the external argument is not expressed (43c).

- (44) a. Umugóre a-rá-hé-er-á umugabo ímbwa ibíryo.
 woman she-PR-give-APPL-ASP man dog food
 'The woman is giving food to the dog for the man'
- b. Ímbwa $_i$ i-rá-hé-er-w-a umugabo t_i ibíryo n'ûmugóre.
 dog it-PR-give-BEN-PASS-ASP man food by woman
 'The dog is given food for the man by the woman.'
- c. Ibíryo $_i$ bi-rá-hé-er-w-a umugabo ímbwa t_i n'ûmugóre.
 food it-PR-give-BEN-PASS-ASP man dog by woman
 'The food is given to the dog for the man by the woman.'

(Kimenyi 1980)

In (44), where a benefactive high applicative combines with a low applicative, both the dative (44b) and the theme (44c) can move to subject position in a passive.

Third, there appear to be instances of (semantically) high applicative structures where only IO can be passivized, i.e., asymmetric passivization. A case in point is the following example from Kinyarwanda, involving a high locative applicative.

- (45) a. Ishuûri_i ry-oohere-j-w-é-ho *t_i* igitabo n'úúmwaalímu.
 school it-send-ASP-PASS-ASP-LOC book by-teacher
 'The school was sent the book by the teacher'
- b. *Igitabo_i cy-oohere-j-w-é-ho ishuûri *t_i* n'úúmwaalímu.
 book it-send-ASP-PASS-ASP-LOC school by-teacher
 'The book was sent to the school by the teacher'

(Kimenyi 1980)

In the high locative applicative like (45), the locative argument can move to subject position in a passive (45a), but lower arguments such as the theme cannot (45b).

Fourth, McGinnis and Gerdts (2003) identify constituency conflicts in the realm of Kinyarwanda applicatives. Consider the examples in (46). This example has an applied argument, *ikárámu* 'pen', and verbal morphology (*-iish*) indicating the instrumental thematic role of this argument.

(46) Úmwáalímu a-ra-andik-iish-a íbárúwa íkárámu.

teacher he-PST-wrote-INST-ASP letter pen

‘The teacher is writing a letter with a pen’

The instrumental argument semantically modifies an event. Accordingly, it projects an event-modifying, ‘high’ applicative structure on top of VP containing the verb and DP. If this approach is correct, then the semantic constituency of the verb phrase in (46) is as in (47): the instrumental argument is merged with a VP denoting the letter-writing event.

(47) [[a-ra-andik-iish-a íbárúwa] íkárámu]

[[write letter] pen]

On the other hand, as is generally the case in the literature on Bantu languages (see Marantz 1993), if the linear order of arguments in (46) reflects c-command, the constituent structure in (48), where the direct object *íbárúwa* ‘letter’ c-commands the instrumental argument, underlies (46).

(48) a-ra-andik-iish-a [íbárúwa [íkárámu]]

write [letter [pen]]

Indeed, McGinnis and Gerdts report the following data involving Quantifier-pronoun

binding supporting the constituency structure in (48). As in English, in example (49a) the keys are associated with the doors, but in example (49b) they are not. This suggests that the quantified theme in (49a) c-commands and binds the possessive pronoun in the instrumental argument, while the quantified Instrument in (49b) does not c-command the possessive pronoun in the theme.

- (49) a. N-a-fúngul-ish-ije buri muryango úrufunguzo rwáwo.
 I-PST-open-INST-ASP each door key its
 ‘I opened each door_i with its_i key’
- b. N-a-fúngul-ish-ije umuryango wáyo buri rufunguzo.
 I-PST-open-INST-ASP door its each key
 ‘I opened its_i door with each key_{j/*i}’

To sum up, some High Applicatives appear to be lower than DO (as reflected by the binding asymmetry) syntactically, but semantically, they are high applicatives. So, we face a syntax-semantics mismatch, or Phrase Structure paradox – a “constituency conflict”, as McGinnis calls it. Constituency conflicts of this sort pose a serious problem for any approach equating syntactic structure and semantic/thematic relations.

In addition to these syntactic problems for the consensus, I would like to mention the fact that the semantic characterization of applicatives that McGinnis relies on, viz. Pylkkänen (2002), appears to be incomplete. Here is what I mean.

Pylkkänen's (2002) representation discussed above can account for the 'resultative/possession part' of the meaning of *John sent Mary a book* such that as a result of John sending a book, Mary is in (potential/intended) possession of the book. But the English ditransitive structure is semantically/thematically richer. It also contains the 'transfer' meaning like 'John sent a book.' This is the thematic relation that Pietroski (2004:201) focuses on. He captures the latter by assuming that DO is generated in the specifier of an intermediate Larsonian VP-shell, whose head indicates transfer, and the lower shell expresses the Goal relation and contains IO. Although Pietroski's semantic characterization is, I think, correct, it requires that DO start off higher than IO, in a position that we have characterized above as a high applicative. This results in the wrong syntax (there are many good reasons to assume that IO is always higher than DO, to which I return in chapter 3; see also Barss and Lasnik 1986, Pylkkänen 2002, etc.). So, the challenge at this point amounts to finding a way of combining Pietroski's insight about the transfer portion of the meaning of English-style ditransitives and Pylkkänen's insight about the possession/resultative portion of the same constructions. To the best of my knowledge, no one has tackled this question, let alone answered it, and I will address this issue in detail in chapter 4. For now I want to note that this problem lies at the very foundation of McGinnis's analysis of the syntax of applicatives.

2.4 Conclusion

In this chapter, I have surveyed the variation of applicative constructions, focusing on various asymmetries such constructions exhibit at the syntax/semantics interface. There is little doubt that progress has been made in this area in recent years. Indeed, one can even begin to talk of a consensus as to how to approach such constructions. But although such a consensus is welcome, I have indicated in the last section that the consensus appears to face some challenges. Because the consensus offers us a way to understand how the syntax and the semantics of applicatives work, I think it is worth trying to preserve it. This means that one ought to devote serious attention to the problems listed in the previous section. The goal of the next chapters will be to remedy these inadequacies and limitations.

CHAPTER THREE

A more precise map of the applicative territory

Having surveyed the landscape of applicatives, I would like to develop in this chapter a better characterization of the syntax of applicative constructions. As I will show in the following pages, such a characterization will lead me to abandon McGinnis's notion of phase-based locality, and make use of recent proposals concerning successive cyclicity and anti-locality. Additionally, I will also argue that notions like case and scrambling play an important role in determining the syntax of applicative constructions, and deserve a closer look.

As a starting point, I would like to briefly summarize what I take to be the key insights of recent research on applicatives reviewed in chapter 2.

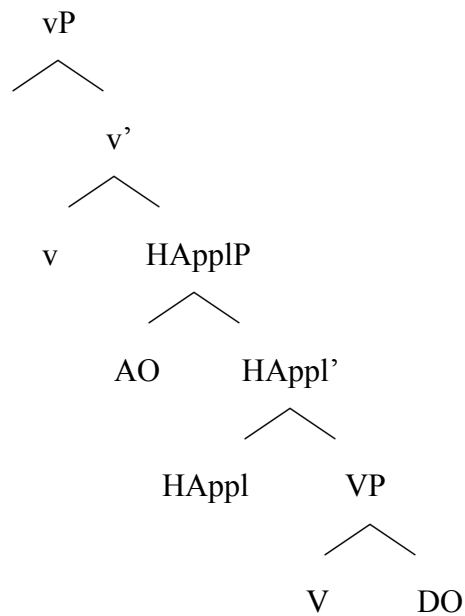
First, there are significant (a)symmetries to be captured in the realm of passivization, incorporation, agreement, prosody, etc.: some languages treat both objects alike, others don't. The following chart summarizes these (a)symmetries.

(1)

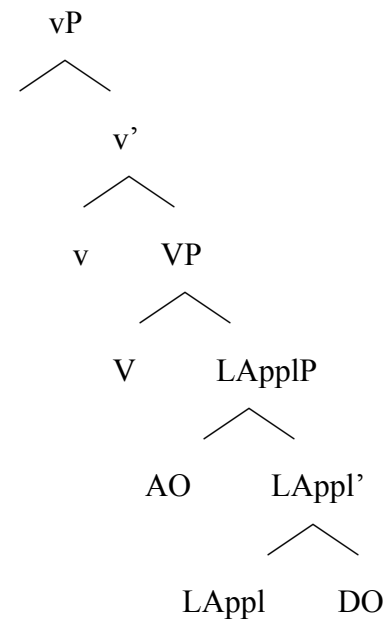
Asymmetric	Symmetric
AO/IO shows object properties (agreement, passives, ...)	AO/IO, VO/DO show object properties (agreement, passives, ...)
Transitivity restriction on verb	no transitivity restriction on verb (i.e. AO/IO can be applied to intransitive)
animacy restriction on AO/IO	no animacy restriction on AO/IO

Second, in addition to these syntactic asymmetries, Pylkkänen (2002) uncovered a crucial semantic asymmetry between what she called ‘high’ and ‘low’ applicatives: High Applicatives express a relation between an individual (AO/IO) and an event. Low Applicatives express a relation between two individuals, AO/IO and DO. This interpretive asymmetry is reflected in a configurational/phrase-structural difference, reproduced here in (2a-b).

(2) a. High Applicatives



b. Low Applicatives



McGinnis (2001) attempts to relate, indeed collapse syntactic and semantic asymmetries, embedding her account in a phase-based system. Her key idea is that High Applicatives provide an escape hatch for the lower object, i.e., DO ‘leapfrogging’ over applied/indirect object (AO/IO), because the High Applicative phrase is a phase, and phases, by definition (see Chomsky 2000) have the option of

projecting an extra specifier position (by means of an EPP feature), which can be used as an escape hatch. By contrast, the Low Applicative phrase is not a phase, hence lacks the ability to project the extra specifier position that would be necessary to circumvent a locality violation, which would otherwise arise if DO moved to T° directly crossing over AO. Due to the *Phase Impenetrability Condition* (PIC), the lower object of a low applicative phrase is irremediably trapped within the complement domain of a *v* phase.

As we saw at the end of the previous chapter, McGinnis faces some challenges. Specifically, her account fails to predict the possibility of crosscutting high/low applicatives and symmetric/asymmetric object behavior, that is, situations of asymmetries in high applicatives, and symmetries in low applicatives.¹⁰ (I stress that these asymmetries are different in kind from asymmetries of scope and binding that are expected under any Phrase Structural account of applicatives. As Baker (2005) notes, any Phrase Structural system relying on binary branching invariably predicts distinctions among different arguments, even in so-called symmetric language.)

¹⁰ In addition to this problem, we also saw in chapter 2 that McGinnis's account faces a problem in the domain of experiencers. McGinnis (2004) does not address this problem, and I will not address it either. At the moment I do not have an analysis of what accounts for the variability of subject raising across experiencers, but this is a topic that lies beyond the scope of the present work. I just want to point out that on the face of it, it is not at all clear that one should extend the applicative typology to experiencer constructions. Typically, languages with overt applicative morphology don't have experiencer applicatives, only datives, locatives, instrumentals, and benefactives. If experiencers do not fall under the rubric of applicative constructions, it should come as no surprise that variability in the context of subject raising across an experiencer doesn't correlate with semantic differences.

(3)

	Symmetric	Asymmetric
High Applicative	Predicted in McGinnis's system	Unpredicted
Low Applicative	Unpredicted	Predicted in McGinnis's system

But such crosscuts, i.e., unshaded boxes in (3), appear to exist in natural languages, as we saw in chapter 1. Specifically, chapter 1 identified such cases as impossible DO passivization in high applicative contexts in Kinyarwanda, and possible DO passivization in low applicative contexts in Haya and Kinyarwanda. In addition, McGinnis herself observes that there are constituency conflicts between syntax and semantics that arise in some languages she looked at. Consider, for example, the sentences in (4) from Kinyarwanda.

(4) Úmwáalímu a-ra-andik-iish-a íbárúwa íkárámu.

teacher he-PST-wrote-INST-ASP letter pen

‘The teacher is writing a letter with a pen’

(5) a. semantic constituency

[[a-ra-andik-iish-a íbárúwa] íkárámu]

[[write letter] pen]

b. syntactic constituency

a-ra-andik-iish-a [íbárúwa [íkárámu]]

write [letter [pen]]

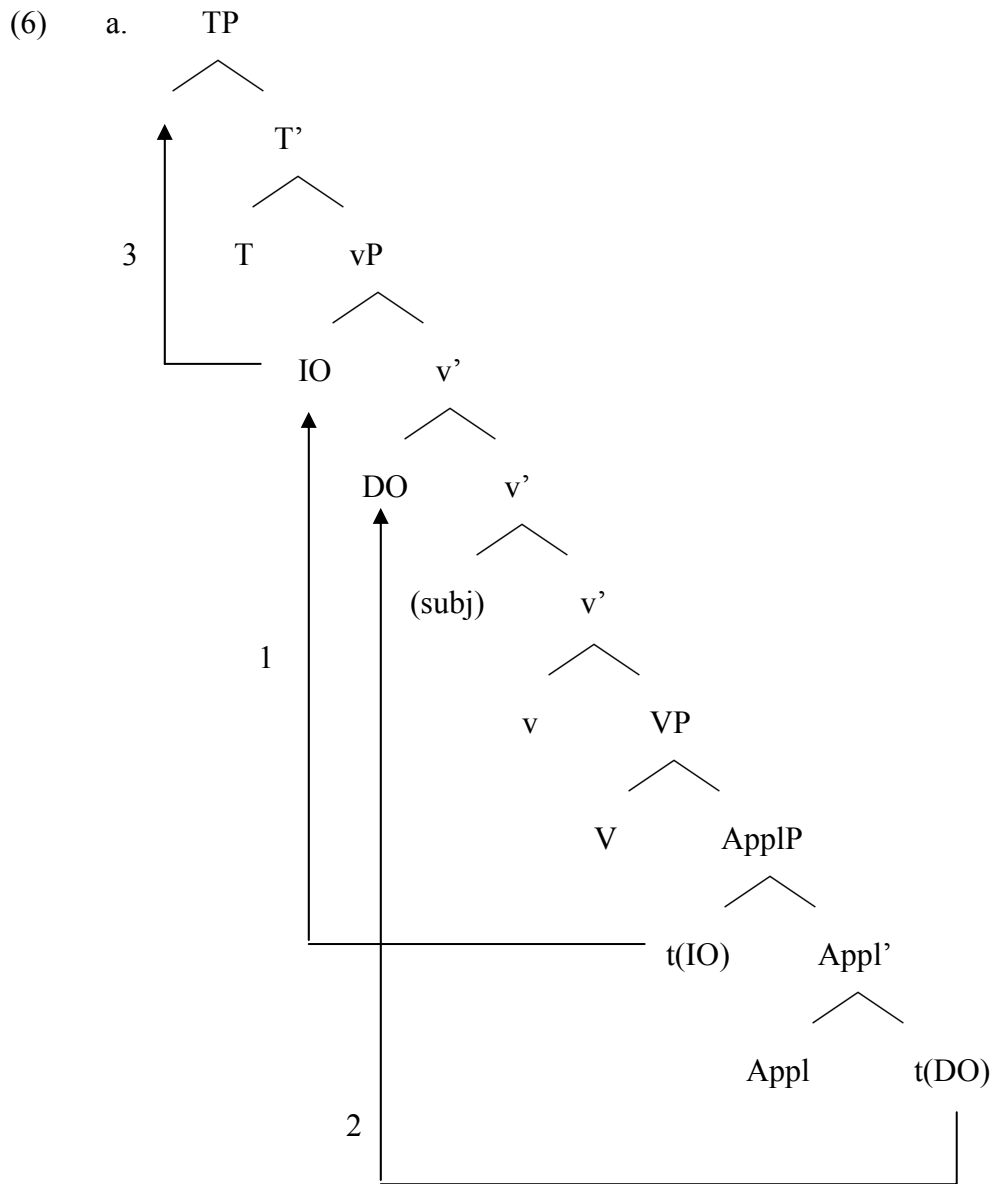
McGinnis (2004) tackles these problems, and the next section discusses her general answers/strategies to deal with the problems that challenge her account.

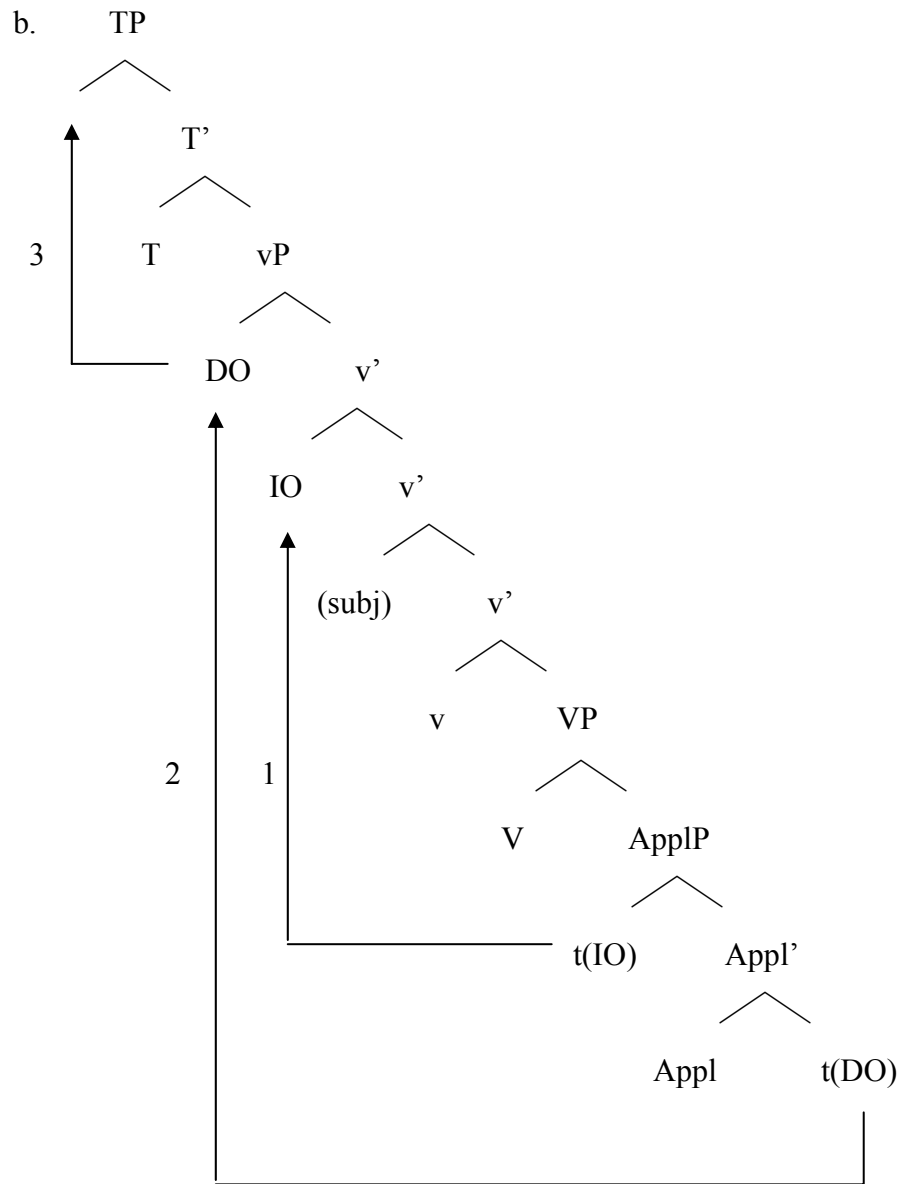
3.1 McGinnis' (2004) solutions

As a general strategy to address the fact that the High/Low distinction does not seem to fully account for the symmetrical/asymmetrical distinction, McGinnis resorts to the idea that the availability of EPP feature is subject to cross-linguistic variation (see also Bissell-Doggett 2004).

Regarding instances of low applicative structures giving rise to symmetric passives, in which both objects can move out of a low applicative, she follows recent work by Bissell-Doggett (2004), who claims that some languages allow for multiple (at least two) EPP features on the *v*-phase, allowing both objects to move. For example, Bissell-Doggett proposes that in a Haya passive, *v* has two EPP features; one can be checked by merging an external argument in Spec *v*P, while the other is checked by an internal argument that raises first to Spec *v*P, then to the subject position. However, if the external argument is not merged, then both EPP features of

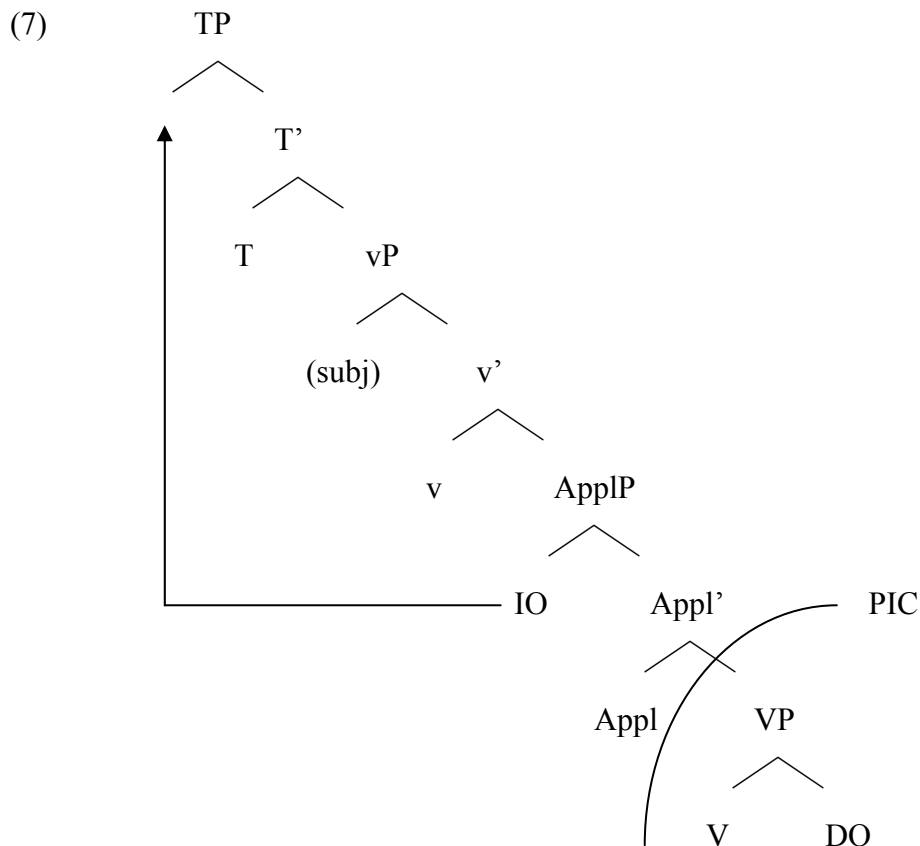
v can be checked by internal arguments (6). Bissell-Doggett furthermore assumes that tucking in (6a) is not forced in the creation of multiple specifier structures created by movement (contra Richards 1999), so the lower object DO can ‘tuck out’ and leapfrog IO on its way to T, as schematized in (6b).





Regarding cases of high applicatives disallowing passivization of DO, McGinnis again passes the blame to the EPP-feature by arguing that some high applicatives allow only the applied/indirect argument to raise to subject position, because the applicative head has no EPP feature to allow the lower object to move. Put differently, in such cases the high Appl cannot project an extra specifier. Being

unable to project an extra specifier, the high applicative phase cannot provide an escape hatch for DO, which remains trapped under the PIC (7) (much as in Low applicative structure, cf. (2b)).

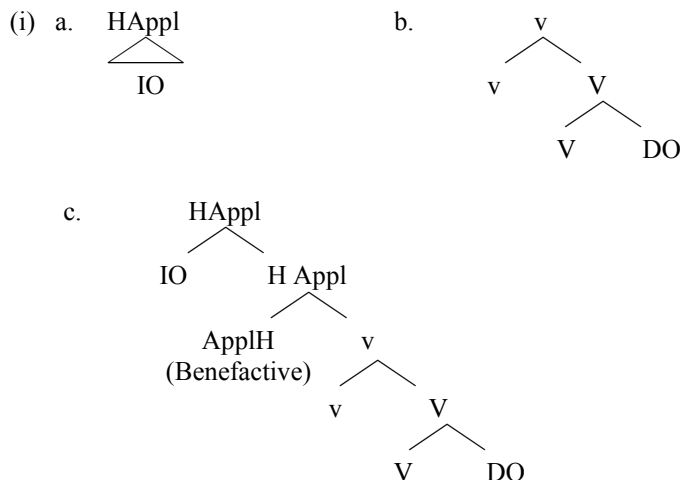


Finally, regarding the constituency conflicts identified in Kinyarwanda, in which unlike benefactive (and locative) applied arguments, instrumental arguments such as *ikarámu* ‘pen’ in (4) follow the theme, with the theme c-commanding the instrument, as in (5b). McGinnis claims that if a bottom-up approach to merge is assumed for the instrumental applicative (like other high applicatives), the

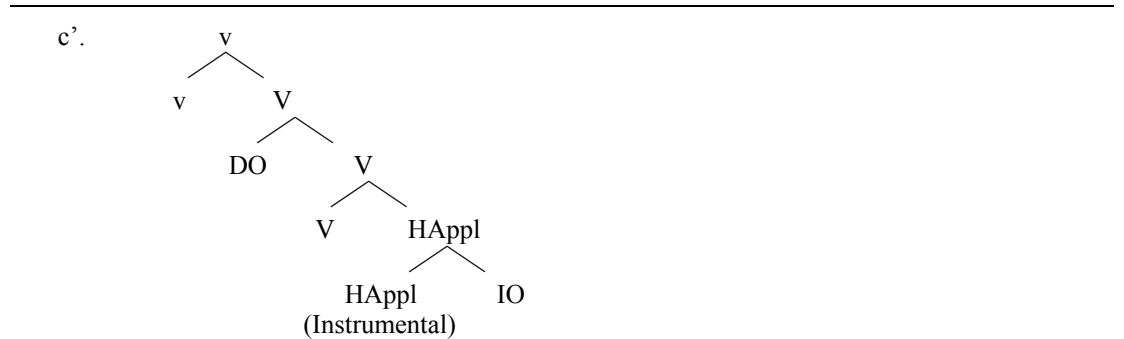
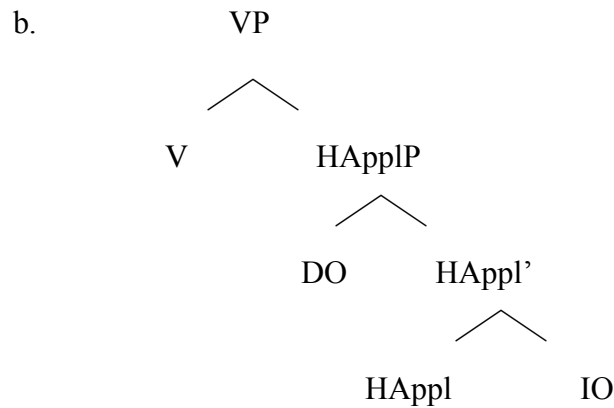
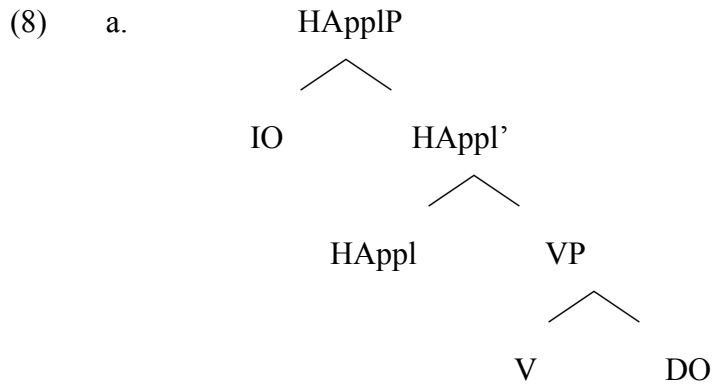
instrumental argument would end up c-commanding the theme, which is not the case. Thus, although the instrumental applicative has the semantics of a high applicative by selecting an event argument, McGinnis suggests that the apparent contradiction can be resolved if constituents can merge downward, i.e., it merges below the theme such that a high applicative phrase can be built in a separate workspace and be merged, acyclically, below the VP containing the verb and DO.¹¹ In order for this to be possible, McGinnis modifies her previous account in that she assumes that the derivation proceeds as follows: once the VP is completed, a high applicative can merge either above it (8a), or below it (8b).¹² The Merge operation will establish a

¹¹ As Takano (2005) points out in a different context, one may think of this as the most radical instance of tucking-in.

¹² The account I discuss in the main text is somewhat different from McGinnis and Gerdtts (2003), though the spirit of both accounts is the same. McGinnis and Gerdtts propose that the derivation proceeds as follows: first, merge V and DO, then merge *v* and VP. At that point, phasal spell-out occurs, shipping {V-DO} to the interfaces; in particular, to LF. Once this is done, the applicative phrase can be merged either below or above the *v*-phrase. If it is merged above the *v*-phrase, it gives rise to the familiar high applicative structure, as shown in (ic).



thematic relationship between the high applicative and VP in both cases. A high applied argument will c-command the theme if merged upwards, and will be c-commanded by the theme if merged downwards.



If the applicative is merged below the completed *v*-phase, it still attaches to an event-denoting group, but this time DO ends up c-commanding the applicative, as shown in (ic').

3.1.1 Problems with McGinnis' (2004) solutions

I agree with McGinnis that one should try to keep the syntax-semantics mapping as transparent as one can. Hence, one should indeed try to reduce discrepancies between semantic asymmetries and syntactic asymmetries. I also think that McGinnis has identified the most salient problems for her reductionist program. But I don't think that her solutions to these problems are going in the right direction. Let me review each of her solutions, and point out the problems that each faces.

