DOCTOR OF PHILOSOPHY

Prepositions and the syntax of complementation.

Salles, Heloisa Maria Moreira Lima

Award date:
1997

Awarding institution:
Bangor University

PREPOSITIONS AND THE SYNTAX OF COMPLEMENTATION

by

Heloisa Maria Moreira Lima Salles

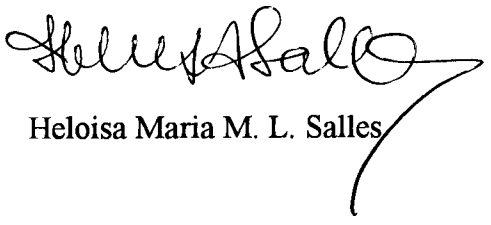
A thesis submitted in partial fulfilment of the requirements
for the degree of Doctor of Philosophy in Linguistics

Department of Linguistics
University of Wales
Bangor
1997

Declaration

I hereby declare that this thesis, which I now submit to the University of Wales in fulfilment of the requirements for the degree of Philosophiae Doctor, has not been accepted in substance for any degree, and is not concurrently being submitted in candidature for any degree. The research reported on here is the result of my own independent investigation, and the extent of my indebtedness to other sources is indicated in the text and in the bibliography.

Candidate:



Heloisa Maria M. L. Salles

Supervisor:

Ian Gareth Roberts

'O discorrer do intelecto deixa as coisas serem o que são e ficarem como estão. O intelecto lógico discursivo nunca trará duas coisas à proximidade que faz de uma o lado de fora ou o lado de dentro de outra. Não é o meio pelo qual as coisas se adaptem e harmonizem. No domínio coisístico, não há coincidência nem sequer oposição. Os opostos, como tão bem nos ensinou Heráclito, são tais que, em qualquer 'posto' está o oposto - o que decerto não acontece com algo que coisa seja. E não há amor. Do mundo das coisas o Eros desertou'.

Eudoro de Sousa

in *Mitologia 1 - Mistério e Surgimento do Mundo.*
Brasília: Editora UnB, p. 48, 1988

Esta tese é dedicada aos meus pais, Bento and Zilmar

Acknowledgements

My first word of gratitude goes to my supervisor Ian Roberts, who accepted me in the doctorate program of the Linguistics Department at the University of Wales, in 1993, and since then has been deeply engaged in the development of my doctorate, and ultimately in my development as a linguist. Ian was impeccable: his orientation was firm, consistent, and continuous. I benefited enormously from the discussions we had. What's more, we became friends, which makes me very pleased!

Next I would like to thank Anna Roussou, my second supervisor. Anna was extremely devoted. Her guidance was consistent and conscientious. Anna was always generous with her ideas, always ready to listen to me. She gave me support and encouragement throughout. My academic debt to her is invaluable. Friendship arose beautifully between us during these years, and we had the best time together!

During my doctorate, I benefited from discussions with various linguists who I would like to thank: Bob Borsley, Annabel Cormack, Anna von Klopp, Maria Rita Manzini, Ianthi-Maria Tsimpli. I also would like to thank those who gave me comments on written pieces of my work, Bob Borsley, Marjon Helmantel, Anna von Klopp, Ursel Luhde, Ianthi-Maria Tsimpli, Heike Zinsmeister.

I am very grateful to my colleagues in my department at the University of Brasília, for their encouragement and support. In particular, Lúcia Lobato and Stella Maris Bortoni who supported me in my application for the scholarship that sponsored my doctorate.

I also would like to thank the Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) for the financial support.

I'm very grateful to all members of staff in the Linguistics Department in Bangor, who made me feel very welcome; a special thanks goes to Angela Pritchard, for her help and warmth.

Many thanks go to my linguists and non-linguists friends for discussions and lots of encouragement, and for having provided me with papers and references: Maya Arad, Elisabetta Battistel, Helena Britto, Dirk Bury, Orlene Carvalho, Susan Clack, Siobhán Cottell, Lee Davies, Maria Christina Gomes, Marjon Helmantel, Najib Jarad, Ewa Jaworska, Mary Kato, Ursel Luhde, Manuela Moutella, Pam MacDonald, Ana Maria Madeira, Margit, Kleanthes Grohmann, Maristela Rocha, Ana Paula Scher, Caro Strujke, and Heike Zinsmeister.

My friends in Brazil deserve a very special thanks - I cannot nominate them, they are so many, thank God! - for their warmth, for their letters, phone calls, CD's, books, magazines (and Brazilian food!), which helped us to cope with the 'saudade'.

I also would like to thank my friends in Bangor who were so kind and made my family and I feel very welcome. We will keep the best memories of the time we spent in Wales. Diolch!

During the writing up, and specially in the very last days, I received lots of help from various friends - again, phone calls, e-mail messages. Thanks to all! A special thanks goes to Marco Aurelio Carvalho, Moira Muir, Anna von Klopp, Helen Pain, Chris Owen, Rhiannon Owen, Fatima Ramos, Anna Roussou and Ian Roberts, and to my dearest partner Paulo, who was writing up his thesis as well, and was always by me! On the other side of the Atlantic Ocean, my parents (and my sister) were looking after my children and putting up with everything in order to give to Paulo and to myself the chance to really concentrate on our work (and finish it!) - all my love, and my gratitude to them!

Finally, my greatest debt of gratitude goes to my family: my children Pedro, Gabriel, Mariana, Ana Cristina and Leandro, and my partner Paulo, for sharing with me all these wonderful years we spent in Bangor, for their love and patience, for their understanding, and friendship. And my big family: my beloved uncles, aunts, cousins, my 'in law' family, my niece Cecilia, my sister Ludmila, and to my dearest parents, Zilmar e Bento, to whom this thesis is dedicated, for their warmth and care, for their constant support and love.

Abstract

This thesis examines the syntax of prepositions from two points of view: firstly, the role of prepositions introducing complements of ditransitive verbs, and secondly, the internal relation between the preposition and its complement. Particular attention is given to the licensing conditions of so-called dative-alternation, as opposed to locative ditransitive constructions, and the phenomenon of preposition-stranding. The study is situated within the theoretical framework of Principle and Parameters, and follows the Minimalist Program (Chomsky (1993), 1995).

Following Hale and Keyser (1993) (cf. also Chomsky (1995)), it is assumed that ditransitive constructions are projections of P and V - double object constructions (DOC) are taken to be projections of a null P, an idea that stems from Kayne's (1984) study of DOC. Crosslinguistic variation in the occurrence of DOC is contingent on the presence of null P in the grammatical system of the language. The question why DOC is not a possible alternative to all ditransitive constructions is discussed. Following a strand of theorising proposing a correlation between argument licensing and the aspectual interpretation of the predicate (cf. Roberts (1985;1987); Tenny (1987; 1994); Borer (1994)), it is argued that the conditions which determine whether DOC emerges as an alternative to overt P constructions are essentially aspectual: in predicates in which the event cannot be *measured out* (i.e. stative predicates), DOC is always possible; in predicates in which the event can be *measured out* (i.e. nonstative predicates), the alternation between DOC and the overt P construction is restricted to the cases in which either argument of the internal predicate is allowed to license the aspectual feature associated with the measuring out process, namely the event measurer (EM) feature - the predicate must allow an interpretation in terms of possession (not location).

Obligatory P-pied-piping which is found in Romance languages, German and Dutch, is shown to correlate with a requirement that phi-features be realised on P. Contraction between P and a definite article or a WH-pronoun is argued to be a morphophonological expression of this requirement. In contrast, English and Scandinavian languages, which do not have contracted forms, allow P to be stranded. On the basis of a study on the conditions licensing the emergence of DOC in the Minas dialect of Brazilian Portuguese, it is argued that crosslinguistic variation with respect to the occurrence of DOC is determined by morphological properties of the language: in particular, the occurrence of null P licensing these constructions is shown to be contingent on the absence of the morphological distinction between accusative and dative in the system of object pronouns.

Table of contents

Chapter 1. Introduction

A fundamental fact about language is its diversity around the world. Another fact is that anyone can speak more than one language, whether as a native or a foreign speaker. In principle, one can learn whatever language there is, provided that certain conditions are met. As far as the acquisition of a native language is concerned, it brings into perspective one of the most intriguing facts about language, namely that the child comes to learn a rich and complex system within a short period of time while exposed to evidence that is impoverished and deficient, due to its incomplete, sparse and noisy character.

The latter fact illustrates so-called Plato's problem (or the problem of poverty of stimulus), which essentially consists of explaining how the cognitive systems arising in human beings display such a degree of specificity and richness on the basis of the limited information provided by the experience. Furthermore, it provides support to the hypothesis that there is an innate faculty in the mind related to language. The language faculty is the subject matter of generative grammar, a theory of linguistic structure which aims to render explicit the principles characterising this particular component of the human mind.

The study of generative grammar, which has Noam Chomsky as its most notable exponent, is concerned with those aspects of sound and meaning that are determined by the language faculty. The language faculty in turn is taken to be a mental organ consisting of two states: (i) the initial state (S_o), which is said to incorporate the genetic language programme that represents the child's innate endowment to language, also called the Universal Grammar (UG), and (ii) the stable or attained state (S_1), which represents the knowledge of a particular language - this stage is triggered as the child is exposed to a particular language, in the process of language acquisition. As Chomsky (1986:57) points out, 'the transition from S_o to S_1 takes place in a determinate fashion, with no conscious attention or choice, and is essentially uniform for individuals in a given speech community despite diverse experience'.

The investigation seeks then to characterise the initial state of the language faculty, and is guided by three fundamental questions:

a. What constitutes knowledge of language?
b. How is knowledge of language acquired?
c. How is knowledge of language put in use?

Answering to these questions, the theory should reconcile the rather paradoxical state of affairs informally presented above: it must be sufficiently *rich* in the options it permits in order to account for the fact that language develops on the basis of limited evidence, while being sufficiently *impoverished* in order to allow the diversity of languages.

The attention is therefore drawn to the I(nternalised)-language, the system of knowledge that underlies the use and understanding of language. In this sense, it is not concerned with the study of the inventory of sentences and utterances, or the collection of actions of behaviours, the E(xternal)-language, as undertaken by structural and descriptive linguistics, and by behavioural psychology. These approaches are in fact at the core of a perennial dispute between 'those of rationalist persuasion, who view the mind as actively organising experiences on the basis of pre-existing schemes, and those of empirist bent, who treat mental processes as a reflection of information obtained from the environment' (cf. Gardner (1985:8)).

The present study will follow the tradition of studies of generative grammar, being situated within the Principles and Parameters framework, and adopting the assumptions of the minimalist program of research, as developed in Chomsky (1993, 1995). I shall summarise the minimalist assumptions in the next section.

1.1 The Minimalist Program

The minimalist program of research as proposed in Chomsky (1993, 1995) is a development of the framework for Universal Grammar (UG) that has been referred to as the principles-and-parameters (P&P) approach. The P&P approach takes UG to be a set of universal and highly restricted principles with a finite array of options as to how they apply (parameters) - the values of parameters being specified in the process of language acquisition.

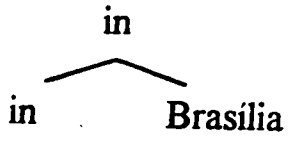
A standard assumption in the minimalist program is that a language consists of two components: a lexicon and a computational system. The derivation of a linguistic expression implies a choice of items from the lexicon, and a computational procedure constructing them as a pair, namely (π, λ), which is interpreted at the articulatory-perceptual (A-P) and conceptual-intentional (C-I) levels, respectively, as instructions to the performance systems in which language is embedded. The elements π and λ correspond in turn to representations at LF and PF, each consisting of *legitimate objects*, that is, objects that can receive an interpretation at the relevant level. A representation consisting of such *legitimate* objects satisfies the condition of Full Interpretation: if a representation satisfies FI in a given level of representation, it *converges* at this level; if the representation converges at both LF and PF, the derivation is said to converge; otherwise, it crashes.

The language meets then a condition of *inclusiveness*: the interface levels consist of rearrangements of the properties of the lexical items entering the computation, nothing else. Economy considerations which only apply to convergent derivations determine then the optimal conditions for a (formal) syntactic object to satisfy the interface conditions. Given a set of lexical choices, namely a *numeration*, the operations of the computational system recursively construct new syntactic objects from items in the numeration, and syntactic objects already formed. These operations are costless: they involve the operation Select, which picks up an item from the *numeration* and introduces it in the derivation (repeating the operation until the

numeration is exhausted), and Merge, which combines two existing syntactic objects, given the requirement that only single objects can be interpreted at LF.

For example, the C_{HL} takes the lexical items *in* and *Brasília* and merges them forming {in, Brasília}, a binary operation. This operation is in turn asymmetric: one of the constituents projects, being therefore the head of the (new) syntactic object, giving it a label, hence L = {in{in,Brasília}}. This could be informally represented as in (1):

(1)



In this sense, the label of *in* is determined derivationally, this process interacting with output conditions just to the extent that the properties involved in the operation are interpreted at the interface as well. Accordingly, the object L, which is (strictly) formed by the (lexical) features of its constituents (hence the idea that its phrase structure representation is bare), is a maximal category (as opposed to minimal category which is a terminal element, that is a lexical item). Furthermore, there are no bar levels and nothing distinguishes the lexical items and the *heads* projected from them.

An important intuition of the Minimalist Program is that the operations of the computational system apply anywhere. In the course of the computation to LF, at some point, an operation Spell-Out applies striping away from the derivation the elements that are mapped by the *phonological component* - this is the *overt* computation: the overt computation involves Morphology, which constructs word-like units that are then subject to further phonological processes, finally reaching PF. After Spell-Out, the computation to LF proceeds in the *covert component*.

As part of the minimalist design of language, LF and PF are taken to be the only (conceptually necessary) levels of representation - in this sense, D- and S-structure are dispensed with (a departure from previous approaches). This is consistent with minimalist assumptions concerning language variation. Drawing on studies such as Borer (1984), it is assumed that variation is determined in the lexicon (lexical arbitrariness and PF component aside): in particular, it is assumed that the formal-

morphological features of functional categories (cf. Tense, Complementizer, Determiner, etc) are under variation, whereas the properties of the substantive categories, namely Noun, Verb, Adjective and (presumably) Preposition remain invariant.

Crucially, morphological properties are taken to determine the *displacement* of syntactic objects in the sensory output. The question of how the displacement property is realised is addressed in terms of the so-called **Checking Theory**. The basic motivation of this theory is the proposal that all modes of structural Case be recast in terms of a mechanism of feature checking under the spec-head configuration. Accordingly, (accusative) Case assignment under government is eliminated. In particular, it is proposed that all instances of movement are motivated by the need for the moved element to be licensed by a functional head. In this respect, as noted in Roberts (1997), it is a theory of how functional heads license lexical heads.

It is assumed that a core property of the computational system is the mechanism of checking (formal) features which ensures that the lexical elements occupy the appropriate positions for receiving the appropriate interpretation at the relevant interface, as required by Full Interpretation. A basic operation for feature checking is Move. This operation takes an element α from an existing syntactic object B and raises it to target K, forming a new syntactic object B'. Move creates then two copies of the same element, namely the CH(ain) = (α, $\mathfrak{a}$), where α c-commands $\mathfrak{a}$. CH = (α, $\mathfrak{a}$) meets a condition on uniformity, whereby its members are uniform with respect to phrase structure status (whether maximal or minimal).

The operation Move is constrained by the Minimal Link Condition, which is drawn from the notion of Relativized Minimality, as developed in Rizzi (1990). This condition is formulated in terms of the notion *attraction*, as in (2):

(2) K (the target) attracts F if F is the closest feature that can enter into a checking relation with a sublabel of K.

Another constraint on the Move operation is that it seeks to raise just F, as it is regulated by the principle of Procrastinate which establishes that operations at the covert component are less costly - morphological properties of the language may require that extra lexical material be carried along with F, characterising a kind of generalised *pied-piping*.

Feature checking occurs either in the overt or the covert component, depending on whether it involves a strong or a weak (categorial) feature. Feature strength is under variation among languages: strong features are detectable at PF, hence they need to be eliminated by checking in the overt syntax, under Spell Out. Weak features, instead, are invisible to the PF component, being checked after Spell Out. Feature strength determines then the exact position in which Spell Out occurs, accounting for crosslinguistic variation with respect to the position of syntactic objects in the syntactic output.

1.2 An overview of the data

In this thesis, I will discuss the syntax of prepositional phrases (PP) in languages such as Portuguese and English, considering in particular PP complements in *ditransitive* constructions, as illustrated in (3a). In the discussion, *ditransitive* constructions basically refer to cases in which the verb takes two **obligatory** complements (cf. (3b-c)) - I shall leave aside cases in which P takes sentential complements:

(3) a. Mary put the book on the shelf
b. *John put the book
c. *John put on the shelf

Verbs with a single obligatory PP complement, as illustrated in (4), will be also taken into consideration:

(4) Mary spoke to John

In the analysis, I shall be particularly concerned with a well-known fact about the syntax of ditransitive constructions, namely the alternation between the construction with the overt P and the Double Object Construction (henceforth DOC), which is found in some languages, for instance English, but not in Romance languages, as illustrated in (5) and (6), respectively[1]:

(5) a. Mary gave a book to John
b. Mary gave John a book

(6) a. Maria deu um livro ao João
b. *Maria deu o João um livro

A great deal of research has been done on the alternation illustrated in (5). Within the Government and Binding framework, Kayne's (1984) and Larson's (1988) analyses proved to be very influential. While proposing different approaches for the origin of the alternating pairs (non-derivational and derivational, respectively), these studies discuss the conditions on Case assignment within the relevant configurations, given the general assumption that arguments are licensed in Case positions (cf. Chomsky (1981), (1986a)). Kayne's analysis further addresses the issue of crosslinguistic variation in the occurrence of DOC among Romance and Germanic languages: his proposal is that crosslinguistic variation in the governing properties of P, which in turn determine crosslinguistic variation in the Case assigning properties of P - this proposal is adopted in Larson (1988) and in a number of subsequent studies of this phenomenon, and related subjects (Baker (1988); Haegeman (1986); Hale and Keyser (1993)).

---

[1] Constructions with two complements in languages with morphological case marking, as illustrated in (i), from German, are not analysed as instances of DOC:

(i) Mary gab Max/dem jungem ein Buch
M. gave Max/theDAT boy aACC book
M. gave Max/the boy a book

A property of DOC is that it has a rigid structure. The possibility of having scrambling with this construction in German is taken as a piece of evidence for the claim that (i) is not DOC:

(ii) daB man das Buch ihr gestern zurückga
that they the book her yesterday back gave
(example from Haider (1992:14))

As will be shown Chapter 5, the occurrence of DOC constructions is contingent on the absence of the morphological distinction between accusative and dative in the system of object pronouns.

Drawing on Kayne's (1984) and Larson's (1988) ideas, Hale and Kayser (1993) propose that the constructions in (3a) and (5) should be analysed as predicates of change, both being projections of V and P - accordingly, (5b) is taken to involve a null P, an idea that had been first proposed in Kayne (1984). This is illustrated in (7):

(7) $[_{VP}\ V\ [\ _{VP}\ DP_1\ V_t\ [_{PP}\ P/P_e\ DP_2\ ]]]$

Hale and Kayser's (1993) analysis is developed within a broader discussion leading to a theory of argument structure in which it is proposed that thematic roles are determined configurationally, that is, they are derivative of the relation holding between the lexical head projecting the configuration and its argument(s). Given this, the constructions in (3) and (5) are taken to be associated with the same thematic roles.

The problem with Hale and Keyser's (1993) analysis is that, on the assumption that the constructions in (3a) and (5) project the same configuration, being associated with identical thematic roles, it is not possible to account for the fact that the alternation between the construction with the overt P and the double object construction (henceforth DOC) is not a property of all ditransitive constructions, as illustrated (8):

(8) *Mary put the shelf the book

In fact, as has been extensively shown in Green's (1974) seminal study, there is a correlation between DOC and possession interpretation (cf. also Kayne (1984); Pinker (1989); Johnson (1991)). An important point in Green's (1974) study is that possession is understood as also involving metaphorical transfer: accordingly, in constructions such as (9), it is assumed that a *percept* or an *experience* comes to be possessed. For this reason, verbs occurring in DOC are often referred to as *dativizable* verbs.

(9) a. Mary showed the picture to John

b. Mary showed John the picture

Leaving aside the rather complicated problem of metaphorical extension, the correlation between DOC and possession interpretation is quite straightforward, as indicated in the contrasts in (10) and (11), provided by Green:

(10) a. John brought flowers to Mary
b. John brought Mary flowers

(11) a. Mary brought flowers to the table
b. *Mary brought the table flowers
(examples adapted from Green (1974:103))

In (10), possession interpretation arises, and it is possible to have the alternating pair; in (11), however, the semantic properties associated with the *goal* argument *the table*, namely the fact that it is inanimate, renders possession interpretation impossible - in this case then, *bring* is interpreted as *put* in (3).

This observation also holds for the alternation in benefactive constructions, as illustrated in (12):

(12) a. Mary baked a cake for John.
b. Mary baked John a cake.

As pointed out in Green, DOC in (12b) does not allow an interpretation in which *Mary* does the action as substitute for *John* or as an employee of *John's*: under these two interpretations, possession interpretation does not arise, at least as a consequence of Mary's participation in the event.

These considerations correlate with Pinker's (1989) discussion of the contrast in (13):

(13) a. Mary pushed the box to John

b. *Mary pushed John the box

Pinker observes that the problem in (13b) is that lexical properties of the verb require that *John* be interpreted as the *goal of location*, exactly as *the table* in (11a), and *the shelf* in (3a).

Moreover, the reverse pattern is also found, namely cases in which DOC is possible, as illustrated in (14a), and the construction with the overt P is ruled out, (at least) under an identical interpretation, as illustrated in (14b) - as pointed out to me by native speakers, (14b) is only possible under the interpretation in which a *kiss* is literally moved from *Mary* to *John*:

(14) a. Mary gave John a kiss

b. *Mary gave a kiss to John

The same observations apply to (15-16), in which DOC is the only possibility, unless *John* is literally handed over *a cold* or *a broken arm*:

(15) a. Mary gave John a cold

b. *Mary gave a cold to John

(16) a. Mary gave John a broken arm

b. *Mary gave a broken arm to John

The question then is why does possession interpretation allow for DOC? Or conversely, why is it that in the absence of possession, DOC is not possible. One strand of analysis proposes that the alternation is lexically determined: the verb is marked in the lexicon as licensing two different frames or thematic structures (hence each frame is independently projected) - cf. Green (1974), Jackendoff (1990b), Haider (1992), among others.

In Haider (1992), for instance, it is proposed that verbs allowing for the *dative*-alternation are lexically marked as being 'open to different conceptualisations': each conceptualisation reflecting a different argument structure. Thus, in the overt P construction (cf. *Mary gave the book to John*), the verb is conceptualised as a *transfer*-verb, whereas in DOC (cf. *Mary gave John a book*), it is conceptualised as a verb with an *affected* experiencer. Accordingly, the impossibility of having either construction is explained in terms of some sort of incompatibility/conflict with the relevant conceptual representation.

Another strand of analysis takes the argument structure to be the same, the constructions in the alternating pair being derivationally related (cf. Larson (1988); Emonds (1993)). Here, the basic concern is to determine the conditions licensing the derived construction. In Larson's analysis, for instance, it is proposed that DOC is derived from the overt P construction under a passivization-like process. Emonds' (1993) main point is that the deep structure of an indirect object is a PP, this structure being preserved under the process deriving the alternating pair.

What I would like to propose is that the dative-alterantion be discussed in terms of the aspectual interpretation of the predicate. Following a strand of theorising establishing a correlation between argument licensing and the aspectual interpretation of the predicate (cf. Roberts (1987), Tenny (1994), Borer (1994), Arad (1996)), I will propose that in nonstative constructions, arguments are licensed by the aspectual properties of the predicate which in turn are represented within the projection of V and P in terms of aspectual features (cf. Manzini and Roussou (1997)): in predicates in which the event cannot be measured out (i.e stative predicates), DOC is always possible; in predicates in which the event can be measured out (i.e nonstative predicates), the alternation between DOC and the overt P construction is restricted to the cases in which either argument of the internal predicate is allowed to license the aspectual feature associated with the measuring out process, namely the event measurer (EM) feature - these are predicates involving possession interpretation (as opposed to locative predicates).

In particular, DOC corresponds to a pattern of aspectual calculus whereby the complement in the upper position is interpreted as providing both the scale along which the event progresses and the endpoint - this pattern being restricted to possession interpretation (and conversely incompatible with locative interpretation). The construction with the overt P, in turn, corresponds to a pattern of aspectual calculus according to which one of the arguments provides the scale along which the event progresses and the other provides the endpoint. As far as the aspectual calculus is concerned, no difference of interpretation arises between (5a) and (5b).

Under this approach, it will be also possible to account for the contrasts in (13-16) as well as the difference of interpretation arising in (17), in which (17b), but not in (17a), entails that the children learned French (cf. Green (1974)):

(17) a. Mary taught French to the children
b. Mary taught the children French

I will further argue that the *dative*-alternation in English is crucially determined by the presence of a specific morpheme in the grammatical system of the language, namely a null P_{WITH}, which is (exclusively) designed to be embedded in a V projection - in the absence of this morpheme, DOC is not found. This idea, which stems from Kayne's (1984) proposal of licensing the indirect object in DOC as a PP, follows Hale and Keyser's (1993) proposal concerning the projection of DOC as well as the construction with the overt P (cf. (7)).