Regarding situations where high applicatives don't allow DO passivization, she claims that the high applicative phase lacks the ability to project an extra specifier, i.e., an escape hatch. Although her solution works technically, I find it not only *ad hoc* but unnatural, since it is at odds with the notion of phase she assumes. By definition (see Chomsky 2000), a phase has the potential of projecting an extra spec, which can act an escape hatch by making use of an extra EPP feature. The extra EPP feature is in part what makes a phase a phase. Saying that a phase lacks an extra escape hatch is a bit like saying that a transitive verb lacks the ability to take an object argument.

So, it seems to me here that McGinnis's solution runs into problem not because of (lack of) the EPP feature *per se*, but because she adopts a phase-based derivational system. If we don't assume phases, the escape hatch position for the high applicative head becomes much more easily parametrizable (see Anagnostopoulou's 2003 account). Of course, saying that for some reason the high applicative head

cannot license an extra specifier is an *ad hoc* statement, but it is more natural than in a framework where the high applicative head is seen as a phase. We know from work on passives and the licensing of null subjects, for example, that the content of a head influences the projection of specifiers. This seems not to be a language-specific thing, but a head/feature-specific thing. So in the context of applicatives, it is possible to say that in the same language some high applicatives allow for DO passivization while some other high applicatives don't. In fact, this state of affairs corresponds to McGinnis's findings: as illustrated in the previous chapter (section 2.3.5), she notes that only locative (high) applicatives block DO passivization in Kinyarwanda.¹³ Other high applicatives (e.g., benefactives) readily allow it.

- (10) a. Umugabo_i a-rá-hé-er-w-a ti ibíryo *t_i* n'ûmugóre
 man he-PR-give-BEN-PASS-ASP food by-woman
 'For the man is given food by the woman'
- b. Ibíryo_i bi-rá-hé-er-w-a umugabo *t_i* n'ûmugóre
 food it-PR-give-BEN-PASS-ASP man by woman
 'The food is given for the man by the woman'
- c. Ishuûri_i ry-oohere-j-w-é-ho *t_i* igitabo n'úúmwáalímu.
 school it-send-ASP-PASS-ASP-LOC book by-teacher
 'The school was sent the book by the teacher'

¹³ It is worth noting that the morphological realization of the applicative morpheme in the case of locatives is more complex than in other applicative contexts (McGinnis notes, following Kimenyi, that there are two applied markers on the verb, as opposed to one). I tentatively assume that this morphological difference is what allows the child to figure out the ban on multiple specifiers in locative applicatives.

- d. *Igitabo_i cy-oohere-j-w-é-ho ishuûri *t_i* n'úúmwáalímu.
 book it-send-ASP-PASS-ASP-LOC school by-teacher
 'The book was sent to the school by the teacher'

In a framework that treats the high applicative head as a phase, one would be forced to say that the identity of phases may vary from language to language, or even within one language. Although such a claim can be made (see Gallego 2006 for the claim that T is a phase in Spanish; see also recent unpublished work by Raposo and Uriagereka), I think it goes against Chomsky's (2000) attempt to motivate the identity of phases on the basis of interface properties (propositionality, e.g.). Parametrizing the identity of phases appears to me to amount to allowing parameters at the semantic interface, or in the thought systems, such as conceptual structure, with which language relates. On these grounds I maintain that McGinnis's solution is unnatural.

McGinnis's (and Bissell-Doggett's) solution to incorporate instances of symmetric passivization in low applicative contexts is too much of an *ad hoc* claim to be satisfactory. There is by now a fair amount of evidence for a phenomenon like "tucking in". Admittedly, multiple-specifier constructions may not be as frequent as some accounts would predict (see Zwart 1997 and Grohmann 2003 on this point), but when such a situation obtains, tucking-in appears to capture some facts that are not so easy to account for otherwise (see Bošković 1999, Richards 2001, Jeong 2004a, among others). So I take it that tucking-in cannot be simply ignored (see Uriagereka 2003 for a similar point.) Certainly when it comes to derived specifiers, i.e., specifiers

created by movement, tucking in appears to be forced (see Richards 1997, 1999, 2001; see also Rackowski 2002). If tucking in is forced, DO would always end up below IO in cases like (6), so no leapfrogging of DO over IO would be possible, assuming that multiple specifiers are not equidistant (see Hiraiwa 2001 on this).

Finally, McGinnis's treatment of the constituency conflicts in Kinyarwanda violates Chomsky's (2000) *No-tampering condition* or his (1993) *Extension condition*,¹⁴ which forbids an acyclic insertion.¹⁵ Furthermore, as was noted in McGinnis and Gerdts (2003), what determines whether an applied object will merge above or below is an unresolved issue. This too is *ad hoc*. What makes McGinnis' (and McGinnis and Gerdts') solution about this constituency problem particularly *ad hoc*, and, therefore, more dubious is that we see no other high applied argument (DP) than an instrumental being merged acyclically. I find this a big price to pay to only account for one exceptional instance.

In light of these problems, in the next section I will offer alternative solutions to the recalcitrant cases for the idea that there is an intimate connection between the high/low applicative distinction and the symmetric/asymmetric passivization facts. This will necessitate the rejection of phase-based derivation, an emphasis on anti-locality, a rethinking of the phenomenon of successive cyclicity, and a renewed

¹⁴ Chomsky (2005) addresses the problem posed by tucking-in for the *No-tampering* condition, and opens the door to a limited amount of tucking-in, formed by internal merge, i.e., movement, targeting the position closest to the Probe. This is not enough to allow McGinnis's instances of acyclic merger.

¹⁵ For more on No-tampering, see Uriagereka's (1998) discussion of 'over-writing'. See also Lasnik (2006).

appreciation for the relevance of case and category in the context of multiple object constructions.

3.2 Towards a more appropriate solution: what is not needed

I would like to start off this section by observing that the major drawback of McGinnis's analysis seems to be her reliance on phases and the EPP property associated with it. Basically, it seems to me that the notion of phase (and the package of assumptions that comes with it) is both too rigid and too permissive. It's too permissive because, as I pointed out, in principle it is always allowed for an element to leapfrog over another element that is higher within a phase, because a phase always has an extra specifier as an option. That's what makes a phase a phase. However, as noted in the previous section, we do find that leapfrogging is sometimes forbidden. Turning off the EPP option for specific phases is not easy to do, for it violates the attempt to ground the identity of phases and their properties in terms of interface properties (see Chomsky 2000). A phase, if such a thing exists, appears to be too deep a notion to parametrize.

In light of this, I'd like to explore the possibility of dispensing with phases. I will only be able to explore this possibility in the context of ditransitives, but I hope that some of the points I will make below can carry over to other phenomena. In fact, recent works have proposed a similar turn away from phases in the context of

locality. Among others, Boeckx (2004, 2006) and Boeckx and Grohmann (to appear) question the validity of phases by pointing out that the extra EPP feature attached to phase-heads comes close to nullifying the notion of *island*. The following quote from Ceplova (2001) should be clear enough to reveal why this is so.

“In the current theory [Chomsky 2001], all phase-boundary-inducing heads can have [EP]P-features. A head with a[n EP]P-feature can attract elements with unsatisfied uninterpretable features to its specifier, with the result that the [EP]P-feature is checked by the attractee, and the attractee is in a position from which it can move further to satisfy its uninterpretable feature (and thus prevent the derivation from crashing). The *problem* that arises by this proposal is that now *nothing should be an island* if all strong phases allow movement out of them (due to [EP]P-features).”

(Ceplova 2001:2-3)

Faced with such a situation Ceplova (and many others before her; cf. Chomsky 1986; see Boeckx and Grohmann to appear on this point) investigates “a possibility of restricting the distribution of [EP]P-features that depends on structural position of the category, a possibility reminiscent of L-marking in Chomsky (1986)”.

But, as pointed out in Boeckx (2004, 2006) and Boeckx and Grohmann (to appear), once notions like L-marking are revived, phases lose much of their minimalist appeal.

In addition to this inherently lenient property of phases (that can only be remedied in a *ad hoc* fashion), phase-locality is too rigid in that it does not care about the contents of a phase, i.e., featural considerations such as case, different flavors of C, etc. What is needed to evaluate locality of an element in a phase is purely based on where it sits in the given phase: a complement of a phase that is impenetrable from outside, a specifier position of a phase that renders an element free to move out of the phase, etc. It simply allows or disallows a movement of an element by brute force. However, we find that it is not always true: the content of a head plays a role, such as what kind of v is involved (active/passive, v vs. v^*), what flavor of a high applicative head is dealt with (benefactive-symmetric/locative-asymmetric passives), etc. appears to influence extraction possibilities.

So, the conclusion is that the system on which McGinnis bases her account is both too rigid and too permissive. My proposal is to dispense with phases and see what machinery we would need instead. Since the phase-based account seems to cause the problems that may not otherwise arise, I will hypothesize that there is no phasal/non-phasal distinction for the (a)symmetries between high and low applicatives, and that the asymmetries between the two types of applicatives, the phase or non-phase *effects* that McGinnis has identified, can be made to follow from independent factors.

The first task I set myself is to derive the ‘anti-phasal’ effects of low applicatives without appealing to phases. Here we’ll see that the notion of anti-locality plays a crucial role.

3.2.1 Anti-locality

Grohmann (2003) proposes that there is a lower-bound restriction on the minimum distance of movement in addition to the well-known notion of locality which restricts the upper-bound on the maximum distance of movement. In other words, he proposes that movement cannot be too local, as given in (11).

(11) *Anti-locality hypothesis*

Movement must not be too local (Grohmann 2003:26)

For Grohmann, movement is too local if an element K has two occurrences within a given domain α , where α ranges over thematic (VP), inflectional (IP), and discourse-related (CP) domains. Movement within these domains is not allowed.¹⁶

Grohmann's view is interesting in that it makes the movement dependencies symmetric as to both the upper and the lower bounds of movement. It is problematic, however, for the analysis of the current issue – passivization asymmetry and the escape hatch effect by an extra EPP feature in high/low applicatives, since for instance the movement of the theme from the complement position of V to a specifier position of high applicative is a movement within an anti-locality domain, vP. In

¹⁶ Grohmann (2003) conjectures that *too local* a movement can be salvaged by resumption (ii), as *too long* a movement can be (i):

- (i) ? Which woman did you claim that Peter met the man who saw ~~<which woman>~~ her
- (ii) a. John [_{VP} <John> likes <John> himself]
b. [_{XP} That man, [_{XP} ~~<that man>~~ He really gets on my nerves]]

particular, the notion of Grohmann's (2003) anti-locality cannot capture the escape hatch effect exhibited in symmetric passive languages. So we need a somewhat different notion of anti-locality.¹⁷

Evidence that the movement dependency has a lower bound is traced back to the proposal by Murasugi and Saito (1995). They formulate a condition in the spirit of anti-locality as (12) for explaining the situation described in (13), the situation where subject moves from Spec of IP to the IP-adjoined position within a single projection as a short subject topicalization.

(12) A chain link must be at least of length 1

A chain link from A to B is of length n iff there are n "nodes" (X, X', or XP, but not segments of these) that dominate A and exclude B.

(13) *I think that [_{IP} John, [_{IP} <John> likes Mary]]

By (12), Murasugi and Saito flesh out the intuition disallowing too short a movement and argue that it may be reduced to a kind of economy principle which bans superfluous steps of derivation.

¹⁷ As Juan Uriagereka notes (p.c.), the notion of anti-locality I adopt is superior to Grohmann's on conceptual grounds. Whereas the domains over which anti-locality holds are axiomatic for Grohmann, my version of anti-locality follows immediately under Bare Phrase Structure, which takes complement and specifier within a given projection to be non-distinct. Under Bare Phrase Structure, anti-local movement amounts to a Last Resort violation (see Boeckx 2006 for extensive discussion of this issue. For an alternative way of deriving a version of anti-locality similar to mine, see Hornstein 2005.)

Supporting Murasugi and Saito (1995), Bošković (1994) claims that indeed a constraint like (12) is needed to prevent Chomsky and Lasnik's (1993) Minimize Chain Link Principle, which requires that each chain link be as short as possible, from forcing a phrase in an adjoined position to adjoin to the same node over and over again.¹⁸

More recently, Abels (2003), in a similar spirit, proposed an anti-locality constraint that no phrase can be both specifier and complement of the same head, which is shown to apply to all heads and their complements. Specifically, Abels uses anti-locality to derive the fact that complements of phases are immobile. According to him, this fact follows from the conflicting claims imposed by the PIC and anti-locality: complements of phases can't reach the edge of the phase (anti-locality), but no element can move out of the phases if they are not at the edge (PIC). (For a related proposal, see Lee 2004.¹⁹)

3.3 Low applicatives and anti-locality

In this section, I propose that we can derive the absence of phase-like effects in the context of low applicatives from anti-locality, and the presence of phase-like effects

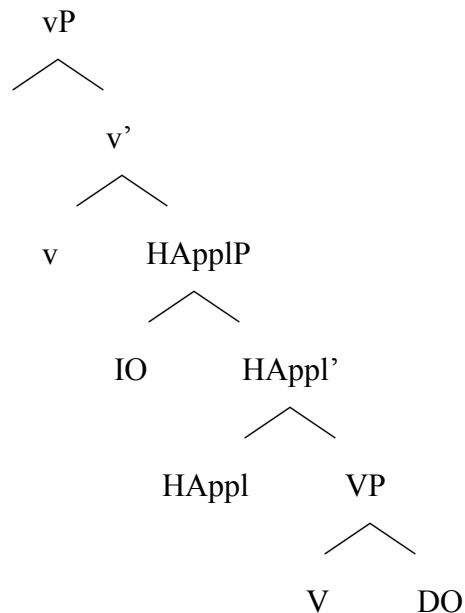
¹⁸ Bošković also suggests that anti-locality, properly defined, ought to rule out adjunction of X to its own XP and substitution of X to Spec of XP, i.e., self-attachment (Chomsky 1995). Since these are not situations that I will consider, I will not pursue his logic here.

¹⁹ Lee (2004) also appeals to anti-locality to capture the basic syntactic contrast between high and low applicatives, but her approach to locality is still phase-based, which is problematic for how the escape hatch strategy would be parameterized in the context of high applicatives.

with high applicatives, from a specific notion of successive cyclicity. I will show that combining anti-locality and a recent version of successive cyclicity allows us to reach the interesting results McGinnis reached without running into the problems tied to the nature of phases.

Consider first (14), repeated from (2a).

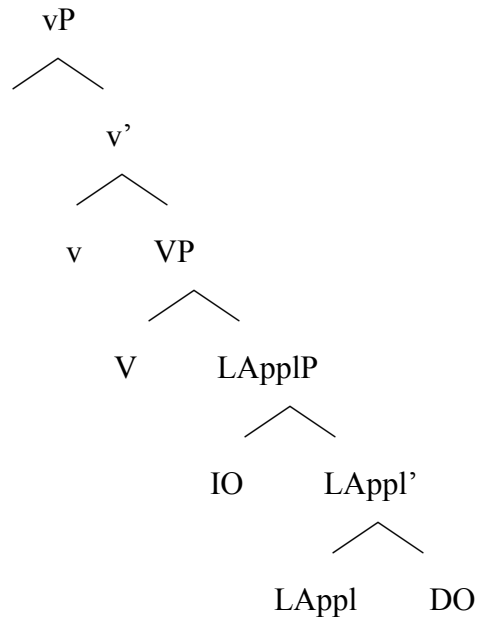
(14) High Applicatives



In (14), DO can, crossing over IO, be adjoined to the outer specifier position of HApplP. No anti-locality is incurred here: IO and DO are not in the same projection, separated by VP, with IO being a specifier of HApplP and DO a complement of VP.

But in low applicatives it follows from anti-locality that a lower argument DO will never move across the higher argument IO, since they are in the same projection, i.e., LApplP.

(15) Low Applicatives



Because of locality, the theme DO first has to move into the outer specifier position of the projection hosting the Goal IO, so that it could be closer to the target T, yet the movement of the theme, which is the complement of LAppI, into the outer specifier position of LAppIP is not possible due to the anti-locality constraint, i.e., anti-locality blocks escape hatch effects from arising in (A)-movement in a low applicative structure.

Note that the nice aspect of McGinnis' phase account is that no leapfrogging is allowed in a low applicative, the place where rigidity of phases is indeed needed. However, we can get this rigidity even without assuming phases; anti-locality, as we saw, captures the same effect. So, when the facts require the system to be rigid, the current proposal without phases is as rigid as McGinnis's. Plus, it is better because

McGinnis has to stipulate a low applicative is not a phase, whereas it is redundant for the current proposal. It follows as a specific instance of anti-locality.

It is also better because unlike her account which says that whenever you have a low applicative, we cannot move DO, under the current proposal, in principle we could move DO (without leapfrogging), such as in cases where IO is not a possible attractee, say, in case IO bears inherent case: this may well be the case in Dutch as in (17).²⁰

- (16) a. Ik toonde iedere leeuw_i zijn_i trainer
‘I showed every lion_i its_i trainer’
b. ??Ik toned zijn_i trainer iedere leeuw_i
??‘I showed its_i trainer every lion_i’ (McGinnis 2004:52)

- (17) a. Het boek werd Mary gegeven
the book was Mary given
‘The book was given to Mary’ (Koster 1978:156)
b. *{Zij werd/ De meisjes warden} het boek gegeven
she was/ the girls were the book given
‘She was/ The girls were given the book’
(Den Dikken and Mulder 1991:71)

²⁰ This derivational option (direct movement of DO) is discussed by McGinnis (2004), in a completely different context. The option doesn’t fit into her system, and leads her to distinguish EPP-driven vs. Case-driven movement, and other complications that render her solution unnatural.

(16) shows that the indirect object in Dutch c-commands the direct object in an active double object construction, just as in English (Barss and Lasnik 1986) since an IO quantifier can bind a pronoun embedded in the DO (16a), but not vice versa (16b). Nevertheless, only the lower DO can become the subject of the passive (17a). One may first consider this to be a result of topicalization, which is possible in flexible word order in Dutch, but the IO cannot bear Nominative case or trigger verb agreement (17b), since it bears inherent case. This leads us to think that case plays a relevant role in the current context (see also Boeckx and Hornstein 2005 for arguments that case matters in ditransitives over and above locality, on the basis of the absence of ditransitive ECM contexts).

One may also in principle in this system, but not in McGinnis' system, find situations where DO moves to a position above IO, but not to the extra LApplP specifier. This derivation is disallowed under McGinnis's system because every movement out of a phase must necessarily go through the edge of that phase. I'll discuss such cases later in section 3.4.1 in the context of Japanese scrambling.

Once we get rid of phases, we seem to be back to Anagnostopoulou (2003) for allowing leapfrogging in high applicative constructions: some high applicatives will allow extra specifier, while some won't. Though less general or deep than what is manifested in phases, Anagnostopoulou's proposal is more adequate. Consider the locative high applicative in Kinyarwanda. Here we clearly see that the content of a head matters: compare benefactive and locative. Both benefactive and locative are claimed to be a high applicative head, but when the high applicative head has a flavor

of the former, extra specifier option is in action, whereas it is not, when the high applicative head is locative. This, however, doesn't mean that the current proposal is a revival of Anagnostopoulou (2003). We saw that Anagnostopoulou's proposal has its own problem: granted Pylkkänen's (2002) two-way distinction of applicatives based on their semantic is correct, which I assume it is, Anagnostopoulou's single structure approach runs into problem in that there seems to be only one semantic interpretation possible, other than how to parameterize *The Specifier to vAppl parameter*. In order to go beyond Anagnostopoulou (2003), thus, we need to attribute the leapfrogging effects to some independent reason, just like McGinnis did with phases. I propose to do so without phases based on a new take on successive cyclic movement.

3.3.1 Bošković's (2005) early successive cyclic movement

Advocating early successive cyclic movement and contra Takahashi (1994), Bošković (2005)²¹ claims that successive cyclic movement starts before the final target of movement enters the structure, and that we can deduce PIC effects in the following way: since phases determine what is sent to the phonology, if something will ever

²¹ Bošković's analysis of successive cyclic movement is part of an ambitious attempt to eliminate the EPP (see also Bošković 2002), and account for the nature of Move and Agree. For my purposes in this chapter, his take on successive cyclicity is all that I need. I am not committed to other aspects of his analysis, specifically, his conception of final EPP-effects, Agree, etc.

move, then it cannot be contained in a unit that is shipped to Spell-Out.²² He also tries to eliminate the (generalized) EPP feature used to motivate successive cyclic movement, and in doing so the look-ahead problem such an EPP feature introduces into the grammar. As Bošković correctly notes, the EPP feature is just there to indicate whether an element Y takes place overtly or not, and is introduced at a stage where it is not possible to know whether movement will indeed yield a successful outcome. Consider (18).

- (18) a. that John bought what
b. Who thinks that John bought what
c. *Who thinks what that John bought

In order to decide whether *what* will be moving to the spec of *that* in (18a) we need to know at the point that structure building has reached in (18a) whether the structure will be expanded as in (18b) or (18c).

Bošković suggests another tack, by capitalizing on Chomsky's (2000) Activity condition, according to which a Goal must have an uninterpretable feature to be visible to a Probe. Just like a probe must have an uninterpretable (or unvalued) feature, to function as a Probe, so a Goal must have an uninterpretable feature to act as a Goal.

²² He also assumes, following Fox and Pesetsky (2005), that the PIC should be eliminated as a syntactic locality condition. Phases and PIC thus have no direct relevance for the locality of syntax and cannot therefore be said to be so trivialized as to be eliminable entirely.

Consider now a situation where an element X has an unchecked, uninterpretable feature uF at some stage S in the derivation, and S does not contain an element that could check off uF on X (i.e., S does not contain a relevant Probe). According to Bošković, X can – by the Activity Condition – move to the next available position (subject to conditions on locality such as minimality, etc.), until the relevant Probe for X is introduced into the derivation. What counts as the next available position is (for XP-movement) the closest available specifier position.

In a sense, Bošković reintroduces the original notion of Greedy movement (movement taking place to satisfy the needs of the moving element, see Chomsky 1993) via the Activation Condition to implement successive cyclic movement. This is technically very different from Chomsky's view on successive cyclic movement, which, for him, takes place to satisfy the EPP feature on the target head.

Bošković's view on successive cyclic movement captures phase-effects (movement through spec-as-escape hatch), but such effects are no longer due to special properties of designated heads. (One can still call intermediate landing sites 'phases' in Bošković's system, but the notion is so different from Chomsky's that I find it misleading to use the term phase²³).

In a nutshell, in Bošković's system, an element (with an uninterpretable feature) is allowed to move, regardless of whether there is a phase or not, simply in order to participate in a further operation, to its benefit. This means that the

²³ Although, as Norbert Hornstein points out (p.c.), both Bošković and Franks and Lavine (below) assume some version of cyclic linearization and the PIC, I don't. So, in this respect, their approaches are closer to Chomsky's than mine.

movement doesn't have to target a phase only; it could move to any position where it doesn't violate the anti-locality condition.

In the context of High Applicative Phrases where McGinnis resorted to phases,²⁴ derivations can proceed according to Bošković's system if DO has *uCase* (structural case; a standard assumption in the context of passivization). If DO has *uCase*, it can move to SpecHigh ApplP, and from there be attracted to T° (closest Attract/shortest Move). (I assume, for the sake of convenience that IO is case-marked as a result of multiple agree with T°.) The derivation proceeds as follows.

- (19) Stage 1: [_{VP} V° DO[*uF*]]
 Stage 2: [IO Appl° [_{VP} V° DO[*uF*]]]
 Stage 3: [_{AppIP} DO[*uF*] [IO Appl° [_{VP} V° *t*_{DO}]]]
 Stage 4: [_{TP} DO T° [_{AppIP} *t*'_{DO} [IO Appl° [_{VP} V° *t*_{DO}]]]]

²⁴ Note that (Anti-)locality will prohibit the following derivation (in Low ApplP contexts, where anti-phase effects obtain.):

- (i) Stage 1: [IO Appl° DO[*uF*]]
 Stage 2: * [_{AppIP} DO[*uF*] [IO Appl° *t*_{DO}]] (excluded by Anti-locality)
 Stage 3: * [_{VP} DO[*uF*] V° [IO Appl° *t*_{DO}]] (excluded by Minimality)

Norbert Hornstein points out that for Minimality to apply in this derivation once we assume Greedy agnostic movement, it shouldn't be defined exclusively in terms of Attract Closest. What we need is something like Richards' (1999, 2001) 'Shortest', which recognizes the need for both Attract Closest and Shortest Move (see also Collins 2002).

- (ii) *Shortest*
 A pair P of elements { α , β } obeys Shortest iff there is no well-formed pair P' which can be created by substituting γ for either α or β , and the set of nodes c-commanded by one element of P' and dominating the other is smaller than the set of nodes c-commanded by one element of P and dominating the other.

In the next section, I will provide independent evidence that case acts as the relevant factor triggering (greedy) successive cyclic movement.

3.3.2 Franks and Lavine's (2004) agnostic movement

Franks and Lavine (2004) share the idea with Bošković (2005) that the EPP feature as a driving force of movement should better be eliminated and it is just a diacritic notion rephrasing the requirement that every movement should be motivated by some feature checking, thereby giving it (featural) justification of movement within the current minimalist theory. They also agree with Bošković (2005) that movement could or should take place for the benefit of an element that is moving, not the target, that is, the element initiates the movement to value its otherwise uninterpretable feature to a position where the target can probe the goal with a matching feature; by doing so the resistant “look-ahead” problem will disappear. (For a similar intuition, see Lasnik, Uriagereka, and Boeckx 2005: chapter 7; see also Epstein and Seely 2006.)

They argue that the element that is moving moves in all cases as a last resort, but not necessarily for immediate feature checking purposes. According to them, in any particular situation, when there is no option but to move, then it should move; otherwise it will induce a derivational crash. They call this type of movement ‘agnostic movement’. In the remainder of this section, I’ll show what they exactly

mean by ‘agnostic movement’ and how it comes about. The data are relevant, as they show how unchecked case features can be involved in driving successive cyclic movement.

Franks and Lavine (2004) examine the unusual case and word order behavior of objects of infinitives in Lithuanian. In Lithuanian, in addition to lexically determined case idiosyncrasy, one finds syntactically determined case idiosyncrasy: with infinitives in three distinct constructions, case possibilities other than the expected accusative obtain. These cases (dative, genitive, and nominative) depend on the general clause structure rather than on the particular infinitive. Moreover, unlike ordinary direct objects, they appear in a position preceding rather than following the verb. Consider the following examples (20-24).

- (20) a. Vaikas **skaito** **knygą**
 child.NOM reads book.ACC
 ‘The child is reading a book’ (Ambrasas *et al.* 1997:605)
- b. Jis nežino [kada **skaityti** **knygą**]
 he not-know when to-read book.ACC
 ‘He doesn’t know when to read the book’
- c. Man nusibosta [laikraštis **skaityti**]
 me.DAT is-boring.[-AGR] newspaper.NOM to-read
 ‘It is boring for me to read the newspaper’
 (Franks and Lavine 2004: 11)

- (21) a. Jie stengiasi [**taisyti kelią**]
they try to-repair road.ACC
‘They are trying to repair the road’ (Franks and Lavine 2004: 11)
- b. Išvažiavo [**kelio taisyti**]
(they)-went road.GEN to-repair
‘They went to repair the road’ (Ambrazas *et al.* 1997:557)
- (22) a. Pastatė daržinę [kad **sukrautų šieną**]
(they)-built hayloft.ACC COMP keep.SUB hay.ACC
‘They built a hayloft so that they could keep hay’
(Franks and Lavine 2004: 11)
- b. Pastatė daržinę [**šienui sukrauti**]
(they)-built hayloft.ACC hay.DAT to-keep
‘They built a hayloft to keep hay’ (Ambrazas *et al.* 1997:557)

Subjects of finite, agreeing verbs are typically nominative, objects of transitive verbs are typically accusative (20a). Objects of transitive infinitives are likewise ordinarily accusative and follow the infinitive in their unmarked word order as in (20b), (21a), and (22a). While these facts are nothing special, in other infinitival constructions such as the psych construction (20c), the supine construction (21b), and the purpose

construction (22b)²⁵, we find that the accusative is consistently replaceable by some other case: nominative in the psych construction (20c), genitive in the supine (21b), and dative in the purpose infinitives (22b). Note that these all involve verbs that otherwise assign accusative to their direct objects, in which case the object follows the verb, and that in contrast the objects in (21c), (22b), and (22b) precede the infinitives, resulting in an unusual discourse-neutral OV order in an otherwise SVO language.

As mentioned above, Lithuanian also exhibits lexically determined case idiosyncrasy, i.e., inherent case. Some verbs govern particular oblique cases. Consider (23).

- (23) a. Mes **vengiame** **to** **profesorius**
 we are-avoiding that professor.GEN
 ‘We are avoiding that professor’
- b. Mes pamiršome [**vengti to profesorius**]
 we forgot to-avoid that professor.GEN

²⁵ Examples (21b) and (22b) involve purpose clauses of different types. Compared to (22b), where the object of the adjunct infinitival purpose clause is dative, (21b), where the object of the infinitive is genitive, the purpose clause is much less of an adjunct, since it specifically depends on the main clause verb being a verb of motion. This contrast can also be detected in English, where in order, which explicitly marks the clause as an adjunct of purpose is preferable in (ia) but odd in (ii):

- (i) a. They built a hayloft (in order) to keep hay
 b. *What did they build a hayloft (in order) to keep *t*?
- (ii) a. They went (?? In order) to repair the road
 b. ?What did they go to repair *t*?
 c. *What did they go in order to repair *t*?