Given the asymmetric position of the internal complements in (7), it is possible to account for a property characterising DOC, namely the asymmetric relation between the internal complements, which is observed in the contrastive binding patterns illustrated in (18) and (19), among other scope phenomena requiring a c-command relation between the binder and the bindee, such as quantifier-bound pronoun pairs, weak cross-over, *wh*-extraction restricted by superiority, constructions with reciprocals, and negative polarity (cf. Barss and Lasnik (1986)):

(18) a. John showed Mary to herself.
b. *John showed herself to Mary.

(19) a. John showed Mary herself.
b. *John showed herself Mary

In the analysis, it will be possible to account for the contrast in (20) concerning the formation of WH-constructions and passives with the *indirect* object: it will be argued that the above-mentioned mechanism of aspectual calculus can be represented in terms of aspectual features in the projection of V and P. These features in turn are associated with the relevant arguments, determining the conditions on extraction of the indirect object.

(20) a. Who did Mary give a book *(to)
b. John was given a book (*to)

As far as the relation between P and its complement DP is concerned, it will be discussed in terms of the crosslinguistic variation among Romance and Germanic languages in the occurrence of P-stranding, illustrated in (21) and (22), from Portuguese and English, respectively:

(21) a. *Que você falou com?
b. Com quem você falou?

(22) a. Who did you talk to?
b. To whom did you talk?

It will be argued that obligatory P-pied-piping in Romance languages, German and Dutch is determined by a property of these languages determining that phi-features be realised on P, contracted forms involving P and either the definite article or the WH-pronoun being the morphophonological expression of these phenomenon. In English and Scandinavian languages, in which these contracted forms are not found, there is no requirement on phi-features on P, hence P can be stranded.

On the basis of a study on the conditions determining the emergence of DOC in the Minas dialect of Brazilian Portuguese, it will be argued that crosslinguistic variation with respect to the occurrence of DOC (cf. (5) and (6)) is determined by morphological properties of the language: in particular, the occurrence of the null P licensing these constructions is contingent on the absence of the morphological distinction between accusative and dative in the system of object pronouns. The lack of the accusative-dative morphological distinction in turn will be shown to correlate with the lack of phi-features on D, allowing for a correlation between the DOC and P-stranding.

Chapter 2. The dative-*alternation: previous accounts and theoretical background*

As mentioned in Chapter 1, an interesting aspect of the syntax of PP in ditransitive constructions is the *dative*-alternation, which is found in languages such as English, but not in Romance languages. In the present chapter, I shall review three studies dealing with this phenomenon within the GB framework, namely Kayne's (1984), Larson's (1988), and Emonds (1993) analyses. It will be shown that these accounts are very insightful, but there are some aspects of the alternation that remain unaccounted for, in particular the issue of why it is restricted to the cases involving possession interpretation.

In fact, as pointed out in Haider (1992), this phenomenon points to a correlation with the conceptual representation of the predicate, requiring then investigation in terms of argument structure. For this reason then, I will discuss two approaches to argument structure that have been recently put forward in the literature. First, I will present Hale and Keyser's (1993) analysis of ditransitive constructions, which is developed within a broader discussion proposing a configurational theory of argument structure. Next, I will present Tenny's (1994) study of the role of lexical aspect for argument licensing; I shall further present Borer's (1994) and Arad's (1996) formalisations of Tenny's ideas. These approaches will provide the background for the analysis that I shall propose in Chapter 3.

The chapter is organised as follows: in section 2.1, I shall discuss the approaches put forward within the GB framework: Kayne's (1984) analysis will be presented in section 2.1.1, Larson's (1988) analysis in section 2.1.2, and Emonds' (1993) analysis in section 2.1.3. In section 2.2, I shall present Hale and Keyser's (1993) theory of argument structure. In section 2.3, I shall present Tenny's (1994) study followed by Borer's (1994) and Arad's (1996) formalisation of Tenny's ideas. In section 2.4, a conclusion will be provided.

2.1 The *dative*-alternation within the GB framework

A general assumption within the GB framework is that Case is assigned in all languages, regardless of whether or not it is realised morphologically. This idea, which was originally proposed by Jean-Roger Vergnaud, is initially formalised in terms of a filter in the PF-component establishing that every noun with a phonetic content must have Case. Case in turn is taken to be assigned to an NP by a category that governs it (cf. Chomsky (1981))[2]. Accusative and oblique Case are assigned by verbs (V) and prepositions (P), respectively, in the configuration in (1)[3]:

(1) $[_{XP}$ X YP]]

Nominative Case is assigned by inflexion (INFL) to NP in the subject position of finite clauses[4]. In infinitive clauses, instead, the subject position is not assigned Case, hence an NP cannot be found in this position, as illustrated in (2a), unless there is an element outside the clause which assigns Case to it, as illustrated in (2b-c) - the latter are referred to as exceptional case marking (ECM) constructions:

(2) a. *[John to be the winner] is unlikely.

b. For [John to be the winner] is unlikely.

c. I believe [John to be the winner].

(examples from Chomsky,1986a:186)

---

[2] A formulation of the notion of government is as provided in Chomsky (1986b):

(i) A governs B iff A c-commands B and there is no category C such that C is a barrier between A and B.

For the notion of *barrier*, it is proposed that maximal projections that are not theta-marked arguments create barriers to government:

(ii) γ is a barrier for β iff (a) or (b):

a. γ immediately dominates δ, δ a B(locking) C(ategory) for β

b. γ is a BC for β, $\gamma \neq$ IP

A BC is in turn defined in terms of the notion of L-marking, and L-marking consists of government under theta-marking by a lexical category:

(iii) γ is a BC for β iff γ is not L-marked and γ dominates β.

[3] An additional requirement on *adjacency* predicting that case assigners must not be separated by an intervening element from the NP's which they case-mark has been proposed in Stowell (1981). For the sake of simplicity I will not consider this issue at this point.

[4] For the sake of simplicity, INFL is taken to represent a collection of features [+/–Tense; Agreement].

Another development of these ideas is the *visibility condition* which was proposed by Joseph Aoun, and establishes that an argument is only *visible* for theta-role assignment if it appears in a Case position at S-structure. Under the *visibility condition* then not only overt NP but also empty categories that are arguments need to have Case. Hence, sentences as in (3) are not derived, since the variable that is bound by *who* is not *visible* for theta-marking, because it is in a position that is not assigned Case:

(3) *who does it seem [e to be intelligent]
(from Chomsky,1986a:95)

Under this view, it is also possible to account for the basic property determining the distribution of the empty category PRO, namely that it is not governed: PRO occurs in the subject position of a non-finite verb in control sentences, as illustrated in (4a), but is not found in *believe*-constructions, as illustrated in (4b) - recall that *believe* assigns Case to the subject of the embedded clause, as illustrated in (2b), hence it governs this position:

(4) a. I tried [PRO to be the winner]
b. *I believed [PRO to be the winner]

Thus, as pointed out in Chomsky (1986a:183), 'PRO cannot be a complement, the subject of a finite clause, or the subject of a nongerund NP - as in [PRO *story*] meaning *someone's story*, because these are governed positions' - a desirable result.

Another development of Case theory is the assumption that all lexical heads assign Case. In Chomsky (1986a), it is proposed that structural and inherent Case should be distinguished as follows: structural Case, namely accusative and nominative, is assigned by V and INFL, respectively, at S-Structure, under government; inherent Case is assigned by P, N and A, at D-structure, in terms of theta-marking[5]. The

[5] Other developments of Case theory are found within the GB framework. In Baker (1988), it is proposed that incorporated nouns are not subject to the Case Filter. Also, it is suggested that different kinds of Case may be identified, which would be associated with closely related but slightly different *Visibility Conditions*: Baker points out that apart from inherent and structural Case, a *semantic* Case is found in languages that have rich case-marking systems, such as Estonian, that has an *ablative* case

assumption that N and A assign Case, not only V and P, also involves the distinction between the notions of Case assignment and Case realisation. The idea is that N and A, contrary to P, assign Case at D-Structure, but cannot realise it, hence the necessity of inserting a morphological Case marker at S-Structure to do so. This explains *of-insertion* in languages such as English, as in (5a), as well as POSS-insertion, by which genitive Case is realised as the subject of a NP, as in (5b) :

(5) a. the destruction *of* the city
b. John *'s* story disturbed me

With this background, let us next consider Kayne's (1984) analysis of DOC in English.

2.1.1 Kayne's (1984) analysis

Kayne's (1984) study on the *dative*-alternation, illustrated in (6), is developed on the basis of a more general discussion concerning crosslinguistic variation on the governing properties of P:

(6) a. Mary gave the book to John
b. Mary gave John the book

he proposes that the occurrence of DOC in English, as opposed to its absence in Romance, is due to the fact that English P's, but not their Romance counterparts, are proper/structural governors, exactly like V's, which means that P in English governs a complement position, whereas Romance P's cannot do so. Since both V and P in English govern in the same way, they undergo reanalysis, which is not possible in Romance languages, given that P, contrary to V, is not a proper governor (cf. Chapter 5 for more discussion on this proposal).

---

which appears in sources, an *allative* case which appears on goals, an *adessive* case which appears on locations meaning *on*, and several others. According to him, the properties of this type of case are captured in a condition by which 'A assigns semantic Case X, then B receives $theta_X$ from A if and only if B receives semantic Case X from A'. In this sense, inherent Case is seen as a looser condition between (morphological) case and theta role association, whereas structural Case is looser still, given that it can be assigned blindly, without reference to semantic or other properties.

Following Oehrle (1976, cited in Kayne (1984)), Kayne takes DOC and the overt-P construction to be independently projected. Whereas (6a) is projected as in (7a), (6b) is projected in a small clause configuration, as illustrated in (7b), in analogy to the construction in (7c)[6]:

(7) a. [V NP] *to* John - Mary gave a book to John
b. V [XP NP] - Mary gave *John a book*
c. V [XP NP] - John believed *Mary a genius*

The distinction between (7b) and (7c) is then taken to depend on how the XP is realised[7]: if XP = NP, a *subject-predicate* interpretation arises, as in (7c); if XP = [$_{PP}$ P_e NP], it is a *possession* interpretation that arises, as in (7b). Crucially, in (7b), the argument *John* is introduced by a null P, which reanalyses with V, given the fact that they are both structural governors - under V+P reanalysis, the null P transmits Case from V to its complement. Thus, (7b) only differs from (7a) with respect to the order of the complements and the emptiness vs. non-emptiness of P. Moreover, in both (7a) and (7b), the *possessor* thematic role is realised as a PP.

However, Kayne (1984) himself points out that the *possessor* thematic role may be assigned to a bare NP as well, as in (8) - in this case, Kayne observes, the overt P makes the null P superfluous:

(8) John supplied Mary with information.

---

[6] The structure in (7b) is proposed in relation to the notion of *unambiguous path* which in turn is proposed as a substitute for c-command in binding, the ECP and government. An *unambiguous path* is informally defined in Kayne (1984:132) as 'a path such that, in tracing it out, one is never forced to make a choice between two (or more) unused branches, both pointing in the same direction'. Assuming that the NP complements in (7b) need to be governed by V, since they receive Case from V, the immediate consequence of adopting the unambiguous path requirement is that only binary branching structures should be allowed (note that c-command holds for n-ary branching as well (n>2)).

[7] A further difference between them is that it is possible to find the embedded clause with the overt *be* copula, as in *Mary believes John to be a genius*, whereas the equivalent with the overt *have* is not found, in English.

As the occurrence of the null P is taken to be contingent on whether the other argument is introduced by an overt P, and assuming (8) to have the structure V [NP PP], Kayne's (1984) proposal loses the generalisation he wants to establish, namely that possession interpretation within the small clause is determined by the realisation of the *possessor* argument as a PP, giving rise to the configuration V [PP NP].

Within the small clause, possession interpretation can be found in either V [PP NP] (cf. (7)) or V [NP PP] (cf. (8)), suggesting that what distinguishes it from the *subject-predicate* interpretation (cf. (7c)) is the presence of PP (irrespectively of whether or not it is associated with the possessor argument). Thus, in Kayne's analysis, possession interpretation is associated with different configurations, namely V NP PP (cf. (7a)), V [PP NP] (cf (7b)), and V [NP PP] (cf. (8)). Moreover, the syntactic realisation of the *possessor* thematic role is not uniform: it can be projected as either a PP (cf. (7a) and (7b)), or an NP (cf. (8)).

The projection of different configurations should not be seen as a problem within an approach assuming that the relevant constructions are independently projected. However, what constitutes a problem is that the small clause configuration as projected in Kayne's analysis does not capture the fact that in DOC the first NP complement seems to asymmetrically c-command the second NP complement, as extensively shown in Barss and Lasnik (1986) with grammatical phenomena sensitive to c-command, namely quantifier-bound pronoun pairs, weak cross-over, *wh*-extraction restricted by superiority, constructions with reciprocals, and negative polarity (cf. Chapter 1)[8].

On the basis of this analysis, Kayne further accounts for the correlation between the existence of indirect passive with nominative subject and the loss of the accusative-dative distinction in English (also noticed by Haugen 1976, Jespersen, 1974, Lieber, 1979, cited by Kayne, 1984:117): assuming that accusative Case implies

---

[8] I leave aside the possibility of projecting the small-clause in Kayne's analysis with discontinuous constituents or unrealised heads. I assume with Barss and Lasnik (1986) these to be *ad hoc* solutions within Kayne's analysis. Note that the idea that DOC is projected in a clause-like configuration will be retained: it will be argued on independent grounds that DOC embed a predicate headed by a null P (cf. Chapter 3) (cf. also Jackendoff (1990)).

structural/proper government, and that the loss of the accusative-dative distinction is a necessary condition for P assigning accusative Case, he proposes that P assigning accusative Case is in turn a necessary condition for the emergence of pseudopassives with nominative subjects. Thus, the existence of indirect passives in English is taken to be an evidence that English P's assign accusative Case, further implying that they are structural governors; the absence of these phenomena in French, for instance, is due to the fact that French P's are oblique Case assigners - recall that in Kayne's analysis, Romance P's are not structural governors, hence they cannot assign accusative Case[9].

On the assumption that DOC involves a null P, Kayne then proposes that the indirect passive construction be seen as an instance of P-stranding, as illustrated in (9) - accordingly, the same conditions allowing for P-stranding with the overt P should hold in this case (cf. Chapter 5 for more details on Kayne's proposal of establishing a correlation between DOC and P-stranding):

(9) a. Mary was given a book.
b. $Mary_i$ ... P_e [NP_i e] a book

However, the logical implication among these facts does not hold as formulated in Kayne's discussion: as noticed in Roberts (1985; cf. also note 8), some languages having DOC, e.g. Dutch, and therefore implying the same governing properties of English P's, do not have indirect passives. However, there seems to be a correlation between DOC and the accusative-dative (morphological) distinction: as will be argued in Chapter 4, on the basis of data from Brazilian Portuguese, the loss of the morphological distinction between accusative and dative is a necessary condition for the emergence of DOC. As for indirect passives with nominative subject, they seem to be constrained by a more general condition preventing PP subjects (hence they should

[9] Roberts (1985) gives a different account for the loss of oblique Case in English. He proposes that P developed the ability to assign accusative Case in English independently of the absence/presence of the morphological distinction between accusative and dative: he proposes that the emergence of pseudopassives is the trigger experience for setting the Oblique Case Parameter negatively - in this sense, it is a cause, not a consequence, of the loss of oblique Case. This account explains the split in Germanic languages with respect to the way the OCP is set. If the presence of overt accusative-dative distinction were to count as the trigger experience for setting the parameter positively, Dutch lacking accusative-dative case morphology would be set negatively, which is not a desirable result, since it does not have either P-stranding, or pseudopassives.

be found in languages allowing for P-stranding - *quirky* subjects should be seen as an alternative way to circumvent the above-mentioned constraint).

Another point that Kayne's (1984) analysis does not explain is what exactly makes English P's, but not their Romance counterparts, proper governors. As pointed out in Roussou (1996), this notion is rather stipulative, as it does not follow from any independent principle[10]. For this reason, Kayne's analysis should be reconsidered anyway. However, various points will be retained, such as the idea that DOC involves a null P, and embeds a clause-like configuration which is associated with possession interpretation.

Consider next Larson's (1988) analysis.

2.1.2 Larson's (1988) analysis

According to Larson's (1988) analysis, DOC in (6b), repeated here as (10b), is derived from the construction with the overt P in (6a), repeated here as (10a), under an abstract process of passivisation occurring within the VP domain - this process parallels with passives in the IP domain:

(10) a. Mary gave a book to John
b. Mary gave John a book

Larson points out that a derivational approach to this phenomenon is a desirable result under Baker's (1988) Uniformity of Theta-Assignment Hypothesis (UTAH) which states that identical thematic relationships are represented by identical structural

---

[10] Roussou's (1996) observation concerns Rizzi's (1990) use of this notion in the analysis of the *that*-t phenomenon, illustrated in (ia):

(i) Who do you think (*that) left?

For Rizzi, the ungrammaticality is due to the fact that I, although a proper governor, does not c-command the trace in its specifier position. C in turn, although c-commanding the trace, cannot license it, because it is not a proper governor. This problem is circumvented, however, if C is radically empty: in this case, the trace in spec,CP triggers an agreeing C form, which turns it into a proper-governor. As pointed out in Roussou, this sort of account cannot be maintained within the minimalist framework: 'the spec-head and head-complement configurations are derived independently and are

relations at the level of D-Structure. He further suggests that the derivational approach allows for a correlation with languages having the so-called aplicative constructions in which a highly productive relation between the oblique and the double object structure suggests derivational relatedness.

Following Chomsky's (1955; 1977, cited in Larson) idea that V and its indirect object make up a constituent that excludes the direct object, Larson proposes that (10a) is projected in a structure in which a [V [to NP]] configuration, which selects for an NP in its specifier position, is embedded in a configuration headed by a light (null) *v*, to which the lower V ultimately raises[11]. This is illustrated in (11):

(11) $\ldots[_{vP}$ give $[_{VP}\ NP_1\ t_{give}\ [_{PP}$ to $NP_2\ ]]]\ldots$

The embedded configuration is taken to have a clausal status: *give* assigns Case to its internal argument NP_2 (this Case being realised by the dative P, namely *to*) and, given Burzio's generalisation, also assigns an external theta role, to NP_1. The layered VP structure is in turn taken to follow from the interaction between the so-called Single Complement Hypothesis and the assumption that the structure of the predicate must show as many A-positions as it has thematic roles.

Larson acknowledges that the structure in (11) is derived from work by Chomsky (1955, 1975, cited in Larson), as already pointed out, and Fillmore (1965, cited in Larson), as well as the development of these ideas in Bach (1979 cited in Larson), Dowty (1979, cited in Larson), and Jacobson (1983, 1987, cited in Larson). As a piece of evidence for the idea that V and the indirect object make up a

---

'costless' since they are created by Merge which applies to any two lexical items and not to a selected set' (p.2) (cf. also Chapter 1).

[11] This proposal is supported by, among others, an argument of the type developed in Marantz (1984, cited in Larson (1988)) to account for the claim that it is V' that assigns a theta-role to the matrix subject, and not simply V. Larson (1988:340) suggests that in sentences such as (i) 'the exact role that is assigned to the direct object depends on the nature of the recipient appearing in the goal phrase':

(i) a. Beethoven gave the Fifth Symphony to the world
b. Beethoven gave the Fifth Symphony to his patron

Whereas in (ia) the transfer of possession is metaphorical, in (ib) a physical object is transferred, and this is due to the fact that 'giving an object to the world (to posterity , mankind...) has a rather different character from giving an object to an individual'.

constituent, Larson invokes the existence of discontinuous idioms (cf. Mary *took* Felix *to task;* Felix *threw* Oscar *to the wolves*).

Regarding DOC in (10b), Larson proposes that an abstract process of passivization is responsible for the absorption of the Case assigning ability of the verb (*to*, being a pure Case marker, is absorbed as well), and the concomitant demotion of its external theta role. This process forces movement of the dative argument to the *subject* position of the inner VP, which becomes a non-thematic position under passivization. In the *subject* position, the dative argument is assigned Case by *give*, which undergoes movement to the higher light *v*. The direct object in turn is assigned its theta role in a position adjoined to V'. This is shown in (12):

(12) ...[$_{VP}$ give [[$_{VP}$ Mary t_{give} [$_{NP}$ t_{Mary}]] [$_{NP}$ a book]] ...

Due to a process of reanalysis which recategorizes V' as V, the outer NP becomes a sister of the complex resulting predicate, and is assigned Case in the canonical way (that is, under government). The result is that the two NP complements are assigned accusative Case. Larson's suggestion is that every transitive verb has two accusative Cases: one structural, which is assigned by V in connection with Infl (V is taken as a *host*); and one inherent, which is assigned by V in connection with the thematic properties of V - in ditransitive constructions, each Case is *pulled apart* and assigned to different arguments [12].

Within these configurations, the contrasts in anaphor binding, among other scope phenomena, pointed out in Barss and Lasnik (1986) (cf. also Chapter 1), are accounted for: on the assumption that c-command is required, and given the asymmetric projection of NP_1 and NP_2 in (11) and (12), the anaphor is bound in (13a) and (14a), but not in (13b) and (14b), hence the latter are ruled out:

[12] Larson proposes that in monotransitive constructions, the NP is assigned structural and inherent Case, both being *superimposed* in this position.

(13) a. John showed Mary to herself.
b. *John showed herself to Mary.

(14) a. John showed Mary herself.
b. *John showed herself Mary

Larson's derivational approach to the *dative*-alternation has been extensively discussed in the literature (cf. Jackendoff (1990b), Haider (1992), Emonds (1993), Hale and Keyser (1993), Pesetsky (1995), among others). Most of the problems that have been pointed out refer to theoretical issues on Case assignment, such as the rather stipulative character of the principle of argument demotion implied by (abstract) passivization, the process of reanalysis recategorising V' as V, and the mechanism itself of (abstract) passivisation deriving DOC.

An important point is made in Jackendoff (1990b): it is not clear why the mechanism of passivisation does not apply uniformly in other alternating ditransitives: this is the case of *load/smear*; *supply/provide* alternating pairs in which an overt P, namely *with*, surfaces in the (alleged) derived construction (contrary to *give/send* pairs in which *to* is *absorbed*); benefactive DOC seem not to conform to the derivational approach either, as *for* suppression cannot be linked to (abstract) passivization absorbing the verb's Case marking on the complement of *for*: *for*-phrases being adjuncts, the verb does not Case-mark the object of the preposition anyway. Also, as Haider (1992:21) points out, the alternation between DOC and the overt-P construction and its correlation to possession interpretation is not captured: 'under a derivational approach it is unexpected that move-NP is contingent on the conceptual representation of the verb involved'.

From Larson's analysis, I shall retain the structure in (10), as well as the idea that the complements are licensed in a clause-like configuration, which in turn stems from Kayne's (1984) analysis. In particular, the Larsonian VP shell will be adopted on the basis of various studies on the structure of events (cf. Ross (1972); Dowty (1979); Bach (1986); Pustejovsky (1991); Grimshaw (1990)) in which it is argued that the causal relation corresponds to a semantic composite in which two (sub)events are

implicated. Other studies adopting the Larsonian structure are Hale and Keyser's (1993) analysis of predicates of change, which is discussed below, and within the minimalist approach, Chomsky's (1995) proposal that both monotransitive and ditransitive verbs project a VP shell, an idea that follows from Hale and Keyser's (1993) theory of argument structure.

2.1.3 Emonds' (1993) analysis

Emonds' (1993) analysis of the *dative*-alternation, which is formulated within the GB framework, proposes that the constructions in (15) are derivationally related.

(15) a. Mary gave a book to John
b. Mary gave John a book

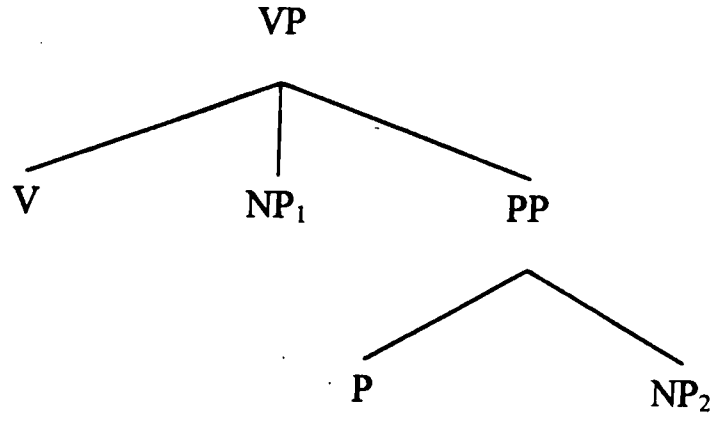
The hypothesis which guides the analysis is that the deep structure of an indirect object is a PP, this structure being preserved under the process deriving the alternating pair. A piece of evidence for the idea that the (derived) direct object appears in a PP with an empty P is provided: it is shown that intransitive directional P in English cannot follow PP's which contain maximal phrases, although they can precede or follow the direct object, as illustrated in (16a) and (16b), respectively, this pattern holds for the P-less dative, as illustrated in (17a) and (17b), respectively:

(16) a. *Some cigars were brought for Dad *down*
b. They brought some cigars *down* for Dad
b'. They brought *down* some cigars for Dad

(17) a. *They brought Dad some cigars *down*
b. They brought Dad *down* some cigars
b'. They brought *down* Dad some cigars
(examples adapted from Emonds (1993:218))

The above-contrasts are taken to corroborate Barss and Lasnik's (1986) paradigms showing the asymmetric relation between the complements in P-less datives. The productivity of (overt) P datives, as compared to P-less datives, in languages lacking (dative) case morphology is taken as a piece of evidence for postulating that the construction with the (overt) P dative of such languages reflect the deep structure of these constructions, which is preserved in their surface representation. The configuration is given in (18):

(18)



Moreover, similarities between the syntax of English P-less datives and their counterpart in non-Indo-European languages are presented, bringing further support to the structure-preserving analysis. In particular, it is noted that the presence of a benefactive/applicative suffix in languages such as Indonesian sheds light on how empty P is licensed in English (and not in Romance).