- c. Jie pasidavè [vengti ilgo karo]
 they surrendered to-avoid long war.GEN
 ‘They surrendered to avoid a long war’
- d. Jie pasidavè [? ilgo karo vengti]
 they surrendered long war.GEN to-avoid
- e. Jie pasidavè [* ilgam karui vengti]
 they surrendered long war.DAT to-avoid

(Franks and Lavine 2004)

In (23) *vengti* ‘avoid’ governs the lexical case GEN. When such verbs appear as infinitives, the lexical case and word order are retained (23b); the same holds even in the purpose infinitive clause (23c-e), unlike (22b), where (structural) accusative case is replaced by dative in the purpose infinitive.

This phenomenon, often referred to as “case preservation”, is typically handled by stipulating that lexical case is required for proper semantic interpretation, whereas structural case, although canonically making a particular grammatical function, is not. Franks and Lavine claim on the basis of this that the very existence of case preservation implies that structural case, unlike lexical case, need not be discharged.²⁶ Consider the contrast between (24) and (25).

²⁶ Franks (2002) argues that the inverse case filter, since it derives from the theta-theory, does not carry over to non-theta-related structural case.

- (24) a. Dailininkas **nutapė paveikslą**
 artist.NOM painted picture.ACC
 ‘The artist painted a picture’
- b. Dailininkas **nenutapė paveikslo**
 artist.NOM NEG-painted picture.GEN
 ‘The artist didn’t paint a picture’
- c. *Dailininkas **nenutapė paveikslą**
 artist.nom NEG-painted picture.ACC
- (25) a. Jie **džiaugėsi pergale**
 they rejoiced victory.INST
 ‘They rejoiced at the victory’
- b. Jie **nesidžiaugė pergale**
 they NEG-rejoiced victory.INST
 ‘They didn’t rejoice at the victory’
- c. *Jie **nesidžiaugė pergalės**
 they NEG-rejoiced victory.GEN

Genitive replaces accusative under negation (24b), whereas it cannot replace the lexical instrumental assigned by *džiaugėsi* ‘rejoiced’ (25c).

In the examples given in (20-25), two problems emerge; first it looks like we need to relax a ‘*v*-accusative case assigner’ correlation in such case as those three distinct infinitive constructions (which Franks and Lavine call the L(eft)E(dge) constructions) and the negation construction, such that we allow *v* either to value accusative or not to do so. The second problem lies in the fact that whether *v* does value accusative or not depends on what will be merged on top of *v*P, which is obviously look-ahead.

For the first problem, Franks and Lavine suggest two possibilities, both of which one way or another involve optionality on *v*. Either way is fine by Franks and Lavine: (i) *v* has two variants, one with features for valuing case and the other without, and optionality lies in which version of *v* is actually selected; (ii) alternatively, *v* always has case features, and hence the potential to value case, but whether it does so or not in any particular instance is optional.

The second problem is more crucial, challenging as it does the well-known ‘look-ahead’ problem. Taking intermediate *wh*-movement as a showcase example, they argue that not all movement is forced by the direct need to satisfy some feature, claiming that there is no obvious local feature that would drive intermediate movement of, say, *wh*-element (other than a diacritic EPP feature that is posited to drive movement for no other reason than that the theory requires that movement be motivated by some feature). They further argue that movement also takes place when, at specific points in the derivation, it can be locally determined that there exists no other option but to move. The LE construction in Lithuanian is an instance of this type of ‘last resort’ operation.

Franks and Lavine's analysis of the offending LE constructions goes as follows: since regardless of whether the case of the direct object of an infinitive is dative, genitive, or nominative, that object appears discourse neutrally at the left edge of vP , giving rise to apparent OV order, the object moves to the outer specifier of vP in order to be within the search space of a higher case-assigner. Note that the movement itself at this point has nothing to do with any feature of either the element that moves or the target head v . It does move otherwise it will be trapped in a doomed domain. Subsequently, a higher functional head is merged that can probe down and value the case features of the NP which, by virtue of having raised to a position outside the complement to v , remains accessible to further syntactic operations in accordance with some version of the PIC.²⁷ They argue that this movement is the only option, once the vP phase is completed, if that object's case feature has not yet been valued due to the optionality of v as a accusative case assigner. Simply put, an NP unvalued for case moves, not for direct feature checking, but rather *agnostically*, to avoid an otherwise inevitable crash.²⁸

So the essence of their analysis, fully compatible with Bošković's notion of successive cyclic movement as greedy movement reviewed in the previous section, is

²⁷ Note that they reject the claim that the LE dative, genitive, and nominative are arguments of the matrix predicate, nevertheless they assume that the matrix predicate is responsible for how each of these LE objects is assigned case.

²⁸ Juan Uriagereka (p.c.) wonders how agnostic movement accounts for the fact that A-movement is typically more bounded/local than A-bar movement. I tentatively assume that the more local character of A-movement is due to the fact that the relevant Probe for A-movement (finite T^0) is more frequent than ($[_{wh}]C^0$), hence is encountered 'faster' in a derivation, causing A-movement to stop. (At this stage, I do not know how to capture the degree of boundedness shown by A-chains cross-linguistically that are discussed in Uriagereka, to appear. I suspect that factors other than case and agreement – complementation, perhaps – conspire to further constrain A-chain formation in languages that prohibit raising out of non-finite clauses.)

that the element that moves has features which need to be licensed or valued and that displacement to left-edge of the structure is a way of avoiding opacity and enabling subsequent visibility. Thus, while some deficiency in features is what motivates the movement, no ‘look-ahead’ is actually invoked.

Though the specific details of Franks and Lavine’s analysis need not be correct for my present purposes, I think that their data offer some reason to think that case is the obvious candidate, just as I claimed for DO-movement over IO in high applicative contexts.

With Bošković’s (2005) version of ‘early successive cyclic movement’ or Franks and Lavine’s (2004) notion of ‘agnostic movement’, we can go beyond Anagnostopoulou (2003) in explaining the state-of-affairs in applicatives, and propose an account that is more general than positing a parameter. Like McGinnis, we can adopt two structures for applicatives and tie leapfrogging to successive cyclicity, but without involving some kind of privileged landing sites, i.e., phases (in the Chomskyan sense; see Boeckx 2004, 2006, and Boeckx and Grohmann 2006 for detailed arguments against privileged landing sites). And because we do not need to resort to deep notions like phases, we can always stipulate why in some cases some projection may not allow movement to some specifier position, as in the Kinyarwanda locative applicative cases.

3.4 Category matters

The next issue I would like to tackle pertains to the constituency conflicts discussed by McGinnis (2004) and McGinnis and Gerdts (2003), discussed in section 2.3.5. Recall that based on sentences like (26), McGinnis and Gerdts argued that some semantically high applicatives, e.g., instrumental, must be merged below theme objects.

- (26) a. N-a-fúngul-ish-ije buri muryango úrufunguzo rwáwo.
I-PST-open-INST-ASP each door key its
‘I opened each door_i with its_i key’
- b. N-a-fúngul-ish-ije umuryango wáyo buri rufunguzo.
I-PST-open-INST-ASP door its each key
‘I opened its_i door with each key_{j/*i}’

To account for this syntax-semantics phrase structural mismatch, McGinnis and McGinnis and Gerdts rely on an acyclic insertion strategy, which I reviewed in section 3.1. The strategy seems to me a big price to pay only to make one exceptional case workable. In this section I’d like to challenge their solution and propose an alternative by appealing to the categorial information of applied/indirect arguments.

It is an oft-made claim that applied/indirect arguments come in two flavors, as NPs/DPs or PPs. This seems straightforward and obvious once we consider cases like (27-28), in English.²⁹

(27) Double object Construction

- a. John sent **Mary** a book
- b. John baked **Mary** a cake

(28) Prepositional dative

- a. John sent a book **to Mary**
- b. John baked a cake **for Mary**

By and large, there is a consensus that DP dative arguments, goal (27a) and beneficiary (27b) are hierarchically higher than themes, and PP-datives, *to Mary*

²⁹ The Goal argument in the double object variant receives an affected/causative meaning that is absent in its prepositional dative counterpart, as the contrast between (ia) and (ib) shows (Oehrle 1976).

- (i) a. The article gave me a headache
- b. *The article gave a headache to me

They also differ with respect to the animacy constraint on the Goal argument, which is present only in the double object variant, as (iia) illustrates (Green 1974, Oehrle 1976).

- (ii) a. I sent the boarder/*the border a package
- b. I sent a package to the boarder/to the border

Bresnan and Nikita (2003) question the standard facts alluded to in this footnote, and provide corpus data where the *to*-dative option is used in situations where we would not expect it. All such data involve factors like prosody, discourse topicality, etc. that I will simply assume are responsible for the deviations from the norm that they report on, just like interface considerations often lead to departures from the norm, as in the case of pronunciation of the highest copy in a chain (see Bošković 2001, Nunes 2004). I leave a precise characterization of how such deviations from the norm take place.

(28a) and *for Mary* (28b), are lower than themes. So they are called high and low datives respectively (Miyagawa and Tsujioka 2004, Anagnostopoulou 2005). The consensus is based on various asymmetries, which show that themes behave differently with two types of arguments, as documented in Barss and Lasnik (1986).

Reflexive binding

- (29) a. I showed Mary_i herself_i
b. *I showed herself_i Mary_i
- (30) a. I introduced Mary to herself
b. *I introduced herself to Mary

Pronominal variable binding

- (31) a. I gave every worker_i his_i paycheck
b. *I gave its_i owner every paycheck_i
- (32) a. I sent every check_i to its_i owner
b. ??I sent his_i paycheck to every employee_i

Anagnostopoulou (2005), however, investigating goal and beneficiary applied arguments introduced by the preposition *se* in Greek, questions this sort of fossilized tenet, and argues that it is not always the case that DP-datives map onto double object

constructions, and sit higher than theme. Nor is it the case that PP-datives map onto prepositional ditransitives, and sit lower than the theme. She notes first of all, citing the following examples from Pesetsky (1995), first discussed by Burzio (1986), that even in English the asymmetries are not quite symmetrically reversed: whereas the prepositional dative goal may bind into the theme in prepositional dative constructions (33b), the theme can never bind into dative DP in dative constructions (34b).

- (33) a. Sue showed [John and Mary]_i to each other_i's friends
b. Sue showed each other_i's friend to [John and Mary]_i

- (34) a. Sue showed [John and Mary]_i each other_i's friends
b. *Sue showed each other_i's friends [John and Mary]_i

Anagnostopoulou claims that a similar phenomenon is also found in the Greek double object construction/prepositional ditransitives that cast doubt on the quick and ready conclusion that DPs are high datives and PPs low datives.

Greek shows the alternation between a DP and a PP similar to (27) and (28) in English. Consider the following: (Note that, regarding *se*-PPs, Greek generally displays a freedom in the ordering of verbal DP and PP complements, which is not found in English, permitting both the DP>PP and the PP>DP permutation, as shown in (35b-c).)

- (35) a. GEN_{Goal} - ACC_{Theme}
- O Jianis estile **tis** **Marias** to γrama
 the Jianis.NOM sent.3SG the Maria.GEN the letter.ACC
 ‘John sent Mary the letter’
- b. ACC_{Theme} - PP_{Goal}
- O Jianis estile to γrama **sti** **Maria**
 the Jianis.NOM sent.3SG the letter.ACC to.the Maria.ACC
 ‘John sent the letter to Mary’
- c. PP_{Goal} - ACC_{Theme}
- O Jianis estile **sti** **Maria** to γrama
 the Jianis.NOM sent.3SG to.the Maria.ACC the letter.ACC
 ‘*John sent to Mary the letter’

Anagnostopoulou runs tests characteristic of double object constructions to see whether the construction under discussion is a Greek version of dative alternation, and indeed it appears to be. Among a number of criteria to diagnose double object construction, she listed these four: animacy (Stowell 1981 among others), predicate restriction (Oehrle 1976, Pesetsky 1995, Pinker 1989, Gropen *et al.* 1989), passivization (Larson 1988 among others), and nominalizations (Kayne 1984, Pesetsky 1995, Marantz 1997, Beck and Johnson 2004, among others). Examples of each criterion are given below:

- (36) a. *I Ilektra estile tis γalias ena ðema
the Ilektra.NOM sent.3SG the France.GEN a parcel.ACC
‘*Ilektra sent France a parcel’
- b. I Ilektra estile ena ðema sti γalias
the Ilektra.NOM sent.3SG a parcel.ACC to.the France
‘Ilektra sent a parcel to France’
- (37) a. Parapempsa ton Oresti stin Anastasia
referred.1SG the Orestis.ACC to.the Anastasia.ACC
‘I referred Orestis to Anastasia’
- b. *Parapempsa tis Anastasias ton Oresti
referred.1SG the Anastasia.GEN the Orestis.ACC
‘*I referred Anastasia Orestis’ (Bowers and Georgala 2005)
- (38) a. *To forema ðoθice tis Anastasias apo ton Oresti
the dress.NOM was-given.3SG the Anastasia.GEN by the Orestis.ACC
‘*The dress was given Anastasia by Orestis’
- b. To forema ðoθice stin Anastasia apo ton Oresti
‘the dress.NOM was-given.3SG to.the Anastasia.ACC by the restis.ACC
‘The dress was given to Anastasia by Orestis’
(Bowers and Georgala 2005)

- (39) a. *I anaθesi mias ðiskolis sonatas tis Marias apo ti ðaskala
the assignment a difficult.GEN sonata.GEN the Mary.GEN by the
teacher
‘*the assignment of a difficult sonata of Mary (i.e. to Mary) by the
teacher’
- b. I anaθesi mias ðiskolis sonatas sti Marias apo ti ðaskala
the assignment a difficult.GEN sonata.GEN to.the Mary.ACC by the
teacher
‘the assignment of a difficult sonata to Mary by the teacher’

So, at this point, it would be safe to conclude the Greek is just like English: DP maps onto high dative, PP onto low datives.

However this conclusion changes when we consider *se*-datives that are what she calls ‘beneficiaries’, not goals. Here Anagnostopoulou convincingly shows that beneficiary *se*-PPs pass all the tests for high dative-hood as if they were regular genitive DPs. She contrasts that with *jia*-PP, which is a low-sitting beneficiary that seems to behave like *to*-datives in English, especially because like in (33-34), binding here is not quite asymmetric (the prepositional object may bind into the direct object), unlike what we find with *se*-beneficiaries. Consider first binding in the genitive DP double object constructions, which shows that beneficiary genitive DPs asymmetrically c-command themes.

- (40) a. ?O arçitektonas sçeđiase tu enos pelati_i to spiti
the architect sketched.3SG the one client.GEN the house.ACC
tu alu_i
the other.GEN
‘The architect sketched each client the other’s house’
- b. *O arçitektonas sçeđiase tu iđioktiti tu alu_i
the architect sketched.3SG the owner.GEN the other.GEN
to ena spiti_i
the one house.ACC
‘*The architect sketched the other’s owner each house’

Next, consider binding in the beneficiary *se*-PP constructions:

- (41) a. O arçitektonas sçeđiase ston ena pelati_i to spiti
the architect sketched.3SG to.the one client.ACC the house.ACC
tu alu_i
the other.GEN
‘The architect sketched each client the other’s house’

- b. *O arçitektonas sçeđiase ston iđioktiti tu alu_i
 the architect sketched.3SG the owner.ACC the other.GEN
 to ena spiti_i
 the one house.ACC
 ‘*The architect sketched the other’s owner each house’
- c. ?*O arçitektonas sçeđiase to ena spiti_i ston iđioktiti
 the architect sketched.3SG the one house.ACC to.the owner.ACC
 tu alu_i
 the other.GEN
 ‘*The architect sketched each house to the other’s owner’

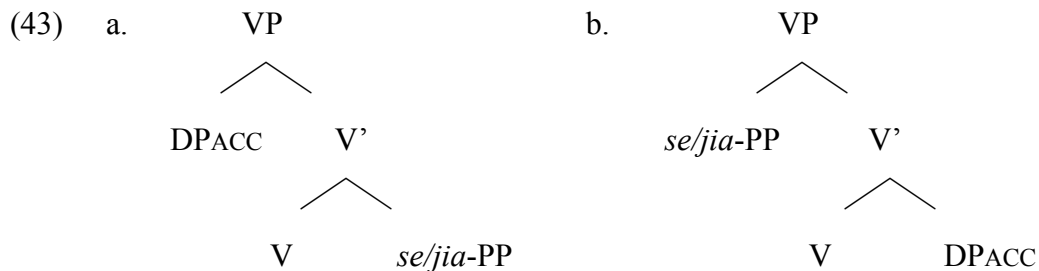
Note that in the ACC>*se*-beneficiary order (41c), binding of the theme into the beneficiary is ungrammatical, suggesting that the order feeding binding is the *se*-beneficiary>ACC order (41b). This shows that despite its appearance as PP, the *se*-beneficiary behaves like its genitive DP counterpart, sitting higher than the theme.

Let us now turn to the *jia*-beneficiary construction. In each order (ACC>*jia*-PP; *jia*-PP>ACC) precedence matches c-command (I set aside the puzzling transparency of the preposition for c-command purposes): in ACC>PP, the theme asymmetrically binds into the beneficiary (42c-d), and in PP>ACC the beneficiary asymmetrically binds into the theme (42a-b).

- (42) a. O arçitektonas sçeðiase jia ton ena pelati_i to spiti
the architect sketched.3SG for the one client.ACC the house.ACC
tu alu_i
the other.GEN
‘*The architect sketched the other’s house for each client’
- b. *O arçitektonas sçeðiase jia ton iðioktiti tu alu_i
the architect sketched.3SG for the owner.ACC the other.GEN
to ena spiti_i
the one house.ACC
‘The architect sketched each house for the other’s owner’
- c. O arçitektonas sçeðiase to ena spiti_i jia ton iðioktiti
the architect sketched.3SG the one house.ACC for the owner.ACC
tu alu_i
the other.GEN
‘The architect sketched each house for the other’s owner’
- d. *O arçitektonas sçeðiase to spiti tu alu_i
the architect sketched.3SG the house.ACC the other.GEN
jia ton ena pelati_i
for the one client.ACC
‘*The architect sketched the other’s house for each client’

What is interesting in Anagnostopoulou's findings is the fact that indirect/applied object headed by a preposition *se* could appear not only in prepositional ditransitives but also in double object constructions. Among a wide array of ditransitive structures in Greek, in double object constructions genitive NPs are like goal NPs in English, which I assume are low applicatives of the familiar sort. The ambiguous status of *se*-PPs makes Greek double object constructions distinct from the English *to*-dative counterpart. When *se*-PPs are goals, they act like English *to*-datives and beneficiary *jia*-PPs. But when they are beneficiaries/recipients, they act like low applicative DPs, although they are PPs.

Of the two meanings of *se*-PPs, the goal one is particularly interesting because the binding evidence is just as unclear as *jia*-PP in (42). Indeed, Anagnostopoulou does not choose between (43a) and (43b).³⁰



³⁰ Anagnostopoulou assumes that as long as the two arguments are in the same minimal domain of V and therefore are equidistant from T, either DO or IO can be base-generated higher than the other. As an alternative, Vukić (2003) argues that only the structure (43b) is needed, in which DO starts lower than PP within VP and the right word order is achieved by obligatory object shift of DO over PP. I will not try to choose between the two analyses here.

Here the situation with *jia*-PP is even more interesting because semantically, it clearly acts like a high applicative in that it doesn't involve a recipient reading, thereby no possession relationship between the applied object and the theme, which is a signature character of a low applicative; rather it has a sheer benefactive reading such that the applied object gets benefit from somebody's doing something (see Anagnostopoulou 2005:74-5 for discussion). But in terms of binding and other tests *jia*-PP behaves like goal *se*-PPs and English *to*-datives, which is fairly low in the structure. Of utmost importance here is that Greek provides with *jia*-dative evidence that semantically high applicatives behave like they are quite low in the structure when they are PPs.

I would like to say that Greek provides a transparent solution for the Kinyarwanda constituency puzzle noted by McGinnis. We do not need to resort to acyclic insertion. Instead, we can say something that seems empirically indispensable and irreducible: applied elements come in two flavors: as DPs or PPs.

So far we have only discussed applied DPs. These must be introduced by an applicative head either because that is the only way for them to relate to the theme/DO, as in low applicative context³¹, or because that's how they relate to the event, denoted by VP, in high applicatives. So the role of the applicative head is to allow for thematic relations that otherwise cannot be expressed; in other words, they act as a thematic mediator. Interestingly, as Pytkänen (2002) and Cuervo (2003) among others have noted, the semantics of a low applicative head is like a preposition

³¹ Baker (2003) argues that a Pred head must exist between any two DPs that are related thematically because DPs cannot assign theta-roles by themselves.

such as *to/at/from* (see Harley 2002 and Pesetsky 1995, among others, who had argued that applicative-head is literally a P^o). Likewise the link between applicative morpheme and preposition has been noted and was a driving force behind incorporation analyses (see Baker 1988). Although this link had to be relaxed due to double dissociation cases³², the similarity between applicative head and preposition remains, and I'd like to make use of it.

In particular I would like to argue that in addition to introducing an applied argument via an applicative head, one can introduce it through a P-head, yielding a high applicative PP.³³ Note that the term 'high/low applicative' in this context is a semantic notion, not the structural one as in (2).³⁴ When the applied PP involves a (semantically) high applicative such as benefactive and instrumental, it could combine with V', just like a DP combines with HAppl', or it could combine with V^o. This latter possibility is what I take to underlie the impression that some high applicatives are syntactically low. Granted that V^o and V' are the same as VP under Bare Phrase Structure (V^o, V', and VP are just occurrences of the same V-element), the applied PP rightfully qualifies as a high applicative since it merges with an event-

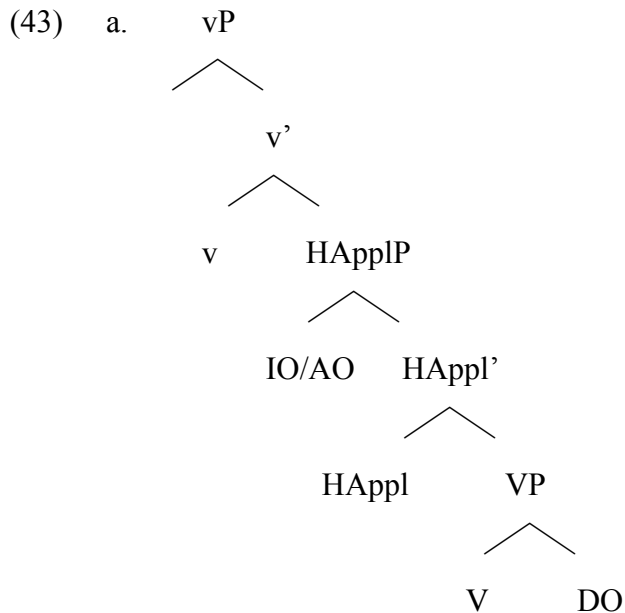
³² For Baker (1988), applicatives always resulted from P-incorporation. However, as Baker (2005) notes, there are reasons to keep P-incorporation and applicatives separate. Indeed, one finds a "double dissociation" in this domain. On the one hand, as Marantz (1984) originally noted, there are many instances in which there is no PP source for applicatives. For example, there is no benefactive preposition comparable to *for* in Chichewa or Mohawk, but these languages have benefactive applicatives. On the other hand, there are languages in which applied arguments are still obliques/PPs (Baker 2005 cites the case of locative applicatives in Chichewa).

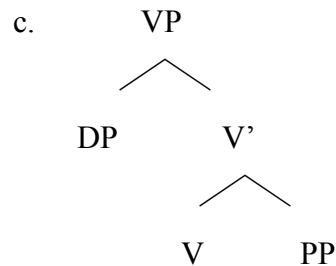
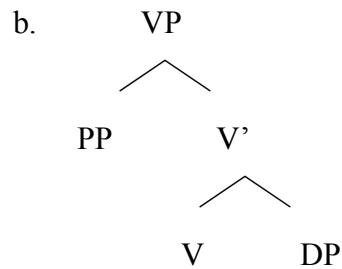
³³ Low applicative PPs can also be found DP-internally, as in cases of DP-internal possessors like *the gift to Mary*. Many possessors in the world's languages are expressed as goal PPs. For example French allows *livre de Jean* and *le livre a Jean*, where the latter preposition *a* is used typically for goals.

³⁴ This syntax/semantics dissociation appears to be problematic for any version of UTAH. I will leave this as an unresolved issue in the present thesis.

head. (In other words, the PP-structure is not an entirely different structure; I am merely exploiting the logic of Pykkänen’s analysis.) With an applicative head, the applied argument must always be outside VP, outside the projection in which DO is introduced – this may be attributed to the fact that there cannot be two heads per projection (see Kayne 1994). But it is not so for high applicative PPs, since these can be inserted VP internally. One might wonder, at this point, why *se* is there in the first place. It is likely that *to* in English is a true preposition while *se* acts more like a case marker comparable to accusative or dative, at least when it occurs in the double object construction.

In a nutshell, high applicatives can be realized as the following three structures.





Like Anagnostopoulou, I'll remain neutral, based on its unclear binding facts, as to whether PP is merged as a specifier of VP (and DO as complement) or the other way around. If merged as Spec of VP, in many languages, DO will have to shift obligatorily (an operation that I will not examine more closely here); if it is merged as a complement, we can say that the PP combines with an unsaturated event head (V°), which is saturated by its specifier, DO/theme.³⁵ Yet another option is to treat PP as an adjunct, following an old intuition that applied arguments are like extra, adjunct-like arguments, and allow DO to bind it under m-command, for example.

³⁵ The [DO [V° PP]] option may be the one selected by English in *to*-dative structures. This would allow us to explain why **Mary was given a book to* is bad, if, as is often claimed, pseudo-passive depends on P-reanalysis (see Hornstein and Weinberg 1981). If P° reanalyzes with V° , the complement of P° becomes the complement of V° (see Chomsky 1993 for the same spirit in that P° incorporated to V° , whereby the relevant domain of movement is expanded). By Anti-locality, this newly-formed complement of V° won't be able to leapfrog DO on its way to SpecTP. I thank Tomohiro Fujii (p.c.) for bringing the issue of pseudo-passives to my attention in the present context and for much discussion of various possibilities toward the solution.

Going back to McGinnis' problem, the analysis proposed here readily reconciles the thematic properties of instrumentals (high applicatives) with the pronominal binding facts discussed above in (26), which suggest that DO c-commands the instrumental. Unlike McGinnis's proposal, it does not involve any acyclic operation. And, I assume that the case of the instrumental is assigned by the preposition itself just like an applicative head does in structures with ApplP.

To conclude this section, I want to stress that by claiming that high applicatives come in two flavors (DPs or PPs), I am not introducing a new configuration to capture 'high applicative semantics,' all I am doing is exploiting Pylkkänen's (2002) insight that high applicative semantics results from configurations where AO/IO receives a theta-role from a head distinct from the head that also theta-marks DO. Pylkkänen only investigates structures where the relevant head (Appl^o) is introduced above VP. I am claiming that other structures, involving P^o, have the relevant properties too.

3.4.1 Japanese ditransitives

In the previous section I showed that the standard view that indirect objects are DPs in double object constructions and PPs in prepositional ditransitives doesn't provide a complete coverage, though it has some truth to it. In this section, an extension and further application of the current proposal that applied arguments come not only as

DPs but also as PPs, I'll discuss Japanese *ni*-goals, in which the PP-DP distinction has been argued to play a role.

In Japanese, indirect object goals are marked by the dative *ni* and direct objects surface with the accusative marker *o*. The relative order of goals and themes is as flexible as in Greek, as illustrated in (44).

- (44) a. Taroo-ga **Hanako-ni** **nimotu-o** okutta
 Taro-NOM Hanako-DAT package-ACC sent
 ‘Taro sent Hanako a package.’
- b. Taroo-ga **nimotu-o** **Hanako-ni** okutta
 Taro-NOM package-ACC Hanako-DAT sent

The two surface orders in (44) are bi-uniquely mapped onto two different hierarchical structures in terms of the distribution of anaphoric dependencies, the situation same as *jia*-PP in Greek, illustrated in (42): in the dative-accusative order, the dative binds into the accusative, whereas the accusative cannot; in the accusative-dative order, binding relations are reversed (for extensive discussion, see Lee 2004).

According to the standard analysis (Hoji 1985, Fukui 1993, Saito 1992, Tada 1993, Takano 1998, Yatsushiro 1999, 2003, among others), Japanese lacks the ditransitive alternation. The goal>theme order in (44a) is considered to be basic, while the theme>goal order (44b) is argued to be derived from (44a) by optional

scrambling of the theme across the goal. Evidence is provided by quantifier scope, as shown in (45).

- (45) a. Taroo-ga dareka-ni dono-nimotu-mo okutta
 Taro-NOM someone-DAT every-package sent
 ‘Taro sent someone every package’
 [some > every, *every > some]
- b. Taroo-ga nanika-o_i dono-gakusei-ni-mo t_i okutta ³⁶
 Taro-NOM something-ACC every-student-DAT sent
 [some > every, every > some]

Quantifiers in the order “goal-theme” only have surface scope (45a), in contrast, in the theme-goal order, the scope is ambiguous (45b).

On the other hand, Miyagawa (1997) and Miyagawa and Tsujioka (2004) argue that the scrambling analysis is incorrect and the construction with the goal>theme order is double object constructions, whereas the reversed orders are prepositional ditransitives. Central for their argument is the proposal that the suffix *ni* is a case marker in the goal-theme constructions and a postposition in the theme-goal construction. Evidence for the ambiguity of *ni* comes from numeral quantifier float. As shown in (46), in Japanese Q(uantifier)-float is licit with DPs (46a) but cannot take place from within a PP (46b) (Shibatani 1978, Ura 1996).

³⁶ Thanks to Tomohiro Fujii (p.c.) for helping me construct relevant examples and also for helpful discussion.

- (46) a. Taroo-ga resutoran-o ni-ken oopunnsita
 Taro-NOM restaurant-ACC 2-CL opened
 ‘Taro opened two restaurants’
- b. *Taroo-ga resutoran-kara ni-ken tabemono-o tanonda
 Taro-NOM restaurants-from 2-CL food-ACC ordered
 ‘Taro ordered food from two restaurants’

A similar observation can be made on the basis of animate/inanimate goals. Q-float of numerals construed with datives brings out well-formed results only when the goal is animate (47a) and only when the animate goal precedes the theme, as the contrast in judgment between (47a) and (47c) shows.

- (47) a. Mary-ga tomodati-ni san-nin nimotu-o todoketa
 Mary-NOM friends-DAT 3-CL package-ACC delivered
 ‘Mary delivered three friends a package’
- b. *Mary-ga kokkyoo-ni mit-tu nimotu-o todoketa.
 Mary-NOM border-to 3-CL package-ACC delivered
 ‘Mary delivered to three borders (or her country) some packages.’
- c. ???Mary-ga nimotu-o tomodati-ni san-nin todoketa
 Mary-NOM package-ACC friends-DAT 3-CL delivered
 ‘Mary delivered three friends a package’

Based on these facts, Miyagawa and Tsujioka (2004) claims that dative *ni*-goals are DPs when they are animate and precede the theme, while they are PPs when they are inanimate or when they are animate and follow themes. So, like Greek *se*, *ni* may have a dual status, vacillating between a case marker and a postposition. They claim that this DP vs. PP distinction of *ni*-goals makes Japanese and English look alike when it comes to the dative alternation: (44a), in which they call the dative *ni*-goal DPs “high” dative because they are by all tests (especially Q-float), always higher than themes, corresponds to (27), and (44b) is like *to*-dative structure (28) in English, and since the *ni*-goal PPs are lower than the theme, they are called low datives.³⁷ So their idea is that Japanese and English are quite similar in that there are two dative positions, high and low; the double object construction chooses a high dative while the pre/postpositional ditransitive chooses the low dative.

Miyagawa and Tsujioka (2004) discuss an interesting case in which both high and low goals appear in the same sentence, with ditransitive verbs such as *okuru* ‘send’, *todokeru* ‘deliver’, *kaesu* ‘return’, *kakeru* ‘ring’, *ataeru* ‘give’, *dasu* ‘send’, and *azukeru* ‘entrust’. Consider (48).

³⁷ Note that Miyagawa and Tsujioka’s terminology is misleading because their use of “high” dative goal doesn’t match Pytkänen/McGinnis’s use of ‘high’ in “high applicative”; in fact, their high dative is semantically low applicative, denoting transfer of possession between the goal and the theme. And as for their low datives, they are semantically high applicatives, denoting a relation between a certain event and say, a location in which that event is involved. The only respect in which high datives behave like high applicatives is syntactically in the case of passives, since Miyagawa and Tsujioka’s high datives allow for theme passivization; in fact both IO and DO can passivize. In all other contexts, they behave exactly like in the English counterpart. I will avoid the high/low datives terminology, and refer to just DP vs. PP dichotomy, keeping terms like ‘high’ and ‘low’ for semantic purposes.

- (48) Taroo-ga Hanako-ni Tokyo-ni nimotu-o okutta³⁸
 Taro-NOM Hanako-DAT Tokyo-to package-ACC sent
 ‘Taro sent Hanako a package to Tokyo’

The meaning of (48) is that *Taro* sent a package to Tokyo, which is a location, with the intention that *Hanako* will come to possess it. *Hanako* does not need to be in Tokyo. They claim that in this two-goal construction the word order is quite rigid, as shown in (49a-c), and that based on this, when there are two goals in the same sentence, the order between the two goals and the theme would be like (50).

- (49) a. *Low goal - high goal
 *Taroo-ga Tokyo-ni Hanako-ni nimotu-o okutta.
 Taro-NOM Tokyo-to Hanako-DAT package-ACC sent
 ‘Taro sent Hanako a package to Tokyo’
- b. */?Theme - high goal
 */?Taroo-ga nimotu-o Hanako-ni Tokyo-ni okutta.
 Taro-NOM package-ACC Hanako-DAT Tokyo-to sent
 ‘Taro sent Hanako a package to Tokyo’

³⁸ In the footnote they added a disclaimer that judgment on this sentence is quite controversial. I’ll get back to this issue connecting to the badness of (49b) later. For further discussion of the delicate nature of the judgments Miyagawa and Tsujioka use, see Lee (2004) and Harada and Larson (2006).

c. Theme - low goal

Taroo-ga Hanako-ni nimotu-o Tokyo-ni okutta.

Taro-NOM Hanako-DAT package-ACC Tokyo-to sent

‘Taro sent a package to Hanako to Tokyo’

- (50) a. high goal (possessive)>low goal(locative)>theme
b. high goal(possessive)>theme>low goal(locative)

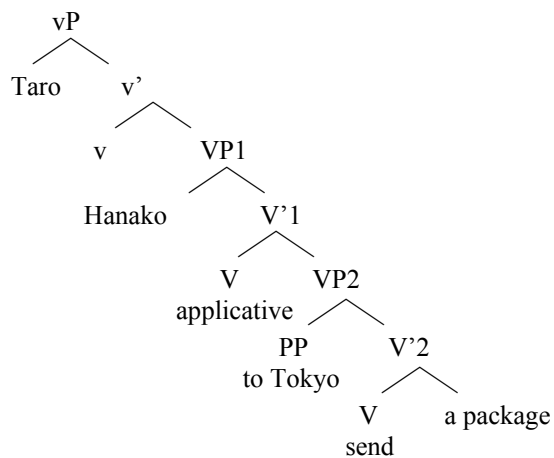
This is a clear case showing that (semantically) both high and low applicatives appear in the same sentence; there is a transfer-of-possession relationship between the dative *ni*-goal and the theme, and a relation between the *sending* event and the location where the event is involved.

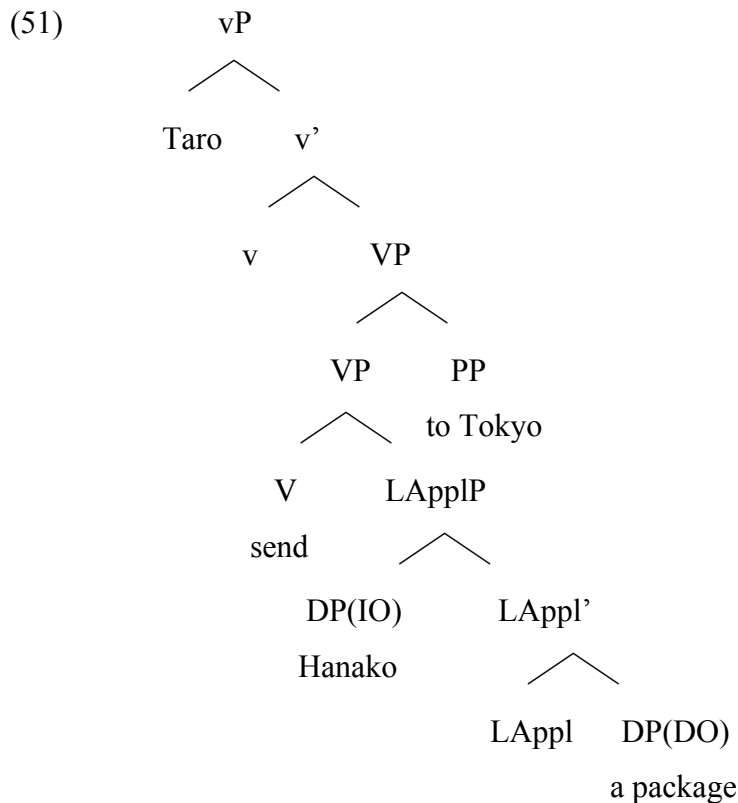
I agree with Miyagawa and Tsujioka (2004) about the claim that *ni* bears a dual status, case marker vs. postposition, whereby the applied argument followed by *ni* is either a DP or PP. The example with two goals of DP and PP, where semantically low and high applicatives combine, is perfectly fine. This is absolutely impossible under McGinnis’s (2004) system, in which she claims that a low applicative head cannot merge with a high applicative head both because the high applicative head does not denote an individual, and because the high applicative would then have no event-denoting argument. The problem for McGinnis’s system is due to the fact that she takes high/low applicative distinction as a syntactic reference,

mapping the semantic difference between high and low applicatives into the syntactic structures in one-to-one fashion, leaving no room for PP applicatives.

The current proposal, however, readily allows the mixed applicatives with low and high, like the one in (48), as illustrated in (51).³⁹

³⁹ Miyagawa and Tsujioka (2004), following Marantz (1997), propose the following structure for (48) (for the purpose of comparison with other structures used in this chapter, I represent Japanese as a head-initial language):





In (51), the semantics of low applicative, i.e., transfer of possession, is achieved within LAppIP, and the semantics of high applicative, the *sending* event and the location where the event is involved, is achieved between PP and VP such that PP has merged with (or adjoined to) VP, which denotes an event.

The structure in (51), however, begs a word order question: How do we get the order in (50a), high goal>low goal>theme? Consider (49a) and (49b) above, in which two goals are adjacent. Though they differ in their categorial status as DP and PP respectively, they share the same surface form *ni*. At this point, it is useful to go back to the controversial judgment on (48). While Miyagawa and Tsujioka claim that they find no problem with two occurrences of *ni* adjacent to each other, all the

(53) Chain Condition (Rizzi 1986)

Chains: $C = (x_i, \dots, x_n)$ is a chain iff, for $1 < i < n$, x_i locally binds x_{i+1}

(x locally binds x' iff it binds x' and there is no closer potential binder y for x')

But if the reciprocal anaphor is embedded in a larger phrase, the Chain Condition problem disappears, as in (54).

(54) [John-to Bob]_{*t*}-o [otagai_{*t*}-no hahaoya]-ga *t*_{*i*} nagutta
[John-and Bob]-ACC [each other-GEN mother]-NOM hit
'John and Bob, each other's mother hit'

Based on this, Miyagawa (1997) claims that two orders in the ditransitive construction, goal-theme/theme-goal, must be viewed as base generated. Neither order shows evidence a Chain Condition violation.

(55) a. goal>theme
John-ga [Hanako-to Mary]-ni_{*t*} otagai_{*t*}-o syookaisita
John-NOM [Hanako-and Mary]-DAT each other-ACC introduced
'John introduced Hanako and Mary to each other'

b. theme>goal

?John-ga [Hanako-to Mary]-o_i (paatii-de) otagai_i-ni syookaisita

John-NOM [Hanako-and Mary]-ACC (party-at) each other-DAT

introduced

‘John introduced Hanako and Mary to each other (at the party)’

The fact suggests that no movement, scrambling of the theme across the goal, has occurred; instead each of them is base-generated.

But Miyagawa’s conclusion is problematic, as it relies on *otagai*. It is widely assumed that *otagai* in Japanese corresponds to English *each other* (Ishii 1989, Nishigauchi 1992, Saito 1992 among others). And based on the "binding" of *otagai*, it has been claimed that in Japanese the “scrambled site” in the case of clause-internal “scrambling” exhibits properties of a so-called A-position (as well as those of a so-called A’-position), That is, the "scrambled" phrase, as the result of "scrambling," can be an antecedent of *otagai*. Hoji (1997), however, shows, contrary to this widely-held view, that *otagai* should not be treated as a reciprocal anaphor on a par with *each other*, and argues that the internal structure of *otagai* is [_{NP} *pro* [_N *otagai*]] and that the anaphoric relation between *otagai* and its antecedent must be understood as that between the *pro* in [_{NP} *pro* *otagai*] and its antecedent. Examples (56) indicate that the semantics of *otagai* is not exactly like that of *each other*.

(56) Otagai need not have a reciprocal interpretation

- a. [John-to Bill]_i-ga hissi ni natte [*pro*_i otagai]-o urikonde ita
‘[each of John and Bill]_i was promoting himself_i with utmost
enthusiasm (as in a competition)’

Otagai need not have its antecedent in its local domain

- b. [John-to Bill]_i-wa [_{IP} Mary-ga [*pro*_i otagai]ni horeteitu to] omoikonde
ita
[each of John and Bill] believed that Mary was in love with the other;
or [each of John and Bill]_i believed that Mary was in love with him_i
- c. [John-to Bill]_i-wa [_{CP} Chomsky-ga naze [*pro*_i otagai]-o suisensita no
ka] wakaranakatta
[each of John and Bill] did not understand why Chomsky had
recommended the other; or [each of John and Bill]_i had no idea why
Chomsky had recommended him_i

Otagai allows split antecedent

- d. Ieyasu_i-wa Nobunaga_j-ni [Shingen-ga sineba [*pro*_{i+j} otagai]-no ryoodo-
ga sibiraku-wa antai-da to] tugeta
‘Ieyasu told Nobunaga that, if Shingen dies, their territories will be
safe for a while’

Yatsushiro (1999, 2003) also criticizes Miyagawa's position on base-generation of two goal-theme/theme-goal orders based on the use of the reciprocal anaphor *otagai* for the Chain Condition. She claims that *otagai* does not always display a Chain Condition violation where one expects it. Whichever of Hoji's or Yatsushiro's approach is taken, what is crucial is that the binding test with *otagai* is not sufficient to cast doubt on the standard view that IO is always generated higher than DO. Thus I take the theme>goal order to be derived from the goal>theme order by scrambling of the theme across the goal.

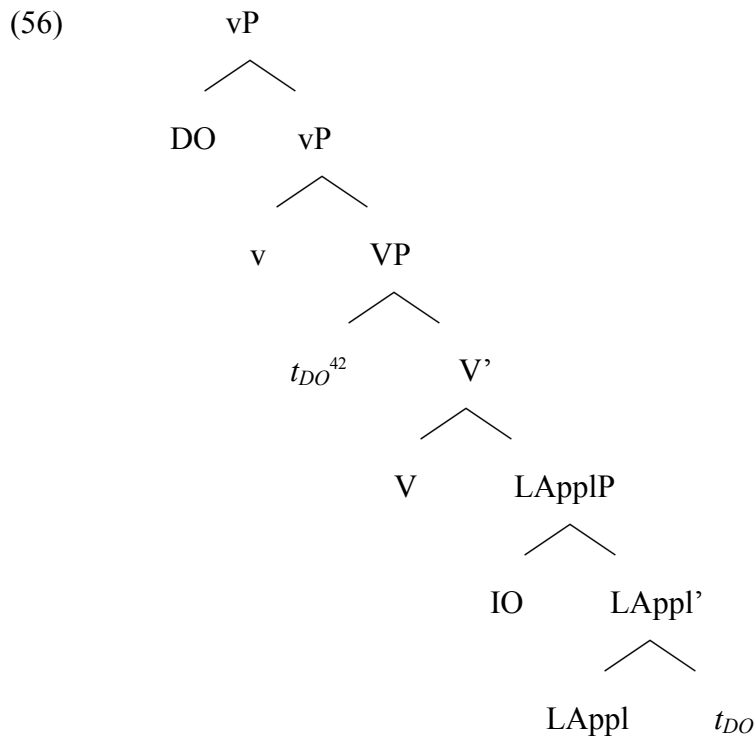
This scrambling option⁴⁰ of the theme across the goal in double object constructions will give us the solution to the problem of passivization in Japanese. Japanese double object constructions allows for either applied/indirect object or direct object as a subject in passives. Notice that passives in this context are the direct passive, not the indirect/adversity passive. And its semantics is like that of the ditransitive examples given so far: low applicative, i.e. transfer of possession, or a relationship between two individuals (IO and DO). This passivization of low applied DP is completely unexpected under McGinnis (2001, 2004). For her, low applicatives are not phases, so she predicts no extra specifier position linked to a phase head, and as a result no leapfrogging is possible. By the time the derivation reaches the vP

⁴⁰ Specifically, A-scrambling. Jeff Lidz (p.c.) points out that Tamil appears to be a counter-example to my claim, as it has the option of A-scrambling, but appears to lack DO passivization in the context of low applicatives. However, Samar (2003) claims that both local scrambling and long-distance scrambling in Tamil involve only A-bar scrambling, showing either topic or focus effects. So I take it that if a language has uniform A-bar scrambling, that option won't help in the context of passivization, as movement to SpecTP is of the A-type. Movement from a theta-position to an A-bar position cannot then target an A-position, as it would result in an Improper Movement.

phase, IO moves to the edge because it's closer, and DO is trapped inside the phase for PIC reasons.

The current proposal can avoid this problem since I do not rely on phases, so there is no categorical trapping effect for me. I agree with McGinnis that DO cannot jump over IO directly, but not for the same reason as her. My analysis claims that this is due to anti-locality. But I would like to claim that DO can jump over IO via scrambling, targeting ν P – since scrambling is known to obviate the minimality effect (for reasons that are unclear, but are independent from my investigation), DO can scramble across IO.⁴¹ Assuming that scrambling obeys cyclicity in Bošković's sense, DO first stops by Spec of VP and moves further to a position adjoined to ν P, leaving its trace/copy behind in Spec VP. At this point of derivation, DO is higher than IO, whereby it is closer to T in passivization. Since scrambling is optional, if DO doesn't scramble, IO will passivize by virtue of being closer to T.

⁴¹ I remain agnostic as to what drives scrambling.



⁴² Bošković's (2005) cyclicity forces DO to first target Spec VP; Spec of LApplP is not allowed for the scrambling site of DO due to anti-locality. And after *v* is introduced, DO can further target Spec of vP. Here comes a problem: object honorification facts in Japanese (Boeckx and Niinuma 2004) show that there shouldn't be any intervening element between two elements that enter into honorification agreement. They assume that *v* has one set of phi-features, which is checked by the higher object, IO. So even if DO has a relevant honorification feature, it cannot take part in the agreement relation. Thus they argue that IO, being always higher than DO at the point *v* is introduced, triggers honorification agreement with *v*. But if DO first moves to VP as in (56), there is no way to avoid this situation of DO sandwiching between *v* and IO. For the sake of honorification, DO should target a position adjoined to vP after *v* is done with honorification agreement with IO. But then it goes against the spirit of early successive cyclic movement. I have no satisfactory answer to this honorification agreement issue at this point.

3.5 Issues of Case assignment

In section 3.3, I have established Case as an important variable in ditransitives, based on the empirical evidence from Dutch and Georgian. As an extension, this section will address the issue of case assignment within multiple object constructions. Let me point out right away that in terms of case-checking, many scenarios are possible. In PP applicatives, the applied argument gets case assigned from P, and the direct object from v (the unmarked case; in some languages DO may receive inherent case from V°). In high applicatives with an applicative head, two DPs have to be taken into consideration: AO (the applied argument introduced by Appl°), and DO. Both may bear inherent case, from Appl° and V° , for AO and DO, respectively. Another possibility would be for AO to receive structural case from a higher head (say, v). DO could receive inherent case from V° , or structural case from a higher head (Appl° or v). If both AO and DO receive case from v , we are dealing with what Hiraiwa (2005) calls a situation of Multiple Agree.

Similar scenarios are possible in low applicative constructions. Both IO and DO may receive inherent case from Appl° , or only one of them may, in which case, the other DP would receive structural case from a higher head (v). Alternatively, both objects may receive structural case from a higher head (v) via multiple Agree.

In the following pages, I consider two situations of multiple Agree, one involving a high applicative, the other a low applicative. I selected multiple Agree

configurations for illustrations, as the other scenarios are not too different from standard A-movement situations.

3.5.1 Multiple case assignment in Korean

First consider multiple accusative constructions in Korean (Jeong 2004b).

- (57) a. John-i Swuni-lul meri-lul cla-ass-ta
John-NOM Swuni-ACC hair-ACC cut-PST-DECL
'John cut Swuni's hair'
- b. John-i catongcha-lul mun-ul pusu-ess-ta
John-NOM car-ACC door-ACC break-PST-DECL
'John broke the car's door'

Semantically, these are low applicative construction (Pylkkänen 2002 also suggests that 'possessor raising' constructions should be treated as low applicative). They have very clear possession relation; they express a(n inalienable) relation between individuals, one is possessor and the other is possessee, which is clear from the availability of genitive case in addition to accusative case.

- (58) a. John-i Swuni-uy meri-lul cla-ass-ta
 John-NOM Swuni-GEN hair-ACC cut-PST-DECL
 ‘John cut Swuni’s hair’
- b. John-i catongcha-uy mun-ul pusu-ess-ta
 John-NOM car-GEN door-ACC break-PST-DECL
 ‘John broke the car’s door’

I will assume that structurally multiple accusative constructions like (57) project like English-type double object constructions.

Jeong (2004b) claims that in multiple accusative constructions like (57), a single functional head *v* assigns accusative case to both *Swuni* and *meri* (57a) for example, via multiple agree, as a way of symmetric feature checking. Yet, despite this symmetry of feature checking, asymmetry is also found. Consider (59).

- (59) a. *?John-i Swuni-lul yetongsayng-ul ttayly-ess-ta
 John-NOM Swuni-ACC sister-ACC hit-PST-DECL
 ‘John hit Swuni’s sister’
- b. John-i Swuni-uy yetongsayng-ul ttayly-ess-ta
 John-NOM Swuni-GEN sister-ACC hit-PST-DECL
 ‘John hit Swuni’s sister’

The contrast between (57a)/(58a) and (59) leads to the following generalization.⁴³

(60) In case of multiple accusative case checking:

The accusative possessor NP cannot be [+animate] if the accusative possessee object NP is [+animate]

The generalization in (60) is very reminiscent of the cross-linguistically robust generalization known as the Person-Case Constraint (hereafter, PCC) (see Bonet 1994 and references therein). As stated in (61), the PCC prohibits the presence of a [+person], say, 1st and 2nd person, accusative clitic or agreement marker when there is a dative clitic or agreement marker.

(61) Person-Case Constraint (PCC): Original Formulation (Bonet 1994)

If Dative agreement/clitic, then Accusative agreement/clitic = [-person]

[= 3rd person, i.e., absence of person marking]

Recently, Ormazabal and Romero (to appear) formulated an interesting refinement of the PCC that gains relevance in the present context. They noted that several languages like *Leista* Spanish or Mohawk disallow [animacy] feature checking by the accusative object NP as well as [person] feature checking in PCC

⁴³ As discussed in Jeong (2004b), Korean disallows multiple [inanimate] accusative DPs. This constraint, which I argue in Jeong (2004b) follows from theta-theory, will not be discussed here.

Note that the Korean data offer an interesting perspective on the exact nature of the PCC, because it factors out the dative/accusative Case difference that the original PCC encodes. Korean shows PCC-effects even if there is no case difference among the members of the checking relation. In accordance with much recent work on PCC effects, I will assume that the existence of PCC effects in Korean indicates that we are dealing with a multiple agree relation (see below for discussion).

There are many other instances of symmetry/asymmetry feature checking that can be found in different ‘multiplicity’ contexts: for example, in clitic cluster environment (see Perlmutter 1971, Kayne 1975, and many others since).

(65) Clitic cluster (French)

- a. Jean *le lui* presentera
Jean it him will-present
‘Jean will introduce it to him’
- b. *Jean *me lui* presentera
Jean me him will-present
‘Jean will introduce me to him’

As (65) illustrates, both objects can undergo clitic movement to check [+EPP] or [+clitic] of a single functional head T (the symmetric aspect), but a dative clitic can co-occur with a 3rd person accusative clitic (65a); whereas when a dative clitic co-

occurs with a 1st person accusative clitic, as in (65b), the result is deviant (the asymmetric aspect).

A similar case of (a)symmetry in the context of multiplicity is found in multiple wh-fronting constructions.

(66) Multiple wh-fronting [Bulgarian]

- a. *Koj kogo vidjal?*
who whom saw
'Who saw whom?'
- b. **Kogo koj vidjal?*
Whom who saw

In (66), both *wh*-phrases undergo multiple wh-fronting, say, to check the [focus] feature of the functional head C, and the movement proceeds while preserving the underlying order. This means that there is a feature, [wh], on C that singles out the highest wh-phrase, selectively checking the feature with it. So, C has both [wh] and [focus] features; [focus] feature can be checked multiply, showing symmetric behavior between wh-phrases, whereas the [wh] feature can be checked only once, showing asymmetry (see Boeckx 2003, see also Bošković 1999).

Here I follow Boeckx (2003), Anagnostopoulou (2003), and Richards (2005) in claiming that such (a)symmetries in multiplicity contexts (i.e., PCC effects) are the result of feature-checking competition. These authors claim that in situations of

asymmetric checking, the relevant feature can only be checked once. Among competing elements, the closer element is selected for checking. In the case of Korean, multiple agree between the two objects and v . I will not try to derive such (a)symmetries. All that suffices for my purposes is that feature-checking competition in the guise of multiple case checking by v must be involved to account for PCC effects in Korean.

I should point out in closing this section that the asymmetry we find in multiple accusative constructions in Korean (the PCC effect just discussed) is not surprising under an account like the present one, where even in so-called ‘symmetric’ languages, there is an asymmetric phrase-structural difference between any two objects. In the case of Korean, the accusative possessor is always higher than the accusative possessee just like dative/indirect argument is higher than accusative/direct object in double object constructions. Baker (in press) makes a similar point on the basis of different data, and uses this fact as an argument for the superiority of phrase structural representations of argument structure over alternatives like LFG and RG. Since LFG and RG treat both objects in (57) on a par, no asymmetric behavior is expected. But Korean clearly shows that even though both objects are objects, there is still a structural asymmetry between the two as we have evidenced.

3.5.2 Linkers

In a variety of African languages such as Kinande and the two Khoisan languages, Ju|’hoansi and †Hoan, a particle, a so-called “linker,” appears whenever there is more than one argument within VP, i.e., DOC and any other structures with applied arguments, for example, between a theme and a locative phrase, or between a theme and an instrumental phrase. Consider the following examples:

(68) Mo-n-a-h-ere omukali y’-eritunda [Kinande]

AFF-1SUB-T-give-EXT woman.1 LK.1-fruit.5

‘I gave a fruit to a woman’

(69) a. Omukali mo-a-gul-ire amatunda w’ omo-soko [Kinande]

woman AFF-1SUB-buy-EXT fruits LK LOC-market

‘The woman bought fruits in the market’

b. Kambale mo-a-seny-ir’ olukwi lw’-omo-mbasa

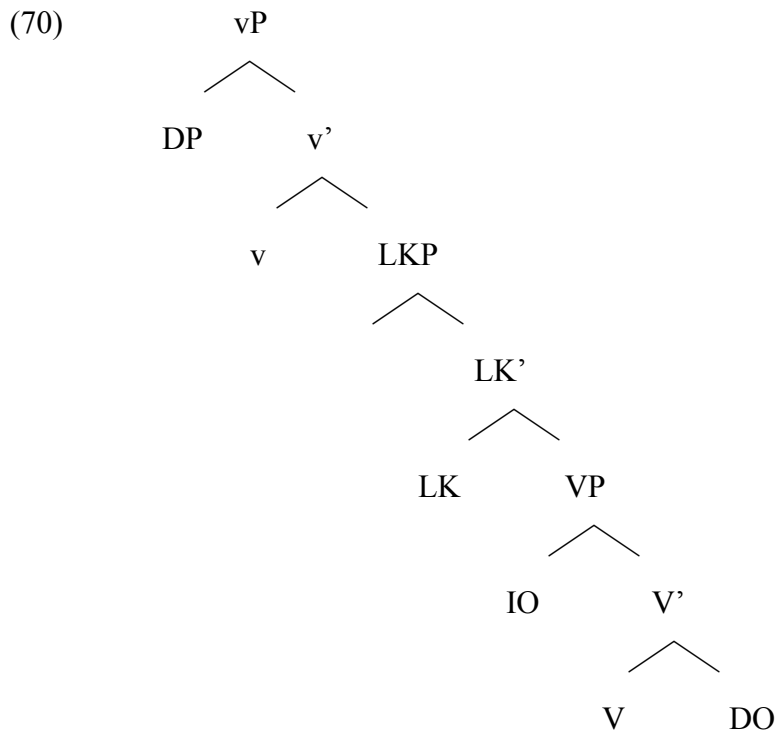
Kambale AFF-1SUB/T-chop-EXT wood.11 LK.11-LOC.18-axe.9

‘Kambale chopped wood with an axe’

In other words, linkers appear in what I’ve referred to in this thesis as applicative constructions.

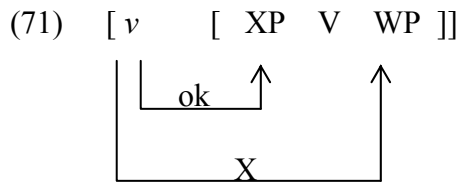
Baker and Collins (2004) argue that Linkers head a *vP* internal functional projection, the specifier of which can be used as the target of movement; that is,

Linker^o is associated with an EPP position. Baker and Collins take LinkerP to be sandwiched between VP and vP (for related positions, see Travis 1991, Koizumi 1995, Lasnik 1999, and Collins and Thráinsson 1996, among others), as shown in (70).