Given this, Emonds proposes that the universal representation of P introducing the indirect object involves unmarked features such as +LOCATION and +GOAL, as well as a marked feature, namely +PATH - the latter feature is justified by the fact that P satisfies the subcategorization of verbs that motivate this feature (e.g. *dash*); its marked status is due to fact that typical adverbs of place are static rather than directional. The representation of the universal indirect object is as illustrated in (19) - the first term of the pair, namely +PATH^NP, forms a constituent immediately dominated by the second (cf. from Chomsky's (1965, cited in Emonds (1993))

notation for grammatical relations; compare to the definition of direct object of a verb: [NP, V^1]):

(19) [+PATH^NP, X^1]

The representation in (19) is then associated with two postulates: (i) the first constituent in (19) is a PP unless a language permits the feature PATH, universally a possible feature on P, to be realised on some other X^o category; (ii) the notation F^XP is incompatible with F being lexically realised by a morpheme associated with additional purely semantic features, excluding P such as *toward*, *through* to introduce indirect objects.

It is then argued that the *dative*-alternation is obtained under *interchange* of the two internal arguments in the relevant positions, an operation found 'under highly particular conditions, exactly those fulfilled in dative (and benefactive applicative) constructions' (p.234) (cf. (1)). Since the structure preserving operation is a mutual substitution, traces cannot be generated - this is only possible if the two constituents are both subcategorised complements of the same head X, with no intervening (lexical) preposition (at D-structure). A further condition is a specific formulation of the Projection Principle in which argument selection is understood in terms of types of constituents (that is, syntactic subcategorization), rather than tokens.

Thus, in the P-less dative construction, P remaining empty, dative movement is obligatory: as a sister of PP, the indirect object NP serves as an antecedent for null P, satisfying a condition establishing that a phrasal antecedent licensing a given null element X must be exterior to XP (cf. (15b)). Conversely, if dative movement does not take place, the empty category remains antecedentless, requiring late insertion of a (grammatical) *to* or *for*, which bears the feature +PATH and yields an oblique complement (cf. (15a)).

As for crosslinguistic variation, Emonds proposes that it is determined by the presence in the verb of a morpheme specified for the feature PATH which licenses the empty P, forcing structure-preserving dative movement to occur. This morpheme is

found in English, but not in Romance languages. In languages such as Indonesian, it corresponds to the applicative morpheme.

Emonds' analysis makes various interesting points which I shall retain: in particular, the idea that indirect objects are represented as PP in both alternating constructions. However, I shall not adopt the structure proposed in Emonds' analysis which involves ternary branching: this structure is incompatible with minimalist assumptions which establish that the basic operation of the computational system forming syntactic objects is binary[13]. Moreover, the derivational approach to the *dative*-alternation as formulated in Emonds' analysis is incompatible with minimalist assumptions, according to which movement involves an extension of the phrase marker, and is motivated by morphological properties of the language (cf. Chapter 1).

The idea that the complements interchange positions within the same configuration will be adopted, although it will be formulated on independent grounds. In Emonds' (1993) derivational approach, the construction with the null P is taken to imply the order IO - DO (cf. (15a)): recall that according to Emonds' analysis, if P is null, it has to be licensed by a phrasal element occurring outside PP, namely an NP, hence NP movement (this should be further restricted to cases in which the PATH feature of P is represented in a head other than P). The order DO-IO should in turn imply the presence of a lexical P. A problem with this approach is that the order DO-IO is indeed found without an overt P in the Minas dialect of Brazilian Portuguese (cf. *Maria deu o livro o João* (=Mary gave the book John)). As will be argued in Chapter 3, the constructions in the *dative* alternation are independently projected - DOC being dependent on the presence of a null P in the grammatical system of the language.

As far as crosslinguistic variation is concerned, I concur with Emonds proposal that it is associated with a specific morpheme licensing DOC. However, I do not take this morpheme to be associated with the verb in the lexicon.

---

[13]The binary branching approach is essentially based on the notion of *unambiguous path* (cf. Kayne (1984).

2.1.4 Summary

In the previous sections, three analyses on the *dative*-alternation have been discussed: Kayne's (1984), Larson's (1988), and Emonds' (1993) analyses. Kayne's basic point is that in DOC the embedded predicate is projected in a small clause configuration which is associated with possession interpretation. In Larson's analysis, it is proposed that a clause-like configuration is embedded in the *overt* P-construction, DOC being derived from the *to*-construction. The basic point in Emonds' derivational approach to the *dative*-alternation is that the indirect object is a PP in both constructions - the PP status of the indirect object in DOC is determined under a mechanism whereby the (indirect object) NP is co-indexed with (empty) P, as it occurs in the appropriate position for being the antecedent of the empty P, allowing P to remain empty at S-structure.

In the following section, I will present Hale and Keyser's (1993) account of these constructions which is developed within a broader discussion on argument structure.

2.2 Hale and Keyser's (1993) configurational theory of argument structure

According to Hale and Keyser (1993:53), 'each lexical head projects its category to a phrasal level and determines within that projection an unambiguous system of structural relations holding between the head, its categorial projections and its arguments (specifier, if present, and complement)'. This configuration and the system of relations associated with it define a lexical relational structure (LRS), which in turn corresponds to the argument structure of the lexical head. Argument structure is therefore a syntax within the lexical domain, and should be distinguished from the sentential syntax, which involves the lexical item, its arguments (the LRS) and its *extended projection*, that is, the functional categories associated with the projection of a sentence interpretable at PF and LF (cf. Grimshaw (1990)).

Hale and Keyser observe that under the assumption that thematic roles are a property of the configurations projected by lexical categories, it is possible to account for the constrained nature of argument structure: the paucity of lexical categories and the restricted number of structural relations determined in the theory of phrase structure (namely, complement and specifier) should explain the limited number of arguments that a given category may have and the rather small number of theta roles that may be associated with the arguments of a given lexical category.

According to Hale and Keyser, these ideas have developed through an investigation of denominal verbs in English (e.g. *calve*, *shelve*, *saddle*), which led to conclusion that they are derived from nouns, the process involved in their derivation being not only lexical (as widely assumed, cf. Chomsky 1970 - quoted by Hale and Keyser op.cit.), but also syntactic. Taking unergative verbs such as *sneeze*, *laugh*, *calve* (all called simply (true) intransitive verbs) to represent the simplest class of denominal verbs, they propose that their initial lexical projection is the same as that projected by verbs such as *make* (as in *make trouble*), *have* (as in *have puppies*), and *do* (as in *do a jig*), as illustrated in (20):

(20) $[_{VP}\ V\ [_{NP}\ N_{calf}]]$

Hale and Keyser's proposal is that the difference between denominal verbs and the above-mentioned constructions, such as *make trouble*, is that the complement NP in the latter is a categorial variable in the LRS representation of *make*, whereas in the former, the complement NP dominates a constant: 'the nominal source, through incorporation, of the denominal verb' (p.73). It is proposed that denominal verbs are derived syntactically under incorporation, into an abstract V, of the nominal head N of its NP complement - this process conforming to the principles that constrain the syntactic process of incorporation (cf. Baker (1988)). Under this view, the assumption that unergative verbs have initial lexical structure of the simple transitive type is justified.

Moreover, since it is a process that is constrained by syntactic principles, it is also expected that the range of possible denominal verb types will be constrained by the syntactic conditions on incorporation. This is the case of hypothetical constructions such as **It cowed a calf*, in which verb formation under incorporation of the subject is ruled out under the constraint stating that a subject cannot incorporate into the verb that heads its predicate. This is illustrated in (21):

(21) $*[_{XP}\,[_{NP}\,N_{cow}]\ X\ [_{VP}\,V]]$

Given this, it is proposed that locative constructions, as in (22a), as well as constructions involving location/locatum verbs, as in (22b), share the same configuration[14]: they are projections of P which enters a syntactic relation with a complex verbal construct, namely a VP shell, under selection, as illustrated in (22c) and (22d), respectively - note that as far as the structure is concerned, it is identical to the one proposed in Larson (1988) for the *overt* P construction (cf. 11, above):

(22) a. John put the book on the shelf.

b. John shelved the book.

c. $...[_{VP}$ put $[_{VP}$ the book $V_{put}\,[_{PP}$ on $[_{NP}$ the shelf $]]]...$

d. $...[_{VP}$ *shelve* $[_{VP}$ the book $V_{shelf}\,[_{PP}\,P_e\ [_{NP}$ ~~*shelf*~~ $]]]...$

The difference between them is that in (22d), the complement of P dominates a constant (the nominal source of the denominal verb), *shelve* being derived syntactically under N incorporation, through the heads P, V, and light *v*. In (22c), on the other hand, the NP in the complement position of P is a categorial variable, incorporation proceeding from V into light *v*[15].

---

[14] It should be noticed that in Hale and Keyser (1997), the configuration for *put the book on the shelf* is rather different: it is proposed that P takes an argument DP in its complement position and another argument DP in its specifier position. The diadic arrangement of the argument structure in this case is due to an inherent property of P, namely that it is *birelational*.

[15] In Hale and Keyser (1997:9), V incorporation to light *v* is a special case of incorporation which is referred to as *conflation*, and is defined as follows: 'a process according to which the phonological matrix of the head of a complement C is introduced into the empty phonological matrix of the head which is a sister to C'.

By virtue of the syntactic relation itself, namely the conditions on phrase structure, and the elementary notional type associated with V and P (namely, *event* and *interrelation*, respectively), the syntactic embedding is taken to correspond to a **causal relation** implicating an **interrelation** between two arguments, giving rise to a predicate of change. Crucially, the specifier position of the embedded VP is saturated by the **affected** argument[16]. Moreover, the thematic role associated with the specifier position in the upper VP is that of *agent* - given that it corresponds to the specifier relation in the structure projected by the *causative* verb.

Following the same reasoning, it is then proposed that DOC and P-Datives in (23a) and (23b) involve a predicate of change as well. That is, they are projections of P and V: one of the arguments is inserted in the specifier of the (lower) VP (the subject of the (internal) predicate), the other within PP, which is headed by an overt P in (23b), and a null P, in (23a)[17]. This is illustrated in (23c):

(23) a. Mary gave John a book.

b. Mary gave a book to John.

c. ...[$_{VP}$ give [$_{VP}$ NP_1 V_{give} [$_{PP}$ P NP_2]]]...

The syntactic projection is therefore the same for both (23a) and (23b)[18]: in (23a), NP_1 is *John* and NP_2 is *the book*, whereas in (23b), NP_1 is *the book* and NP_2 is *John*. They only differ with respect to whether P is null or overt. The null P in turn is taken to correspond to the overt *with* in its possessive use.

Note that this account is reminiscent of Kayne's (1984) analysis, in which it is proposed that DOC embeds a small clause. In Hale and Keyser's (1993) terms,

---

[16] On the notion of *affected* argument, see Roberts (1987); Tenny (1994), also Chapter 3.

[17] According to Hale and Keyser (1993), the null P in DOC corresponds to the overt *with* in its possessive use. This proposal stems from Kayne's (1984) idea of relating the null P in DOC to possession interpretation - this idea will be refined in Chapter 3.

[18] Cf. Pesetsky (1995) for a proposal in which (23a) and (23b) are projected in a uniform structure as well, and for discussion on the advantages of having the same configuration for these constructions. In Pesetsky's (1995) configuration, V takes a complement PP. PP, in turn, can be headed by an overt P or a null P (- a Zero Morpheme which ultimately attaches to V, given its affixal status). Also both complements are licensed within PP: the first one, in the specifier position, and the second one in the complement position. This is illustrated in (i):

(i) [$_{VP}$ give [$_{PP}$ NP_1 P [NP_2]]

however, not only DOC but also the constructions with the overt P embed a clause-like configuration - the last point is also made in Larson (1988). However, Hale and Keyser's analysis differs from Larson's (1988) analysis in a rather crucial way: the former, but not the latter, propose that in both constructions the clause-like configuration corresponds to an embedding involving two lexical heads, namely V and P - in Larson's analysis, P is taken to be a Case marker, not a lexical P[19].

Under this view, (22) and (23) are associated with the same thematic properties, given that they are projected in the same configuration. Apparently, what is assumed in Hale and Keyser's analysis is that in some sense, location *underlies* possession - this view implies a conception of the relation between possession and location according to which the former is construed from the latter by some metaphorical process, given the idea that spatial proximity is often (but not necessarily) associated with ownership (cf. Jackendoff (1992)).

The problem is that on the assumption that (22) and (23) share the same thematic properties, it is not expected that differences arise with respect to the arguments insertion in the relevant positions. Accordingly, in the presence of a null P, other conditions being equal, there should be no restriction on licensing the locative argument in the position where the possessor is found. However, as is well-known, DOC is not found with locative constructions, as illustrated in (24):

(24) a. John put the book on the shelf
b. *John put the shelf the book

In fact, possession and spatial location are independent concepts: as pointed out by Jackendoff, although they may occur in similar linguistic configurations, the conceptual parallelism is very limited. For instance, it is possible to say that an object moves *up*, *down*, or *halfway toward*, say, *Bill*, but it is not possible to say that the

[19]Hale and Keyser's (1993) approach to Theta-Theory has been adopted in Chomsky (1995): it is proposed that arguments are licensed within the syntactic projection of lexical categories under Merge (a root operation). Theta-role assignment is therefore assumed to be derivative of the conditions determining Merge at the base, which in turn follow under a bare model of phrase structure (cf. Chapter 1).

object was given *toward* or *partway to Bill*. Jackendoff (1992) observes that this is because the notion of location in physical space ranges over the three continuous dimensions of space whereas possession ranges over the discontinuous unstructured set of individuals[20].

What I would like to suggest is that the restrictions on the *dative*-alternation indicate that the independence between the conceptual representation of possession and location is represented in the syntax.

2.2.1 Summary

In the last section, I have discussed Hale and Keyser's (1993) approach to ditransitive predicates. It was shown that, although retaining various aspects of both Kayne's (1984) and Larson's (1988) analyses, Hale and Keyser's (1993) approach departs from these analyses in a rather crucial point: they propose that ditransitive constructions are projections of the lexical categories P and V (including DOC, which is taken to involve a null P). This analysis is embedded in a more general discussion leading to the conclusion that the configuration projected by a given head and the system of relations associated with it define a lexical relational structure (LRS) which in turn corresponds to the argument structure of the relevant head.

From Hale and Keyser's (1993) analysis, I shall retain the idea that ditransitive constructions are projections of V and P, and that the configurations projected by the lexical heads in various cases (but not always) correspond to thematic roles. I will argue that the above-mentioned independence of the concepts of location and possession is indeed captured in the syntax, the *dative*-alternation indicating so. Following various studies establishing a correlation between argument licensing and the aspectual interpretation of the predicate, I will propose that the above-mentioned differences in the conceptual representation of possession and location is determined

---

[20] In Jackendoff (1992) the independence of these concepts is taken as an argument for refuting the idea that all the repertoire of human concepts gradually evolves from sensorimotor concepts to abstract concepts of pure logic, as proposed in Piagetian constructivism: ownership being among the innate stock of primitives indicates the possibility of having abstract concepts that are not built upon sensorimotor ones.

by the aspectual interpretation of the predicate which in turn is represented syntactically.

Before I turn to this discussion, I shall present Tenny's (1994) study of argument structure in which thematic properties are taken to be determined by the aspectual properties of the predicate. Next, I will present Borer's (1994, 1996) as well as Arad's (1996) proposals for representing aspectual properties in the syntax which in turn capitalise on Tenny's ideas. These studies will provide an important theoretical background for the analysis in Chapter 3.

2.3 Argument structure as a function of the aspectual interpretation of the predicate

As pointed out in Borer (1996), the matter of how thematic roles are mapped into syntactic positions has motivated various approaches of different orientations from the theoretical point of view. The main controversy, Borer observes, involves the *lexical-entry-driven approach* as opposed to the *syntactic predicate-based approach*: whereas the former derives the syntactic structure in which arguments are projected from the properties of individual lexical entries, the latter establishes that argument licensing within V-predicates is determined compositionally by the properties of the entire predicate (in particular its aspectual properties).

The correlation between argument licensing and the aspectual interpretation of the predicate has been pointed out in a number of studies (Roberts (1987); Tenny (1994); Grimshaw (1990); Borer (1994, 1996); Arad (1996), among others). In these studies, aspect is understood as the *internal* temporal properties of the event described by the verb, such as duration/delimitedness, iterativity, etc. The role of delimitedness as an aspectual property has been noticed in the literature back to Aristotle's taxonomy of verb aspect: it refers to the distinction between events having definite endpoints and events not having endpoints, and led to various verb classifications.

A rather well-established one is the so-called Vendler & Dowty's classification which distinguishes four aspectual classes, as shown in (25):

(25) a. states: *know*; *believe*; *love*
b. activities: *walk*; *run*; *push a cart*
c. accomplishments: *build a house*; *play a sonata*
d. achievements: *find*; *reach*.

As pointed out in various studies (cf. Schmitt (1996)), the problem with the classification in (25) is that it sets all the information regarding the aspectual interpretation of the predicate in the lexicon, failing to account for the fact that the same verb can be inserted in predicates that are assigned different aspectual interpretations (cf. discussion below). In fact, Dowty (1979) himself points out that the purpose of the classification was to provide a descriptive approach of events rather than define aspectual properties for verbs (the presence of the direct object in (25c) should indicate that the aspectual interpretation is determined compositionally under the interaction between the verbal and nominal properties of the predicate).

In particular, the strand of theorising that will be presented below takes thematic roles to correspond to aspectual properties which are mapped onto specific positions within the event structure of the verb. These positions in turn are taken to correspond to syntactic positions in the projection of the verb.

2.3.1 Tenny's (1994) approach to the syntax-semantics interface

According to Tenny (1994), among the arguments of V, the prototypical *theme* plays a fundamental role in the aspectual structure, since it is the argument that may determine the temporal terminus of the event. Three kinds of measuring-out can be found: (i) with *incremental-theme* verbs: the event is understood to progress through the increments of the internal argument, the final increment marking the end of the event (e.g. *eat a mango*); (ii) with *change-of-state* verbs: the end point of the event is achieved by progressing along measurable degrees of change in the argument with

respect to some property central to the meaning of the verb (e.g. *ripen the fruit*); (iii) with *route verbs taking path objects*: the event progresses through a path that is defined by the internal argument (e.g. *play a sonata*).

In (26), for instance, the measuring-out is type (i): the complete consumption of the *mango* marks the end of the *eating* event, hence the event is inherently marked as having an endpoint in time (i.e. it is a *telic* event, as opposed to an *atelic* event, which does not have an endpoint). In this sense, the argument *a mango* measures out the event represented by the verb - this is confirmed by the compatibility with the adverbial expression *in 5 minutes*, which constitutes a test for delimitedness:

(26) Leandro ate a mango in 5 minutes

It is then pointed out that the notion of measuring-out can be further illustrated by the *mass/count* noun distinction. Following a number of studies (cf. Dowty (1979); Verkuyl (1972, 1993), Krifka (1992), cited in Tenny), it is shown that the aspectual interpretation of the predicate can be altered depending on whether the noun phrase in the object position is realised as a count noun or a mass noun (or a bare plural). In (27a-b), below, contrary to (26), the mass noun *ice cream* and the bare plural *mangoes* give rise to durative or non-delimited readings, as indicated by the adverbial expressions:

(27) a. Leandro ate ice cream (for 5 minutes/ *in 5 minutes)

b. Leandro ate mangoes (for 5 minutes / *in 5 minutes)

Tenny observes that this is because the mass noun in constructions such as (27a) (cf. *ice cream*) and the bare plural in constructions such as (27b) (cf. *mangoes*) describe something of undefined extent or quantity, hence they cannot measure out the event. Verbs like *eat* have therefore the ability to translate spatial delimitedness into temporal delimitedness. These facts indicate that the delimitedness of the event represented by a verb is not a property of the verb: it is determined compositionally, by the verb and the argument occurring as its direct object, depending on whether this argument is able to measure out the event.

Tenny further observes that the effects of the count/mass noun distinction show a clear asymmetry between arguments occurring in the object position and in the subject position (or as an indirect object): with change-of-state verbs, for instance, the delimitedness of the event is unaffected whether the subject is a count-noun (cf. *Mary*) or a mass-noun (cf. *snow*), as illustrated in (28):

(28) a. Mary killed the rosebush (by overwatering) in a day/ *for a day
b. Snow killed the rosebush in a day/ *for a day
(examples from Tenny (1994:28)

This asymmetry is taken to confirm that only the argument occurring as the prototypical *theme* may measure out the event.

However, according to Tenny, an additional argument (other than the prototypical *theme*) may be interpreted as a participant in the aspectual structure of the verb: in this case, the argument specifies the endpoint that has been determined (either explicitly or implicitly) by the event *measurer*. This is illustrated in (29):

(29) a. Mary walked (the path) *to school* in 5 minutes/ *for 5 minutes
b. Mary put the book *on the shelf* in 5 minutes/ *for 5 minutes[21]

The presence of a *terminus* in turn implies that the event is measured out by a *path* argument, a particular type of measuring-out which involves motion over distance. Accordingly, in (29b), the argument licensed as the PP marks the endpoint on a scale measured out by the distance the object is moved. Thus, the *path-terminus* pattern comes as a set.

Three aspectual roles are then identified: (i) a *measure*, which is the event participant that measures out the event denoted by incremental-theme and change-of-state verbs (in this case, both the scale along which the event transpires over time and

[21] The *putting* event may be thought of as consuming time under the supposition that the book is a heavy copy and/or the shelf is very high.

the endpoint on that scale are provided); (ii) a *path*, which is a defective measure role providing a scale along which the event is measured out, but not necessarily the endpoint (contrary to measure-objects, path-objects do not undergo *internal* change); (iii) a *terminus,* which is the event participant that marks the temporal endpoint on the scale provided by the *path* participant.

On the assumption that some events are decomposable in two parts, namely an external and an internal part (in Pustejovsky's (1991) terms, *activity* and *state*; cf. also Grimshaw (1990)), and that the subparts of the event have syntactic import, three positions are in turn identified: a position *external* to VP, and two positions internal to VP which host the *direct* argument and the *indirect* argument[22]. Under this view, argument structure is represented in purely syntactic terms, the arguments occurring in the above-mentioned syntactic positions which in turn coincide with three different ways of participating in the aspectual structure.

It is then proposed that the aspectual roles in (i) (ii) and (iii) are mapped onto the internal subpart of the event, which is taken to be the locus of aspectual structure. Aspectual structure is determined by the availability of the relevant aspectual roles in the event structure of the predicate (cf. (26-27) and (29b), as opposed to (29a)). Thus, the aspectual information associated with the positions within the aspectual structure determines the mapping of thematic roles to the syntactic structure. In other words, it is the aspectual component of thematic roles that governs their linking to syntax, suggesting that only aspectual structure is visible to syntax.

These aspectual role grids further define three general classes of verbs: (a) verbs lacking aspectual roles (that is, verbs with non-measuring arguments) - these are unergatives, some transitive verbs (e.g. *Bill pushed the cart*), and statives; (b) verbs with a measure aspectual role (cf. (21)); (c) verbs with a path-terminus aspectual grid (cf. (24)). In this sense, Tenny points out, a verb's aspectual class carries lexical

---

[22] Tenny (1994) points out that the notions of *external* argument as opposed to *direct* and *indirect* internal argument are taken from Williams' (1981, cited in Tenny) study of predication and Marantz (1984, cited in Tenny) study of argument structure. They roughly correspond to the grammatical functions, subject, direct object, and indirect object, although the latter may include PP adjuncts intervening in the aspectual interpretation of the predicate (cf. (24a)).

information about the organisation of time as it is introduced in the semantics of the sentence.

2.3.2 Representing aspectual roles within aspectual projections

The idea of representing aspectual properties syntactically has been proposed in Borer (1994, 1996). On the assumption that the direct object has a crucial role in the aspectual calculus, she proposes that aspectual properties of the predicate are represented within aspectual projections under the nesting of the relevant argument in the specifier position of the aspectual projection. In Borer (1996), this proposal is developed on the basis of a discussion on the syntactic representation of the unergative/unaccusative distinction and its aspectual correlate, the process/eventive distinction: assuming that the unaccusative subject is projected lower than the unergative subject (cf. Levin and Rappaport-Hovav (1995)), she proposes that the aspectual properties in each case derive from the syntax of the predicate.