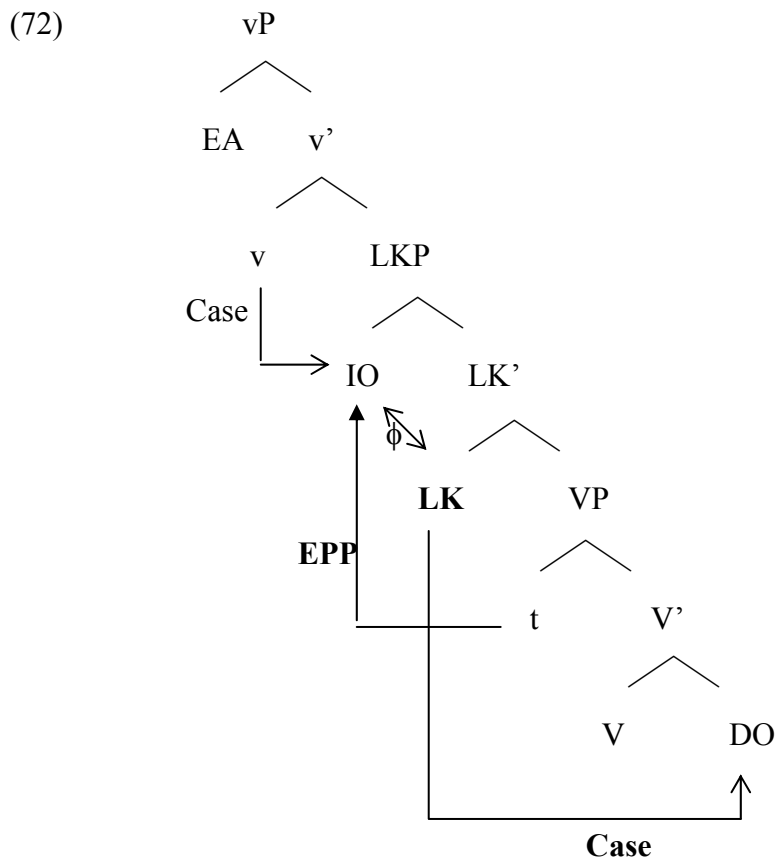


Baker and Collins argue that the central function of LinkerP is to enable Case-licensing of all the nominals inside vP. In particular, they argue that a ‘simple’ vP-VP would not be able to license two DPs vP-internally.⁴⁴

⁴⁴ Baker and Collins observe that the situation is similar to the ban of in situ (vP-internal) subjects in cases where the object DP also remains vP-internal discussed at length by Alexiadou and Anagnostopoulou (2001).



Thus, according to Baker and Collins Linkers perform two functions. First, they case-license the most deeply embedded DP. Second, they provide an EPP (specifier) position for the higher DP, a position from which that DP can be case-licensed by *v* under Agree as in simple transitive constructions. The dual role of Linkers is schematized in (72).



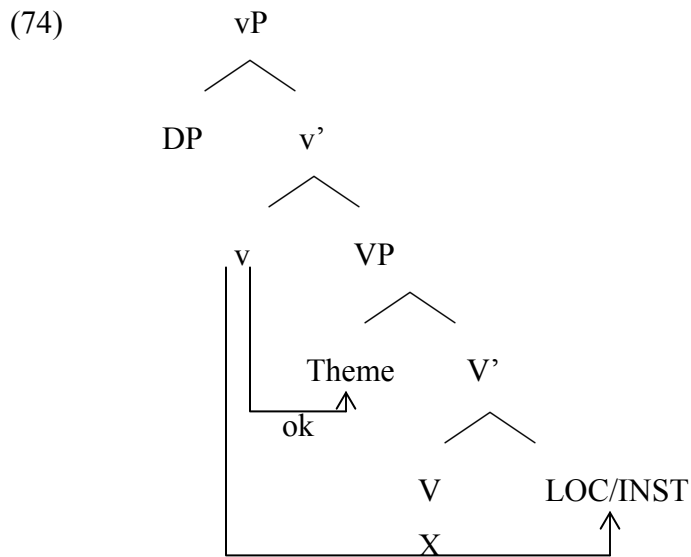
Baker and Collins argue that Linkers are needed not only in ditransitive constructions in which two DP arguments have to be case-licensed, they are also needed in applicative constructions more generally because PPs (locatives, instrumentals, etc.) are nominal-like in the languages they examine. In particular, PPs in such languages trigger agreement and participate in A-syntax the same way regular DPs do. For example, they can raise to subject position, as in locative inversion cases, and unlike in English trigger subject agreement on the finite verb.

- (73) Omo-mulongo mw-a-hik-a omukali
 LOC.18-village.3 18SUB-T-arrive-FV woman.1

‘At the village arrived a woman’

For this reason Baker and Collins assume that PPs are DPs in such languages and have to be case-licensed. Since lack of a Linker head would leave one of the vP-internal DPs case-less, and thereby cause a crash at the interfaces, a LinkerP is necessary.⁴⁵

⁴⁵ The languages under discussion are not the only languages where PPs behave like DPs (cf. Greek and Japanese). This is true of Bantu languages as well. Baker and Collins speculate that Linkers may exist in some of these languages, although they are not pronounced.



Baker and Collins also note that movement into the specifier of a linker phrase is freer in Kinande than it is in †Hoan: whereas only the indirect object (non-theme) can occupy SpecLinkerP in †Hoan (75), either object can occupy that position and trigger agreement with the linker in Kinande (76).

- (75) a. ma 'a cu Jefo ki setinkane [†Hoan]
 1SG PROG give Jeff LK hand-harp
 'I am giving Jeff the hand-harp'
- b. *ma 'a cu setinkane ki Jefo
 1SG PROG give hand-harp LK Jeff

- (76) a. Kambale a-seng-er-a omwami y'-ehilanga [Kinande]
 Kambale 1SUB/T-pack-APPL-FV chief.1 LK.1-peanuts.19
 'Kambale packed peanuts for the chief'
- b. Kambale a-seng-er-a ehilanga hy'-omwami.
 Kambale 1SUB/T-pack-APPL-FV peanuts.19 LK.19-chief.1
 'Kambale packed peanuts for the chief'

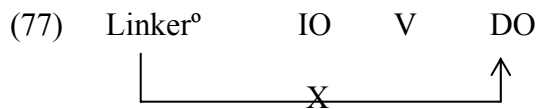
To account for this variation, Baker and Collins postulate that Relativized Minimality is not a principle, but a parameter in Kinande. In languages where Minimality is turned off, arguments will be freely ordered, i.e., they will be allowed to move freely.

Though Baker and Collins propose an interesting analysis on the nature of a linker and its function in these languages, there are several aspects of their analysis that I find undesirable.

First, as noticed, if (71) and (72) combined, the fact that the element in the specifier position of the Linker Phrase triggers agreement on Linker^o, but is case-licensed by ν forces Baker and Collins to divorce case-checking from agreement, contra Chomsky (2000) and much related work. I take this divorce to be one of the undesirable aspects of Baker and Collins's analysis. Given the evidence that has been adduced in support of the connection between case and agreement (see Boeckx 2003), it would be desirable to preserve it in the context of Linkers. Second, it would also be desirable to avoid parametrizing Minimality. Minimality has become a hallmark of economy over the years, and one of the clearest cases of minimalist aspects of

grammar. For this reason Minimality should be taken as a defining, core principle, and not an option that some languages may choose to ignore. Put differently, something else must underlie the freedom of argument ordering in linker constructions in languages like Kinande.

In addition to this undesirable conceptual aspect of Baker and Collins's analysis, there are two technical aspects which I find problematic. First, notice that case assignment by Linker^o to Theme must take place across IO:⁴⁶



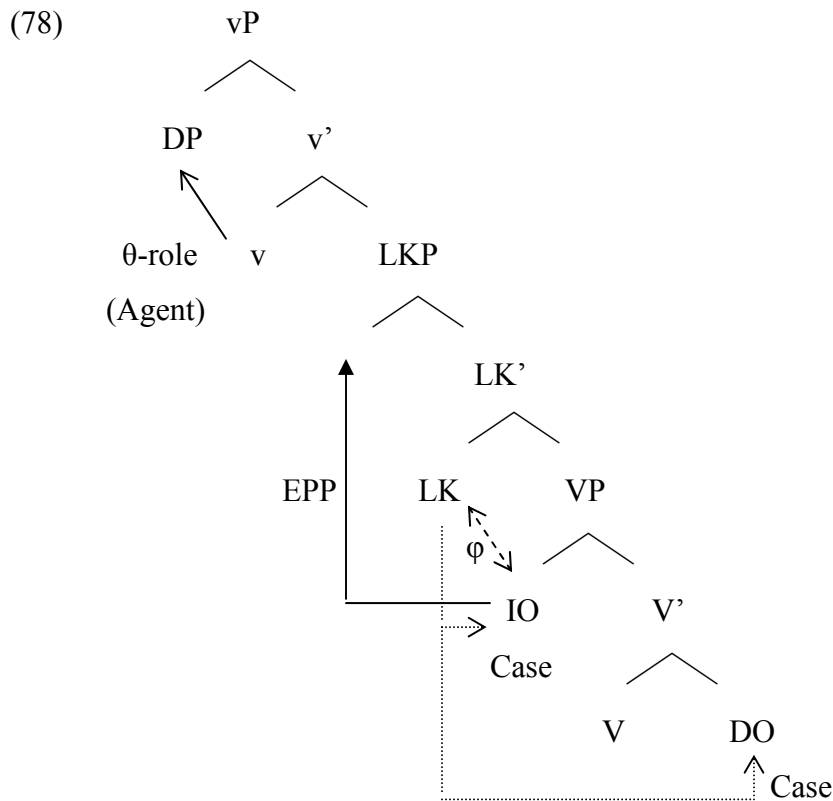
This is clearly a minimality violation.⁴⁷ Second, in situations where the Linker^o agrees with the element in its specifier, i.e., situations where case and agreement are dissociated, agreement appears to take place in a spec-head configuration, not under Agree. I take this to be undesirable in light of Chomsky's (2001) arguments against spec-head relations in general. For all the reasons just discussed I would like to propose an alternative explanation for the linker data Baker and Collins analyze.

⁴⁶ Since acyclic locality evaluation is not an option, I disregard the possibility that case-assignment takes place across the trace of IO (see Hiraiwa 2003).

⁴⁷ Note that Baker and Collin take it that minimality applies to Hoan, since the language doesn't allow the free ordering between the arguments within VP. If so, minimality has to somehow be very selective as to what context it applies to: it has to be operative in blocking the free order, whereas it gets blind in Case-assignment of Linker^o so that it could reach the lower argument DO across the closer one IO.

The central feature of my analysis is that in languages like Kinande, and Ju|'hoansi and †Hoan, v is not an object-case/agreement licenser. v merely assigns an external (agent) theta-role to the DP in its specifier position. Object-case/agreement licensing takes place one notch below v , via LinkerP. In other words, for those languages that make use of Linkers, Burzio's Generalization (captured by Chomsky by assigning a dual (Case/agreement + Theta) function to v) does not hold. (We will see evidence below that this is the desired result, empirically.)

I assume that LinkerP is located in between v P and VP, as Baker and Collins do. Contra Baker and Collins, I assume that Linker^o assigns case to and agrees in ϕ -feature with the higher DP in its complement domain, and attracts it to its specifier, i.e., Spec of LinkerP (EPP-effect). I furthermore assume that Linker^o case-licenses the other, lower DP argument in its complement domain via Multiple Agree, in a manner similar to what I have explored in the context of Korean multiple accusative constructions. And also along the lines suggested in Boeckx (2003), I assume that multiple agree does not render all goals (in the context of Probe-Goal) equidistant. Only the highest goal can trigger agreement and raise to the specifier position of the probe. All the relations I proposed in the context of linkers are schematized in (78).



Although the proposal in (78) eliminates the problems raised above for Baker and Collins's analysis, it begs a question about the validity of LinkerP. The role I have assigned to LinkerP is very much the one Koizumi (1995) and Lasnik (1999) assigned to AGRoP. Chomsky (1995) argued against the existence of AGR phrases in general, and proposed that the role of AGRoP, i.e., object case licensing, be taken over by *v*. As Chomsky correctly notes, the dual nature of *v* immediately captures Burzio's generalization, since *v* becomes the locus of both external theta-role assignment and accusative case checking. I have nothing interesting to offer here as to

Chomsky's objection against AGRoP, or LinkerP in my case.⁴⁸ Perhaps LinkerP also encodes aspectual flavors and thereby becomes semantically more contentful, as several authors have suggested for AGRoP (see Borer 1994, Schmitt 1996 and much related work). But the claim that *v* does not perform a dual role in the languages under discussion is something I want to discuss further.

The crucial evidence for the need of LinkerP as an overall object-case assigner independently of *v*P in these languages comes from intransitive verb contexts. These verbs appear with a locative or instrumental PP. As already noted, in languages like †Hoan and Ju|'hoansi (as well as Kinande), PPs actually behave like DPs, bearing a case feature. But the *v* of the intransitive verb does not have a Case feature that can check it. So a linker is needed in these circumstances.

- (79) Tsi a-kyxai ki !oa na
 3pl PROG-dance Lk house in
 'They are dancing in the house'

More evidence comes from a Ju|'hoansi unaccusative context (80).

⁴⁸ In Chomsky's work on phases, especially Chomsky (2005), T is said to consist of uninterpretable features only, which makes it like AGR. Similarly, Chomsky assumes that *v* is present even in unaccusatives, where it is devoid of any thematic property.

- (80) a. Ha ku u [Ju]’hoansi
 he was going
- b. Ha ku u-a tju m!kui
 he was going-LK house to

Examples (79-80) show that the prepositional object case licensing cannot be done by v , at least not the kind of v that licenses the agent theta-role, since we are dealing with an agent-less, unaccusative construction. So by hypothesis there is no v in such sentences, and yet objective case must be available. I take sentences like (79) and (80) to be the relevant cue to the †Hoan and Ju]’hoansi learners that v is not the objective case licenser in the language. (I assume that this is true even in simple transitives.)

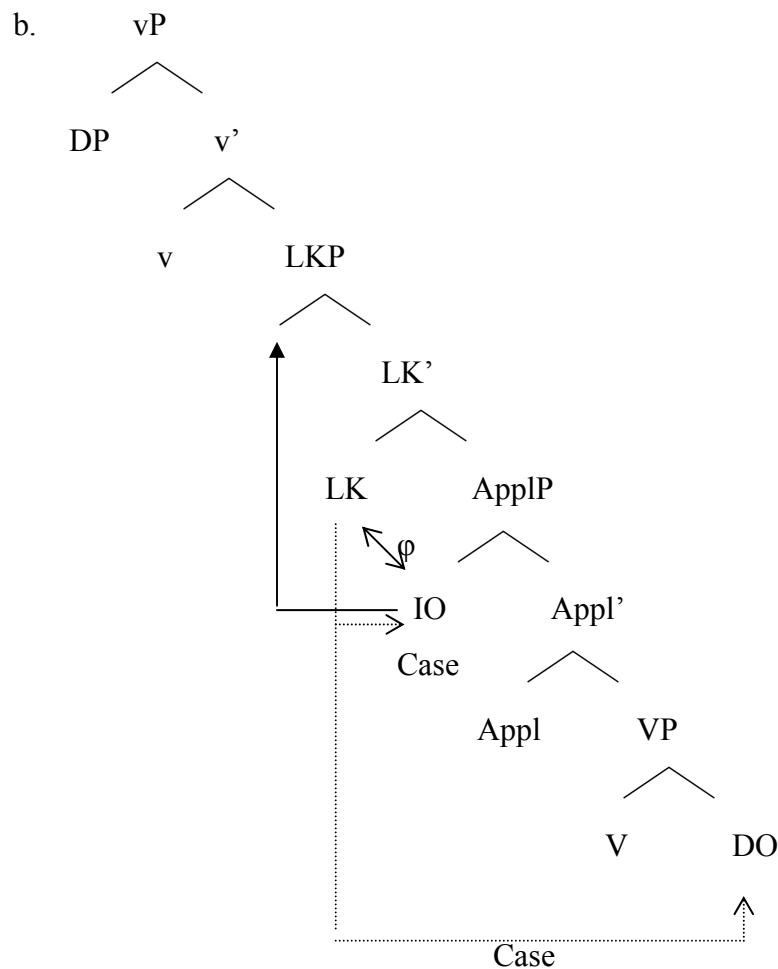
So, even though I differ from Baker and Collins regarding the role of Linkers, I agree with them that the existence of Linkers is related to the fact that locative and instrumental PPs are nominal-like, whereby they need to be case-licensed. And the existence of a linker in the intransitive verb contexts is providing an important cue for children to acquire linker as a case-assigner.

The second issue I would like to address concerns the free ordering of internal arguments that motivated the parametrization of relativized minimality (i.e., MLC) for Baker and Collins. The proposal I would like to make is that free ordering of arguments inside vP is to be captured the same way McGinnis (2001, 2004) captured the symmetric behavior of multiple objects in passives, for example. In other words, I would like to implicate the applicative typology in the context of linkers. Specifically,

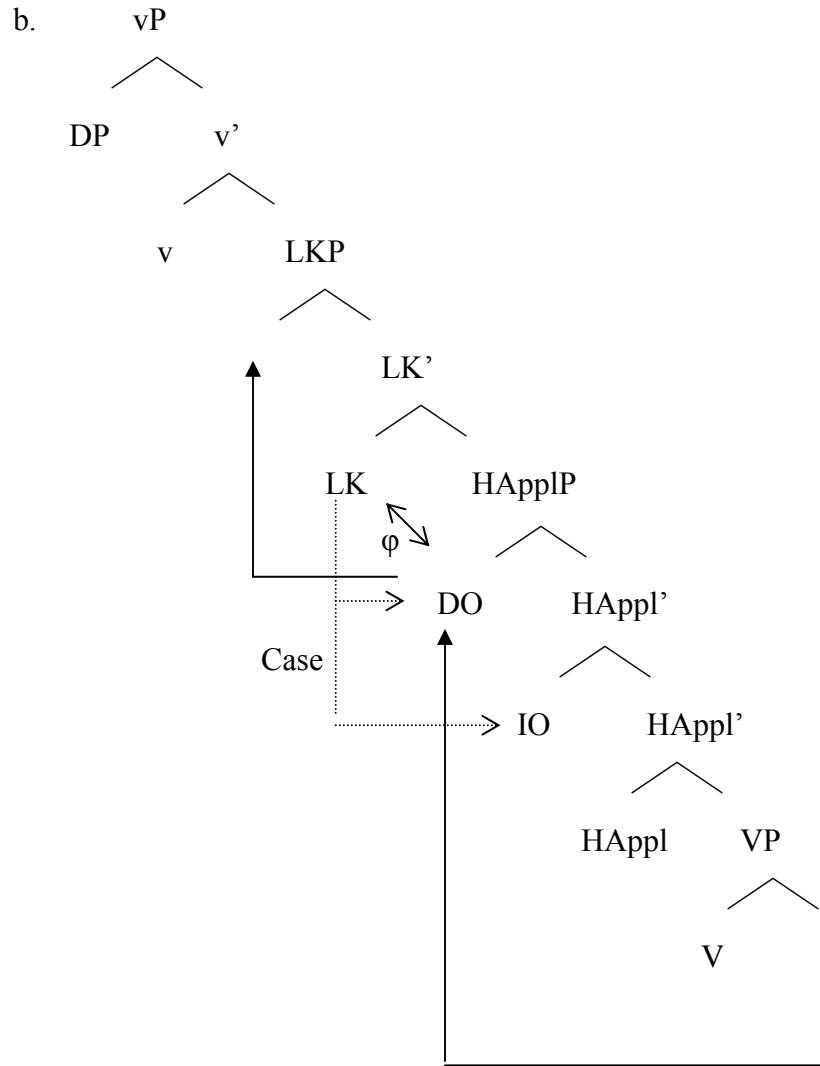
I would like to refine the structure in (72) and claim that what is represented as VP by Baker and Collins can actually be a high ApplP structure or a low ApplP structure.

For now familiar reasons, high applicative structures will provide the source of freer word ordering, accounting for (76) in Kinande. The derivations for (76a) and (76b), repeated here as (81a) and (82a), are schematized in (81b) and (82b), respectively.

- (81) a. Kambale a-seng-er-a omwami y'-ehilanga.
 Kambale 1SUB/T-pack-APPL-FV chief.1 LK.1-peanuts.19

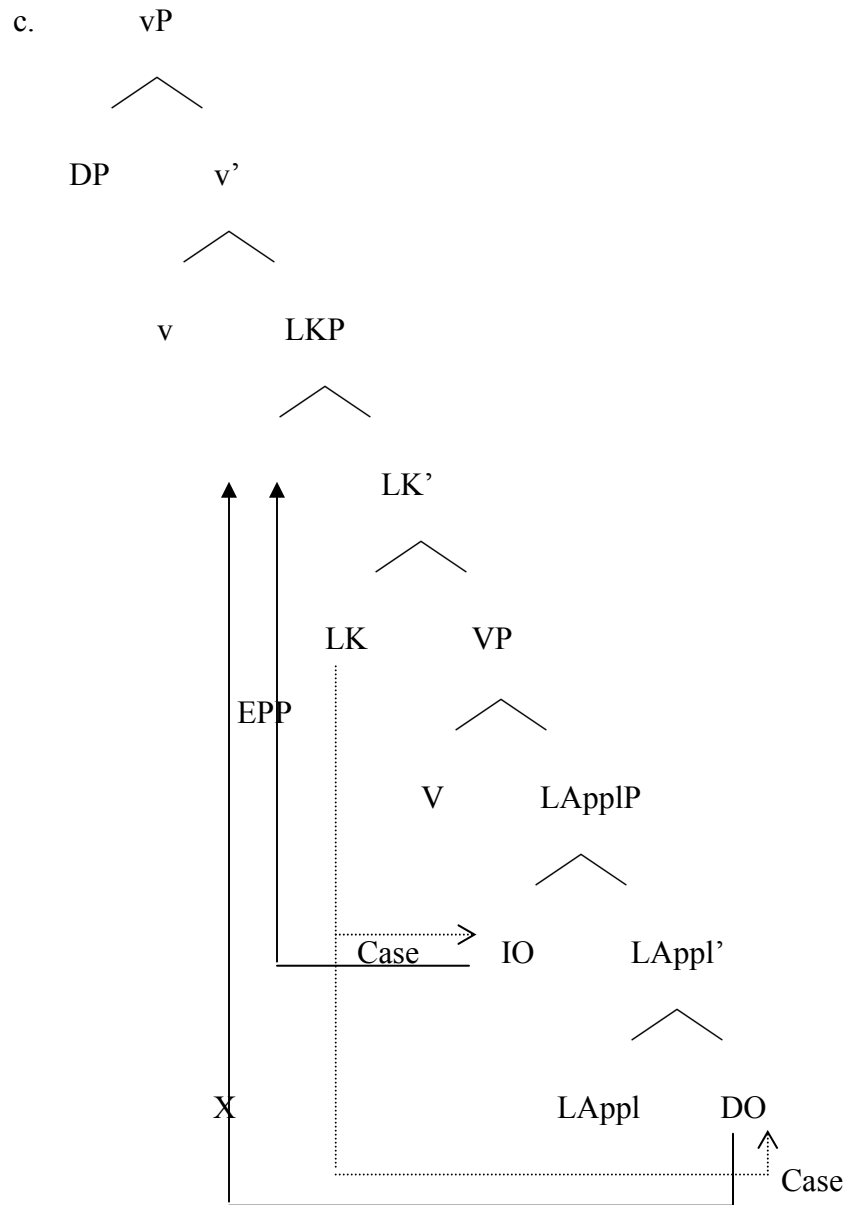


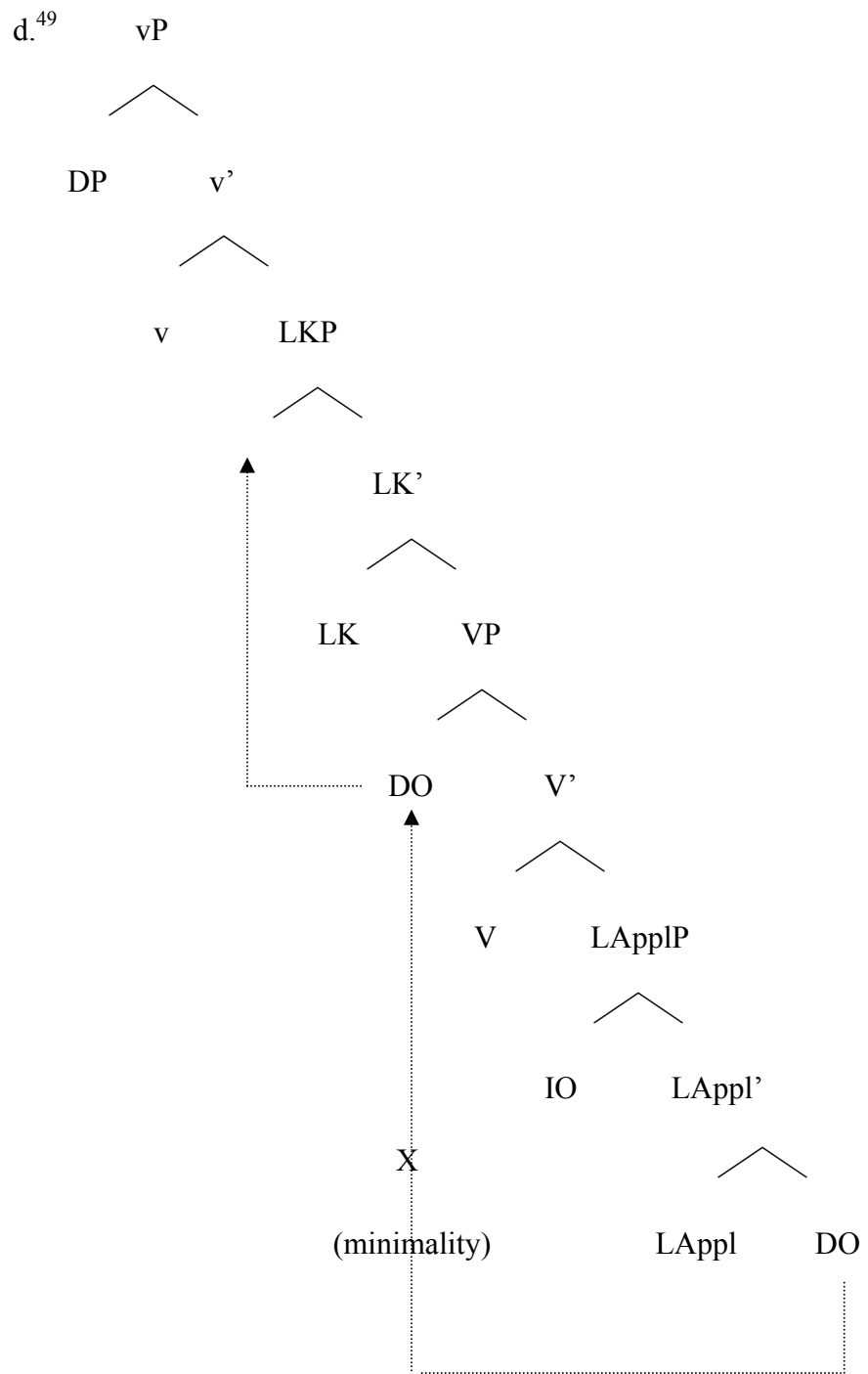
- (82) a. Kambale a-seng-er-a ehilanga hy'-omwami.
 Kambale 1SUB/T-pack-APPL-FV peanuts.19 LK.19-chief.1



By contrast low applicative structures will impose a strict ordering. As noted above, Baker and Collins observe that in double object constructions in \neq Hoan, only the goal can precede the Linker. This mirrors asymmetric passives in languages like English (83).

- (82) a. ma 'a cu Jefo ki setinkane
 1sg prog give Jeff Lk hand-harp
- b. *ma 'a cu setinkane ki Jefo
 1sg prog give hand-harp Lk Jeff





⁴⁹ Thanks to Heidi Harley for bringing this derivation to my attention.

- (83) a. John was given *t* a book
 b. *A book was given John *t*

As in (82d), DO cannot move to Spec of VP across IO on the way to Spec of LinkP; though it doesn't violate the anti-locality condition, it does violate minimality.

Baker and Collins also note that with locative and instrumental applicatives, only the theme can precede the Linker.

- (84) a. koloi g|lon-a 'amkoe ki gyeo na [≠Hoan]

car hit-PERF person LK road in

'A car hit a person in the road'

- b. *koloi g|lon-a gyeo na ki 'amkoe.

car hit-PERF road in LK person

'The car hit the person in the road'

- (85) a. Gya"msi a-'n a"m Jefe ki setinkane [≠Hoan]

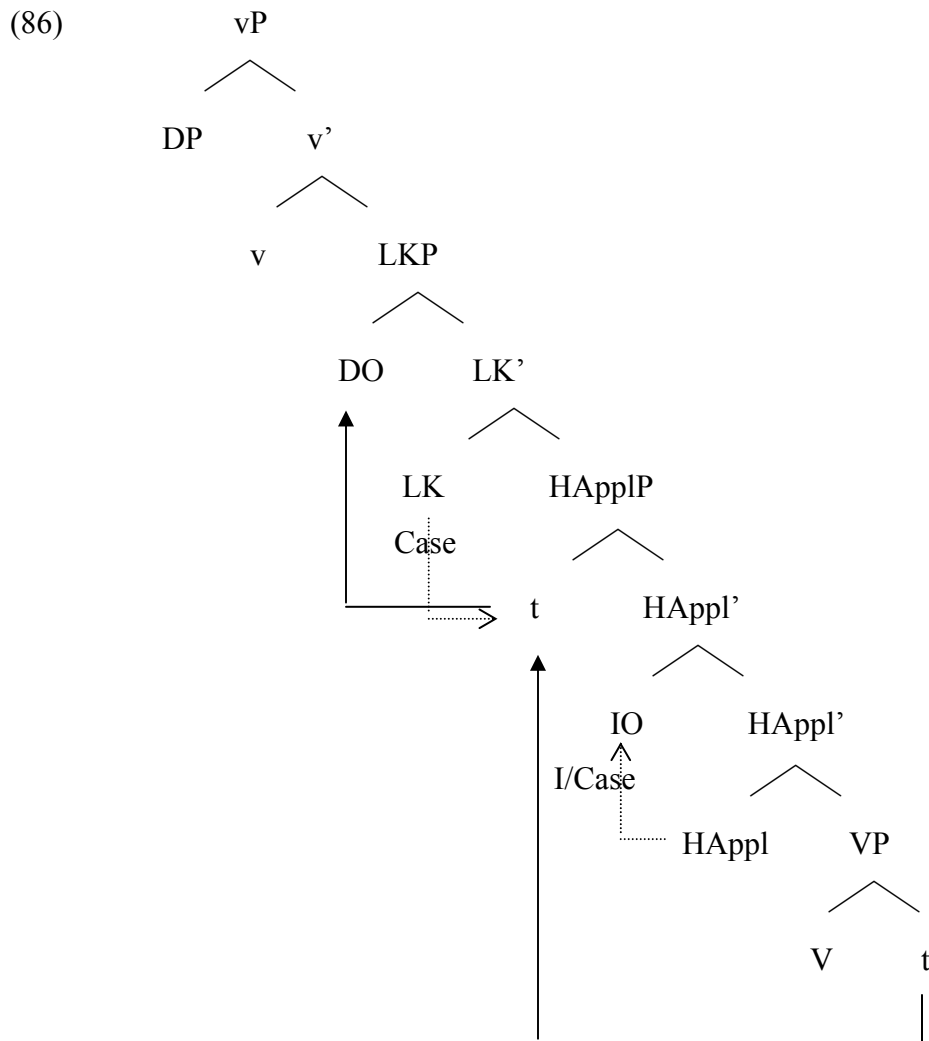
child PROG-hit Jeff LK hand harp

'The child is hitting Jeff with a hand harp'

- b. *Gya"msi a-'n a"m setinkane ki Jefe

child PROG-hit hand harp LK Jeff

This may come as a surprise, since semantically we are dealing with high applicative constructions, which should give us multiple word order possibilities. To account for the strict ordering in (84-85), I would like to argue that applied arguments in high applicatives in Hoan bear inherent case. Since they bear inherent case, they do not (in fact, cannot) move to Spec of LinkerP. They also do not block movement of the Theme, since they do not have a structural case feature matching with that of the probe. The derivation of (84a) is shown in (86).



To sum up, both Linker-languages and Korean provide evidence for situations of Multiple Agree in the domain of multiple object constructions. I have shown how such situations can be described once embedded within the typology of applicative constructions defended in this thesis.

3.6 Conclusion

In this chapter, I have examined problems for McGinnis (2004) and argued that the solutions she provides are not completely satisfactory, due largely to the notion of phase superimposed onto the high vs. low applicative distinction. As an alternative, I propose that the notion of phase should be dispensed with, and that instead we should resort to anti-locality constraint and early-successive cyclic movement advocated by Bošković (2005) to unravel the puzzle behind the structural differences between high and low applicative structures. In addition, I have also argued that other factors, such as category, case, and scrambling, conspire to yield the cross-linguistically varied patterns of applicative constructions.

The system I end up with is less rigid than McGinnis'. It is more relativized, featurally speaking, as it makes use of more factors to capture the syntax of applicatives, going beyond pure notions of Phrase Structure. In addition to configuration, I also use case, category, and scrambling to distinguish the behaviors of AOs/IOs and DOs.

With such flexibility, I predict many more language types than just two, and I have shown that all the types predicted are attested. For McGinnis, if a language employs a high applicative, then it is a symmetric language; if a language employs a low applicative, then asymmetric. For me, symmetric/asymmetric behavior is a function of various possibilities:

- a. Configuration: high/ low (Pylkkänen 2002; McGinnis 2001, 2004)
- b. Category: DP/ PP
- c. Case: Structural/ Inherent
- d. Scrambling/ non-scrambling

Like McGinnis, I have advocated a mapping between syntax and semantics in terms of high and low applicatives. But McGinnis's strict two-way structural distinction does not provide enough room to cover all the varieties. Instead, the current analysis embraces various structural realizations between high and low applicatives, while maintaining the basic semantic distinction introduced by Pylkkänen. Such flexibility appears to make better empirical predictions, and possibly provides an argument for alternative conceptions of locality that do not make use of phases.

In closing, I note that, unlike McGinnis' solution, which assumed a very rigid syntax-semantics mapping, which would be very useful in the context of language acquisition, my analysis requires the child to pay attention to many more options before he/she can acquire the syntax of applicatives in his/her target language. In

some cases (in the case of inherently case marked DPs in languages with poor case morphology like English and Dutch), the child may have to rely on complex cues such as passivization possibilities.⁵⁰ It should come as no surprise under my analysis that passivization possibilities are subject to dialectal/idiolectal variation. This fact is totally unexpected under McGinnis' approach, and may therefore be used as another piece of evidence in favor of a more flexible account like mine.

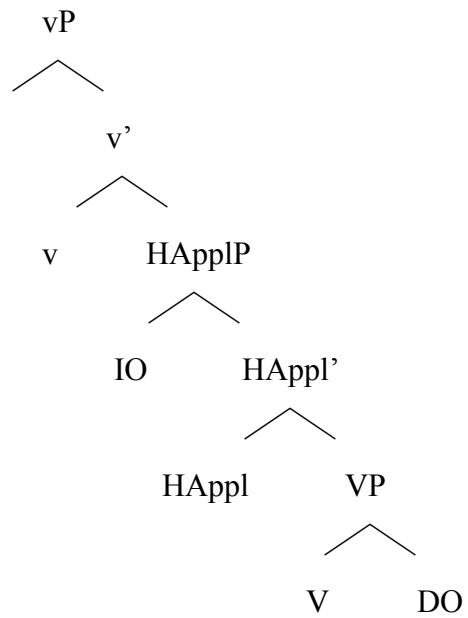
⁵⁰ Thanks to Amy Weinberg (p.c.) for urging me to address this issue.

CHAPTER FOUR

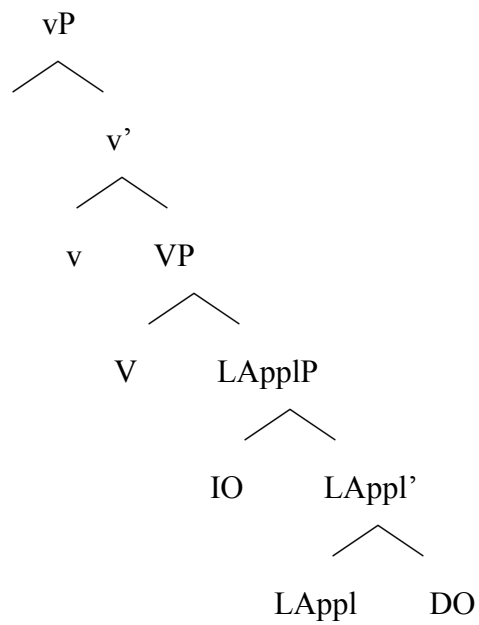
The thematic properties of Low Applicatives and related constructions

As we have seen in this thesis, recent work at the syntax-semantic interface (Pylkkänen 2002, and works influenced by her) has, by combining insights from previous analyses (see especially Marantz 1993, Pesetsky 1995), reached the conclusion that multiple object constructions (applicatives, ditransitives) split into ‘high’ and ‘low’ constructions. High Applicatives (HA) express relations between an individual (AO; applied object) and an event (1), and Low Applicatives (LA), relations between two individuals, IO and DO, indirect and direct object, respectively, (2).

(1) High Applicatives



(2) Low Applicatives



Up to now in this thesis I have kept the semantics of applicative constructions constant, that is, I have assumed that Pylkkänen's dichotomous characterization in terms of high and low applicatives is correct, and I went on to identify all the syntactic variables that are needed to characterize the syntactic behavior of objects in applicative structures across languages if something like the high/low applicative distinction is correct.

In this chapter I will not cast doubt on the high/low distinction, but instead show that it is incomplete. In particular, I will argue that it fails to capture a key aspect of the semantics of low applicatives. (High applicatives will remain untouched.) After characterizing this key aspect, I will propose a way to capture it that leaves everything else about applicatives I have said in this thesis unchanged. My proposal will relate low applicatives to serial verb and resultative constructions in terms of object sharing. If correct, it will provide an additional argument for the claim that movement into theta-position is licit.

4.1 Introducing Object-sharing: intimacy between serial verb constructions and ditransitives

The most elementary transaction and communication events to be expressed by a single verb involve three participants: the giver, the recipient, and the given object, or the speaker, the addressee, and the uttered message. If such a device exists, it can be

generalized to cover the expression of more complex or derived three-participant events. As we have seen throughout, applicative phrases extend the grammatical potential of transitive verbs. The task of this chapter is to show how this extension takes place semantically.

4.1.1 The semantic complexity of the three-participant event

Many ditransitive events include a transitive action with an intended result, which itself is stative: something is located at some place or object, or something is in possession of some person, such as ‘LOC (z, AT(y))’ and ‘POSS (y, z)’ (for related argument, see Harley 2002). These two predicates can characterize the result of an action performed on z. The combination of a transitive action with a two-place stative result is usually linked by means of a shared argument. For example, *if I sent a letter*, and *you received the letter*, ‘the letter’ is the shared argument.

Put differently, many ditransitives can be decomposed into two predicates: one describing a certain activity and the other describing a certain result. It seems that every language exhibits at least some of these verbs in its primitive lexical repertoire, either morphologically underived ditransitive verbs like in English, belonging to two well-defined semantic classes: change of possession and change of location (see Pesetsky 1995, Harley 2002 for detail), or morphologically enriched transitive verb

forms, via the use of applicative morphemes expressing a beneficiary, a location, or an instrument.

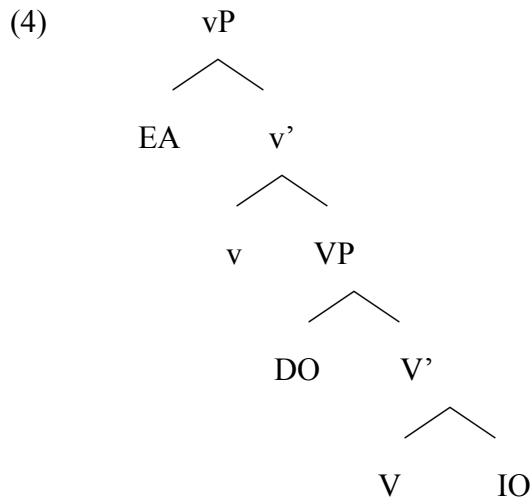
My main concern in this chapter will be change-of-possession verbs like *give*, *send*, *buy*, etc. (I focus on these low applicative-enriched verbs, as I have nothing to add to Pylkkänen's discussion of high applicatives.) The third argument of these verbs is typically a recipient, a human or animate being who comes into possession of an object. (3), for example, shows a standard semantic representation for these verbs.

- (3) a. John bought Mary a book
b. buy: $\lambda z \lambda y \lambda x \lambda e \{ \text{BUY}(x,z) \ \& \ \text{BEC POSS}(y,z) \} (e)$

If we now turn back to representations like (2), it is obvious that such a structure is incomplete. In Pylkkänen's representation, a key factor of the meaning of low applicatives is missing. The structure in (2) correctly captures the resultative part of the meaning of LA: the fact that if 'John sent Mary a book', *Mary got the book*. Note that (2) is very close to a small clause/possessive DP structure (cf. Harley 1995; 2002). But (2) fails to express what Pietroski (2003) calls the 'transfer' part of the meaning of LA, that is, the fact that if 'John sent Mary a book', *John sent the book* (with the intention of getting the book to Mary). Since the intended meaning is 'Mary got a book as a result of John's having sent it', the fact that 'John sent a book' needs to be represented; otherwise, one can never be sure about the source of 'the book', that is, one could imagine a scenario such that John sent a gift card from Barnes and

Noble's to Mary and she bought a book with the gift card that she had been received from John.⁵¹ This situation cannot be described as '*John sent Mary a book.*' This is not what the low applicatives mean.

In light of this fact, Pietroski makes a good case that for the transfer aspect of meaning of low applicatives, DO is clearly an argument of the verb. This is readily captured by means of a standard representation for ditransitives like (4).



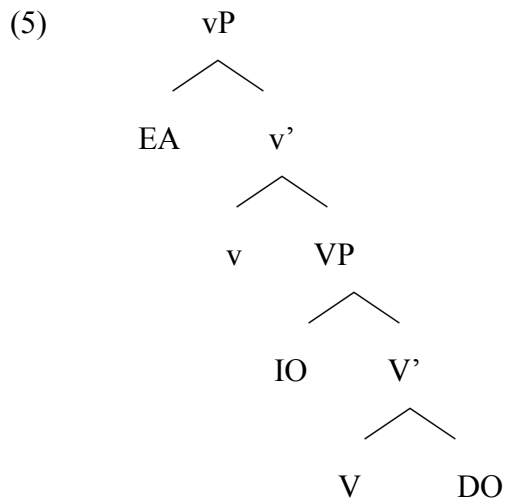
But although (4) is adequate at some semantic level, it is quite clear that it is inadequate syntactically, based on various asymmetries between IO and DO, where IO is superior to DO.

Both Baker (1997) and Pietroski (2003) propose that DO is actually higher than IO like in (4), and that the surface order <IO, DO> results from what Larson

⁵¹ The logical form for this would be something like: $\exists(e)$ [Agent (John, e) & Send (e) & Theme (*pro*, e)] $\rightarrow \exists(e')$ [Possessor (Mary, e') & HAVE (e') & Theme (Book, e')]

dubbed “object promotion/demotion”. This seems reasonable, at least for the semantics: it can capture the ‘verbal’ role in relation to DO, the first conjunct of the dual event paraphrase above. However, syntactically we have pretty good evidence that the base order is <IO, DO> as we saw in the previous chapter. In most languages showing asymmetric object behavior in double object constructions, IO is singled out. For instance, only IO can be passivized, since IO would be closer to the target in the <IO, DO> order. Furthermore, irrespective of movement, the IO seems to act as an intervener in many cases such as: (i) in Japanese, only IO can enter into Honorification agreement with *v*, and that (ii) in most African languages, only IO can trigger object agreement on the verb; (iii) Barss and Lasnik’s (1986) scope and binding asymmetries, which clearly indicate that IO c-commands DO inside the VP-domain.⁵² Thus, all in all, we are led to conclude that IO is higher than DO underlyingly, as in (5).

⁵² The latter facts cannot be used to argue that DO never c-commands IO; they only suggest that at the stages where binding, scope, agreement, and movement take place, IO c-commands DO. This follows most naturally if the base order is <IO, DO>, and the word order is preserved throughout, as minimality would predict. I refer the reader to the previous chapter for fuller discussion.



The central proposal of this chapter is that *both* (2) and (4) are needed to fully account for the properties of LAs. Specifically, I propose that (2) and (4) be combined in a way that is very reminiscent of serial verb constructions: as an object sharing structure. To make my proposal clear, I will first illustrate the object sharing property of serial verbs, which has been thoroughly investigated in the literature.

4.1.2 Object Sharing in Serial Verb Constructions: Baker and Stewart (2002)

A common descriptive characterization of serial verb constructions, which are widely observed in West African languages and Creole languages, is that they are clauses that have a single tense node, but two or more verbs, with no overt markers of coordination or subordination (Collins 1997). Among various characteristics of serial

verb constructions, ‘object-sharing’ has been by far in the center of interest, because of the issue of how to formally represent the property of object-sharing.

As is well-known, in serial verb constructions (e.g. (6)), an object has a dual thematic status, a fact that has often been captured in terms of the object of Verb-1 necessarily binding a phonetically null argument (*pro*) of Verb-2 (7a), which is more or less equivalent to control constructions as in (7b) (see Collins 1997).

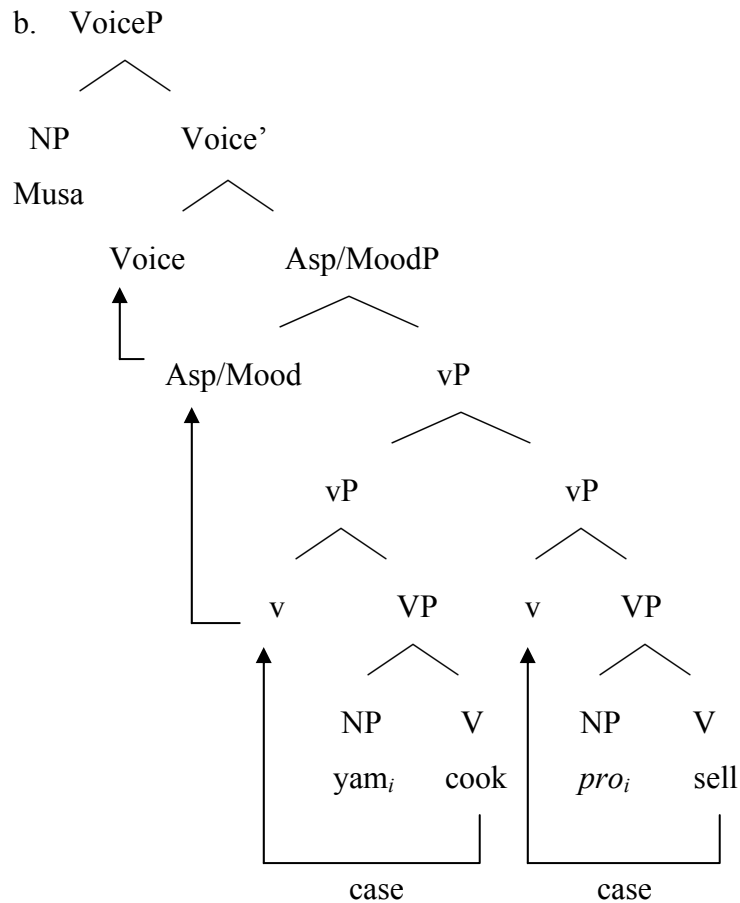
- (6) Òzó lé èvbàré ré [Edo]
Ozo cook food eat
‘Ozo cooked and ate food’ (Stewart 2001:60)

- (7) a. Òzó lé èvbàré_i ré *pro*_i
≈ Ozo cooked food and ate *it*
b. John persuaded Mary_i [PRO_i to leave]
≈ John persuaded *Mary* that *she* should leave

Baker and Stewart (2002) distinguish three types of serial verb constructions (8-10).

- (8) a. Consequential SVC
- consists of 2 transitive verbs; 2nd verb has no overt direct object
 - 2 distinct subevents that the agent performs in sequence, as part of an overall plan (if event 1 takes place, so does event 2)
- b. Òzó ghá gbè èwé khièn [Edo]
 Ozo FUT hit goat sell
 ‘Ozo will kill the goat and sell it’ (Baker and Stewart 2002:2)
- (9) a. Resultative SVC
- 2nd verb is unaccusative
 - single event; 2nd verb describes a state the theme is in as a result of the action expressed by 1st verb
- b. Òzó ghá gbè èwé wù [Edo]
 Ozo FUT hit goat die
 ‘Ozo will hit the goat dead/to death’
- (10) a. Purposive SVC
- 2 transitive verbs
 - unlike CSVC, 2nd verb is not always asserted (event 2 need not take place, even if event 1 does)

- (11) a. Musa du etsi kun [Nupe]
 Musa cook yam sell
 ‘Musa cooked a yam and sold it’



As clearly described in Pietroski (2005), the meaning of (11a) is that *Musa* cooked a yam and sold it, and that the cooking and selling must be part of a unified process in which *Musa* cooked the yam with the intention of selling it.

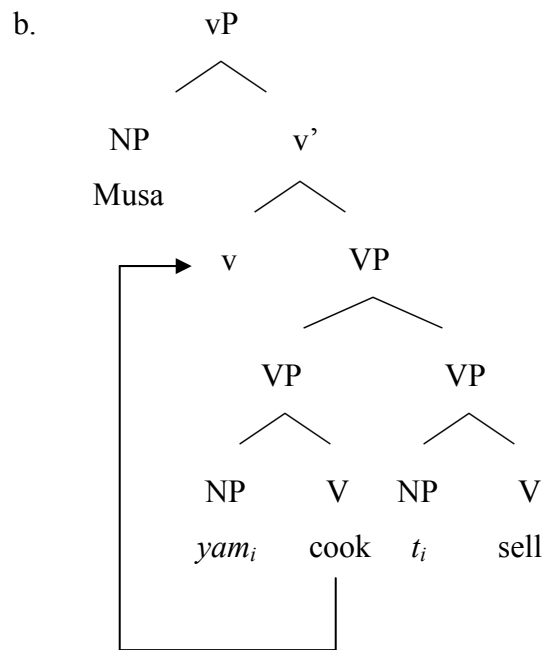
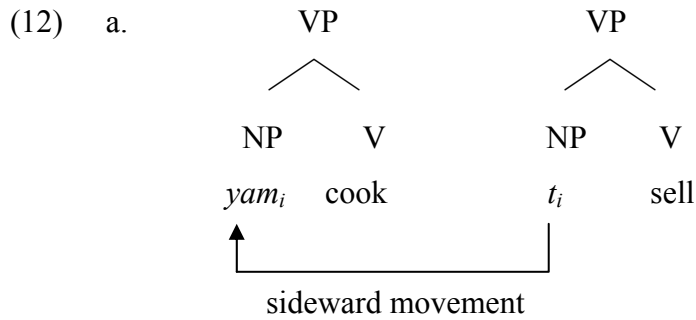
Pietroski (2005) points out that the structure in (11b) does not immediately capture the full meaning of serial verbs just described. The structure in (11b)

represents two distinct events, introducing two distinct theme-participants. Co-indexing enables these participants to co-refer, but notice that nothing forces co-reference. Nothing immediately forces two distinct predicates to be part of the same unified macro-event. Put differently, nothing forces object sharing.

I agree with Pietroski (2005) on the limitations of the structure in (11b), and would like to consider a way to ensure object sharing and event-unification. The simplest way to achieve this seems to me to be a structure that would represent object sharing literally – not via co-indexing of two distinct elements, but by assigning a dual role to the very same element. That is, I would like to eliminate one of the objects in (11b), specifically, *pro*.

As a starting point for my alternative, I would like to point out that argument sharing is not restricted to serial verb constructions; it is also a property of (obligatory) control structures. This property of obligatory control is standardly captured in terms of binding (co-indexing) of an empty argument (PRO) (much like *pro* in serial verbs), but it follows more straightforwardly under Hornstein's (1999) analysis, where 'PRO' and the controller are the same element (ensuring coreference). Taking Hornstein's lead, I would like to argue that argument sharing is the result of movement driven by the checking of a theta-feature. Specifically, I claim that the *pro* posited by Baker and Stewart in the context of serial verb constructions is actually a trace/copy left behind after movement of 'a yam' (11b). (Movement here must proceed sideways, at a point where the two VPs haven't been connected yet, to avoid a CED-violation/ban on movement out of adjuncts. For extensive motivation

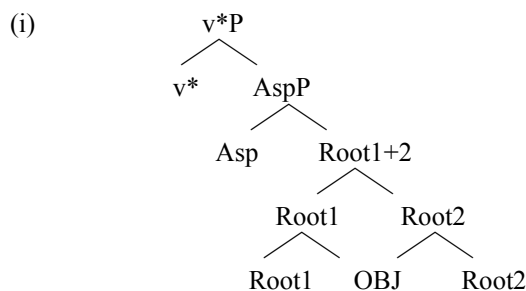
for this kind of movement, see Nunes 2004, Hornstein 2001.) The movement operation is illustrated in (12).⁵⁴



⁵⁴ Under Nunes' (2004) assumptions about the LCA, the structure in (12b) would require one more movement step (movement of the direct object to a position c-commanding the two copies in SpecVP) to be linearizable. I will not discuss this issue here. Thanks to Heather Taylor (p.c.) for bringing this matter to my attention.

Movement readily captures why co-construal of the objects of the shared verbs in serial verbs is necessary. It literally captures object sharing, unmediated by an empty category like *pro*.⁵⁵ It seems to me that literal object sharing offers the possibility of capturing the unified macro-event semantics that characterizes serial verbs that Pietroski focuses on. The idea, which I will also express below in the context of low applicatives, is that by ensuring co-indexing of objects via movement/object-sharing, the syntax forces the semantics to interpret all the subevents that relate to the shared object contained within a VP-domain as ‘connected’ parts of a whole event structure expressed within the VP-shell. Put differently, if the Object 1 that relates to Event E is the same as the Object 2 that relates to Event E’, by transitivity, E and E’ are related to one another, which I assume is interpreted as E and E’ being part of a macro-event. Note that I am not claiming that argument-sharing immediately and necessarily entails event-unification. There are other conditions on event-union (all sub-events must be contained within one VP-shell; sub-events cannot be separated by Tense-nodes specified for different

⁵⁵ Hiraiwa and Bodomo (2005), investigating several verb constructions in Dàgáárè, a Gur language, also argue for literal object sharing in serial verb constructions, which they achieve via (i), a multi-dominance structure that does not require movement.



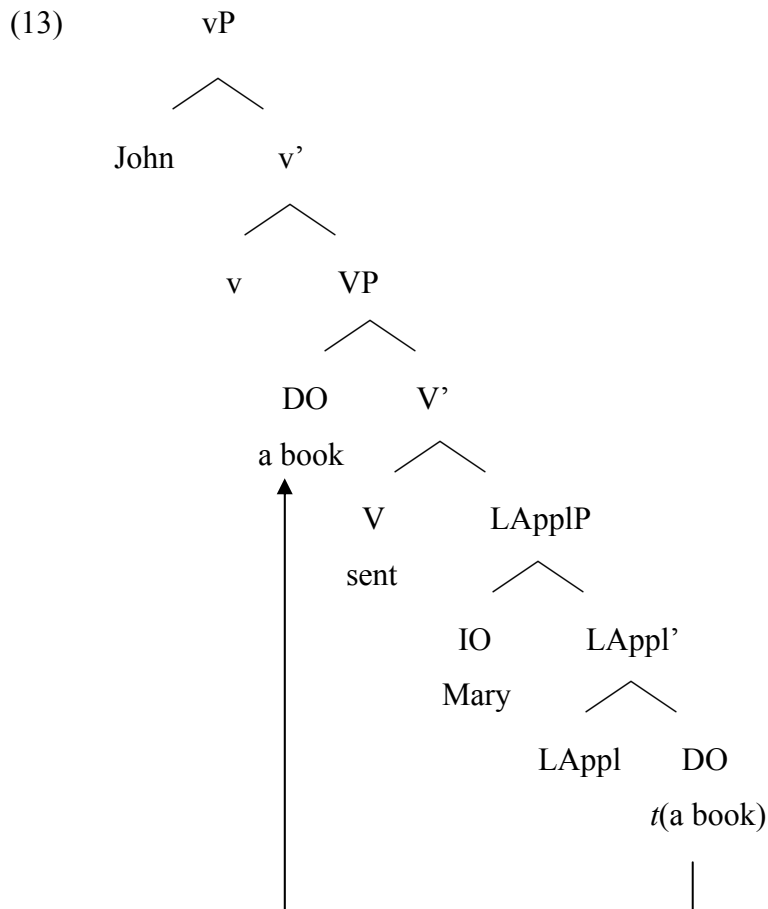
I will not explore this theoretical possibility here. Perhaps they are just notational variants, like Hornstein (2005) has suggested when comparing copying and remerger operations.

values, etc.). All I am claiming is that in the situations in VP-shells where one wants event-unification, literal argument-sharing via movement ensures it.

It is this notion of object sharing which I would like to extend to double object constructions. That is, I would like to argue that the object-sharing properties of low applicatives to be syntactically encoded via movement of the relevant object from one theta-position to another.

4.2 Deriving the semantics of double object constructions

As already mentioned, in order to grasp the complete meaning of *John sent Mary a book*, we need both (2) and (4) to represent the *transfer* of *x* and the coming of *x* into *possession* of *y*, as a *result* of the transfer of *x*. So, there are two key aspects of low applicatives to capture: the dual role of *x*, and the connection between the events that each are responsible for assigning a role to *x*. Based on my discussion of serial verbs, I argue that these key aspects of low applicatives can be made to follow if we find a way for the direct object to reside in Spec VP (transfer-role) and in the complement position of the low applicative head (possession-role), and if both positions are connected via movement, as in (13).



In (13), DO starts off in a projection where it thematically related to IO (this is essentially (2)). DO then moves to SpecVP, where it becomes a direct argument of the verb (essentially as in (4)). Following Hornstein (1999), I assume that a theta-role can drive movement just like any other formal feature: *a book* checks two theta features, one with LAppI head, i.e. possessee, and the other with the verb *sent*, i.e. theme. By doing so, we can capture the full semantics of low applicative. Interestingly, the structure in (13) also allows us to capture the entailment (noted by Norbert Hornstein, personal communication) that if John sent Mary a book, it follows that John sent a book to Mary. Recall from the previous chapter that PP-(high-)

applicatives have a structure like [_{VP} DO [_{V°} PP]]. The structure in (13) is very similar to the latter, as DO occupies SpecVP (at some stage in the derivation), and the applied object (more precisely, a copy of IO, as we will see momentarily) sits in the complement domain of V°. So, I assume that the entailment noted by Hornstein follows from the fact that at some stage in the derivation (alternatively, for some relevant portion of the structure) the LowApplP-structure and the PP-(high-)ApplP structure are structurally identical in the sense that the relative structural positions of DO and IO are equivalent.

Having discussed the semantic consequences of a structure like (13), I now want to address some syntactic issues that arise under this derivation. Note that in order for DO to reach SpecVP, it has to cross IO, in apparent violation of Relativized Minimality (Rizzi 1990). There are two possible solutions to circumvent the minimality problem, or rather, two ways of expressing the same intuition that somehow IO doesn't count when DO moves to SpecVP.