The examples in (30), from Italian, illustrate this point: in (30a), the verb is a typical unergative, taking the unergative auxiliary *avere*, and the predicate is assigned a process interpretation; in (30b), in the presence of the PP, the verb behaves as an unaccusative, as indicated by the choice of the auxiliary, and the predicate is interpreted as terminative:

(30) a. Gianni ha corso
G. has run

b. Gianni e corso a casa
G. is run to home
(examples from Borer (1996:2)

Borer points out that the contrast in (30) is a problem for the idea that the verb encodes the information on whether its argument will be project in the higher or in the lower syntactic position, as proposed in lexical-entry driven approaches to argument licensing, even under the postulation of lexical rules accounting for the appearance of these verbs in more than one construction, and for their different semantics in each

case - these rules would be undesirable as they would affect a large and coherent group of verb, a point that has been made in Dowty (1991, cited in Borer).

Given this, Borer observes, the unergative/accusative distinction and its aspectual correlate calls for a solution in terms of a predicate-based approach to argument licensing. It is then proposed that the aspectual properties of these predicates derive from the position and the properties of the relevant arguments within these predicates: the *lower* argument position is associated with a terminative interpretation, whereas the *higher* one with a process interpretation. The relation thus created defines the participation of the argument in the event structure of the lexical V. Note that this proposal capitalises on Tenny's idea that the syntactic position in which a given argument is licensed corresponds to a specific aspectual role in the event structure of the predicate.

This proposal is then extended to predicates in general: on the assumption that no information on the hierarchical structure of the arguments is available in the lexicon, Borer proposes that the arguments are unordered within VP; their hierarchical representation (which is minimally required for assignment of grammatical functions) is then obtained under movement to a specifier position of a functional node above VP, primarily because of Case assignment. The Case position may in turn be an aspectual node, but not necessarily (in the latter case, the functional node where Case is assigned parallels to AgrO in Chomsky's (1993) feature-checking system - the crucial difference between them is that the former is a Case and a thematic position). The projection of aspectual nodes is determined by the properties of the event; moreover, there might be cases in which the aspectual node is projected, and nevertheless it is not a Case position.

Predicates interpreted as terminative, as in (30b), for instance, imply the projection of an aspectual node marked as bearing terminative properties, namely Asp(term)P. The appropriate realisation of the aspectual properties in turn requires that these properties be predicated of the DP argument licensed in that position. The argument projection in (30b) is as illustrated in (31):

(31) ...[$_{TP}$ Gianni$_{nom}$ T [$_{AspP(term)}$ t_{Gianni} Asp(term) [$_{VP}$ <V, $t_{DP(Gianni)}$ >]]]

DP movement into [spec,AspP(term)] triggers the appropriate terminative interpretation. Further DP movement to [spec,TP] meets Case requirements (in this specific case, the AspP(term) is not a Case position). This, Borer proposes, is the syntactic derivation associated with the unaccusative diagnostics. Note that verb movement is not taken into consideration, since it is not relevant for the discussion.

As pointed out in Borer, another possibility is to assume that the arguments are merged directly in the specifier of the aspectual heads. The latter possibility is developed in Arad (1996) as the one to be preferred. According to Arad, Borer's (1996) proposal of raising the arguments from within VP is problematic, as DP movement from within VP would be barred under Chomsky's (1995) Minimal Link Condition, which establishes that shorter moves are preferred to longer ones: in a monotransitive construction, for instance, in the presence of two DP's within VP, the lower Asp head would serve as the closer attractor for both DP's. Arad points out that this problem does not arise if arguments are base-generated within the aspectual nodes where they are interpreted.

In Arad's system, the arguments in (26), repeated here as (32a), namely *Leandro* and *a mango*, are respectively licensed as follows: in [spec,AspI(nitial)], which hosts the argument responsible for the beginning of the event (that is, the *originator* of the event) and in [spec,AspM(easurer)], which hosts the argument measuring out the event, as illustrated in (32b) - word order is achieved under V movement to higher positions, as well as DP movement satisfying the EPP:

(32) a. Leandro ate a mango

b. [$_{AspI}$ Leandro [$_{AspM}$ a mango [$_{VP}$ V_{ate}]]]

It is further assumed that the AspM node may as well be a position in which accusative Case is checked, exactly as in Borer (1996).

In ditransitive constructions, such as (33a), it is assumed, following Tenny (1994, cf. above), that the distance *the book* is displaced provides the path measuring out the event. The DP *Mary*, which initiates the event, is merged in AspI; the DP *the book*, which provides the path, is merged in AspM, and the PP *on the shelf* provides the end point, as illustrated in (33b):

(33) a. Mary put the book on the shelf

b. $[_{AspI}$ Mary $[_{AspM}$ the book] $[_{VP}$ V_{put} $[_{PP}$ on $[_{DP}$ the shelf]]]]

It is then assumed that the same holds for constructions such as *John give a book to Mary*. As for DOC, as in *John gave Mary a book*, the picture is slightly different, although the event structure remains the same: it is proposed that the argument *Mary* is merged in a third aspectual node projected above AspM, namely AspDel(imiter), where it is assigned Case as well as the aspectual interpretation of a Delimiter (exactly like the PP). This is illustrated in (34):

(34) a. $[_{AspI}$ Mary $[_{AspM}$ the book] $[_{VP}$ V_{give} $[_{PP}$ to $[_{DP}$ John]]]]

b. $[_{AspI}$ Mary $[_{AspDel}$ John $[_{AspM}$ the book] $[_{VP}$ V_{give}]]]

The problem with Arad's analysis is that again, it does not account for the fact that the alternation is restricted to the constructions involving possession interpretation: the natural question is why the AspDel projection is not found as an alternative possibility in relation to the construction in (33a) as well? Moreover, under this view, it is not possible to account for the entailment differences between DOC and P-dative constructions which may arise with the verb *teach*, illustrated in (35) (cf. Chapter 1):

(35) a. Mary taught French to the children

b. Mary taught the children French

If the arguments have identical aspectual roles in each construction, there should be no difference of interpretation. I will return to this matter below.

Another problem with both Borer's (1994;1996) and Arad's (1996) approaches is the idea of projecting arguments as specifiers of aspectual nodes. A question that arises is whether it is theoretically adequate to postulate that aspectual properties of verbs which are essentially lexical are projected as functional categories. This observation relates to Tsimpli's (1992) study on the acquisition of aspect, in which it is shown that aspect is not a functional category, as indicated by its presence in very early stages of acquisition, but rather a substantive, probably innate, category of the mental lexicon[23].

2.4 Conclusions

From the previous discussion, I will adopt Kayne's idea of relating possession interpretation to the presence of a null P in the syntax. I shall further assume Larson's (1988) proposal of projecting ditransitive constructions in a layered V structure. Moreover, and crucially, I shall assume Hale and Keyser's idea according to which ditransitive constructions, including DOC, are projections of lexical heads, namely V and P (DOC being a projection of a null P). Furthermore, I will assume Tenny's (1994) approach to argument structure to be basically correct, in particular the idea that the calculus of terminative aspect involves two patterns: the so-called *measure* pattern, whereby the relevant argument provides both the scale along which the event progresses, and the endpoint, and the so-called *path-terminus* pattern, whereby terminative calculus involve an (internal) argument that provides the *path* along which the event progresses, and another argument provides the *endpoint*. I shall also adopt Borer's and Arad's representation of aspectual roles as syntactic properties. However, I shall propose that these properties are represented in the lexical projection of V (cf. Salles (1996)) - in particular, I shall adopt the formalization of these properties as proposed in Manzini and Roussou (1997), in terms of aspectual features.

---

[23] Interestingly, Schmitt (1996) arrives at similar conclusion on independent grounds: showing that there are syntactic constraints on the aspectual interpretation of the VP which involve the internal structure of the verbal complements (hence the idea that it is a combination of verbal and nominal features), she claims that aspect cannot be parameterised, crosslinguistic variation in aspectual marking being reduced to how languages encode quantificational elements and how phrase structure affects case marking

Given this background, I will turn to the study of the *dative*-alternation in Chapter 3.

Chapter 3. On the syntax of PP objects in ditransitive constructions

In the present study, I will propose an approach to argument structure which is based on both Hale and Keyser's (1993) configurational theory of argument structure and Tenny's (1994) theory, and its further development in Borer's (1994, 1996) proposal of characterising thematic roles in terms of aspectual properties (cf. also Roberts (1987); Grimshaw (1990); Arad (1996); and Chapter 2). Although, from the syntactic point of view, as pointed out in Manzini and Roussou (1997), Hale and Keyser's (1993) configurational approach to argument structure turns out to be equivalent to Borer's (1994, 1996) proposal of representing thematic properties as the nesting of arguments within aspectual nodes, I will suggest that a combination of the main points of each approach is necessary in order to account for the syntax of PP in ditransitive constructions.

Assuming with Hale and Keyser (1993) that ditransitive constructions are projections of P and V, I will propose that the aspectual properties of the predicate are formally represented within the configurations projected by these heads (cf. also Salles (1996)). Following Manzini and Roussou (1997), I will assume that these properties are formally represented in the syntax as aspectual features, namely Originator (OR), Event Measurer (EM) and Delimiter (DEL), which in turn are licensed within the configuration projected by V and P under DP merge in the specifier position of the relevant lexical head. Thus, aspectual features are taken to be part of the inventory of (interpretable) features of the lexical head projecting the relevant configuration.

In the discussion, I shall be particularly concerned with nonstative ditransitive constructions - stative predicates will be briefly discussed as their projection is taken to be an open matter as well as the licensing of thematic properties within these projections. I will argue that the basic property of alternating nonstative ditransitives is that the predicate is associated with a change-of-state interpretation. Accordingly, the interrelation implicated by the causal relation expressed within the projection of V and P is such that one of the arguments of the embedded predicate is interpreted as

undergoing (internal) change, whereby (transfer of) possession is obtained, and the relevant argument is associated with the *possessor* role (cf. section 3.2). This interpretation arises under two patterns determining the aspectual interpretation of the predicate: the overt-P construction is associated with the *path-terminus* pattern; in DOC, the *path-terminus* is not at stake, but rather a pattern in which a single argument, namely the *possessor*, provides both the *scale/path* along which the event transpires over time and the *endpoint/terminus* on that scale (cf. Tenny (1994); also Chapter 2).

I will further argue that the alternation between DOC and the overt-P construction is contingent on the grammatical system having a null P - conversely, in languages not having a null P, DOC is not found (cf. Chapter 5). Following Hale and Keyser (1993), I will assume that the null P corresponds to an overt *with*. The feature WITH of null P is basically determined by the correlation between possession and comitative interpretation.

Before turning to the syntax of PP in ditransitive constructions, I shall present in section 3.1 basic points of the theory of argument structure that I shall adopt. In section 3.2, I shall consider ditransitive constructions. In section 3.3, I shall discuss constructions with a single PP object.

3.1 Towards a theory of argument structure

An important assumption in the present approach to argument structure is that as part of their lexical information, verbs correspond to either one or two events: the *one-event* semantic construct is associated with a single VP, whereas the *two-event* semantic construct is associated with a VP shell - in this respect, I follow studies on the structure of the events, as developed in Ross (1972); Dowty (1979); Pustejovsky (1991); Grimshaw (1990), among others[24]. Each type in turn include the following group of verbs: *one-event* semantic constructs are stative and unaccusatives; *two-event* semantic constructs are nonstative transitives and unergatives.

[24] Also relevant is Higginbotham's (1985, 1994) proposal that all verbs have an E(vent)-position irrespective of whether they are eventives or a statives.

This formulation is based on Chomsky's (1995) proposal concerning the structure of verb projections: although no reference to aspect is made, Chomsky proposes that the VP shell be generalised to all transitive verbs (whether ditransitives or monotransitives), an idea that follows from Hale and Keyser's (1993) theory of argument structure), and in connection with this idea, he suggests that only unaccusatives (e.g. *die*; *arrive*), lacking the *agent* role, be projected in a single VP.

The idea that there is a correlation between aspectual verb classes and the syntactic structure in which these verbs occur is not new: in Dowty's (1979) theory of aspect calculus, for instance, it is proposed that the aspectual classes of verbs can be explained by postulating logical structures for the verbs in each class which in turn consist of one or more stative predicates embedded in complex sentences formed with aspectual connectives and operators (e.g. DO, CAUSE, BECOME). Following Ross' (1974) proposal of assigning an underlying (abstract) DO to the structure of verbs of action, Dowty proposes that activity predicates, for instance, have a logical structure in which an underlying DO embeds the corresponding stative predicate, which in turn is taken to be a primitive (that is, a non-logical constant).

In Pustejovsky's (1991) study on the structure of events, it is argued that predicates interpreted as *accomplishments* (cf. Chapter 2) have a complex event structure which is formed by subevents, namely an *activity* and a resulting *state*. As shown in Chapter 2, Pustejovsky's theory is adopted in Tenny (1994): recall that Tenny proposes that aspectual roles determining the argument's participation in the event are mapped onto the event structure, which is taken to be syntactically projected, providing the relevant positions for the arguments[25].

[25] An approach establishing a correlation between aspectual verb classes and the syntactic structure in which they occur is found in Smith (1991) study of aspect in which it is proposed that the relevant property distinguishing *states* and *non-states* is that the latter has an internal structure whereas the former does not.

From these studies, I shall retain the idea that verbs have an event structure which may consist of subevents[26]. In section 3.1.1 I will discuss constructions projecting a VP shell. In section 3.1.2, I shall discuss constructions projecting a single VP.

3.1.1 The two-event semantic construct: the VP shell

Consider first the *two-event* semantic construct. In Tenny's (1994) terms, it implies the existence of an originator marking the initial point of the event as well as a measuring scale along which the event progresses. These properties are formally represented by two features, namely the originator (OR) and the event measurer (EM) features, respectively - whether an endpoint for the scale is provided, giving rise to terminative interpretation, is determined in the syntax either in terms of quantificational properties associated with the verbal complement, or by PP expressions delimiting the event (in the latter case, a delimiter (DEL) feature is checked within PP) (cf. Chapter 2). Hence, a crucial property of the verbs represented as *two-event* semantic constructs is that they may occur in predicates that are interpreted as either terminative or durative[27].

Nonstative transitive as well as unergative verbs are two-*event* semantic constructs. Consider first nonstative transitives[28], as in (1a). In this case, the above-mentioned aspectual features, namely OR and EM, are (obligatorily) represented

---

[26] I refer the reader to Lombard (1985) for a discussion in which the idea that transitive verbs of action involve a (complex) structure of events is inferred from an analysis of the identity of actions: Lombard proposes a semantic representation of sentences with transitive verbs of action in which it is possible to account for shortened transitives (cf. *John walked (Mary))*, as opposed to intransitive verbs (cf. *John walked*), also keeping the idea that they are not independent of each other.

[27] This is probably a corollary of the idea proposed in Schmitt (1996) that *durative* is the default interpretation.

[28]The distinction between accomplishments and achievements as proposed in Vendler and Dowty's classification is not relevant for the present discussion. In fact, the existence of achievements as a class of verbs is controversial (cf. Dowty (1979), Verkuyl (1993); also Tenny (1994), and references cited there). The idea that *achievements* are punctual, as opposed to *accomplishments*, which imply a duration, is not so clear. For instance, *find*, *reach* which are taken to occur in predicates interpreted as *achievements* may occur in constructions as in (i), in which the presence of *do* implies *duration* (cf. also Ross (1972)):

(i) John found the book/reached the mountain, which I think he might *do*

What (i) suggests is that verbs representing *achievements* can be associated with *two-event* semantics, projecting a VP shell in the same way as verbs representing *accomplishments* do.

within the syntactic projection of the verb, namely the VP shell, in the upper V head, and in the lower V, respectively. Each feature is then checked under DP merge in the spec-head configuration, as illustrated in (1b) - I (provisionally) assume, following Chomsky (1995), that the DP in spec of the upper V moves to [spec, I] to satisfy the strong D-feature of I; DP merge within the V_{EM} projection checks the D feature of V_{EM} and licenses the EM feature. Moreover, from V_{EM}, which is the position where the lexical content of the verb is realised, the lexical verb raises to V_{OR}, yielding the desired word order:

(1) a. the wind broke the glass (in 5 minutes)

b. ... [$_{IP}$ [$_{DP}$the wind] I [$_{VP}$ broke$_{\sout{OR}}$ [$_{VP}$ the glass ~~broke~~ $_{\sout{EM}}$]]]

Overt V raising to the upper V head within the VP shell is taken to be independently required, presumably under feature-checking of a (non-interpretable) strong feature above VP[29], given some version of the split-Infl hypothesis (cf. Pollock (1989)) - this should not affect crosslinguistic variation concerning overt V movement to Tense (cf. Emonds (1978) (cf. also the notion of *conflation* in Hale and Keyser (1993, 1997); and Chapter 2).

Assuming the Move-F(eature) operation, as proposed in Chomsky (1995; also Chapter 1) and proposing an Asp/feature-based representation of thematic roles, Manzini and Roussou (1997) formulate an alternative construal of the relation between the DP and its thematic role in which phrasal/DP movement from thematic to D-position translates into direct Merge of DP into a D position: it is assumed that the OR/EM features carried by V are weak as well as interpretable, hence they do not require to be checked by (overt) Merge/Move. The D-feature of I, instead, being strong, needs to be overtly checked, hence the DP is merged directly in [spec,I]. The OR/EM feature becomes in turn associated with the DP in [spec,I] under Move-F: it is assumed that the DP itself is an attractor for OR/EM (technically, they point out, some weak [-interpretable] feature associated with the DP needs to be checked by OR/EM).

---

[29] Cf. also Haider (1992) for an approach to V-to-v movement which is independently motivated: on the assumption that projection structures are universally right branching (the basic branching conjecture), it is proposed that the A-structure of V is discharged under V-movement in a layered

The same should hold for licensing the direct object (cf. *the glass* (1)): it is assumed that the V head bearing the EM feature is also associated with a strong D-feature which is checked by merger of a DP in [spec,V_{EM}][30]. This formalisation, Manzini and Roussou (1997:5) observe, 'provides a natural translation within the minimalist framework of the clause of the Theta Criterion which requires every argument to be assigned a theta-role'. I shall adopt this approach henceforth.

As for unergatives, I assume, following Hale and Keyser (1993) (cf. Chapter 2), that they are *hidden* transitives. I propose then that the syntactic representation of a construction such as *John walked*, is identical to the one in (1b): the DP checking the strong D feature of I is merged directly in [spec,I], the OR feature being associated the DP under movement to I; the EM feature in turn is licensed presumably under incorporation of N to V (cf. Hale and Keyser (1993); also Chapter 2). This is illustrated in (2b):

(2) a. John walked (for two hours)/*in two hours

b. ...[$_{IP}$ [$_{DP}$ John] I/OR [$_{VP}$ walked$_{OR}$ [$_{VP}$ ~~walked~~$_{EM}$ N_{walk}]]

Note that the event has a durative reading. This is presumably due to the fact that N, being a constant (not a variable) cannot be quantized, and therefore the event cannot be measured out - I shall return to this matter shortly.

As nonstative transitives in (1), unergatives may occur in a predicate that is interpreted as terminative (cf. (3a)). In this case, the *path-terminus* pattern is obligatory: the event is measured out as progressing over a certain distance, the *path*,

---

configuration, given the assumption that *progressively* governing heads (a parameter associated with languages such as English) must c-command over all arguments.

[30]As pointed out in Manzini and Roussou (1997), another formulation is to assume that an intermediate functional position between the two Vs in (31) bears the strong D-feature, as under the Bobaljik's (1995) Stacking Hypothesis (cf. also Koizumi (1993), cited in Bobaljik (1995)). I shall discard this idea as it is incompatible with the hypothesis adopted in the present study according to which no functional head should be found within the domains defined by lexical entries. The important point here is that the effects of Bobaljik's Stacking Hypothesis are also captured under the present approach as in the present analysis, DP licensing in transitive constructions does not involve crossing of the paths under DP movement, which is shown to be a problem in Chomsky's (1993) theory.

to an endpoint, the *terminus*. The *path* in turn may be either implicit or explicit (Tenny ((1994); cf. also Chapter 2). The projection is as illustrated in (3b):

(3) a. John walked (the distance) to the station (in two hours)

b. ...[$_{IP}$ [$_{DP}$ John] I/OR [$_{VP}$ walked$_{\overline{OR}}$ [$_{VP}$ ~~walked~~$_{EM}$ N$_{walk}$ [$_{PP}$ to$_{DEL}$ [$_{DP}$ the station]]]

Another way to look at unergatives in (2) and (3) is to consider that being hidden transitives, they pattern with the constructions involving a cognate object, illustrated in (4):

(4) John walked a (long/5 mile) walk

In Tenny's (1994) analysis, the cognate object, which represents the event itself, corresponds to the *path*, and should measure out the event in the same way as *the sonata* in *John played a sonata* does. Thus, both (3) and (4) allow for terminative interpretation. Moreover, as in *John played a sonata*, if the *path* is not implicit, terminative interpretation may arise without a PP determining the endpoint. In (2), instead, the path being an implicit argument, terminative interpretation is obviously dependent on the presence of the PP.

The constructions in (3) and (4) could be also seen as patterning with the ones involving verbs of imparting-motion, illustrated in (5):

(5) John pushed the cart (for two hours)

As pointed out in Tenny (1994:75), in (5), the argument *the cart* itself does not measure out the event, as '[it] undergoes no necessary internal motion or change in the events described by these sentences'. As in the above-mentioned cases, these constructions may occur with a *path* (either implicit or not) and a *terminus* which together measure out the event (cf. *John pushed the cart (the whole distance/5 miles) to the station*). Accordingly, as noted in Tenny (1994:78), from the point of view of the aspectual structure, *push the cart* is a kind of intransitive event, namely *cart-*

pushing, which can be done for a certain time, over a certain distance: 'the fact that the moved object must change in location along the distance travelled during the course of the event follows from the fact that the event itself travels that course, and the moved object is part of the event'.

Interestingly, it seems that there is another way to look at the aspectual interpretation of unergatives which seems to give similar results as compared to the above possibilities, and proves to be particularly revealing in the analysis of single PP complements (cf. section 3.3). Adopting the previous reasoning, I would like to suggest that terminative reading in (2) is built upon a conceptual representation that takes the event to progress on a path, the length of which is determined by a *displacement*, namely *John's* (cf. Gruber (1976), Lombard (1985)). In this case, the argument representing what is displaced is the same argument initiating the event, namely *John* - the interpretation is therefore equivalent to *John walked himself* (compare to *John walked Mary*)[31].

Accordingly, as in *push the cart* (also *walk the path*, *play the sonata*), the (implicit) argument *himself* does not measure out the event; rather, by being what is displaced, it allows the *path* along which the event progresses to be determined (I shall discuss below cases in which no displacement takes place)[32]. The endpoint is then determined by the PP argument, giving rise to a change-of-location predicate. Accordingly, the following interpretation should be possible: *John walked (himself) (a 5 mile walk) to the station*. The aspectual interpretation whether terminative, as above, or durative, as in *John walked (for 10 hours)*, arises in connection with the (implicit) argument being interpreted as either *himself* or the cognate object *a walk* (or both)[33].

---

[31] Cf. (i), from Portuguese in which the unergative verb is construed with a reflexive pronoun:

(ii) Maria se riu
M. 3rd.p.REFL laughed

[32] Cf. Verkuyl (1993) for a discussion on unergatives and *push*-type verbs leading to the same conclusion.

[33] The former possibility is further confirmed by the existence of constructions such as *John drunk himself sick*. In Dowty (1979), these constructions are taken as an argument against the idea that verbs of this type are derived from an underlying monotransitive construction (cf. **John drunk something himself sick*). I shall return to this case shortly.

At this point, it is important to note that verbs allowing for this kind of interpretation form a subset of the group that has been referred to in the literature as *internally caused,* as opposed to *externally caused*, eventualities (cf. Levin and Hovav (1995)) - whereas the latter include verbs such as *break* and *open*, which have transitive as well as intransitive noncausative uses (cf. *The wind broke the glass/ The glass broke*), the former verbs never allow this alternation. With verbs expressing *internally caused* eventualities, Levin & Hovav observe, 'some property inherent to the argument of the verb is responsible for bringing about the eventuality'. Moreover, this property may or may not correspond to 'the will or volition of the argument performing the activity (cf. *laugh* and *walk*, respectively) - in the latter case, the *internally caused* eventuality arises from internal properties of the relevant argument which may be either animate, as in *Mary trembled/sneezed*, or non-animate (thus, clearly non-agentive), as in *The light glittered/ The bell rang*' (p. 91) (cf. also Perlmutter (1978), cited in Levin and Hovav (1995)). Hence the above-mentioned interpretation should refer to unergative verbs expressing *internally caused* eventualities involving animate arguments.

Under this view, it is possible to account for the cases in which unergatives appear with an optional reflexive object, as illustrated in (6) - Tenny (1994) observes that for some speakers, (6b) necessarily implies a terminative reading, although for others, durative reading is acceptable as well. In the latter case, an adverb should disambiguate the sentence (cf. *John shaved himself completely*):

(6) a. John shaved/bathed/washed

b. John shaved/bathed/washed himself

c. ...[$_{IP}$ [$_{DP}$ John] I/OR [$_{VP}$ shaved ~~$_{OR}$~~ [$_{VP}$ (himself) ~~shaved~~$_{EM}$]]

Notice however that the interpretation of the argument represented by the reflexive is rather different from what is proposed for the change-of-location construction above: in these cases, no displacement takes place, but rather a change of state. Terminative reading implies then an incremental theme and/or a change-of-state interpretation: the event is measured out as the argument realised by the reflexive is interpreted as undergoing an (internal) change - or in Tenny's (1994:42) terms, 'this kind of reflexive

object construction makes explicit a potential measuring argument for a certain class of verbs'.

This analysis should then extend to other constructions, namely the ones taking so-called *fake*-reflexives and the ones taking body-part objects with resultatives. (cf. also Simpson (1983), cited in Tenny (1994)), as illustrated in (7) and (8), respectively:

(7) a. I laughed myself sick
b. I cried myself to sleep
c. I danced myself tired

(8) a. I cried my eyes blind/out
b. John walked his feet off
(examples from Tenny (1994:42-3))

Tenny proposes that the argument represented by the reflexive in (7) is a measuring argument, as in (6b). A question that arises is why, in (7) and (8), contrary to (6b), secondary predication is obligatory, that is, the reflexive in (7) or the body-part argument in (8) cannot occur without the expressions *sick/to*; *sleep/tired* and *blind/out/off*, respectively.

A difference between these constructions is that the former, but not the latter, may take a non-reflexive argument (cf. *Mary washed the baby*). This difference, I propose, translates in terms of the conceptual representation of aspect: in (6b), the argument realised as the reflexive occurs in a change-of-state construction, and measures out the event by providing both the scale along which the event transpires over time and the endpoint; in (7) and (8), on the other hand, the argument realised as the reflexive provides the scale along which the event progresses but not the endpoint - the argument is the *instrument* on which the event is expressed[34]. The endpoint is provided under predication, giving rise to resultative reading, as desired. Hence in (7) and (8), the *path-terminus* pattern is obligatory. The latter can only be obtained under

[34] This interpretation should correlate with the fact these arguments are either *body parts* or realised as reflexives (although exceptions are possible: as in (10), below - but see comment on them below).

the *path-terminus* pattern of aspectual interpretation - this should characterise *reflexivity* (6b) as opposed to *fake*-reflexivity (7). The projection of these verbs is illustrated in (9):

(9) ...[$_{IP}$ [$_{DP}$ Mary] I/OR [$_{VP}$ laughed ~~$_{OR}$~~ [$_{VP}$ herself ~~laughed~~$_{EM}$] [$_{AP}$ sick$_{DEL}$]

The impossibility of having the (internal) argument in (7-8) providing the endpoint seems to further correlate with the fact that the verb in these constructions, but not in the former (cf. (6)), involve *body-functions*: this should allow the interpretation according to which the relevant argument undergoes change by performing what is expressed by the verb, suggesting that it is the *performing* interpretation that excludes that the relevant argument be interpreted as providing the endpoint for the event[35].

Under this view, it is also possible to account for the construction in (10a), its projection being as (10b):

(10) a. John laughed the children off the stage

b. ...[$_{IP}$ [$_{DP}$ John] I/OR [$_{VP}$ laughed$_{OR}$ [$_{VP}$ the children ~~laughed~~$_{EM}$] [$_{PP}$ off$_{DEL}$ [$_{DP}$ the stage]]

---

[35] Note further that constructions involving *fake*-reflexivity are not restricted to verbs involving *body-functions* - although a *body*-related activity is involved (cf. (ia)). Note that these verbs are also found as monotransitive predicates (compare to *Mary bathed/washed the baby*); also, as pointed out in Dowty (1979), the reflexive may be found on its own (contrary to verbs expressing *body-functions* (cf. (7-8)). This is illustrated in (i):

(i) a. John drank himself (silly)
b. John drank (a glass of wine)

However, the possibility of having the reflexive on its own is basically due to the possibility of having (ib) - that is, it is independent of the construction with the *fake*-reflexive. In this respect, verbs such as *eat* and *drink* pattern like *wash*, *shave*, *bathe* (cf. *Mary bathed/washed* (*the baby*)), a property that distinguishes these verbs from *laugh, cry, cough*. In this sense, *John drank himself* is interpreted on par with *John drank a glass of water*, hence *himself* in this construction is interpreted as being acted upon, not as the argument undergoing the action (the same holds for *herself* in *Mary bathed/washed herself*). In *John drank himself silly*, instead, *himself* is interpreted as the argument that originates and undergoes the action expressed by the verb - an interpretation that is exclusive of unergative verbs, as we have seen. Hence, *John drank himself* **can** be analysed as being entailed by *John drank himself silly*, provided that the latter interpretation holds, not the former (in this respect, I depart from Dowty's analysis of these facts - cf. previous note).

This construction should pattern with *John walked Mary to the station*: they are both transitive (nonreflexive) constructions (and are both construed with unergatives verbs). A difference between them is that in the latter, it is possible to have the construction without PP (cf. *John walked Mary (to the station)*), whereas in (10), PP is obligatory (cf. *John laughed the children**(*off the stage*)). Why should this be so?

What I would like to suggest is that in *John walked Mary (to the station)*, but not in (10a), the argument *Mary* occurring as the direct object, by being displaced, determines the *path* along which the event progresses: this construction should pattern with *push the cart* (cf. (5)), hence the possibility of having it without PP. In the former, instead, there is no displacement: the argument *the children* determines the *path* along which the event progresses by being an *instrument* on which the event progresses, hence, as in (7) and (8), since no displacement occurs, the argument cannot be found on its own[36]. The endpoint is then determined under secondary predication, giving rise to a resultative reading (exactly as in (7) and (8), as desired). Thus the generalisation is that an important difference among unergative verbs in (3), (7) and (8) is that in (3) the *body-function* expressed by the verb involves motion, whereas in (7) and (8) there is no motion (that is, displacement is not required in order to represent the notion of *path*).

It should be noticed that this analysis, although based on Tenny's (1994) proposals concerning the *path-terminus* pattern, does not follow her account of unergatives: according to Tenny, unergatives belong to a class of verbs that never take aspectual arguments, patterning like statives and monotransitives as in *push the cart* - the idea is that in this class, verbs share the property of occurring in predicates interpreted as durative. In present terms, instead, unergatives pattern with (all) nonstative transitives (including *push the cart*), that is, (all) verbs projecting a VP shell. Under this approach it is possible to capture an important difference between stative, on one hand, and unergative verbs as well as nonstative monotransitives, on the other

[36] An objection to this analysis could be that in *play the sonata* there is no dislocation and it is possible to have the construction without a PP determining an endpoint. What I would like to say is that this is because in *play the sonata*, the verb is not a change-of-state verb, hence the argument can be interpreted as the instrument along which the event progresses.

hand, namely that the former always occur in predicates interpreted as durative, whereas the latter occur in predicates interpreted as either durative or terminative.

In fact, what I would like to propose is that durative interpretation has different sources in each case: in the former, it is associated with a lexical property of V, which translates in the syntax in terms of temporal obviation of V with respect to Tense, whereby the thematic relations between V and its arguments hold independent of the time specified by the Tense in Infl (cf. Roberts (1987)); in the latter, it is determined in the syntax, under the interaction between verbal and nominal properties of the predicate. In other words, the lexical information about the organisation of time is introduced in the semantics of the sentence, compositionally, in the latter case, under the interaction between verbal and nominal properties of the predicate, and by V itself, in the former case, in terms of temporal obviation of V with respect to Tense.

Before I turn to ditransitive constructions, I shall discuss *one-event* semantic constructs.

3.1.2 The one-event semantic construct: the single VP

As mentioned above, *one-event* semantic constructs correspond to stative verbs[37] and unaccusatives. These verbs have in common the property of projecting a single VP. However, they differ in a rather crucial way: whereas unaccusatives bear a EM feature, statives do not. In fact, the notion *event measurer* does not arise with respect to statives predicates: as pointed out in Smith (1991:37), 'states are stable situations, they do not change of themselves', hence their representation is independent of measuring out patterns.

---

[37] I shall leave aside *psych* verbs as their syntactic properties constitute a topic on its own - but cf. Cottell (1996) for a study in which it is assumed that psych verbs are projected in a single VP, as opposed to other transitive verbs, which are projected in a VP shell. Cf. also Larson (1988) for a similar conclusion on independent grounds

Consider first the projection of unaccusatives in a construction such as (11a): the DP *Mary* is merged in [spec, I] satisfying the strong D-feature of I; the EM feature is then associated with the DP under EM movement to I. This is illustrated in (11b)[38] -

(11) a. Mary arrived

b. ...[$_{IP}$ [$_{DP}$ Mary] I/EM [$_{VP}$ arrived$_{EM}$]]

The same applies to unaccusative originating under the so-called *causative alternation*, as illustrated in (12):

(12) a. The glass broke

b. ...[$_{IP}$ [$_{DP}$ the glass] I/EM [$_{VP}$ broke$_{EM}$]]

Note that this representation is essentially based on the so-called Unaccusative Hypothesis. As pointed out in Levin & Rappaport-Hovav (1995), this hypothesis, which has been first formulated in Perlmutter (1978, cited in Levin & Rappaport-Hovav op. cit.), claims that there are two classes of intransitive verbs, the unergative verbs and the unaccusative verbs, each associated with different syntactic representations: whereas the former has an external argument but no direct internal argument, the latter has a direct internal argument but no external argument. In the present analysis, the basic properties characterising unaccusatives as opposed to unergatives are represented in terms of the amount of structure projected by the verb (cf. section 3.2.1): whereas the latter project a VP shell, the former project a single VP, an idea that stems from Chomsky (1995).

---

[38] Whether the predicate is interpreted as terminative or durative is determined compositionally, under the interaction between nominal and verbal properties (recall that the same holds for the predicates associated with the VP shell). Accordingly, the predicate may be interpreted as durative if the DP is not quantized, as shown in (i) (compare to (10), in which terminative interpretation arises):

(i) Poor children arrived at the station for 2 days

In this case, durative interpretation is due to iteration: *children* being a count noun allows for the partition of the event (cf. Schmitt (1996)). This is a desirable result: once the EM feature is present either durative or terminative interpretation should be possible, depending on the quantificational properties of the verbal complement, exactly as in verbs projecting the VP shell (cf. above). Note, however, that the partition of the event, whenever it is due to the quantificational properties of the verbal complement, should not alter the syntactic representation of the event which in the present case remains the same, namely a single VP.

Consider now the projection of stative predicates, as illustrated in (13a). Given the observations above, V head projects a (single) VP, and does not bear a EM feature (as a lexical property, V is not compatible with an interpretation in which the event is measured out). The DP *Mary* is merged in [spec,I], satisfying the strong D-feature of I, and the DP *the lesson* is merged in [spec,V] satisfying the strong D-feature of V, as illustrated in (13b)[39] (cf. also Borer (1996); Arad (1996)) - (obligatory) V movement to some (functional) position above VP should then yield the right word order:

(13) a. Mary knows the lesson

b. ... [$_{IP}$ [$_{DP}$ Mary] I [$_{XP}$ knows [$_{VP}$ the lesson ~~knows~~]]

The projection of stative predicates is not fully developed. In a first approximation, it seems to be plausible to maintain that (stative) V projects a single VP (cf. studies on the syntactic representation of events cited above). However, in the absence of aspectual features, more needs to be said with respect to the conditions on the interpretation of the relevant arguments.

Another way to look at statives is to assume that they involve an embedding of V and a null category, presumably a null P, in an analogy to Kayne's (1993, 1995) proposal that the verb *have* in its possessional use, as in *John has a car*, is derived under P incorporation to an abstract copula BE, as illustrated in (14):

(14) ... BE [$_{PP}$ John P_{WITH} [a car]]

---

[39]A piece of evidence supporting this formulation comes from the fact that in the corresponding nominal, the same argument cannot be realised in a *by*-phrase, as illustrated in (ia), as opposed to (ib), in which the argument is licensed as a specifier:

(i) a. *the knowledge of the lesson by Mary

b. Mary's knowledge of the lesson

(examples adapted from Roberts (1987: 363)

As has been independently shown in Roberts (1987), only *agent* arguments can be licensed in the *by*-phrase in nominals (that is, only nominals derived from nonstative verbs take a *by*-phrase, as illustrated in (ii):

(ii) the destruction of the city *by the barbars*

What this contrast suggests is that arguments that are licensed in the *by*-phrase should be licensed within the lexical projection of V. Conversely, arguments that cannot be licensed in the *by*-phrase should not be licensed in the projection of V. I shall leave aside this and other matters associated with the syntactic representation of statives.

Kayne acknowledges that this structure is to a significant extent in agreement with Freeze's (1992) study on existentials and locatives in which it is observed that in various languages, stative predicates are expressed in constructions of this type, as illustrated in (15), from Portuguese:

(15) Maria **está com** fome/frio/calor
M. **is** **with** hunger/cold/heat
Mary is hungry/cold/hot

I shall return to this configuration in section 3.2, as it will be argued that DOC embeds a predicate of possession which is projected in a similar configuration.

In present terms, it could be said that the projection is as in (16): the DP *Mary* is merged in [spec,I] satisfying the strong D-feature of I; and the DP *the lesson* is merged within PP. The thematic properties raise in turn from P_{WITH} (through V) to I, under Move-F, in order to satisfy the condition stating that every argument should have a thematic role (cf. Manzini and Roussou (1997)) - but note that these (thematic) properties are neither OR nor EM.

(16) ...[$_{IP}$ [$_{DP}$ Mary] I/WITH [$_{VP}$ knows/~~WITH~~ [$_{PP}$ $P_{\sim\sim WITH\sim\sim}$ [$_{DP}$ the lesson]]]]

As pointed out to me by Ian Roberts (p.c.), what this representation suggests is that the verbal head above P is a raising predicate. In this sense, its subject position is non-thematic (cf. Moro (1997)) - this should capture the idea that stative verbs do not have an external argument. This should further suggest that the notion of *non-thematic* in raising predicates can be understood as *non-aspectually* licensed - I shall leave this formulation as an open matter as it requires further investigation. At this point, what should be retained is the idea that stative predicates are not projected in a VP shell.

3.1.3 Summary and concluding remarks

In the previous sections, it was said that a basic assumption in the present study is that verbs can be thought of as either one-event or two-event semantic constructs, this representation having a syntactic import, namely the projection of a single VP and a VP shell, respectively: statives and unaccusatives project a single VP; unergatives and nonstative transitives project a VP shell. Following a strand of theorising establishing a correlation between argument licensing and the aspectual interpretation of the predicate, it was proposed that the aspectual properties of the verb are represented within its lexical projection. These properties were taken to be formally represented as aspectual features, namely *originator* (OR), *event measurer* (EM), *delimiter* (DEL), each corresponding to the role of the argument within the event structure of the verb.

It was shown that aspectual calculus involves two basic patterns: the *measure out* pattern whereby the EM feature is licensed by an argument providing both the *path* and the *endpoint* to the event; and the *path-terminus* pattern whereby the EM is licensed along with the DEL feature, one argument providing the *path* and another the *endpoint*. Whether the predicate is interpreted as terminative or durative is determined compositionally by the verbal and nominal properties of the predicate. Hence verbs associated with these features are lexically marked as occurring in predicates that are interpreted as either terminative or durative. Argument licensing within the projection of stative verbs was shown to be independent of these features due to a lexical property of these verbs determining that they always occur in predicates interpreted as durative.

Given this, it is possible to say that the presence of OR is contingent on the presence of EM (the contrary is not true - cf. unaccusatives): that is, if the EM feature is absent, then OR is not found either, hence OR is never found on its own. This should be a corollary of Tenny's (1994:10) observation that 'among a verb's various arguments, *only* the direct internal argument can measure out the event': recall that the direct internal argument is the one the EM feature is associated with. As far as the *originator* role is concerned then, aspect is read off the (amount of) structure projected

by V. In this sense, it is possible to say that aspect is an emergent semantic property of certain syntactic configurations, in the same way as thematic roles in Hale and Keyser's (1993) theory of argument structure are (cf. Chapter 2). This should translate Chomsky's observation that the v-VP configuration expresses the *causative* or *agentive* role of the external argument, an idea that stems from Hale and Keyser's (1993) theory of argument structure (cf. Chapter 2).

In essentially syntactic terms, it could be said that the present approach is similar to Arad's (1996) system (cf. Chapter 2). However, Arad's account of unergatives differs from what is proposed here in a rather crucial way: following Tenny (1994), Arad proposes that unergative verbs are associated with a single aspectual head, namely AspI(nitiatior) (=OR), that is, the AspEM node is not projected - in this sense, it is possible to have the OR on its own; in the present analysis, instead, on the assumption that unergatives are *hidden* monotransitives (cf. section 3.1.1), unergatives project a VP shell, and as a consequence, they pattern with all nonstative monotransitives, bearing both the OR and the EM feature, capturing the fact that these verbs occur in predicates interpreted as either terminative or durative.

Note that the present proposal has implications for language acquisition as well: as pointed out to me by Ian Roberts (p.c.), the concept of *one-event*, as opposed to *two-event*, semantic construct is probably innate. Accordingly, children sort out verbs into pre-existing categories, figuring out which can be thought of as simple events and which cannot in the acquisition of the verb's meaning.

Given this background, I shall examine the syntax of PP in ditransitive constructions.

3.2 The syntax of PP in ditransitive constructions: the alternation between DOC and the overt-P construction

After having presented basic points of an approach assuming a correlation between argument licensing and the aspectual interpretation of the predicate, I will discuss the syntax of PP complements in ditranstive constructions, taking into consideration the *dative*-alternation in English, illustrated in (17) and (18). The study

will be particularly concerned with the question of why this alternation is not found as a property of all ditransitive constructions.

(17) Mary put the book on the shelf

(18) a. Mary gave a book to John
b. Mary gave John a book

Following Hale and Keyser (1993; cf. also Chapter 2), I will assume that both the construction in (17) and the constructions in (18a-b) are projections of P and V, differing in that P is overt in (17) and (18a), and null in (18b). Accordingly, they consist of the embedding of two lexical predicates, as illustrated in (19):

(19) $[_{vP}$ Mary v $[_{VP}$ DP V $[_{PP}$ P DP]]]

Note that in this configuration, the well-known contrasts in anaphor binding, as well as other scope phenomena which are sensitive to c-command, as first discussed in Barss and Lasnik (1986), are accounted for (cf. Chapter 2).

Recall that in Hale and Keyser, the constructions in (17) and (18) are taken to correspond to a **causal relation** implicating an **interrelation** between two arguments (given the notional type associated with V and P categories, namely *event* and *interrelation*, respectively). Furthermore, as pointed out in Chapter 1, an important distinction among these constructions is that the alternation illustrated in (18) is restricted to predicates involving possession interpretation (Green (1974); Kayne (1984); Pinker (1989); Johnson (1991), among others). That is, whereas both (18a) and (18b) embed a predicate of possession, (17) does not: DOC is restricted to the constructions embedding a possession predicate.

What I would like to propose is that this distinction is captured under the aspectual interpretation of the predicate: in (18), but not in (17), either argument in the embedded predicate may be interpreted as measuring out the event. This is because the interrelation between the two arguments implicated by the causal relation gives rise to

an interpretation whereby one of the arguments undergoes (internal) change of state, characterising *transfer of* possession[40]. In stative ditransitive predicates (cf. *Mary owes John 5 pounds/her life*; *Mary owes 5 pounds/her life to John*), the interrelation between the arguments in the embedded predicate is represented irrespective of measuring out patterns, hence there is no restriction on the occurrence of DOC - for this reason, stative ditransitive predicates will be left aside[41].

Crucially, the emergence of DOC is contingent on the presence of a null P in the grammatical system of the language, a fact that is under crosslinguistic variation (I shall turn to this issue in Chapter 5, in connection with the discussion on the absence of DOC in Romance languages). Following suggestion in Hale and Keyser (1993), I assume that the null P corresponds to an overt *with* in its possessional use (an idea that is reminiscent of Kayne (1984), as already noted). Null P_{WITH} in turn is exclusive of DOC - this is independently motivated in terms of the conditions determining the emergence of these constructions in a given language (cf. Chapter 5).

In section 3.2.1, I shall discuss nonstative ditransitive constructions; in section 3.2.2, a summary will be provided; in section 3.2.3, I shall discuss cases in which either DOC or the construction with the overt-P is not found. Finally, in section 3.3, I shall discuss constructions with a single PP.

3.2.1 The dative-*alternation in nonstative ditransitive predicates*

Consider the *dative*-alternation, illustrated in (18). As mentioned above, a property of these predicates is that either argument in the embedded predicate may be interpreted as measuring out the event. Thus, each construction in the alternating pair corresponds to a different mechanism of licensing the EM feature of V: (i) the so-called *path-terminus* pattern, in the overt-P construction; (ii) the pattern in which a single argument provides both the *path* along which the event transpires over time and the *terminus* on that scale (henceforth the *measure* pattern), in DOC. The application

---

[40] As a corollary, it could be said that the verb in this case is assigned the feature [–LOCATION] - as opposed to the verb in the locative ditransitive construction which is (obviously) assigned the feature [+LOCATIVE]; in this respect, I follow Emonds (1993).

[41] I am grateful to Bill McClure for having pointed out these constructions to me, and for discussion on their aspectual interpretation as opposed to nonstative ditransitives.

of the alternating patterns should provide identical results with respect to the representation of the (internal) change undergone by the relevant argument, hence no difference arises with respect to the *transfer of possession* interpretation. However, as will be shown in section 3.2.3, the alternating patterns allow for an account of other differences of interpretation between DOC and the overt P construction, which may be found with some verbs (e.g. *teach*).

The alternating patterns of aspectual calculus correspond then to different ways of licensing the thematic relations within the predicate. The differences in the representation of the thematic relations interact in turn with a condition determining that each DP occupies a D (Case) position. This, I propose, is syntactically represented in the formation of WH-constructions and passives involving the indirect object, giving rise to the contrasts in (20):

(20) a. Who did Mary give a book *(to)?

b. John was given a book (*to)

Before I turn to these contrasts, let us see how the thematic relations are construed in each case.

Consider first the **overt-P construction** in (18a), repeated here as (21a). As mentioned above, I will propose, to a significant extent in agreement with Tenny (1994), that whenever P is overt, the aspectual interpretation of the predicate is obtained under the above-mentioned *path-terminus* pattern, PP determining the endpoint of the event. Thus, the projection of (21a) is as illustrated in (21b): the DP *Mary* is merged in [spec,I], checking the strong D feature of I; from this position, it attracts the feature OR in V_{OR} to I, hence it is interpreted as the originator; the DP *the book* is merged in [spec,V_{EM}], checking the (strong) D feature of V and satisfying the EM feature of V (it is thereby interpreted as the *path* along which the event progresses); the DP *John* in turn, is merged within PP, licensing the DEL feature[42].

[42]As noted in Haider (1992), further evidence for this projection comes from prosody: on the assumption that sentence stress is indicative for the most deeply embedded structural position, as

(21) a. Mary gave a book to John

b. [$_{IP}$ [$_{DP}$ Mary] I/OR [$_{VP}$ gave$_{\overline{OR}}$ [$_{VP}$ [$_{DP}$ the book] ~~gave~~$_{EM}$ [$_{PP}$ to$_{DEL}$ [$_{DP}$ John]]]

This pattern also applies to the construction in (17), repeated here as (22a), as illustrated in (22b):

(22) a. Mary put the book on the shelf

b. ...[$_{IP}$ [$_{DP}$Mary] I/OR [$_{VP}$ put$_{\overline{OR}}$ [$_{VP}$ [$_{DP}$ the book] ~~put~~ [$_{PP}$ on$_{DEL}$ [$_{DP}$ the shelf]]]]

A relevant point is that under the *path-terminus*, each DP is licensed by a different aspectual feature, namely EM and DEL, each associated with a different lexical head, V and P, respectively[43].

Consider next DOC in (18b), repeated here as (23a): as mentioned above, this construction has a null P_{WITH} - null P_{WITH} taking two arguments[44]. Moreover, the null P_{WITH} is only found entering a syntactic relation with V. We shall see in Chapter 5 that this is independently determined: null P_{WITH} is a lexical substitute for the (morphological) distinction between dative-accusative. Moreover, I propose, the syntactic relation between null P_{WITH} and V is determined by the aspectual interpretation of the predicate.

(23) a. Mary gave John a book

---

proposed in Cinque (1992, cited in Haider (1992)), the *to*-phrase should be assigned the most embedded position, as this constituent is assigned the normal/ noncontrastive stress in the sentence.

[43] Recall that this pattern of aspectual calculus is also associated with resultative constructions as (i) (cf. section 3.1.2):

(i) Mary cried her eyes out/blind

As noted in the literature (cf. Dowty (1979), Tenny (1994)), these constructions are syntactically and semantically similar to the verb-particle construction (cf. (ii)), allowing for a parallel between the latter and the process of aspectual calculus associated with (22). In present terms, the projection of (iia) should be as in (iib):

(ii)b. [$_{IP}$ [$_{DP}$Mary] I/OR [$_{VP}$ ate$_{\overline{OR}}$ [$_{VP}$ [$_{DP}$ the apple] ~~ate~~$_{EM}$ [$_{PP}$ up$_{DEL}$]]]]]

[44] Note that this view does not exclude Hale and Keyser's (1997) proposal that prepositions in general take two arguments within their projections, a property that is associated with its *relational* character. Hence, as in the PP projected by the null P_{WITH}, in the PP projection of overt-P, one of the arguments is licensed outside PP. However, in the overt-P construction, the argument merged in [spec,V_{EM}] is (aspectually) licensed independently of the semantic properties of P.