Before sketching these two implementations, I would like to address an issue raised by Howard Lasnik (personal communication). Lasnik points out that the present derivation may pose problems for the various asymmetries pointed out in Barss and Lasnik (1986), as DO crosses over IO and c-commands it at some stage in the derivation. Why, then, can't DO bind (into) IO or take scope over it? There are several solutions to this problem. One is to claim that scope/binding takes place at the end of the entire derivation; since the trace/copy of IO must be invisible for syntactic

reasons, it must also be invisible for semantic reasons like scope and binding.^{56,57} (Notice that I follow Hornstein in assuming that when arguments move through theta-positions, they carry their theta-features with them. Accordingly, when IO moves to SpecvP, it carries its theta feature with it, so the copy of IO in SpecLApplP is not required for purposes of (thematic) interpretation.) Alternatively, if we adopt the claim that DO-movement takes place covertly (see below), it is possible to claim that covert movement cannot affect binding/scope, as we know from the movement of the associate in existential *there*-constructions (see Lasnik 1999).

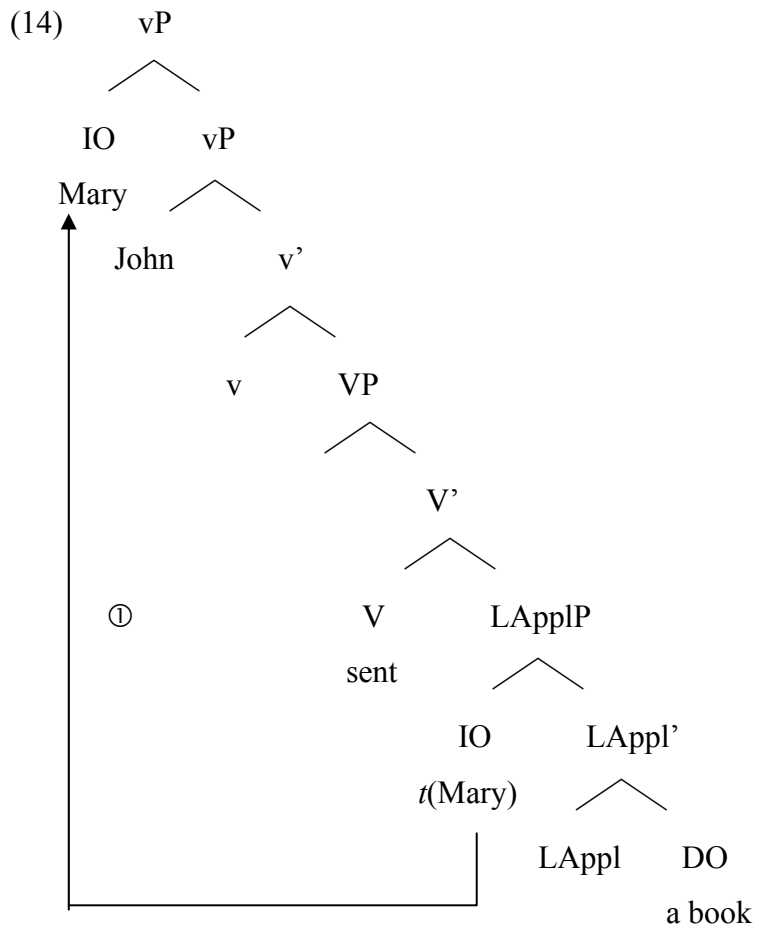
Let me now turn to the two ways of capturing the invisibility of the trace left by IO. The first implementation would amount to assuming that IO moves overtly to a position higher than the final landing site of DO, and then let DO move in a separate covert component,⁵⁸ after the intervening IO has become a trace. Assuming that traces don't count for intervention (Chomsky 1995, 2001; Uriagereka 1988), no minimality problem will result. The sequence of operations is illustrated in (14-15).

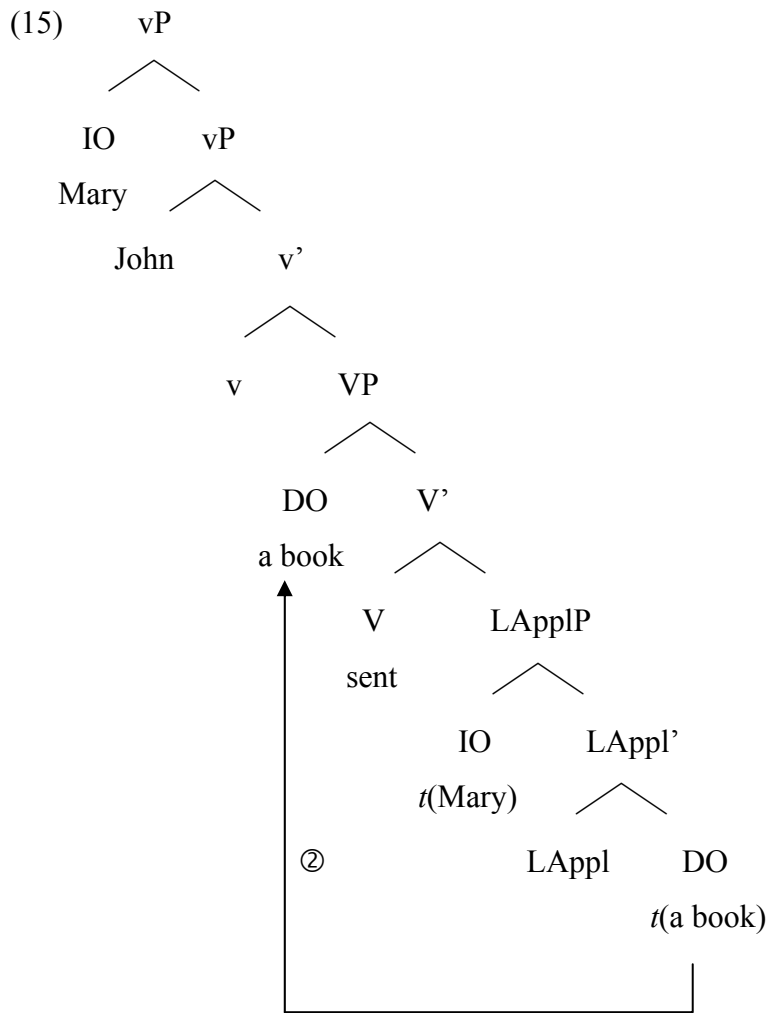
⁵⁶ Rezac (2004) provides independent evidence from a variety of constructions to the effect that the traces of movement that must be invisible to avoid intervention effects never show reconstruction effects. Rezac attempts to derive this by combining cyclic interpretation (Chomsky 2001) and Fox's (2002) mechanism of trace conversion/reduction.

⁵⁷ As far as I can see, this option is compatible with strictly derivational frameworks that let binding and scope be determined as the derivation unfolds, with cyclic access to the interfaces (see Epstein *et al.* 1998, Uriagereka 1999, Chomsky 2000, 2001).

⁵⁸ Juan Uriagereka (p.c.) asks what prevents a sentences like **there hit a man* from meaning *a man hit himself* at LF (after *a man* has moved from VP to vP (covertly)), in a framework that allows covert movement to theta-positions. The particular problem Uriagereka raises disappears if we adopt Hornstein and Witkos's (2003) analysis (explicitly developed to tackle the problem Uriagereka raises) of existential constructions, according to which associates in *there*-sentences, never move (let alone, never move to theta-positions). Instead, Hornstein and Witkos argue that it is the expletive *there* that forms a constituent with the associate in VP and later raises to its surface position.

For arguments in favor of covert theta-checking movement, see Bošković and Takahashi (1998) and Potsdam and Polinsky (2002).

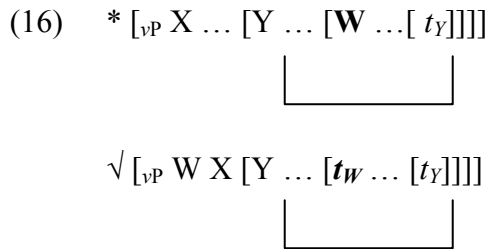




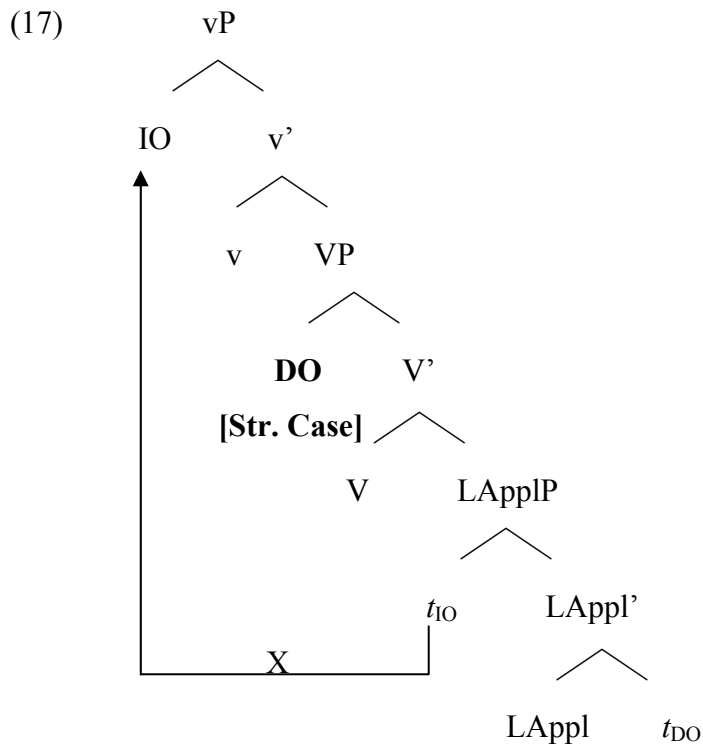
Note that this solution forces us to reject a single-output/cycle syntax of the type advocated in Groat and O’Neil (1996), Bobaljik (1995, 2002), and Pesetsky (2000).

Alternatively, one could avoid resorting to a separate covert component and claim, with Chomsky (2001), that locality is computed not strictly derivationally, but upon completion of a given domain (a phase, for Chomsky, though nothing hinges on phases being crucially implicated; Grohmann’s 2003 notion of domain would do equally well). Specifically, Chomsky argues that no minimality/intervention effect

will result at the ν P-level if the potential intervener raises beyond the landing site of the element whose movement it may block, by the time the ν P level is completed, as schematized in (16).



Note that this ‘phase’-based solution to the minimality problem requires DO to bear inherent case (the type of case that does not block movement), otherwise, DO would block movement of IO even if minimality is evaluated at the phase-level.



However, IO movement is possible if DO bears inherent case, which has been argued to be inert for purposes of attraction to a case-assigning head (see McGinnis 1998 for independent evidence for this claim).⁵⁹ That DO bears inherent case is compatible with what I have said about case matters in chapter 3 (see Boeckx and Hornstein 2005 for independent evidence to the effect that DO bears inherent case). I assume, as is standard, that inherent case features on a DP are enough for the DP to satisfy the Case Filter. I also assume, following previous work of mine (see Boeckx and Jeong 2004)

⁵⁹ I follow McGinnis in regarding instances of non-inert inherent cases (i.e., quirky cases) as case-stacking phenomena, where a (phonetically null) covert structural case is added on top of an inherent (inert) case, whereby the relevant DP behaves like structurally-case marked DPs for all syntactic purposes (including raising and intervention)

that movement options are not just defined over distance, but must also be relativized to the featural content of the elements involved.

Both options just sketched are alternative ways of rendering IO invisible by turning it into a trace at the point where minimality is computed. I tend to favor the first option (movement of DO takes place in a covert component), simply because distinguishing between overt and covert operations seems to me more natural than computing minimality at various stages in the derivation. But whichever option one ends up adopting, one is led to conclude that object sharing in ditransitives captured by movement is contingent upon movement of IO beyond SpecVP in LAs.

Interestingly, several authors have independently argued for obligatory IO-raising. For example, Landau (2005) argues that positing obligatory IO-raising readily accounts for the ban on (sub-)extraction of (/from) IO (18). (The judgments are Landau's. Landau does not address the fact that for many speakers such sentences are not as degraded as the corresponding subject (sub-)extraction cases: **Who did you say that left*/**Who did [pictures of] annoy Bill.*)

- (18) a. ?*Who did John send a medal
b. *Who did John give [friends of ___] a medal

Landau's reasoning is that movement out of a displaced element is banned (see also Takahashi 1994), which accounts for (18b). As for (18a), Landau claims that just like

movement to SpecTP often blocks subsequent extraction of the moved element (cf. *that*-trace effects), likewise movement to SpecvP blocks further movement of IO.

Another independent piece of evidence that IO moves to the edge of vP comes from Bruening (2001). Bruening claims that obligatory IO movement to vP captures the well-known fact that IO necessarily takes scope over DO (19a). If IO resides in SpecvP, movement of DO for scope reasons (QR, which Bruening takes to be movement to the vP edge) will necessarily tuck in underneath the landing site of IO (as is typical in multiple specifier configurations; cf. Richards 2001). The relevant portion of the derivation is given in (19b).

- (19) a. John gave some girl every candy (some > every; *every > some)
 b. T° ... [_{vP} some girl [_{vP} every candy [_{vP} (*t_{John}*) [gave *t_{IO}* *t_{DO}*]]]]

I should point out that for my purposes nothing depends on Landau or Bruening being correct (or, for that matter, on the facts being as they report them). I could simply stipulate that IO movement is required in my system. I would, however, like to point out that many studies focusing on small clauses (which closely resemble low applicative structures) have claimed for a variety of reasons that (at least) one of the members of the small clause must move out of it overtly (see Den Dikken 1995, 2006, Moro 2000, Richards 2002). I take this to be a good sign (indicating that the issue may receive a more general solution), even if, at this stage, movement of IO retains an *ad hoc* character.

4.3 Low Applicatives and Resultatives

So far I have claimed that movement of DO into the specifier position of VP in the domain of low applicatives is necessary for DO to get its second theta-role, which is assigned by V – thereby capturing the fact that DO bears a dual thematic role in low applicatives. As far as I can see, this theta-role driven movement of DO is necessary to fully represent the thematic relations of the sort that we see in the current study. While the previous section approached the object-sharing issue from the point of view of serial verb constructions, in this section I will focus on the relationship among subevents that follows from object-sharing by taking a closer look at resultative constructions in general.

That there is a semantic connection between serial verbs, ditransitives of the English type and resultatives is not new; what is new here is that the present approach emphasizes the structural and derivational uniformity among these three constructions, from which semantic similarity follows. Notice that I am not claiming that all three constructions are identical; there are differences that argue for keeping the three constructions distinct (I return below to the question of where these differences may come from). For example, not all languages need to have all three constructions if they have one or two. But my main point in this section is that there are enough similarities to warrant a closer look.

4.4 Resultatives

Resultative constructions (RCs) are single clause constructions comprising two predicates, a main predicate and a result predicate; neither predicate is introduced by a conjunction, adposition, or complementizer. Semantically, RCs express a relation of causation between the eventualities described by the main and result predicates, without this relation being indicated by any overt morpheme (Dowty 1979). (20) illustrates a typical transitive adjectival resultative construction.

(20) John hammered the metal flat

Since my main concern in this chapter is the phenomenon of object sharing, I will focus on the thematic relation of the direct object with regard to both main predicate and result predicate.

The understood thematic relations of subject and object to the event of the main predicate *hammered* is that *John* is the agent of hammering and *the metal* is its patient; and as a result of *John's hammering the metal*, *the metal* went through a change of state and became flat. Simply put, (20) can be paraphrased as (21).

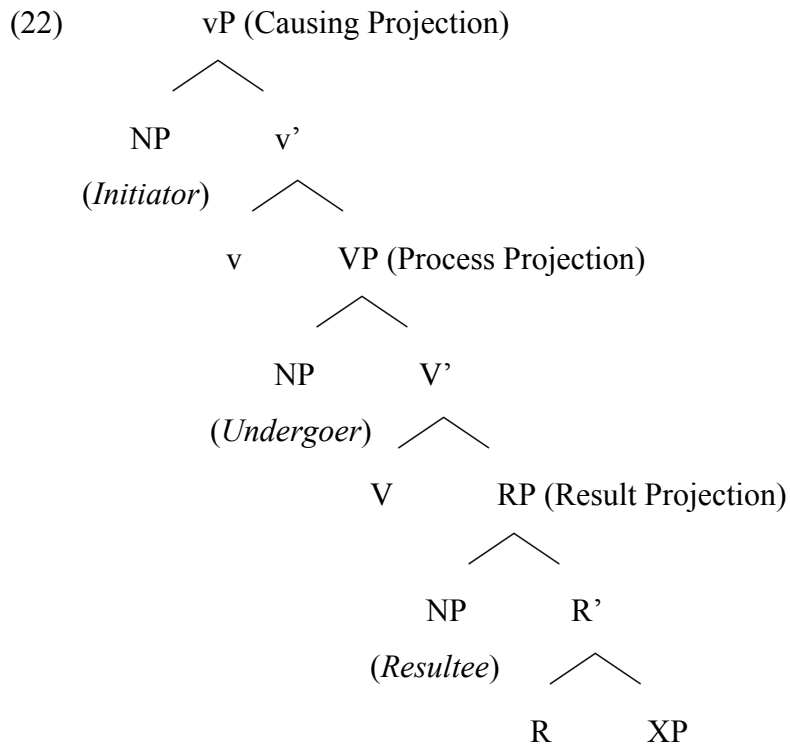
(21) John hammered the metal and it (the metal) became flat (as a result of John hammering it)

By now such object-sharing paraphrases should be familiar. What we see in (21) is a dual thematic role for the object and an event-unification that are strongly reminiscent of serial verb and low applicative constructions. It is therefore natural to try to extend to resultatives the theta-driven movement analysis I have pushed for these constructions. In a nutshell, I will argue that the shared element will move from within its thematic position in the small clause to another thematic position inside the main VP-domain.

Now, I will turn to the details, focusing on previous analyses of resultative constructions, Ramchand (2002), where the link between ditransitives and resultatives is discussed, though left vague, and Kratzer (2004), who provides a thorough analysis of resultatives, and on which I will build.

4.4.1 Ramchand (2002)

The link between low applicatives and resultatives is made clear in Ramchand (2002). Ramchand is very clear about the structure of resultatives. For her, event structure in syntax looks like:



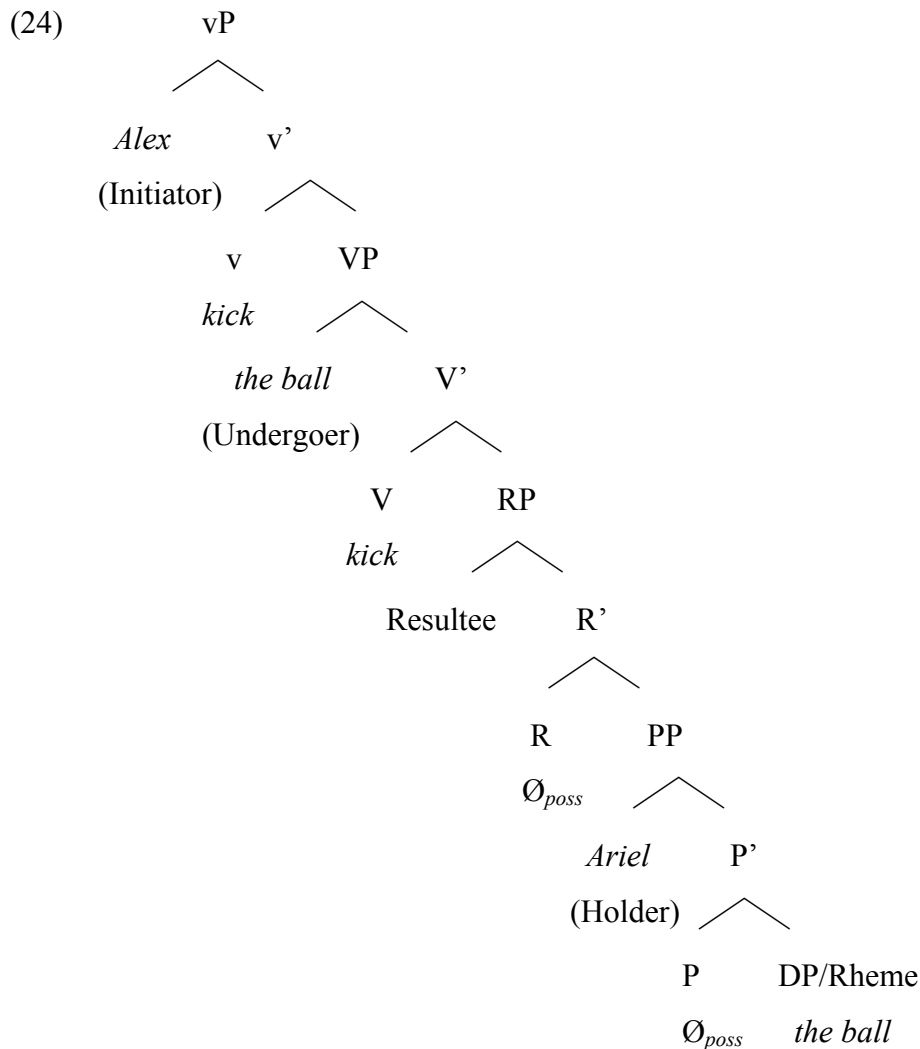
Ramchand proposes that in order to represent all the possible components of the event structure building processes of natural languages, these three sub-event projections are necessary. So in (22) the verb phrase contains three different projections such as Causing, Process, and Result Projections, and each projection is an instantiation of a subpart of the whole event. As for the designated specifier positions, Ramchand claims that the specifier positions are interpreted systematically by the general semantic component as *Initiator*, *Undergoer* and *Resultee*, respectively. One major departure of this proposal from standard representations of lexico-conceptual structures is that for Ramchand these specifier positions are not claimed to be mutually exclusive, that is, it is possible for a single argument to be in more than one

of these positions simultaneously by multiply inserting the lexical items under nodes built up by the syntax.⁶⁰ On how to execute this, however, Ramchand remains neutral: it could be by either Merge or Move (internal Merge).

Resultatives in Ramchand's system are those constructions that fill up the lowest event projection (RP). Interestingly, in Ramchand's system, a sentence like (23) is represented as in (24), where RP is crucially involved.

(23) Alex kicked Ariel the ball

⁶⁰ I am using Ramchand's own words here; I am actually not quite sure how everything works technically, as she doesn't provide any mechanisms.



In (24), the verb *kick* has a causing sub-event that licenses an Initiator, and it also identifies a process sub-event that describes projectile motion on the part of the Undergoer. In addition, there is a final state arrived at by the Undergoer: as a result of the ‘kicking’, *Ariel* comes to be in possession of *the ball*.

Setting aside details about case checking and other issues, on which Ramchand is not very clear, Ramchand’s representation of double object

constructions like (24) is very close to mine. In her structure (24), the complement of V (the location of Pykkänen's LAppIP) is occupied by Result Projection (RP), which is the phrase Ramchand claims expresses the result of an action. So LAppIP and RP may be two different names for the same thing: the complement of V expresses 'result'.

Notice that in the structure (24), Ramchand makes use of a null preposition head with \emptyset_{poss} as possessional semantics. She claims that the prepositional head is necessary (i) to assign structural case to the RHEME of possession, *the ball*, (ii) to license the external thematic relation of HOLDER, and (iii) to identify the head R of RP. In essence, Ramchand shares with Pesetsky (1995) and Harley (2002) the idea that whether a language has the double object construction depends upon whether the language has a lexical item with the general semantics of possession and with the syntactic features P and R. So in Ramchand's system, what brings a state of 'result' on the surface is R, but the nature or identity of R is solely dependent on P with or without \emptyset_{poss} in the context of double object constructions or their prepositional ditransitive variants, respectively.⁶¹

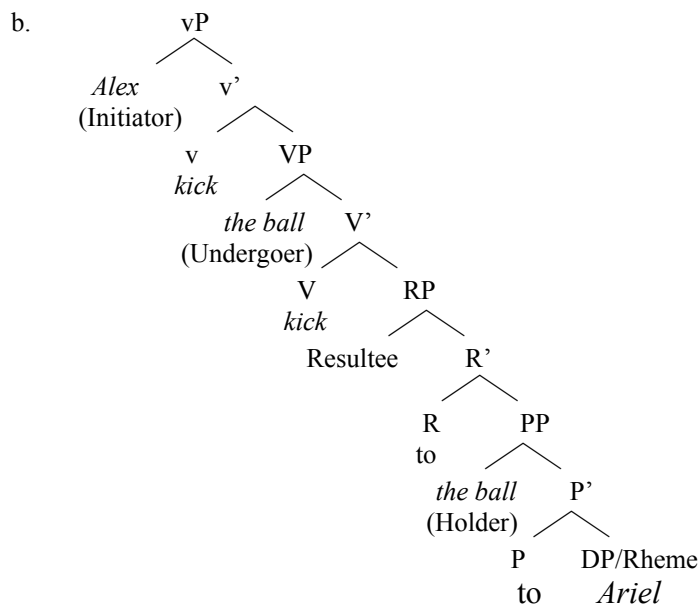
⁶¹ For prepositional ditransitive, Ramchand uses the following structure:

- a. Alex kicked the ball to Ariel

Ramchand is not quite explicit about the object sharing property of resultatives, and low applicatives/ditransitives in particular. By contrast, Kratzer's study of resultatives almost exclusively focuses on this question, and I will therefore turn to her study. What the reader should take away from my discussion of Ramchand is the structural similarity between Low ApplP and RP.

4.4.2 Kratzer (2004): a uniform raising analysis of resultatives

In contrast to previous analyses of resultatives that distinguish between at least two subtypes of resultatives, depending on whether we are dealing with transitive or intransitive environments (see, e.g. Carrier and Randall 1992), Kratzer (2004) proposes a unified raising analysis for adjectival resultatives, according to which all objects are akin to (raised) ECM-objects (see also Hoekstra 1988 for this position).

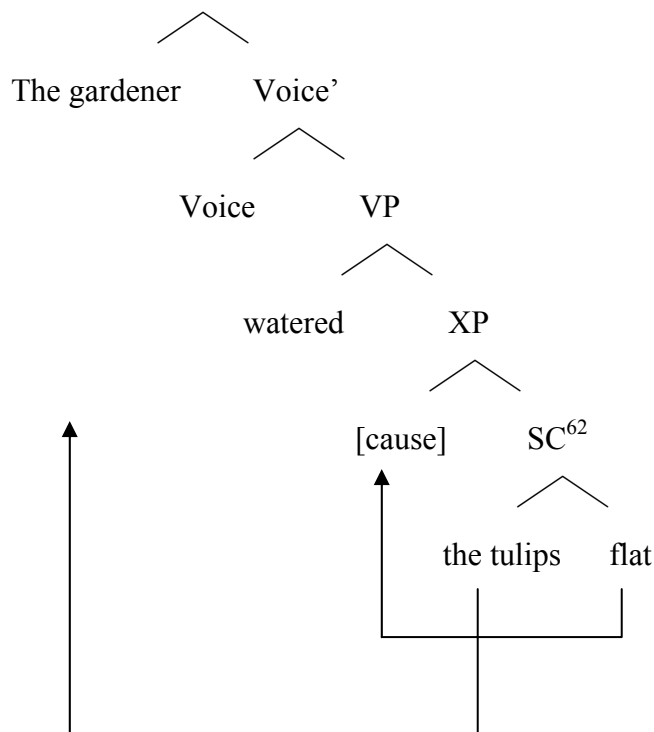


Kratzer's analysis is very relevant for my own concerns, as her main argument is basically that what looks like a direct object in some resultatives is never an argument of the main predicate; so the dual role of a direct object is merely an illusion. For this reason I undertake a thorough review of her paper, so as to make the main features of my analysis more salient.

Basically, Kratzer's claim amounts to a long argument in favor of the following derivation:

(25) a. The gardener watered the tulips flat

b. VoiceP



⁶² Kratzer makes it clear that she is not assuming that external arguments of adjectives originate within the projection of their head, and the adjectives do not have external arguments since they lack voice, following Kratzer (1996). So the SC in (25b) is not the kind that Stowell (1983) assumed.

Ignoring details that are not directly relevant to my concerns, such as the nature of XP introducing a [cause] property,⁶³ we can say that the bottom line of Kratzer's analysis is that all objects in resultatives are derived, ECM-style objects. Under her analysis, the argument predicated of the (resultative) adjective must become part of the main VP-domain for case reasons. In this way, Kratzer attempts to derive the well-known observation going back to Simpson (1983) that there is a special relationship between resultative adjectives and (surface) direct objects. This relationship is what Levin and Rappaport Hovav's (1995) well-known Direct Object Restriction captures.

(26) *Direct Object Restriction*

A result phrase may be predicated of the immediately postverbal NP, but may not be predicated of a subject or of an oblique complement (p.34)

⁶³ Kratzer argues that the causal relation in resultatives must be introduced by an invisible lexical item, which is an unpronounced morpheme consisting of an interpretable feature [cause].

- (i) $T([\text{cause}]) = \lambda P_{\langle \text{st} \rangle} \lambda e_s \exists S_s [\text{state}(s) \& \text{event}(e) \& P(s) \& \text{CAUSE}(s)(e)]$

In (i), [cause] introduces an event argument, but crucially does not introduce any other argument, e.g. a causer. That is, according to Kratzer, we are dealing with a causer-less causal relation.

Kratzer finds support for this causeless causal relation from Pykkänen (2002), who argues that the Agent theta-role and the [cause] property are introduced by distinct heads that can be teased apart morphologically in various languages such as Japanese and Finnish.

Kratzer claims that the presence of a [cause]-affix accounts for the fact that no other suffix may be added to resultative adjectives, as seen in (ii).

- (ii) a. The gardener watered the tulips flat
 b. *The gardener watered the tulips flatten

For Kratzer, the adjective raises to the [cause] affix to form some sort of compound, an operation that she crucially implicates in accounting for the distribution of resultatives across languages (see also Snyder 1995, 2001). Based on this process, Kratzer makes the interesting claim that resultatives may be related to serial verbs, which is a link that I will also develop below, albeit in a very different implementation.

For Kratzer, DOR follows from case-mechanics. In other words, the argument of the predicate expressed by the adjective is to be the very same argument that raises out of the resultative small clause to get case, and become a direct object.

An important and distinctive feature of Kratzer's analysis is that if all objects are derived, no object should be present in the main VP-area, to avoid any case-competition. This means that no genuinely transitive predicate is expected to participate in resultative constructions. Likewise, if all objects are derived for case-reasons, objective/accusative case must be available, meaning that unaccusative predicates are expected not to combine with resultative adjectives.

These are strong claims, and the bulk of Kratzer's paper is devoted to addressing counterexamples to them. Let me briefly discuss the major obstacles Kratzer faces, and the strategies she develops to deal with them.

Consider (27).

- (27) a. Sie haben *(die Wand) bemalt
they have the wall painted
'They painted the wall'
- b. Sie haben die Wand blau bemalt
they have the wall blue painted
'They painted the wall blue'
- (Kratzer 2004: 9)

The example in (27) has verbs like *bemalt* ‘paint’ that are obligatorily transitive (27a); yet the verb seems to be able to participate in adjectival resultative construction (27b). So it looks like it is challenging Kratzer’s ban on transitive in resultatives. To get around this problem, Kratzer focuses on examples like (28).

- (28) a. Wie haben sie die Wand bemalt?
 how have they the wall pained
 ‘How did they paint the wall?’
- b. Blau
 blue
 ‘Blue’
- (Kratzer 2004: 9)

Kratzer claims that the example in (28) suggest that the apparent adjectives like *blau* ‘blue’ in (27b) do not have to be parsed as adjective, but might also be parsed as adverbs. In German, manner adverbs and predicative adjectives look exactly alike, and this makes it hard to keep the two apart in cases like (27). But structurally, if *blau* is an adverb, one can assume that it is adjoined to VP, and so it can be distinguished from resultative structures of the type under discussion.

A second counter to the counterexample arises in the context of verb reduplication. See (29).

- (29) a. Sie haben ?(das Auto) gekauft
 they have the car bought
 ‘They bought the car’
- b. Sie haben den Laden leer gekauft
 they have the shop empty bought
 ‘They bought the shop empty’
- c. Sie kauften und kauften
 they bought and bought
 ‘They bought and bought’ (p.13)

- (30) a. Er kochte und kochte
 he cooked and cooked
- b. *Er bekochte und bekochte
 he cooked-for and cooked-for (p.14)

Kratzer claims that the verbs like *gekauft* ‘bought’ that come with those resultatives (29b) might be wrongly classified as obligatorily transitive based on the kind of contexts given in (29a). But upon closer scrutiny, one finds that those verbs have some intransitive uses: they do not require a direct object when they are reduplicated to produce an iterative interpretation like (29c) and (30a), while those transitivized version of the verb like *bekochte* ‘cooked-for’ cannot participate in the verb reduplication.

The third kind of problematic cases comes from unaccusative contexts. If Kratzer's claim of a raising analysis is right for all types of adjectival resultatives, we shouldn't find any truly unaccusative verbs in resultative constructions, since these offer no way to case-license derived objects. But we do find some unaccusative verbs in resultative constructions.

- (31) a. The river froze solid
b. The bottle broke open
c. The gate swung shut (Levin and Rappaport Hovav 1995:39)

Alluding to German resultatives where the adjectives following the unaccusative verbs might be recategorized as verbal prefix as (32), Kratzer suggests that the adjectives following unaccusative verbs in resultative construction may be able to act like a particle (33).

- (32) Die Wunde ist aufgeplatzt
the wound is open-burst
'The wound burst open' (p.18)

- (33) a. The police the door open
b. The police broke open the door
c. The police broke open and removed the door

- a'. We threw out the documents
- b'. We threw the documents out
- c'. We threw out and shredded the documents (pp. 20-21)

Having said this all, basically what Kratzer is suggesting is that an apparently transitive (or unaccusative) verb turns out to be unergative, or has unergative uses.

To conclude this brief overview of Kratzer's detailed proposal, let me say that like Kratzer, I will also argue that objects in resultative constructions are derived (raised), but the raising that takes place will be closer to the raising that takes place in control (and serial verb) constructions, as it will target a theta-position.

4.4.3 Object sharing in resultative constructions by movement into theta position

What I want to capture is the following entailment that obtains in resultative constructions: If John hammered the metal flat, John hammered the metal, and that very metal became flat as a result of the hammering activity. Much as I argued above in the context of low applicatives and serial verbs, I will argue that object sharing (understood as movement connecting theta-positions) provides the 'glue' between various subevents internal to a VP-shell.

In early minimalism (see Chomsky 1995), where V to v movement is thematically motivated, one may have been tempted to say that it is head-movement among theta-introducing heads (V, v) that accounts for the creation of macro-events within VP-shells, but current minimalism treats head-movement as suspect. So, as an alternative, I would like to claim that it is theta-driven XP-movement resulting in argument-sharing that provides the glue between (sub-) events internal to a VP-domain.⁶⁴ Since glue is necessary to connect the various subevents in resultatives, I will follow Kratzer in requiring argument-movement in such constructions. But the relevant raising will target a theta-position. This will allow me to depart from Kratzer's contentious claim that only unergatives enter into resultative frames. In what follows, I will describe in detail how it unfolds.

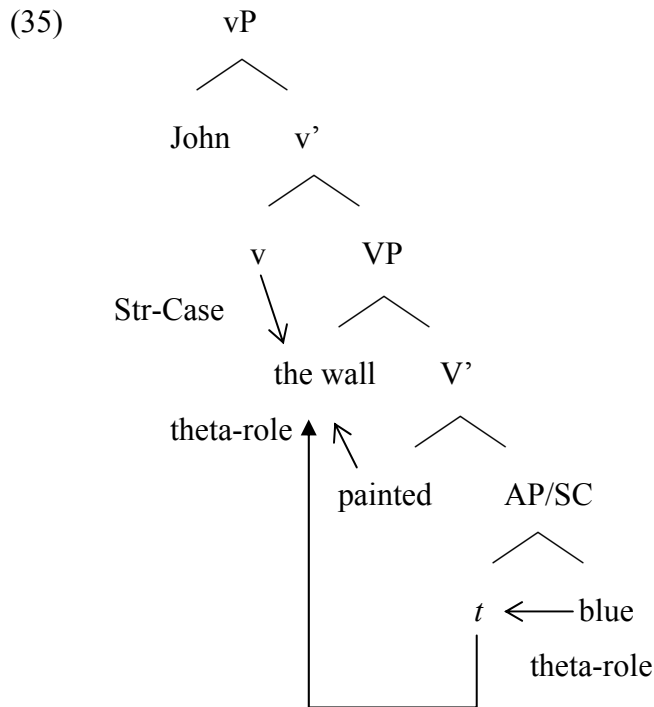
Consider typical transitive verbs like *paint* that participate in resultative constructions.

- (34) a. John painted the wall blue
b. John painted the wall and it (the wall) became blue

In (34), *the wall* is involved in two thematic relations: *the wall* is *what John painted* and also *what became blue*. It starts out as a specifier of small clause, receiving or checking its theta-feature with the adjective, and then moves from there to Spec VP,

⁶⁴ Hong (2005) also argues for theta-driven movement in resultative constructions. The present proposal differs in how this movement is implemented.

where *the wall* receives its second theta role from V.⁶⁵ By receiving two theta-roles, the object connects the two events, and thereby it brings them together into one big-event.



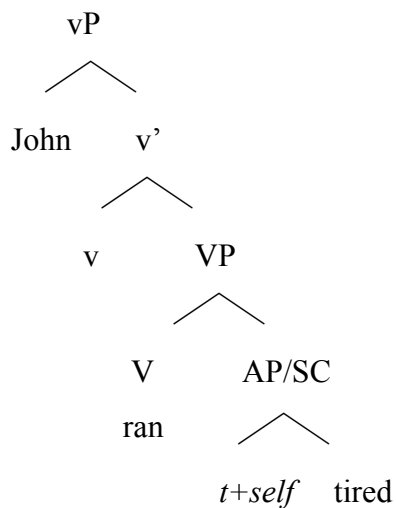
When it comes to resultatives involving intransitive, specifically unergative verbs like *run*, several cases must be considered, as shown in (36).

⁶⁵ I assume that the movement is overt. As pointed out by Alexander Williams (p.c.), this appears to introduce an asymmetry between low applicatives and resultatives, if movement of the direct object in low applicatives moves to SpecVP in covert syntax, as argued above. However, as I pointed out above, one could (under a different set of assumptions) assume that all movements, including movement of the direct object in low applicatives, take place in overt syntax.

- (36) a. John ran himself tired
 b. John ran his Nikes threadbare

Let me focus on the so-called ‘fake reflexive’ cases (36a) first. If I am correct, movement must be involved to provide the necessary glue among subevents. And movement can be implicated if we follow Hornstein (2001) in taking reflexives to be modified copies left by movement (see also Lidz and Idsardi 1998). Specifically, in this context, a copy of *John*, which moves from Spec SC to Spec vP.

- (37) John ran himself tired



In (37), *John* starts out as a specifier of the resultative small clause, where it receives a theta-role from *tired*. I assume that *John* also receives inherent case in this position, a point I come back to momentarily. V is introduced, but the verb *run* doesn't have additional theta-role to assign, so no movement of *John* occurs. But *v* needs to assign

agent theta-role, and the only candidate here is *John*, so *John* moves to Spec of *vP*. This is the key difference between unergatives and transitives in resultative constructions. In the former, movement targets Spec*vP*; in the latter, Spec*VP*. The difference derives from the different thematic requirements imposed by the two types of verb. There is no reason to claim that every verb is unergative, unlike Kratzer.

Back to the structure (37), I assume that *himself* must be pronounced (**John ran tired*), but for a reason different from Hornstein (2001). According to Hornstein, reflexives found in situations like *John likes himself* are pronounced to avoid the creation of a chain that would bear multiple cases. At first sight, Hornstein's claim appears to cover the relevant data discussed here. Like Hornstein, I assume that each pronounced copy must be case-licensed, hence SpecSC is a case position, specifically for me, an inherent case position. (I also assume that *v* in unergative contexts is defective; that is, it cannot be a full-fledged *v* as in transitive context; what I mean by 'defective' is that it has no ability to assign accusative case. So the unacceptability of **John ran himself* follows at once, contra Hong (2005), who assumes that unergative *v* can assign accusative case, and who must restrict this possibility to fake reflexive resultative contexts in an *ad hoc* fashion.) But even if I treat SpecSC as a case-position, I cannot adopt Hornstein's claim that a copy-reflexive is required in each case position, since I would then predict '*John painted the wall itself blue*' to be the PF form of the derivation in (35), since *the wall* would head a chain to which two cases have been assigned. So, I conclude that case is a necessary, but not a sufficient

condition for copy-pronunciation. So, if case cannot be the factor forcing a copy to be pronounced as a trace, why should the copy-reflexive surface in (37)?

The solution I would like to propose comes from sentences like (38).

(38) John's picture hangs on the wall

The sentence in (38) can mean that John owns the picture, or painted the picture, or that John is represented in the picture, but it does not mean all these things at once, unless reflexives (*John's picture of himself by himself*) are introduced.

The generalization appears to be that if an element bears multiple distinct thematic relations within a thematic domain, each relation must be realized overtly and each copy, suitably modified, must be case-licensed (see Grohmann 2003 for the first explicit claim to this effect).⁶⁶ What counts as distinct? For Grohmann, any theta-role counts as distinct. But this is too strong, as it would also predict '*John painted the wall itself blue*' to be possible (under a non-emphatic reading of the reflexive). I propose to define distinctness over thematic values. For me, Agent and 'resultee' (often called 'Attribute' or 'Theme') must be distinct; they are prototypical cases of [External] and [Internal] roles. But 'resultee' and 'Theme', being both prototypical [Internal] roles count as non-distinct, hence don't require multiple-copy

⁶⁶ Well-known problematic cases like *John washed/shaved* or *John behaved* must be treated as exceptions, perhaps by claiming that the *v* involved in such constructions only optionally assigns case (see Hornstein 2001), which leads to deletion of the lower copy of *John* (i.e., *himself*) to avoid a case filter violation (see Lasnik 2005 on deletion-as-repair).

pronunciation.⁶⁷ Put differently, ‘resultee’ and ‘theme’ are basically two different names for the same thematic value, hence they count as non-distinct. Notice indeed that so far the multiple thematic relations we have dealt with all involve [internal] theta-roles (assigned in SpecVP, in the complement of LApplP, and in SpecSC). So for these cases, no multiple copy-pronunciation is required (we therefore capture the unacceptability of **the lake froze itself solid/*John painted the wall itself blue* by saying that since *the lake/the wall* bear two non-distinct theta-roles, only one copy of the chain they head must be pronounced.).

Consider now the following examples.

- (39) a. John cried his eyes red
b. *John cried his mother’s eyes red⁶⁸ (Hong 2005: 163, fn.20)

While one can say (39a), one cannot say something like (39b). Hong (2005), assuming Kayne’s (2002) and Uriagereka’s (1995) analyses on doubling structure, claims that like the clitic and its double start together, the antecedent and the pronoun are merged together and the antecedent moves into surface position out of a doubling structure leaving the pronoun behind.

⁶⁷ My claim that the role ‘Theme’ can be discharged in different syntactic positions conflicts with a strong reading of Baker’s UTAH (1988, 1997), but it is fully compatible with what he calls relativized UTAH, since in either configuration, Theme is still assigned lower than any other theta-role.

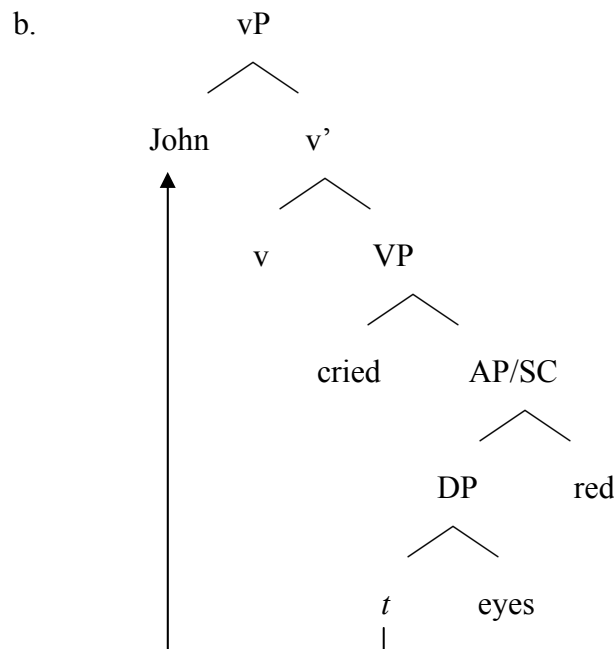
⁶⁸ Hong (2005) acknowledges this problem raised by Jairo Nunes.

(40) antecedent_i [t_i pronoun]

Applying (40) to (39a), Hong derives the surface structure from moving *John* out of [*John his eyes*] into a subject position, where it receives a second theta-role from the verb *cry*. If she is right about the doubling structure in (39a), why would (39b) be bad? After all, *John* is what moves out of [*John his mother's eyes*] and then receives its additional theta-role from *cry*.

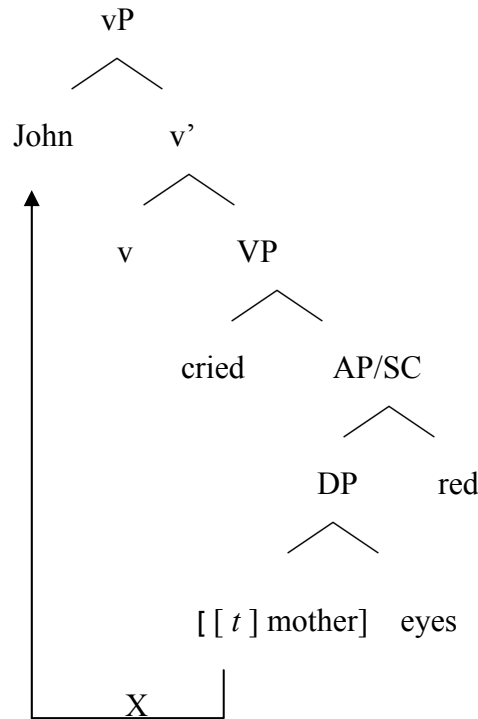
In the spirit of Hong (2005) and Hornstein (2001), I would like to suggest that in (39) the pronoun *his* is a residue of movement of *John*, like the reflexive pronoun *himself* in (37); here are how the derivations in (39a) and (39b) proceed (repeated here as (41a) and (42a)).

(41) a. John cried his eyes red



(42) a. *John cried his mother's eyes red

b.



In (41), *John's eyes* receives a theta role from the adjective *red* within the small clause, then when *v* is introduced, which needs to discharge agent theta role, attracts *John* to its specifier position; note that *John* is the only possible argument to check agent theta role with *v*, *John's eyes*, not being [+animate], cannot. The badness of (42) is straightforward: this follows from the A-over-A constraint. If one has to move an argument from the SC to check theta role with *v*, it should be *John's mother* since it is animate and could receive the Agent theta-role from *v*.

Let me now turn to unaccusatives like (43).

- (43) a. The clothes steamed dry
b. The kettle boiled dry

Some unaccusatives appear to allow for resultative complements, like *steam* and *boil*, while others, like *arrive*, don't. The adjective in (44) is a depictive phrase.

- (44) John arrived tired

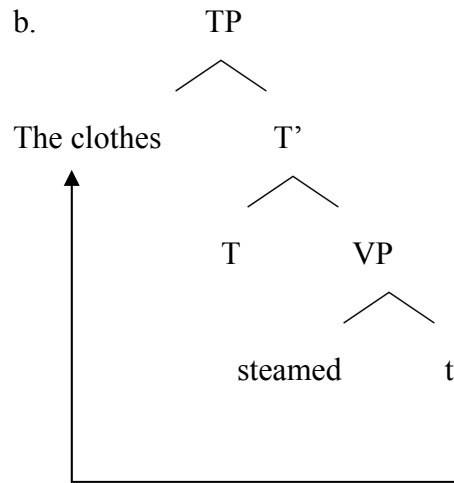
The key difference appears to be that unaccusatives like *arrive* can never be used in a transitive context (in English, for reasons that are not completely clear, see Borer 2005) (46), whereas *steam* or *boil* can, as in (45).

- (45) a. John steamed the clothes (dry)
b. I boiled the kettle (dry)

- (46) *John arrived Mary (tired)

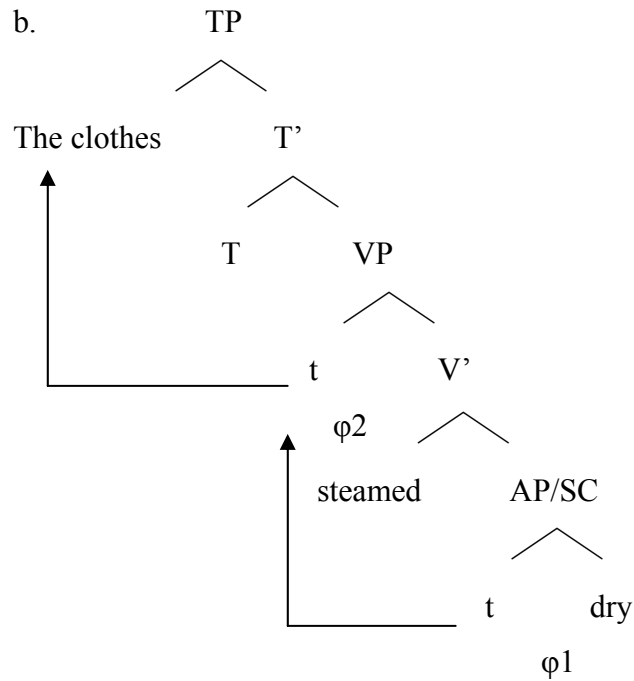
I take this to mean that *steam* and *boil* can license SpecVP in addition to a complement, whereas verbs like *arrive* cannot. Accordingly, *steam* and *boil* allow for the following derivations depending on in which context they will appear.

(47) a. The clothes steamed



(47) is a normal unaccusative context; no vP is introduced in the structure. *The clothes* starts out as a complement of the verb *steam* and gets a theta role from it; then it moves to Spec TP to get its case feature checked.

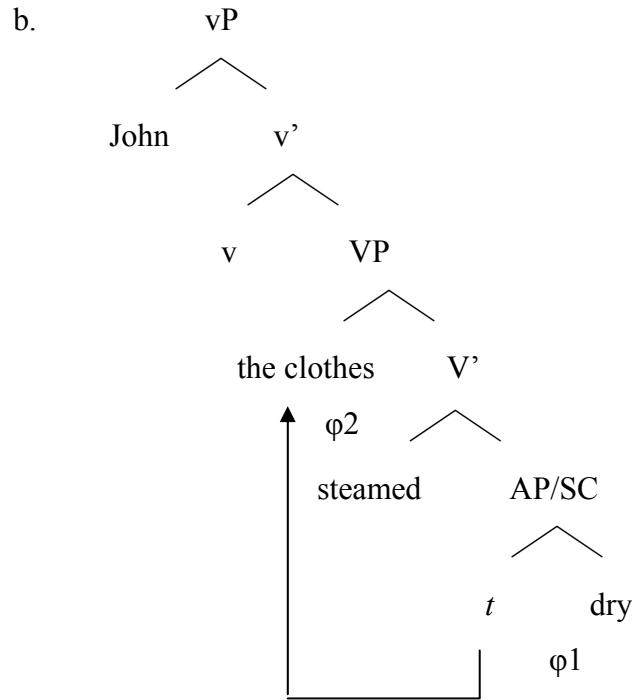
(48) a. The clothes steamed dry



In (48), *the clothes* receives a theta role from the adjective *dry* within the resultative small clause and then undergoes movement into SpecVP to receive an additional theta-role from *steam*. Movement to Spec TP is due to case.

Consider the following variants: such verbs that are being considered here can even be used transitively, as in the following derivation.

(49) a. John steamed the clothes dry



In (49), *the clothes* receives a theta role from the adjective *dry* within the small clause and then undergoes movement into SpecVP to receive an additional theta-role from *steam*. Direct object *the clothes* gets its case checked against *v* as it would do in a regular simple transitive context.

All in all, it appears that the theta-driven movement account can be generalized to all sorts of resultative constructions.

Before closing this section, I would like to mention interesting data from Williams (2005).⁶⁹ Williams provides examples of resultative constructions from

⁶⁹ What follows is intended as a mere sketch of an analysis of the salient data discussed by Williams. It is not meant to be a thorough analysis. For extensive discussion of Igbo and Mandarin resultatives, I refer the reader to Williams (2005).

Igbo and Mandarin Chinese where the object is not an internal argument, e.g., patient, of the main verb.⁷⁰

(50) tā hái qiē dùn-le nǐde càidāo [Mandarin]

3s also cut dull-LE your food.knife

‘He also made your cleaver dull by cutting’ (Williams 2005: 10)

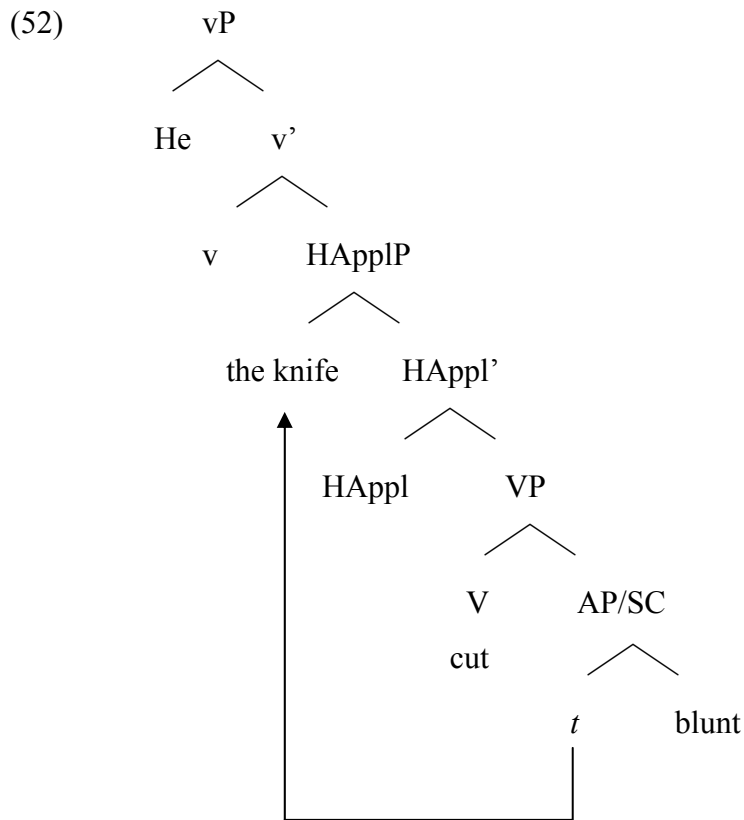
(51) O bi -kpụ -rụ mma [Igbo]

3sS cut-blunt-FACT knife

‘He made his knife blunt by cutting [stuff]’ (Williams 2005:13)

In both (50) and (51), *what is being cut* is not specified, yet they are perfectly acceptable for the speakers of both languages. Interestingly, as far as I have been able to determine, all the objects involved in Williams’ crucial examples, such as ‘the knife’ in (50) and (51), can be characterized as arguments introduced by High Applicative phrases (e.g., instrumentals). If this is a true generalization, examples like (50)-(51) can be analyzed from the present perspective as movement of the shared object from SpecSC to SpecHAppIP. See the following derivation for (51).

⁷⁰ Norbert Hornstein points out (p.c.) that given the right context English may allow such resultatives as well.



Setting aside the details of how to get the surface order (which I assume will require head-movements), in (52), *the knife* gets a theta role from the adjective *blunt* within the small clause, and moves further to SpecHApplP to receive a second theta role, i.e., instrumental.

Let me conclude. As we have seen, resultative small clause and low applicative projection look alike as far as their structures are concerned: both are argument of a verb and have an object shared by two subevents, i.e., one event manifested by the main predicate and the other by the embedded predicate. Despite the similarity in their overall configuration and derivational history, there is one

difference between the two that deserves mention. (I set aside the obvious difference that in Low Applicatives an extra argument, IO, has to be licensed.)

When one says *John hammered the metal flat*, one expresses the fact that the metal eventually gets flat. But when one says *John sent Bill the book*, it does not necessarily entail that Bill got the book such that it is perfectly fine to say *John sent Bill the book but he didn't get it*. The difference may be due to the content of the head expressing the result state being different in the two cases. The content of the result head in resultatives could be something like 'BE' (or 'AT'). By contrast Pykkänen (2002) and Harley (2002) have argued that the meaning of the Low Applicative head in English is TO (direction), not AT (location). It is possible that some speakers may assume 'AT' in some cases, which accounts for why some people claim that in *John sent Bill a book*, Bill must have received the book. Since the head under discussion is null, perhaps different speakers acquire slightly different versions of it. The nature of the Low Applicative head may even depend on specific verbs. Thus, most speakers may assume an abstract 'AT' head in the context of *teach*, which would account for the following contrast perceived by many speakers between *teach* vs. *send*.

- (53) a. John taught the students French
b. *John taught the students French but they didn't learn it
- (54) a. John sent Mary the book
b. John sent Mary the book but she didn't receive it

4.5 Conclusion

In this chapter, I have argued that the recent treatment of ditransitives of the English kind as LAs offered by Pylkkänen (2002) is incomplete semantically-speaking, as it only captures half of the thematic properties of the construction. To remedy this problem I have argued that ditransitives involve object-sharing, captured via theta-driven movement, a derivational process that they share with serial verbs and resultative constructions. I have argued that object-sharing viewed as movement may be the source of macro-event formation, the glue that connects subevents together. If correct, the present chapter offers yet another argument for movement into theta-position.

CHAPTER FIVE

Conclusion

The present thesis has documented and, I hope, accounted for the remarkable variation of applicative constructions, focusing on various asymmetries such constructions exhibit at the syntax/semantics interface.

I started by showing that much progress has been made in the area of multiple object constructions in recent years. Indeed, one can even begin to talk of a consensus as to how to approach such constructions, both syntactically and semantically. But although such a consensus is welcome, the various solutions proposed face some serious challenges, and appear to leave some key aspects unaccounted for, from the point of view of both syntax and semantics. Because the consensus offers us a way to understand how the syntax and the semantics of applicatives work, and how the two domains are connected in a transparent manner, I think it is worth trying to preserve the insights gained.

I have tried to remedy the inadequacies and limitations that I could identify in previous accounts. As far as the syntax of applicatives is concerned, my analysis has necessitated the rejection of phase-based derivation, and required an emphasis on anti-locality, a rethinking of the phenomenon of successive cyclicity, and a renewed

appreciation for the relevance of case and category in the context of multiple object constructions.

The system I end up with is more relativized than previous accounts, as it makes use of more factors to capture the syntax of applicatives. But I do not see at present how an account that makes use of fewer variables predicts all the attested patterns. At a more general level, the analysis I developed insists that a crucial distinction be made between inherent case and structural case. It also argues that when it comes to determining which elements move where, both distance and featural content matter. Conceptually, my analysis of locality (successive cyclic movement) and anti-locality are more principled than existing alternatives in that they either require fewer assumptions, or the axioms I make use of appear more natural/minimalist in character.

In addition to providing a more adequate characterization of the syntax of applicative constructions, I have developed a semantic analysis of double-object/low applicative constructions. Specifically, I have argued that such constructions involve object-sharing, captured via theta-driven movement, a derivational process that they share with serial verbs and resultative constructions. I have argued that object-sharing viewed as movement may be the source of macro-event formation, the glue that connects subevents together.

If correct, the present thesis offers empirical arguments for various theoretical options currently entertained in the minimalist program, among which movement into theta-position, multiple agree, anti-locality, and early successive cyclic movement

(i.e., movement taking place before the final landing site is introduced into the structure).

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