As already said, the *path-terminus* pattern is **not** at stake in this case, but rather the *measure* pattern, that is, the one in which both the scale along which the event transpires over time and the endpoint on that scale are provided by the DP licensing the EM feature. The projection is then as illustrated in (23b): the DP *Mary* is merged in [spec,IP], exactly as in (21b) and (22b); the DP *John* is merged in [spec,V_{EM}], checking the D feature of V; crucially, in this case, the DP *John* licenses not only the EM feature of V but also the thematic properties of P_{WITH}, namely WITH, a condition on its interpretation as providing both the scale and the endpoint in the aspectual interpretation of the predicate; this is represented in the syntax under attraction of the thematic features of P_{WITH} to V_{EM} by the relevant DP, in the same fashion as other thematic features are attracted to upper positions; the DP *a book* in turn is merged within the PP headed by null P_{WITH} [45]:

(23) b. ...[$_{IP}$ Mary I/OR [$_{VP}$ gave$_{\text{~~OR~~}}$ [$_{VP}$ John [$V_{\text{~~give~~/EM/WITH}}$ [$_{PP}$ $P_{\text{~~WITH~~}}$ a book]]]

Note that in (23a), given that the aspectual calculus is obtained under the *measure* pattern, the PP headed by the null P_{WITH} does not determine the terminus of the event. However, nothing prevents null P_{WITH} from occurring in a predicate in which the *path-terminus* is at stake. This is what happens in alternating datives in the Minas dialect of Brazilian Portuguese (cf. (i) *Maria deu o João o livro/* (ii) *Maria deu o livro o João* (=M. gave John a book/ M. gave the book John): in (ii), but not in (i), the *path* is provided by the DP *o livro* licensing the EM feature, and the *endpoint* is provided by the PP headed by the null P_{WITH} - I shall return to these constructions in Chapter 5.

Under the *measure* pattern of aspectual interpretation then, the DP *John* is interpreted as the *affected* or the *patient* argument. This idea is not new: Pinker (1989) points out that the representational distinction between DOC and the overt-P construction is basically that the *patient* is the recipient, in the former, and the

[45] Note that technically, this operation can be said to correspond to nullP incorporation to V, allowing for a parallel with Kayne's (1993; also section 3.1) proposal of deriving *have* in its possessive use under P incorporation to an abstract BE - an interesting result given that the notion of possession arises in DOC as well. However, the idea of moving the thematic feature only, not the categorial one,

transferred object in the latter. This distinction, Pinker notes, accounts for the contrast in *What John did to Bill was give him a book/ ?give a book to him*, as well as the entailment differences between *teach John lesson 5*, *teach lesson 5 to John* whereby *John* is interpreted as having learned *lesson 5* in the former, but not in the latter (I will return to this case in section 3.2.4).

In this sense, the *measure* pattern in DOC works in the same way as in *Mary thinned the gravy, John built a house* and *Leandro ate a mango*. Recall that a common property of the latter two constructions is that their aspectual interpretation is determined translating spatial delimitedness into temporal delimitedness (cf. Tenny (1994); also Chapter 2)[46]. In (23a), this is not obvious, as (transfer of) ownership involves abstract concepts; however, the application of the *measure* pattern suggests that a similar condition holds: that is, the argument measuring out the event needs to be in some sense *delimited in space* as well, in order for the relevant interpretation to arise.

At this point, Jackendoff's (1992) observation concerning the distinction between the conceptual representation of location (in physical space) as opposed to possession is rather revealing: the former ranges over the three continuous orthogonal dimensions of space, whereas the latter ranges over the discontinuous unstructured set of individuals (cf. also Chapter 2). What I would like to suggest is that the *measure* pattern in DOC correlates with the fact that the conceptual representation of possession ranges over individuals, allowing for a parallel with the cases in which aspect is calculated translating spatial delimitedness into temporal delimitedness. Conversely, the representation of location, ranging over the three continuous orthogonal dimensions of space, is incompatible with the *measure* pattern of aspectual calculus, hence DOC is excluded in locative ditransitives (cf. **Mary put the shelf the book*) (and only the *path-terminus* pattern is possible (cf. (22a)).

---

is rather crucial for the present proposal: recall that this operation is triggered by the properties of DP, under attraction, hence there is no motivation for the DP to attract categorial features of P.

[46] It is possible to assume that under possession interpretation the relevant argument undergoes change (namely, that of becoming a possessor) . In this sense, it should parallel with (i):

(i) Mary thinned the gravy

Interestingly, these facts further interact with the lexical properties of null P_{WITH}. As noted above, this element is taken to correspond to an overt *with* in its possessional use, as suggested in Hale and Keyser (1993), on the basis of Kayne's (1984) original idea of having a null P associated with the representation of possession in DOC (cf. Chapter 2). The possession interpretation of null P_{WITH} is built upon comitative interpretation, which in turn requires that the arguments be represented as *individuals* (that is, *entities*), as opposed to $P_{LOCATIVE}$ for which this requirement does not arise, as the argument occurring in its complement position is interpreted as a position in space. Accordingly, the arguments of P_{WITH} are necessarily specified for Gender, contrary to $P_{LOCATIVE}$, for which this requirement does not hold (cf. *with here/there; from here/there).

Note that this approach to licensing the arguments of null P_{WITH} in DOC can be partially related to Kayne's (1995:65) discussion of the pairs in (24). According to Kayne, the *with*-phrase patterns with small clauses and infinitivals with respect to Case marking:

(24) a. John and Bill collided
b. John collided with Bill

Kayne proposes that (24b) involves 'stranding of the *with*-phrase as the result of leftward movement of *John* out of a constituent *John with Bill*', to the thematic subject position within VP: this is because *John* is not Case-licensed within the *with*-phrase, contrary to (24a), in which it is clear that the phrase as a whole is Case-licensed (a property distinguishing *and* and *with*). It is then observed that the ungrammaticality of (25a) is due to the same reason as in (25b-c), namely lack of Case on *John*:

(25) a. *John with Bill collided
b. *John to go away would be a good idea
c. *John intelligent is believed by everyone

In present terms, in ditransitive constructions, lack of Case on the DP *John*, and DP-movement out of the *with*-phrase translates as DP Merge in [spec,V_{EM}],

checking the Case feature of V, an operation that is independently motivated by the condition stating that the DP should be found in a Case position, and (obligatory) movement of the thematic properties of P_{WITH} to V_{EM}. The output of this operation, namely the WITH-feature on V, has a syntactic effect: it blocks (or renders at best marginal) extraction from the [spec,V_{EM}] position, as illustrated in (20a), repeated here as (26a-b) - compare to the overt-P construction in which extraction of the direct object is grammatical:

(26) a. *Who did Mary give a book?

b. Who did Mary give a book to?

This contrast has been recurrently discussed in the literature (cf. Whitney (1983); Larson (1988); Johnson (1991); Emonds (1993), among others). Within the GB framework, Whitney's (1983) account is rather elaborate: it is argued that the restriction to extraction is due to illicit binding of the A-bar bound trace of dative movement from inside the domain of its A-bar operator. Hence, the restriction on extraction in (26b) is due to the dative movement operation.

In present terms, descriptively, what happens in (26a) is that the variable is bound in a position in which the DP licenses two thematic features, namely the EM feature of V and the thematic features of P_{WITH} (as a consequence of its entering in the *measure* pattern of aspectual interpretation) - the WITH feature is attracted to V_{EM} by the DP *who* which in turn is merged in spec,V_{EM}. This is illustrated in (27)

(27) *[$_{CP}$Who did [$_{IP}$ Mary I/OR[$_{VP}$ give$_{\text{~~OR~~}}$ [~~who~~ ~~give~~ $_{EM/WITH}$ [$_{PP}$ $P_{\text{~~WITH~~}}$ a book]]]]]

At this point, I would like to capitalise on Whitney's (1983) approach to these facts, which is developed within the GB framework: on the assumption that DOC involves movement of the dative argument, she argues that extraction is blocked by the condition C from Binding Theory which establishes that an R-expression (a referring expression) must be A-free (cf. Chomsky (1981, 1986a)). Given that dative movement leaves a trace that is A-bound by its antecedent (the dative NP), it follows that once WH-movement is applied to the dative NP, the variable, which is an R-expression for

the effect of binding theory, is coindexed with the resulting trace of dative movement, violating the above condition.

In present terms, however, there is no DP movement: instead, what moves is the feature WITH, leaving a copy behind. However, it is possible to capture the effects of Binding Theory as formulated in Whitney's analysis in terms of reconstruction. The notion of reconstruction arises within the minimalist framework as a by-product of operator-variable interpretation at LF, its effects indicating that WH-movement leaves a full copy of the WH-phrase behind (cf. Chomsky (1995))[47]. What could be said is that reconstruction is blocked in (27), because one of the thematic features licensing the relevant DP (namely, WITH) has a copy of itself behind: for the purposes of Binding theory, the reconstructed expression is analysed as an R-expression, and therefore cannot be A-bound - (thematic) feature movement in this case is analysed as an instance of A-movement.

However, more needs to be said. As pointed out to me by Anna Roussou (p.c.), (at least) as far as (thematic)-feature movement is concerned, this situation resembles to WH-questions involving subjects (cf. 28a): in this case, the variable position is spec,IP (where nominative Case is assigned), and an aspectual feature is attracted to I by the DP merged in spec,IP (cf. (28b)) - however, (28a) is grammatical:

(28) a. Who arrived?

b. [$_{CP}$ Who C [$_{IP}$ ~~who~~ I/EM [$_{VP}$ ~~who~~ arrived/~~EM~~]]]

My proposal is that extraction is possible in (28) because I is an *extended* projection (in the sense of Grimshaw (1990)) of V, that is, the effects of Condition C, as described above, do not apply if movement involves V and its extended projection(s): if the relevant copy is within the verbal skeleton of the sentence (which include C and I)

---

[47] As pointed out in Chomsky (1995), the effects of reconstruction can be observed in (i), in which two interpretations are possible depending on whether the anaphoric is bound in the reconstructed or in the derived position - in the former case, *himself* is bound by *Bill*, in the latter, it is bound by *John*:

(i) a. John wonders [which picture of himself [Bill saw ~~which picture of himself~~]]

there should be no problem for extraction[48]. The idea is that principle C is not violated if the blocking reconstruction should not be at stake if (feature) movement involves a lexical head and its extended projections. In (27), V is not an extended projection of P, hence the properties of P_{WITH} licensing the argument *John* should *count* for the purpose of reconstruction. The variable cannot be bound, giving rise to the ungrammaticality illustrated in (26a).

Note that this problem does not arise in overt P constructions (cf. 29a-b), as indicated by the fact that extraction from the same position, namely [spec,V_{EM}], is grammatical (cf. (29c)):

(29) a. What did Mary give to John?

b. What did Mary put on the shelf

c.[$_{CP}$ What did [$_{IP}$ Mary I/OR[$_{VP}$ give$_{OR}$ [$_{VP}$ ~~what~~ ~~give~~ $_{EM}$ [$_{PP}$ to John]]]]]

This result, I propose, is due to the fact that in the overt P construction the EM feature is licensed under the *path-terminus* pattern which splits the thematic representation of the (internal) arguments among each head, V and P (and at the same time combines them under the condition determining that the *path-terminus* pattern itself comes as a set) (cf. Tenny (1994)).

It remains to account for the contrast in (30), involving passivisation, in which the reverse pattern arises - I defer the discussion of this case to Chapter 4, in which pseudopassives are discussed (cf. section 4.4).

(30) John was given a book (*to)

---

[48] The same reasoning should apply to WH-movement in control sentences, as illustrated in (i):

(i) Who tried to leave

Following Manzini and Roussou (1997), I assume that control sentences amount to more than one Asp feature being associated with the same DP argument. Accordingly, in (i) the DP in spec,IP licenses two aspectual features, namely OR (from the upper V) and EM (from the embedded infinitive clause). This is possible because these features belong to a broader extended projection, which is formed under the conditions licensing control sentences.

A relevant question at this point is why P has to be null in DOC. On the assumption that null P_{WITH} corresponds to an overt *with* in its possessional use, given a correlation between possession and comitative interpretation, the natural question is why is it that the overt *with* cannot be found as an alternative to DOC (cf. **Mary gave John with a book*). What I would like to propose is that the overt P_{WITH}, in English, is a *specialised* preposition: although it may share semantic features with null P_{WITH}, it is exclusive of the constructions in which the notion of *fulfilment* is also implied (cf. (31)) - this should exclude overt *with* from the construction in which this notion does not arise.

(31) a. Mary provided John *with food* (+fulfilment; +possession)
b. Mary presented John *with a medal* (+fulfilment; +possession)

The null P_{WITH} on the other hand, is a specialised P as well. As has been already pointed, it is restricted to grammatical systems in which the morphological distinction between accusative and dative is not present (cf. Chapter 4). In this sense, null P_{WITH} can be seen as a lexical substitute for the accusative-dative distinction.

3.2.2 The aspectual approach to the dative-*alternation: further evidence*

In this section, I will discuss the contrasts that have been presented in Chapter 1 in connection with the *dative*-alternation in terms of the aspectual-based approach to this phenomenon, as presented in section in 3.2.1.

Consider first the differences of interpretation associated with DOC and the overt-P constructions in (32), in which (32a), but not (32b), entails that *the children learned French* (cf. Green 1974):

(32) a. Mary taught the children French
b. Mary taught French to the children

The interpretation according to which the *teaching* event implies that *the children learned French* (cf. 32a) should only arise in relation to the pattern of aspectual calculus in which the relevant argument is interpreted as providing both the scale and the endpoint to the event expressed by the verb - as mentioned above with respect to *give*-type verb, the argument is interpreted as undergoing change of state. In (32b), instead, the *path-terminus* pattern is at stake, hence this interpretation is not possible: the EM feature of V is checked by the argument *French*, which is interpreted as the *path* along which the event progresses; and the argument *the children* is interpreted as providing the endpoint as it checks the DEL feature within the PP.

Note that these observations do not exclude the possibility of having terminative interpretation with the overt-P construction. Compare (33a) to (33b), in which the argument checking the EM feature is specific - but neither (33b), nor (33c) entail that *the children learned lesson 5*:

(33) a. ?Mary taught *French* to the children in 2 months
b. Mary taught *lesson 5* to the children in 2 months

Accordingly, terminative interpretation is possible with both patterns of aspectual calculus, as desired. However, the above-mentioned contrastive reading is determined by a lexical property of *teach*, which is not found in the *give*-type verb (hence no difference of interpretation arises in the latter group). This property is presumably associated with the fact that the verb *teach* allows for an interpretation in which the focus is either on the *learner* or on *what is learned* (note that this verb is found with either argument in a monotransitive construction, as illustrated in (34)):

(34) a. Mary taught French
b. Mary taught the children

Interestingly, the account provided above correlates with Tenny's (1994) account of the difference of interpretation in the locative alternation illustrated in (35): as often observed, (36a), but not (36b), implies that the car is completely filled at the end of the event (cf. also Pinker (1989), Jackendoff (1990), Hale and Keyser (1993)):

(35) a. John loaded grass in the car

b. John loaded the car with grass

Tenny observes that 'the locative alternation becomes possible where the verb has two arguments that can be understood to mutually measure out the event' (p. 52), which is determined by semantic properties of both the internal arguments: one of them must have material-like properties and the other must be a flat surface or container that can be filled up over time (with the relevant material). It is then proposed that when the *material* is the direct object (cf (35a)), it is interpreted as an *incremental* theme, and it optionally measures the event; when it is the *location* that occupies the direct object position, then it is more likely to be interpreted as undergoing a change of state, hence the completive/terminative interpretation.

Tenny further notes that the possibility of measuring out the event by either aspectual pattern, namely the *incremental* theme and the *change of state*, correlates with non-aspectual elements of meaning associated with the verb, as not always the contrastive reading arises (e.g. *spray*). As noted in Jackendoff (op.cit: 173), *spray* is identical [to *load*] except that it lacks the distributive feature and instead incorporates an ordinary location function, hence it is not necessarily completive'.

Consider now the contrast in (36), in which DOC, but not the overt-P construction, is ungrammatical:

(36) a. *John pulled Sue the box.

b. John pulled the box to Sue.

(examples from Pinker (1989))

As pointed out in Pinker (1989:102-3), verbs such as *pull, drag, push,* 'which involve continuous exertion of force', differ from verbs such as *throw, kick, bounce*, in that they do not allow for an interpretation in which the verb 'causes someone to possess an object by means of instantaneously imparting force to it'. Therefore, Pinker

observes, in the former class, the goal argument can only be interpreted as goal of a location (contrary to the latter).

I take Pinker's observations to be basically correct. In Jackendoff's (1992) terms, *Sue* is represented as a point ranging over the three orthogonal dimensions of space - in this respect these verbs pattern like verbs such as *put*. Accordingly, the interpretation in which the DP *Sue* both provides the scale and the endpoint to the event is not possible, hence the DP *Sue* cannot be merged in [spec,V_{EM}] checking the EM feature of V, and DOC cannot be licensed. Instead, the thematic properties can only be licensed under the *path-terminus* pattern of aspectual interpretation. As pointed out to me by Ianthi Tsimpli (p.c.), this should correlate with the possibility of substituting the preposition *towards* for *to* (cf. *John pushed the box towards Sue*; compare to *John give the book to/ *towards Mary*).

Interestingly, the absence of DOC with verbs such as *donate* (cf. (37)) can be accounted for in those terms as well, if we assume that the argument introduced by P in this case is a *goal of location*, rather than a *possessor* - accordingly, *donate* is interpreted as *put* in (17):

(37) a. Mary donated her books to the library
b. *Mary donated the library her books.

This is not unreasonable, since the arguments occurring in this position tend to be *institutions*, *organisations*, which may be interpreted as the *depository* of the donation, rather than the *owner* of what is donated. This is suggested by the fact that the preposition *to* may substituted for (in particular, in the nominal construction), as illustrated in (38)[49]:

---

[49] The verb *donate* has been analysed in the literature along with other verbs not allowing for DOC in terms of the so-called morphological constraint on datives, whereby DOC is associated with verbs having an Anglo-Saxon/native, not Latinate, stem. Cf. (i) (cf. Green (1974); Pinker (1989)):

(i) a. *Mary reported John the story
b. *Mary explained John the lesson

I take this to correlate with the fact that these verbs are not typical ditransitive (cf. (ii)):

(ii) a. Mary reported the story
b. Mary explained the lesson
c. Mary donated her books

(38) a. ??Mary donated her books *in favour of* the library

b. Lots of donations will be put *towards* repairing the church
((30b) from Longman Dictionary of Contemporary English)

Consider now the contrasts in (39) and (40):

(39) a. John gave the rope a pull.

b. *John gave a pull to the rope.

(40) a. Mary gave John a kiss.

b. *Mary gave a kiss to John

Following a suggestion by Higginbotham (1996), I will assume that (39a) and (40a) make explicit the fact that these constructions involve two events by allowing one of them, namely the lower one, to surface as an argument. In the spirit of Hale and Keyser's (1993) proposal of deriving denominal verbs under head movement (cf. Chapter 2), I propose that DOC in (39a) and (40a) be analysed as the overt counterpart of the process deriving *pull* and *kiss*, respectively. In this sense the structure of (39a) and (40a) should parallel with the structure in which *pull* and *kiss* are derived - a difference would just be that in the former a variable, instead of a constant, is found in the most embedded position. This is illustrated in (41):

(41) a. $[_{IP}\ [_{DP}$ Mary] I/OR $[_{VP}$ gave$_{\text{~~OR~~}}$ $[_{VP}\ [_{DP}$ the rope] ~~gave~~$_{EM}$ $[_{PP}$ P $[_{DP}$ a pull]]]]

b. $[_{IP}\ [_{DP}$ Mary] I/OR $[_{VP}$ pull $_{\text{~~OR~~}}$ $[_{VP}\ [_{DP}$ the rope] ~~V~~$_{EM}$ $[_{PP}$ P$_e$ $[_{NP}$ ~~pull~~]]]

The construction with the overt P is not possible because the arguments *a pull* and *a kiss*, being an event turned into argument, cannot be interpreted as an *affected* argument - in Tenny's terms, they cannot measure out the event, hence they cannot be merged in [spec,V_{EM}] position.

Interestingly, the peculiarity of the construction in (40), as opposed to the alternating ones (cf. (16)), is grammaticalized in different ways crosslinguistically: in

Portuguese, in which DOC is not found, the *a*(=to)-construction co-occurs with a construction involving a locative preposition, as illustrated in (42a) and (42b), respectively, a property that is restricted to this case (cf. 42c):

(42) a. Maria deu um beijo ao (=a+o) João
M gave a kiss to-the J.

b. Maria deu um beijo no (=em+o) João
M. gave a kiss on-the J.

c. Maria deu um livro ao/ *no João
M. gave a book to-the/ on-the J.

This analysis should then apply to the constructions in (43) - incidentally, in these cases, the counterpart with a single verbal form is not found, contrary to the previous ones:

(43) a. Mary gave John a cold/ a broken arm/ a black eye

b. *Mary gave a cold/ a broken arm/ a black eye to John
(examples from Larson (1988: 376))

The expressions *a cold, a broken arm, a black eye* in (41), are interpreted as events turned into arguments, exactly as (39) and (40). Hence, the interpretation is as follows: *John* is associated with the event of *having a cold/ a broken arm/ a black eye* under a causative interpretation[50].

Consider now the constructions in (44), in which only DOC is found[51] - note that these are stative predicates:

(44) a. Mary envies John his car

b. *Mary envies his car to/of/on John

---

[50] This approach has similarities with Emonds' (1985) account in which these constructions are distinguished from the ones in (18) in terms of the level of lexical insertion of *give*.

[51] I am grateful to Ian Roberts (p.c.) for having pointed out to me these examples and for discussion on this matter.

Here the problem seems to be essentially lexical: *envy* only combines with possession interpretation. Any additional (semantic) information is incompatible with the conceptual representation of this verb, hence the impossibility of having the quoted prepositions, namely *to/of/on*. The only preposition in English satisfying this condition is null P_{WITH}. Note that the overt *with* in its possessive use is incompatible as well, as it is also associated with an interpretation involving the notion of *fulfilment* (cf. *provide John with a good book*), which is incompatible with the properties of *envy*[52].

3.3 Single PP objects

In this section, it will be shown that the analysis that has been proposed for ditransitive constructions can be extended to constructions in which V takes a single PP, as illustrated in (45):

(45) a. John went to the beach
b. John spoke to Mary
c. John depends on Mary

Consider first (44a), which involves an unaccusative verb taking an (obligatory) PP complement. What I would like to propose is that (45a) is aspectually interpreted under the *path-terminus* pattern: V bears a EM feature and projects a single VP, the argument *John* is merged in [spec,I], checking EM, which is the closest thematic/aspectual feature, hence it is interpreted as providing the scale along which the event progresses; the DEL feature is in turn checked by PP, as illustrated in (46):

(46) ... John I/EM $[_{VP}$ DP_{EM} $went_{EM}$ $[_{PP}$ to_{DEL} $[_{DP}$ the beach]]]

---

[52] Note that in these constructions, extraction from either position is not possible (cf.(i)) (I am grateful to Siobhán Cottell for having pointed out to me these cases, and for discussion on this matter):

(i) a. *Who do you envy his car?
b. *What do you envy John?

I take these cases to correlate with the fact that the construction with the overt P is not possible - recall that extraction from the upper position is not possible in DOC anyway. Note further that this verb belongs to the group of psych verbs, which, as is well-known, have a number of syntactic properties which are very specific requiring therefore a separate study - I leave this for future work.

Consider now (45b). Here again, as far as the aspectual interpretation is concerned, the *path-terminus* pattern is at stake: the verb expresses a so-called *internally caused* eventuality, in the same way as unergatives such as *walk*, *run*, *laugh*, *cough*. Hence, the argument *John* is interpreted as both initiating and undergoing the event expressed by the verb. The projection is then as follows: the argument *John* is merged in [spec,I] satisfying the strong D-feature of I, and licensing the closest aspectual feature, namely OR; the EM feature which remains unassigned is associated with an implicit argument (cf. Williams (1987)) which necessarily corresponds to *himself*; the DEL feature is checked by PP. This is illustrated in (47):

(47) ... John I/OR [$_{VP}$ spoke ~~OR~~ [$_{VP}$ (*himself*$_i$) V_{EM} [$_{PP}$ to Mary]]]

The immediate question is then why the argument licensing the EM feature has to be implicit. Note that in (45b) the verb expresses a so-called *internally caused* eventuality, hence the argument that initiates the event *necessarily* undergoes it. This should explain why this argument does not have to be overt (although it may be overt - cf. *Maria se riu* (=Maria 3rdREFL laugh), from Portuguese, or *Mary laughed herself sick*). In fact, the conditions licensing the reflexive in this case are under crosslinguistic variation.

Given this, I would like to suggest that this analysis be extended to the construction in (46c). Accordingly, the verb *depend* should be analysed as expressing some sort of *internally caused* eventuality, exactly like (46b), the predicate being aspectually interpreted under the *path-terminus* pattern as well[53]. The same should hold for *John insisted on the problem*. Under this view, it is possible to account for the impossibility of constructions such as **John spoke Mary on*; **John insisted the problem on*: the EM feature being associated with the implicit argument, cannot be licensed by the object of P.

[53] I leave aside the cases in which the construction with the single PP complement is a stative predicate (cf. *I believe in God*)).

3.4. Conclusions

In this chapter, a discussion on the syntax of PP in ditransitive constructions was provided, taking into consideration the *dative*-alternation as opposed to locative ditransitive constructions. Following Hale and Keyser (1993), it was assumed that these constructions are projections of V and P - DOC was taken to involve a null P_{WITH}. It was then proposed that the emergence of null P_{WITH} is independently motivated, being contingent on the absence of the morphological distinction between accusative and dative in the grammatical system of the language - this proposal is motivated in chapter 5.

It was then argued that argument licensing within the projection of V and P is determined by the aspectual interpretation of the predicate. Drawing on Tenny's (1994) theory according to which *measure, path* and *terminus* are aspectual roles which may be associated with a given predicate, it was proposed that these aspectual properties are represented within the projection of V and P in ditransitive constructions. This proposal is based on Borer's (1994) idea of representing aspectual properties in aspectual heads, which in turn host the arguments of the predicate (cf. also Arad (1996)). The representation of the aspectual properties within the predicate was formalised in terms of aspectual features, as proposed in Manzini and Roussou (1997).

It was argued that in the *dative*-alternation, the *interrelation* between the internal arguments which is implicated by the causal relation expressed by the verb gives rise to an interpretation whereby one of the arguments undergoes (internal) change - characterising *transfer of* possession. This interpretation was taken to arise under two different patterns of aspectual calculus: the *path-terminus* pattern in which the *possessee* is associated with the *path* role, whereas the *possessor* is associated with the *terminus* role; and the *measure* pattern in which the *possessor* measures out the event (the *possessee* is not licensed aspectually) - crucially, in the latter case, the

interpretation of the *possessor* argument as measuring out the event was taken to be contingent on the thematic properties of the embedded predicate, namely P, being represented in the aspectual calculus. The former pattern was associated with the overt-P construction, and the latter pattern with DOC.

The correlation between DOC and possession interpretation was then accounted for: it was argued that the aspectual pattern associated with the DOC construction is incompatible with the semantics of locative ditransitive predicates - in the latter, the locative argument being interpreted as a position in space cannot measure out the event. Locative ditransitives in turn were taken to be licensed under the *path-terminus* pattern, exactly as proposed in Tenny (1994). Finally, it was proposed that (nonstative) predicates in which V takes a single PP complement be analysed as involving the *path-terminus* of aspectual calculus.

Chapter 4. Crosslinguistic variation in the occurrence of P-stranding

In the previous chapter, I have discussed the syntax of PP in ditransitive constructions within a broader discussion on argument licensing. In this chapter, I will consider a very interesting phenomenon concerning the syntax of PP in English and Romance languages, namely the variation in the possibility of stranding P in the context of WH-constructions and passivization. As pointed out in Riemsdjik (1978), P-stranding represents the marked rather than the unmarked case among languages. Crosslinguistically, it is found within the Germanic group quite freely in English and among Scandinavian languages, but it is a very restricted phenomenon in Dutch, and still more restricted in German. Within the Slavic group, it only occurs in Macedonian. In Greek, Celtic and in Romance languages, it is not found at all[54].

This phenomenon has been discussed in terms of the notion of reanalysis between V and P. However, the reanalysis hypothesis faces a number of problems, as we shall see. In the present study, I shall propose that this phenomenon be analysed from a different point of view: instead of looking for the reason why P can be stranded, I shall investigate why they cannot be stranded - or in other words, why P-pied-piping is obligatory in a number. This shift of focus will prove to be very revealing as it will lead to an approach that is essentially minimalist.

In the present study, I shall discuss this phenomenon on the basis of data from the Germanic and Romance groups. The discussion will be as follows. In section 4.1, I shall present data from English and Portuguese illustrating variation in the occurrence of P-stranding; I shall also present some aspects of the syntax of P-stranding in English. In section 4.2, I will present a review of some analyses discussing this

---

[54] I shall leave aside the well-known (and rather sporadic) constructions in (i), from French and Portuguese, respectively, which do not come under the topic P-stranding as they do not correspond to either WH-constructions or passives:

(i) a. Maria votou contra
b. Marie a voté contre
M. voted against

problem. In section 4.3, I will propose an account for crosslinguistic variation in the occurrence of P-stranding.

4.1 The problem

It is well known that in the Romance languages, P cannot be stranded in WH-constructions, P-pied-piping being obligatory, as shown, in the examples (1a) and (1b), respectively, from Portuguese:

(1) a. *Quem Maria falou com?
b. Com quem Maria falou?
With who M. talked

In English, however, either P-stranding or P-pied-piping may occur, as illustrated in (2a) and (2b) respectively:

(2) a. Who did Mary talk to?
b. To whom did Mary talk?

Moreover, in English, P-stranding is also found in the so-called pseudopassive construction, as illustrated in (3) :

(3) John was talked to

However, P-stranding is not a free phenomenon in English: in some cases, neither the WH-construction nor the pseudopassive is possible, as illustrated in (4a-b):

(4) a. *Which break did you leave during?
b. *His mother was travelled with by John

Apparently, the possibility of stranding P correlates with the following condition, proposed in Riemsdijk (1978:26): 'the more closely a prepositional phrase is connected

with the verb, the easier it is to extract elements from such a prepositional phrase'. However, Riemsdijk himself points out that it is necessary to give a more precise definition of what the notion of *closely connected* is. Compare (4b) to (5):

(5) Who did John travel with?

The *connection* between V and PP is the same, that is, in both cases PP is an adjunct, and nevertheless P-stranding is possible in WH-construction, but not in the passive, suggesting that P-stranding is less constrained in WH-constructions.

The possibility of stranding P is further constrained by the insertion of an intervening adverb, as shown in (6a-b):

(6) a. This road was recently driven on.
b. *This road was driven recently on.
(examples from Chomsky, 1995)

In the following section, I will briefly discuss some analyses that have been put forward in order to account for these facts.

4.2 P-stranding and the Reanalysis Hypothesis

There has been a great deal of research on P-stranding. Among them, Riemsdjik's (1978) study remains an important reference: according to Riemsdjik, P-stranding depends on the availability of an escape-hatch position within PP. Subsequent studies have adopted the idea that P-stranding is due to a rule of reanalysis between V and P, the occurrence of which is under variation among languages. This idea was first proposed in Hornstein and Weinberg (1981), and modified in Kayne's (1984) analysis, in terms of the governing properties of P - Kayne's (1984) analysis, which is formulated within the GB framework, proved to be very influential: it as was adopted in various studies of this phenomenon and related subjects (cf. Roberts

(1985), Chomsky (1986), Haegeman (1986), Baker (1988), Larson (1988), Rizzi (1990), Van Kemenade (1987), Hale and Keyser (1993), among others).

In section 4.2.1, I shall briefly discuss Hornstein and Weinberg's (1981) analysis. In section 4.2.2, I will discuss Kayne's (1984) analysis. On the basis of Baltin & Postal's (1996) discussion, it will be shown in section 4.2.3 that the hypothesis of reanalysis between V and P faces a number of problems and should therefore be abandoned.

4.2.1 Hornstein and Weinberg's (1981) analysis of P-stranding in English

Hornstein and Weinberg's (1981) analysis of P-stranding is essentially based on an idea originally proposed by Jean-Roger Vergnaud that arguments are licensed in positions where either nominative, accusative or oblique Case is assigned (cf. Chapter 2). They propose that UG is endowed with a filter blocking an empty category in a position where oblique Case is assigned (cf. (7)):

(7) $*[_{\text{oblique}}\ e]$

On the assumption that P assigns oblique Case (cf. Chomsky (1980)), the filter in (7) rules out a construction with an empty category in the object position of P.

It is further claimed that a language-specific rule of syntactic reanalysis may be found within the domain of VP. The reanalysis rule, which is optional, applies in the base, forming a complex between V and any set of elements contiguous to its right. Crucially, Case marking follows reanalysis. It is then argued that the application of the filter in (7) may be circumvented by the rule of reanalysis: P is absorbed by V under reanalysis, and the trace in the complement position of P is assigned objective case (by V), thereby allowing P to be stranded, as in English. This is illustrated in (8):

(8) a. John $[_{VP}\ [_{V}$ talk$]\ [_{PP}$ to Mary$]$

b. Who$_i$ did John $[_{VP}\ [_{V}$ talk to$]\ t_i]$

The language-specific character of the reanalysis rule should then account for the paucity of P-stranding crosslinguistically. Moreover, a prediction of this theory is that P-stranding only occurs if PP is c-commanded by V. This is taken to be borne out, given the impossibility of stranding P in constructions such as (9):

(9) a. *What time did John arrive at?[55]

b. *What inning did the Yankees lose the ball game in?

(examples from Hornstein & Weinberg (1981:56))

On the assumption that the PP in (9) is not c-commanded by V, reanalysis is not possible, and the constructions are ruled out as a violation of the filter in (7), as desired.

The contrast in (10), which seems to bring a complication to this analysis, is taken to actually confirm it: following Dresher (1976, cited in Hornstein & Weinberg), it is assumed that in (10a), PP is generated within the domain of VP, hence the possibility of stranding P, whereas in (10b), it is generated outside VP. The reanalysis rule does not apply, and the filter in (7) rules out the sentence:

(10) a. The bed was slept in

b. *New York was slept in

Moreover, the rule of predication deriving the well-formed construction in (10a) is taken to only apply to semantically possible words - a notion that is taken to be part of the grammar, as proposed in Baltin's (1978, cited in Hornstein & Weinberg) discussion on the process deriving adjectives from verbs as in *a reduced price*, *a referred to solution*, as opposed to **a referred to in 1964 solution*. Accordingly, (11) is ruled out

[55] Judgements are controversial with respect to (9a), as there are speakers that accept this construction. The example is quoted as it is cited in the authors' discussion, but it will be shown below that the matter of whether PP is c-commanded by V is irrelevant for P-stranding (cf. section 4.3).

because the rule of predication cannot be applied, as *was slept often* is not a possible semantic word[56]:

(11) *This bed was slept recently in

A problem with this analysis is that the reanalysis hypothesis itself faces various problems, as pointed out in Baltin & Postal (1996), among others - I defer the discussion on this matter to section 4.2.3, below. Let us next consider Kayne's (1984) study which also invokes the notion of [V+P] reanalysis, although in different theoretical terms.

4.2.2 Kayne's (1984) study of the syntax of English and French prepositions

Kayne's (1984) analysis takes Hornstein & Weinberg's (1981) proposal that P-Stranding involves reanalysis between V and P to be basically correct. However, following Vergnaud (1979, cited in Kayne (1984)), Kayne points out that [V+P] reanalysis should not be analysed as constituent reanalysis, rather in terms of government, essentially as in Rouveret & Vergnaud's (1980, cited in Kayne) proposal for French causative and related verbs: on the assumption that reanalysis is found in causative constructions in French, it is not plausible to maintain the idea that French does not have the reanalysis rule.

It is then proposed that [V+P] reanalysis depends on whether P has the same governing properties as V, which in turn is under variation among languages. This proposal is developed on the basis of a comparative study of the complementizer systems of English and French, which led to the conclusion that the particle *de* in French (also *di* in Italian) has the same complementizer status as *for*, in English. However, their governing properties are different: given the compatibility of *de* with

---

[56] The possibility of assimilating the reanalysis rule to that of possible word is discarded in terms of the following piece of evidence: the idiomatic reading is kept under passivisation in (i), but not in (ii), suggesting that what distinguishes these sentences cuts across their semantics:

(i) a. John took advantage of Harry
b. Advantage was taken of Harry by John
(ii) a. John kicked the bucket
b. The bucket was kicked by John
(examples from Hornstein & Weinberg op. cit.: 66)

control, shown in (12a) - note that in English the construction with control takes *to* (cf. (12b)) - and the negative relation between control and government, it is concluded that the difference between *de* and *for* is that the former cannot govern the adjacent embedded subject NP position whereas the latter can, as shown in (13):

(12) a. Jean a essayé de partir
b. John tried to leave.

(13) a. *Ce serait dommage de quelquechose lui arriver.
b. It would be a pity for something to happen to him.

On the basis of this distinction, Kayne (1984) further accounts for the contrast in (14), involving constructions with verbs such as *croire* and *believe*, in French and English, respectively - the English example is an instance of Exceptional Case Marking (ECM) (cf. also Chomsky (1981)):

(14) a. *Je crois Jean être le plus intelligent de tous.
b. I believe John to be the most intelligent of all.
(examples from Kayne (1984:110-111))

Kayne's proposal is that in both constructions there is a phonetically null prepositional complementizer ϕ which bears the same governing properties of its overt counterparts, namely French *de* and English *for*. The ungrammaticality of the French construction in (14a) is then explained in terms of Case theory: since the embedded lexical NP is not governed, and given the requirement that Case be assigned under government (cf. Chomsky (1981); Chapter 2), the embedded lexical NP is not assigned Case and therefore the construction is ruled out.

Regarding the English construction in (14b), the explanation follows from the assumption that the prepositional complementizer ϕ governs the embedded NP. However, according to Kayne, since C_ϕ lacks phonetic content, it cannot assign Case. Thus Case is assigned by V and transmitted through null C_ϕ. Case transmission is then

dependent on V reanalysing with null C_{ϕ}, and this is possible because the latter is a structural governor, exactly like V.

The governing properties of P are further taken to determine their Case assigning properties: English P's, being structural governors, assign structural Case; Romance P, instead, assign oblique Case. The idea that English P's differ from their Romance counterparts in their Case assigning properties was suggested by Kayne in previous work, and incorporated in Lightfoot's (1980, cited in Kayne (1984)) study on the correlation between the loss of the accusative-dative distinction in English and the emergence of pseudopassives with nominative subjects, illustrated in (3), and repeated here as (15).

(15) John was talked to

Kayne's proposal then is that the occurrence of pseudopassives in English is due to reanalysis between V and P, which is possible because P in this language is a proper/structural governor, exactly like V. The fact that English P's are structural governors correlates in turn with the loss of the distinction between accusative and dative to the extent that it is taken to be a condition for P to assign structural Case. At this point, Kayne's (1984) proposal meets Hornstein and Weinberg's (1981) idea of accounting for P-stranding in terms of [V+P] reanalysis. However, in Kayne's account, [V+P] reanalysis has further extensions: apart from the above-mentioned syntactic environments, namely ECM constructions, and P-stranding in pseudopassives and WH-constructions, it also provides an account for DOC.

It is proposed that in DOC the complements are projected in a small clause configuration, the DP interpreted as the *possessor* being introduced by a null P, as illustrated in (16) (cf. Chapter 2):

(16) a. Mary gave *John a book.*

b. V [PP NP]

Null P in turn is taken to be deprived of the ability to assign Case, reanalysis between V and null P allowing for Case transmission from V to NP. Under this view, the construction *John was given a book* is taken to be an instance of P-stranding, as illustrated in (17):

(17) John ... [given [[P_e [e]] [a book]]

The absence of DOC in Romance languages is automatically derived on the basis of the above-mentioned restriction on reanalysis between V and P in these languages (cf. Chapter 2).

A problem with this proposal is that it is not clear what motivates (abstract) reanalysis between V and P. In the analysis of DOC, Kayne's (1984) proposal is quite clear with respect to the need for [V+P] reanalysis: it is assumed that the null P itself cannot assign Case, functioning merely as a transmitter of the Case properties of V - Case transmission under [V+null P] reanalysis is therefore crucial, being precisely what rules out DOC in Romance languages: the equivalent of English null P in these languages does not reanalyse with V, given its governing properties. However, when it comes to the overt P, it is not clear why reanalysis between V and P is necessary: like the null P, the overt P is a proper/structural governor, but contrary to the null P, it has its own Case assigning properties, so why should the overt P reanalyse with V? The reason should not be that the object of P receives structural/objective Case from V, since P, being overt, assigns structural Case (nothing similar to the filter in (7) is postulated). A possible answer to this question would then be that reanalysis is **automatic** [57]/[58].

---

[57] A possible way to answer this question, which is not found in Kayne's (1984) discussion, would be to postulate a condition establishing that once two **structural** Cases are available to be assigned to one single position, they should be absorbed into a single one, hence automatic/obligatory reanalysis between V and P - this should be the counterpart of a condition stating that every Case property should be discharged. This idea would account for pseudopassives as follows: given reanalysis between V and P, once the passive morpheme absorbs the Case properties of V, also those of P will be absorbed, hence NP movement from the object position of P to subject position in the clause, in order to get Case. Accordingly, what is reanalysed is not V and P, rather the Case properties of V and P - this follows from Kayne's (1984) proposal that reanalysis is dependent on the elements sharing the same governing and consequently, Case properties.

In fact, unless [V+P] reanalysis is taken to be automatic, it is difficult to motivate it without referring to the conditions on licensing the object of P. Recall that in Hornstein & Weinberg's (1981) analysis (cf. section 3.2.1), this led to theoretical claims making use of a filter (cf. (7)), which is not desirable, because of its stipulative character. However, if the strong version of the hypothesis is taken and [V+P] reanalysis is assumed to be automatic, another problem arises: once the conditions on reanalysis are met (namely, that P is a structural governor), it is expected that all constructions associated with reanalysis cluster, as the result of a single parameter, which is not borne out by the facts: languages vary with respect to whether they have EMC, DOC, and P-stranding (in pseudopassives or in WH-constructions) - I shall return to the parametric issue in Chapter 5.

As pointed out above, Kayne's analysis has been adopted in a number of studies. Baker (1988), for instance, while adopting Kayne's (1984) approach to crosslinguistic variation in the occurrence of DOC in terms of the governing properties of P, proposes a formalisation of [V+P] reanalysis in terms of (head)-incorporation which in turn allows for a unified analysis of DOC and applicatives: the idea is that the P^{o} category undergoes syntactic movement to the V^{o} (cf. (18)), an operation following the same locality conditions as Move-α in NP raising, and WH-constructions:

(18) $[_{VP}\ [\ P\ V]\ [_{PP}\ t_{P}\ DP]]$

Other studies capitalise on the idea of formalising [V+P] reanalysis in terms of (head) incorporation, as proposed in Baker. However, a number of facts cast doubt on the reanalysis hypothesis, as has been pointed out in the literature (Baltin and Postal (1996), among others). In the following section, I shall point out some of these problems.

---

[58] A problem with this tentative solution is that under this view reanalysis is obligatory. As pointed out in Baltin and Postal (1996), the mere existence of P-pied-piping in English, as illustrated in (18) should indicate that it has to be optional:

(18) a. To whom did you talk?

Note that even on the assumption that reanalysis may occur under reconstruction at LF should not solve the problem, given that Case is assigned at S-structure. We shall see below that **automatic** reanalysis faces other problems.

4.2.3 Arguments against the Reanalysis Hypothesis

As noted above, the reanalysis hypothesis is faced with a number problems. In this section, I will provide a summary of Baltin and Postal's (1996) discussion of these problems which strongly suggests that the reanalysis hypothesis should be abandoned. Recall that the basic idea of the reanalysis hypothesis is that V forms a complex with P in its complement position, allowing for the object of P to be licensed by the complex [V+P]. This is illustrated in (8), repeated here as (19).

(19) a. John [$_{VP}$ talked [$_{PP}$ to Mary]]

b. John [$_{VP}$ [talked to] Mary].

However, as pointed out in Baltin and Postal, there is evidence that the DP in (18b) behaves not as an independent NP direct object but as a PP object. This asymmetry, noted in Ross (1967, cited in Baltin and Postal), is illustrated in (20): the DP in the complement position of P cannot undergo Heavy-NP shift (cf. (20b)), as opposed to (20a), in which the NP object of V can - this is not be expected under (automatic) [V+P] reanalysis[59]:

(20) a. I discussed t_i with Lorenzo - [the problems he was having with deliveries]$_i$

b. *I argued with t_i about such problems - [the driver's union leader]$_i$

(examples from Baltin and Postal (1996:129))

Similarly, in constructions involving gapping and pseudogapping, as illustrated in (21) and (22), respectively: P cannot be *deleted* independently of its object, either in co-ordinate constructions, as illustrated in (21b), or in comparatives, as in (22b), as

[59] Note that in a theory blocking rightward movement as proposed in Kayne (1995), the observation concerning reanalysis still holds: assuming with Kayne that (20a) involves leftwards movement of both V and the PP, *with Lorenzo*, the question is why is it that the [*argued+with*] reanalysed complex cannot undergo leftwards movement along with *about such problems*, giving rise to (20b).

opposed to the well formed cases not involving a PP, illustrated in (21a) and (22a), respectively:

(21) a. Frank called Sandra and Arthur _____ Louise.
b. Frank talked to Sandra and Arthur ___ *(to) Louise.

(22) a. Frank called Sandra more often than Arthur did ___ Louise
b. Frank talked to Sandra more often than Arthur did __*(to) Louise.
(examples from Baltin and Postal (1996:129))

Another relevant fact is whether [V+P] reanalysis is automatic/obligatory. Baltin and Postal (1996) point out, citing Postal (1986), that the possibility of having P-pied-piping in English immediately suggests that it is not, as illustrated in (2b), repeated here as (23):

(23) To whom did Mary talk?

This problem seems to dissolve under the notion of reconstruction, as it is possible to say that in (23) [V+P] reanalysis occurs at LF, under reconstruction. However, at least for the purpose of the above-mentioned analyses, this solution does not work, given that [V+P] reanalysis is associated with structural Case which is assigned at the S-structure.

Baltin and Postal further discuss the reanalysis hypothesis as adopted in Van Riemsdijk and Williams' (1986) study of constructions involving binding of reflexives. In Riemsdijk and Williams' account, [V+P] reanalysis has to be automatic. They propose that in (24a) nothing specifies whether the object binds the reflexive, unless [V+P] reanalysis is at stake, as in (24b), in the same way as it is taken to be in its pseudopassive counterpart, as illustrated in (24c): under reanalysis, the PP structure is eliminated and the NP object of P is found in a position from which it c-commands the reflexive, as required for binding.

(24) a. John talked [$_{PP}$ to Bill] about himself.

b. John [talked to] $Bill_i$ about $himself_i$.

c. $Bill_i$ was [talked to] e_i about $himself_i$.

The contrast in (25) is then claimed to provide a further piece of evidence for this analysis: in (25a), given [V+P] reanalysis, the reflexive can be bound by the object of P; in (25b), once the PP containing the antecedent is pied-piped, [V+P] reanalysis does not occur and the reflexive cannot be bound by its antecedent, hence the construction is ruled out:

(25) a. $[Which\ girl]_i$ did Ernest talk to about $herself_i$

b. *$[To\ which\ girl]_i$ did Ernest talk t_i about herself?

(examples from Baltin and Postal (p.128))

However, this analysis is faced with a paradox when it comes to the discussion of (26b) involving (nonreflexive) pronoun antecedence, as compared to (26a):

(26) a. *I talked to $Thelma_i$ about her_i.

b. *the person to $whom_i$ I talked t_i about him_i

(examples from Baltin and Postal (p.132-133))

If, on the one hand, (26a) seems to confirm the idea that [V+P] reanalysis is automatic, the ungrammaticality following from the impossibility of (nonreflexive) pronoun binding under (automatic) reanalysis, on the other hand, the same reason could not be invoked for ruling out (26b): given P-pied-piping, [V+P] reanalysis should not occur, and therefore the conditions on binding should be met, namely that the pronoun be free in its governing category.

Baltin and Postal (1996) point observe that a crucial point for any approach involving [V+P] reanalysis is how the intuitive notion of P *absorption* into V forming a complex is implemented in the syntax. Riemsdijk and Williams' (1986) analysis, which is formulated within the GB framework, seems to assume the idea that P incorporates

to V, as proposed in Baker's (1988) theory. Accordingly, the reasoning above implies that P incorporation to V *eliminates* the PP structure, allowing for the object of P to c-command the reflexive.

A problem with this formulation, Baltin and Postal (1996) observe, is that it ignores an important claim in Baker's (1988) theory, namely that movement leaves a trace, which makes it impossible to postulate the elimination of PP. That is, there is no theoretical support within Baker's theory of incorporation, and ultimately within the GB framework, for postulating that P incorporation to V *eliminates* the PP node. In fact, what is proposed in Baker's theory is that the complex head formed under incorporation governs everything which the incorporated item governed in its original structural position. This in itself should not affect the c-command relation between these elements - recall that the notion of c-command is determined in terms of domination from either the first branching node or the first maximal projection (cf. Reinhart (1976) and Aoun & Sportiche (1983), cited in Baltin and Postal).

The discussion provided so far has given evidence for rejecting the Reanalysis Hypothesis, not only within Riemsdijk and Williams' (1986) analysis, but also as an operation accounting for DP extraction from PP altogether.

4.2.4 Summary

In section 4.2, Hornstein and Weinberg's (1981) and Kayne's (1984) studies on P-stranding have been reviewed. In Hornstein & Weinberg's analysis it is proposed that a rule of reanalysis between V and P circumvents a universal filter prohibiting an empty category from occurring in a position in which oblique Case is assigned - this rule being found in English allows for the DP object of P to be extracted leaving an empty category. Kayne's analysis in turn proposes that the V+P reanalysis arises under a condition determining that V and P govern in the same way (that is, they are both structural governors), variation occurring in the governing properties of P.

It was then pointed out that Kayne's approach to reanalysis in terms of crosslinguistic variation in the governing properties of P makes predictions that are not

borne out by the facts - I refer to reader to Chapter 5 for a more detailed discussion on this issue; it was also shown that there are asymmetries in the syntactic behaviour of the DP object of V and of the alleged reanalysed [V+P], casting doubt on the theoretical status of the Reanalysis Hypothesis.

In section 4.3, I will argue for an alternative approach to the phenomenon of P-stranding in which both the [V+P] reanalysis and the notion of government are dispensed with. However, Kayne's idea that there is a correlation between P-stranding and DOC will be retained, and further discussed in Chapter 5.

4.3 Crosslinguistic variation in the occurrence of P-stranding: a minimalist approach

In the present study, I will propose an account for the above-mentioned cases of crosslinguistic variation in the occurrence of P-stranding (cf. section 3.1) which does not rely on the hypothesis of reanalysis between V and P. Assuming the minimalist framework (cf. Chomsky (1993; 1995)), I will argue that the conditions on P-stranding, as opposed to P-pied-piping, are determined within PP in terms of morphological properties of the language associated with the grammaticalisation of phi-features in the D category.

A fairly well-accepted idea is that DP arguments of P are licensed under inherent Case assignment[60], as opposed to DP arguments of V, which are licensed under Structural Case assignment (cf. Chomsky (1986a); also Chapter 2). Within the minimalist framework, the distinction between structural and inherent Case is retained: whereas structural Case is defined within the theory of movement in terms of feature-checking, inherent Case is taken to be assigned and realised within the domain of the θ assigner, independently of feature-checking, therefore dispensing with any plausible functional head (cf. Chomsky (1995)). On the assumption that DP arguments of P receive inherent Case, the idea is that P does not have a Case feature that is explicitly listed: in the absence of a formal feature, no checking is required, and inherent Case is

[60] I leave aside N and A as inherent Case assigners - the requirement of *of*-insertion should be an evidence that they differ from P which may take its complements directly, exactly like V.

assigned within the domain of the θ assigner in terms of the thematic relation holding between P and its argument.

Given some version of Hale and Keyser's (1993) configurational theory of argument structure, theta role assignment is taken to occur in the *base position*, that is, in the configuration of lexical insertion, under Merge, an operation of the Computational System (C_{HL}) which takes two (lexical) items and forms a syntactic object (or creates a new syntactic object out of an existing one) (cf. Chapter 1). That is, theta-relatedness is a property of the position of merger and its (very local) configuration. In present terms, this approach follows naturally as arguments of verbs are taken to be licensed at the base as well, in terms of the aspectual properties of the lexical heads projecting the relevant configuration.

However, various analyses within the minimalist framework have adopted the idea that argument licensing within PP involves checking of a Case feature: the general assumption then is that a lexical entry such as *in* has, among other relevant information for the operations of C_{HL}, an (intrinsic) Case property which is non-interpretable and listed explicitly, hence it has to be checked in order to be deleted, characterising structural Case (cf. Chapter 1). Thus, the notion of inherent Case assignment is either dispensed with or taken to overlap with structural Case.

In a PP such as in (27a), for instance, the DP argument is licensed within a PP shell: the Case feature of P is checked in the spec-head configuration under (covert) movement of both (lexical) P and its complement DP to a (functional/agreement-like) node, namely AgrP, which is projected above PP, as illustrated in (27b):

(27) a. in Bangor

b. $[_{AgrP}$ Bangor [in Agr] $[_{PP}$ P_{in} [$DP_{Bangor}]]]$

This formulation is adopted in various studies, such as Hornstein's (1995) discussion of quantifier scope in constructions with prepositional objects, Fujita's (1996) analysis of anaphoric binding in ditransitive constructions, in Rooryck's (1996) study of complex P's in Dutch and German, among others.

Note that word order within PP in Romance languages indicates that DP movement to spec,AgrP is covert in this language in the same way as English (cf. (27)). Given this, it is not possible to derive a condition on P-stranding in terms of (Case) feature-checking. In the present study, I will not make any claim on whether an Agreement node is projected above PP, although I assume that a layered configuration may be projected, as in complex P's. In this respect, I leave Chomsky's (1995) proposal of eliminating Agreement as part of the inventory of functional categories as an open question.

The discussion will be as follows: in section 4.3.1, I shall propose a correlation between the absence of P-stranding and the presence of [P+article] contraction in Romance languages; in section 4.3.2, I shall discuss P-stranding in German and Dutch; In section 4.3.3, a summary will be provided. In section 4.3.4 I will discuss the above-mentioned cases in which P-stranding is not possible in English.

4.3.1 On the correlation between P-stranding and [P+article] contraction

Consider again the examples in (1) and (2), repeated here as (28) and (29), respectively, illustrating the fact that in Romance languages, P cannot be stranded in WH-constructions, P-pied-piping being obligatory, whereas in English, both P-stranding and P-pied-piping are possible:

(28) a. *Quem você falou a/com?
b. A/Com quem você falou?

(29) a. Who did you talk to?
b. To whom did you talk?

The structure of these constructions is nevertheless the same, as illustrated in (30), with the English example:

(30) $[_{CP}$ (to) who(m) did $[_{IP}$ you I $[_{VP}$ talk $[_{VP}[_{PP}$ to $[_{DP}$ ~~who~~]]]]]]

In English, as well as in Romance languages, the WH-expression is merged in spec,CP - this should correlate with a parameter establishing that C in these languages has a strong Q-feature. However, in English, the WH-expression is merged in spec,CP either on its own or together with P. In Romance, instead, only the latter possibility is available.

What happens in (28), as opposed to (29), is that in Romance languages, but not in English, P and D enter some sort of relation that amalgamates them rendering P-pied-piping obligatory (cf. Salles (1995)). As noted by Anna Roussou (p.c.), the phenomenon of [P+article] contraction in Romance languages seems to be a morphophonological expression of this relation[61].

In fact, a closer look at the characteristics of the phenomenon of [P+article] contraction in Romance languages strongly suggest that the intuition is on the right track. [P+article] contraction is a pervasive phenomenon among Romance languages: it is found with different prepositions and is obligatory, as illustrated in (31) and (32), from Portuguese[62] and French, respectively:

(31) a. a necessidade *da* (*de a) criança
the necessity of-the child

b. o interesse *no/pelo* (*em o)/(*por o) assunto
the interest in-the/for(?)-the subject

c. a volta *ao*/ (*a o) Brasil
the return to-the Brasil

---

[61] In Greek, for instance, [P+article] contraction is found, as illustrated in (i), and P cannot be stranded:

(i) a sto Bangor
in-the Bangor

[62] In Portuguese, contraction is also found with demonstrative, relative and personal pronouns, as illustrated in (i):

(i) a. gostar (=like) disto/*de isto (of-this); falar (=speak) naquilo/ *em aquilo (in-that)

b. gostar dele/ *de ele; falar nele/ *em ele (in-he)

c. falar comigo/ *com migo/ com mim (with-me)

Note that *migo* only occurs with the preposition *with*. It is an allomorph with *mim*, also inflecting for person and number: *contigo , consigo, conosco, convosco*. This form evolved from the Latin form *mecum* (cf. Williams, (1938)), which is itself a [P+pronoun] complex head as well.

(32) a. le besoin *des* (*de les) enfants
b. l'intêret *au* (*à le) sujet
b. le retour *aux*/ (*à les) Pays Bas

Contraction is also found between P and WH-pronouns, as illustrated in (33) and (34), from Portuguese and French, respectively:

(33) a. *Donde* vem Pedro?
From-where P. comes

(34) a. *D'où* vient Pierre?
From-where comes P.
b. *Pourquoi* vient-il?
For what (=why) P. comes

The idea is that in the presence of [P+article] contraction, P-stranding is not found. This is the situation in Romance languages. Conversely, the possibility of stranding P should imply the absence of [P+article] contraction. The last prediction is borne out within the Germanic group among English and Scandinavian languages: P can be stranded quite freely in these languages, and [P+article] contraction is not found[63].

As for German and Dutch, things are not so straightforward. Consider first German, in which [P+article] contraction is found, as illustrated in (35), being a very productive phenomenon, exactly as in Romance languages[64]:

---

[63] In the present analysis, the scarcity of P-stranding implies that [P+D] amalgamation is a widely spread phenomenon (recall that P-stranding requires that P and D do not amalgamate) - I am grateful to Joe Emonds for having raised this question and for discussion on this matter. It should be stressed that the proposed correlation (namely, if [P+D] is found, then P cannot be stranded) is not bi-directional. Hence no predictions are made about the occurrence of [P+D] in a given language on the basis of whether it allows P-stranding. Interestingly, as noted by Bob Borsley, the correlation between [P+D] amalgamation and the absence of P-stranding seems to hold outside the Indo-European group as well (e.g. in the Semitic group).

[64] Thanks to Ursel Luhde and Heike Zinsmeister for providing me with these examples and for discussion on this and other aspects of the syntax of PP in German.

(35) a. das Interesse *am /an dem* Thema
the interest in-the DAT subject
b. die Rückehr *zum /zu dem* Bahnhof
the return to-theDAT station

WH-pronouns also form a complex word with P in this language, as illustrated in (36):

(36) *Womit* schneidet Heike das Brot
what-with cuts H. the bread
What does Heike cut the bread with?

However, an important difference between German and Romance languages is that in German, [P+article] contraction is not obligatory, a fact that will prove to be crucial in the present analysis.

Going back to the parallel between [P+article] contraction and P-stranding, what happens is that P-stranding is found in German (and in Dutch - see below), but, as noted in Riemsdjik (1978), it is a very restricted phenomenon. As pointed out in Roberts (1997:257), apparently, it is restricted to the cases in which 'the WH-element takes a particular form into which P appears to be incorporated' (cf. (27)) (note that Roberts' observation points to a contradiction with respect to the correlation that is being established so far - we shall see in section 4.3.2 that the contradiction is just apparent). Leaving aside these rather exceptional cases, I will assume that German does not have P-stranding. Thus, the correlation between [P+article] contraction and the impossibility of stranding P holds as in Romance languages.

In Dutch, P-stranding is found under more or less the same conditions as in German (cf. Riemsdjik (op.cit.)), hence Dutch will be analysed as not allowing for P-stranding either - I shall return to the *exceptional* cases of P-stranding in Dutch in section 4.3.3. How about [P+article] contraction? In fact, [P+article] contraction is not found in this language, at least as a pervasive phenomenon, as in German and in

Romance languages. However, as pointed out to me by Marjon Helmantel (p.c.), although restricted to informal (and fast) speech, it is possible to find contraction between P and the neuter article *het*, as illustrated in (37):

(37) a. *in 't* huis (=in het huis)
in the house
b. *voor 't* eten (=voor het eten)
before the dinner

More importantly, in Dutch interrogative pronouns form a complex word, exactly as in German. This is illustrated in (38):

(38) *Waarmee* snijdt Marjon het vlees?
What-with cut M. the meat
What does Marjon cut the meat with?

If contraction in (37) is just phonological in Dutch, what the data suggest is that [P+WH-pronoun] contraction (cf. (38)) provides the same result as [P+article] contraction in German and Romance languages. This is quite interesting for the present discussion, given that [P+WH-pronoun] contracted forms directly illustrate the phenomenon we are primarily concerned with, bringing further evidence for the hypothesis we want to examine, namely that P-pied-piping in WH-questions is obligatory if P and D amalgamate.

So far then, we have the picture illustrated in (38) suggesting that the correlation between [P+article] contraction and P-stranding holds:

(39)

	+/– P-stranding	+/–[P+article/wh-pronoun] contraction
Romance	–	+
German	–	+
Dutch	–	+
English	+	–
Scandinavian	+	–

In this sense, what this correlation suggests is that these forms are sensitive to syntax, that is, their emergence is not just a phenomenon of PF[65]. Interestingly, Portuguese provides a piece of evidence for this proposal. Recall that [P+article] contraction in this language is **obligatory** in the relevant syntactic context, namely if D is in the complement position of P (cf. (31)). Thus, the prediction is that if [P+D] contraction is not obligatory, then P and D should not be found in this syntactic context. This is what happens in (40a-b): here [P+article] contraction is not obligatory, and D is not in the complement position of P - P introduces a non-finite clause with an inflected infinitive, and D is in the subject position of the embedded clause (cf. 40c) (cf. also Rizzi (1984); Figueiredo e Silva (1994); Madeira (1995)):

(40) a. A necessidade *de as* crianças brincarem é clara.
The necessity of the children to play3rdpl. is clear

b. O interesse *em os* assuntos serem discutidos é claro.
The interest in the subject to be3rdpl. discussed is clear

c. $[_{PP}$ **P** $[_{CP}$ C $[_{IP}$ $[_{DP}$ **D** NP] I]]]

[65] W*anna* (=want to) contraction in English is a case in which contraction is sensitive to the syntax: it is not found if a copy of a WH-pronoun is found between the relevant contracting elements, as illustrated in (i), as opposed to (ii), in which nothing intervenes, and the contraction is allowed:
(i) Who do you *want* t_{WHO} *to* leave (*wanna)
(ii) Who do you *want to* leave (wanna)
(cf. Jaeggli (1980); also Radford (1997))

The idea then is that **obligatory** [P+article] contraction is restricted to the contexts in which D is in the complement position of P.

Given this, it is possible to say that [P+article] contracted forms in Portuguese have a syntactic correlate, an idea that can be extended to other Romance languages given the similarities among them with respect to [P+article] contraction (cf. (31), (32)). This should indicate that there is indeed a correlation among the facts illustrated in (39). Accordingly, it is possible to say that P-pied-piping is obligatory in Romance languages, German and Dutch because P and D amalgamate in the syntax. The question now is why amalgamated elements have to be pied-piped.

Before I turn to this matter, I would like to discuss another relevant fact concerning [P+article] contraction in German and Romance languages, namely that articles are inflected for gender and number, suggesting that there is a correlation between [P+article] contraction and the grammaticalisation of phi-features on the system of definite articles. This implication is confirmed by the fact that in English, phi-features are not found on the system of definite articles, and [P+article] contraction is not found either.

However, it is not possible to say that the grammaticalisation of phi-features on the system of definite articles imply [P+article] contraction: in Scandinavian languages, articles are inflected for gender and number (cf. Holmberg (1987)), and nevertheless, [P+article] contraction is not found. However, definite articles in Scandinavian languages have different properties, as compared to the other Germanic languages, in particular they can be either affixal or non-affixal. This is illustrated in (41):

(41) a. bil*en*
car-DEF

b. *den* nya bil*en*
the new car-DEF
(examples from Holmberg (1987))

Leaving the details about the syntax of DP in Scandinavian languages aside, what the facts in (41) suggest is that [P+article] contraction is independently blocked in these languages.

It remains to say something about Dutch: articles in this language are not inflected for gender and number; and as noted above, [P+article] contraction seems to be a PF phenomenon in this language. We have also seen that [P+WH-pronoun] contracted forms are found in Dutch (cf. 38). But here the correlation we want to draw seems to hold, as WH-pronouns are inflected for gender as they are distinguished for the feature [+/–human].

Given this, it could be said that [P+article/(WH-)pronoun] contraction amounts to phi-feature realisation on P through *cliticization* of the relevant form onto P (the phonological processes involved being irrelevant for the present discussion). This in turn amounts to saying that Romance languages and German have a type of inflected P. Accordingly, they pattern with languages such as Welsh, Breton and Irish which have inflected P's, as illustrated in (42), from Welsh:

(42) wrtho ef
by3p.s.masc. he

An important difference is that in Welsh, Irish and Breton, inflected P bears person, gender and number features, whereas in Romance and German, only gender and number features. This is expected: in the latter, the inflected form involves definite articles which are inflected for gender and number, whereas in the former, it involves personal pronouns, which obviously also have the feature person.

The phenomenon of inflected P in Celtic languages has had fairly extensive attention in the literature (cf. Borsley (1989), McCloskey (1990), Rouveret (1991), among others). In Rouveret's (1991) study, for instance, it is argued that the D (pronoun) complement of P raises within a layered structure to an agreement phrase above PP, giving rise to the inflected form. Interestingly, as pointed out above, Celtic

languages do not have P-stranding, suggesting that the impossibility of stranding P correlates indeed with phi-feature realisation on P[66]. Whether the syntactic mechanisms deriving the inflected forms in Romance languages, German and Dutch involve D incorporation to P, as in Rouveret's (1991) proposal for inflected P in Welsh, is not relevant at this point. The important point is that phi-feature realisation on P amounts to P and D being pied-piped together in WH-constructions obligatorily. At this point then, I shall turn to the question of why pied-piping is obligatory if P and D amalgamate.

The answer to this question is straightforward within the minimalist framework, and depends on a central tenet of minimalism, namely the principle that movement carries just enough material for convergence (cf. Chomsky (1995); cf. also Chapter 1). Accordingly, Move-F(eature) is the operation to be preferred. However, morphological properties of the language may determine that feature movement carries along extra lexical material, characterising a kind of 'generalised pied-piping'. This economy principle further interacts with the condition that movement is driven by morphological considerations.

Consider now the construction in (28b), from Portuguese, repeated here as (43a), and its respective projection, illustrated in (43b):

---

[66] The case in (i), from Irish, pointed out to me by Ian Roberts (p.c.), in which P is not pied-piped, seems to be a problem for the present analysis - P is inflected, that is, it bears phi-features, and nevertheless, P is not pied-piped:

(i) Cé a raibh tú ag caint leis?
who COMP were you talk-PROG with-him
Who were you talking to?
(example from McCloskey (1990:234)

However, it should be noticed that, although it is clear that P is not pied-piped, it cannot be said that P is stranded in the same way as it is in the English constructions, and this is precisely because P is inflected. In fact, what is proposed in the present analysis is that the inflected forms be seen as the expression of a more general condition requiring phi-feature realisation on P, which in turn amounts to P being pied-piped along with the WH-pronoun in WH-constructions. In (i), the condition on phi-feature realisation on P is presumably satisfied, hence P does not have to amalgamate with the WH-word. This should in turn interact with the fact that inflected P in these languages cannot occur with an object pronoun, contrary to Welsh, in which the pronoun is obligatory (cf. (42)). Note that these observations are all tentative. The Celtic inflected P is a topic in itself, and a rather interesting one. For this reason, I shall leave it aside, for future work.

(43) a. Com quem você falou?
With who you talk
Who did you talk to?

b.[$_{CP}$ Com quem C [$_{IP}$ você falou$_{OR}$ [$_{VP}$ ~~falou~~ [$_{VP}$ ~~falou~~$_{EM}$ [$_{PP}$ ~~com~~ [$_{DP}$ ~~quem~~]]]]]]

As recurrently noted, the construction in (43a) is an instance of P-pied-piping. In minimalist terms, what happens in (43a) is that as a morphological property, the Q(uestion) feature in C in Romance (as well as in English) is strong, requiring phonetic realisation (cf. Roberts and Roussou (1997)). Hence, the WH-expression moves to spec,CP. Moreover, in Romance (but not in English), merging of the WH-expression in spec,CP pied-pipes P, an operation that should be determined by morphological properties of the language.

Given this, the conclusions that were reached so far follow naturally: recall that it was argued that obligatory P-pied-piping in Romance languages (as well as in German and Dutch) is determined by the fact that P and D amalgamate in the syntax, a process that amounts to phi-feature realisation on P whenever phonological conditions allow for it. P-pied-piping is therefore crucially determined by a morphological property of these languages, namely the fact that phi-features have their grammatical source in the D category - in particular in the system of definite articles. In English, instead, in the absence of phi-features on the system of definite articles, P and D do not amalgamate, hence, the WH-feature checking the strong feature of C in spec,CP only carries the WH-phrase, and P can be stranded[67].

In this sense, this analysis follows from minimalist assumptions which establish that the conditions on pied-piping lexical material are determined by the morphological properties of the language (cf. Chomsky (1995)). In the following section, the idea that [P+article] contraction amounts to phi-feature realisation on P will be further discussed

---

[67] Cf. Radford (1997) for an approach in which (obligatory) P-pied-piping in (i), from English, is analysed as being determined by attraction of the overt case feature of *whom* to the preposition *to*, in the overt syntax:

(i) *(To) whom were you talking to?

in connection with the process of feature-checking in the spec-head configuration. Next, I will discuss the rather exceptional cases of P-stranding in German and Dutch.

4.3.2 Phi-features on P and spec-head Agreement

In the previous section, it was proposed that in Romance languages (as well as in German and Dutch), P and D amalgamate in the syntax, this process corresponding to phi-feature realisation on P (whenever phonetically possible). In the present section, I would like to investigate what this phenomenon amounts to in the syntax. An obvious conclusion is that some sort of agreement relation is at stake. The hypothesis that I would like to entertain is that this agreement relation corresponds to, or is equivalent to, (agreement/Case) feature-checking in the spec-head configuration.

This idea is reminiscent of Baker's (1988) proposal that N incorporation to V exempts N from being assigned structural Case. Recall that feature-checking in the spec-head configuration is associated with overt XP movement and strong feature-checking (weak features are checked under Move-F) (cf. Chomsky (1995); also Chapter 1). Accordingly, it could be said that phi-feature realisation on P involves a strong feature as well, implying then that in Romance languages, German and Dutch, but not in English and Scandinavian languages, P has a strong D (Case) feature. Let us (provisionally) assume this to be the case.

Accordingly, in English and Scandinavian languages, given that P has a weak (D) feature, P and D enter a syntactic relation which does **not** involve either phi-feature realisation on P or phi-feature checking in the spec-head configuration (covert feature-checking in the spec-head configuration is excluded on the assumption that weak features are checked under Move-F). The question is to determine whether the strong feature of P may be checked in the spec-head configuration in Romance languages, German and Dutch.

In Romance languages, the DP is never found to the left of P, indicating that the strong feature of P can only be checked under phi-feature realisation on P. This, I

propose, is due to fact that [P+article] contraction is obligatory in these languages (cf. (31), (32)) - obligatoriness of [P+article] contraction blocks DP merge in spec,PP. In German and Dutch, instead, D is found to the left of P, as indicated by the occurrence of **post**positions in these languages, illustrated in (44), from Dutch[68] (cf. Koopman (1993); Riemsdijk (1990), for analyses proposing that postpositions involve DP raising to spec,PP):

(44) a. Jan springt in de sloot.
J. jumps into the ditch
b. Jan springt de sloot in.
(examples from Helmantel (1997:1))

As is well-known, the presence of **post**positions in these languages is basically determined by the fact that they are SOV languages - this should subsume the effect of not having obligatory [P+article] contraction. Needless to say, DP merge in the complement position is also available for all these languages, by default (cf. Kayne (1995)).

A question that arises is whether the choice between *pre* and *post*positions is optional. And if it is not, what determines it. As argued in Helmantel (1997), the choice between pre- and postpositions in Dutch (and in German) is not free, being determined by the aspectual interpretation of the predicate. At this point, it is not relevant the conditions licensing these interpretations (on this matter, cf. Helmantel (1997)). The relevant point is that given a language-specific condition allowing for the occurrence of either pre- or postposition in these languages (crucially their SOV status), it is possible to express contrastive aspectual interpretations within PP.

In Romance languages, instead, given the morphophonological constraint blocking the occurrence of postpositions, crucially obligatory [P+article] contraction, contrastive readings cannot be expressed. Neither can they be in English and Scandinavian languages: given that P has a weak feature, only DP licensing in the

[68] It should be noticed that postpositions in Dutch are restricted to directional PP.

complement position of P is available (a fact that further correlates with the possibility of either stranding or pied-piping P, as already noted).

Given this background, I will discuss P-stranding in German and Dutch.

4.3.2.1 P-stranding in German and Dutch

In this section, I shall briefly consider the above-mentioned *exceptional* cases of P-stranding in German and Dutch. I will restrict the discussion to Dutch cases, as they subsume the German ones. As noted above, P cannot be stranded in Dutch (cf. (45a)), except in constructions in which the DP complement of P is an R-pronoun[69], as illustrated in (45b) (examples from Koopman (1993:7)):

(45) a. *Welke tafel heb je dat bookje *op* gelegd
Which table have you that book on put
Which table did you put the book on

b. Waar heb jij dat bookj *op* gelegd
Where have you that book on put
Where did you put the book on

A great deal of research has been done on the problem of why only R-pronouns can strand P in Dutch (cf. Riemsdijk (1978); Koopman (1993); Helmantel (1996), among others). In Koopman (1993), for instance, this phenomenon is discussed within a broader study on the structure of Dutch PP's, in relation to another interesting fact about the syntax of [+R] pronouns, namely that they always precede P in Dutch (contrary to non-R (locative) DP's which always follow P). This is illustrated in (46):

---

[69] R-pronouns are: *er, daar* (both =there), *hier* (=here), *ergens* (= somewhere), *nergens* (=nowhere). *waar* (=where) and *overal* (=everywhere). Van Rimsdjik (1978) labels them *R-pronouns* because most of them end in an *r* (data from Helmantel (1996)).

(46) a. *op* de tafel/ *op* *het/ *op* *er
on the table/ on it/ on there

b. *de tafel *op*/ *het *op*/ er op
the table on/ it on/ there on
(examples from Koopman (1993:6))

In Koopman's analysis, it is assumed, following Riemsdjik (1978), that [+R] pronouns are licensed in some specifier position, hence the possibility of moving to higher positions in the clause, stranding P (which non-R DP's cannot do). In particular, it is proposed that R-pronouns are licensed in a position outside the lexical projection of the PP: assuming a layered structure for PP in Dutch, it is proposed that a *Place* head is projected as a functional category (just like Agr) taking PP as its complement (a configuration that mirrors Jackendoff's (1990, cited in Koopman) conceptual argument structures for PP's) (cf. (47)). It is then argued that [+R] pronouns being homophonous with locative pronouns bear a locative agreement feature which needs to be licensed in spec,Place, hence R-pronouns move overtly to this position - this should account for fact that [+R] pronouns always precede P (cf. (46)). Locative DP's in turn do not encode Place agreement, hence they do not move to Spec, Place (at least in the overt syntax) - this should account for the fact that they are not found to the left of P (cf. (46b)).

(47) $[_{Pplace}\ er_i\ P\ [_{PP}\ (e_i)\ op\ [\ (e_i)]]$

I assume Koopman's analysis to be basically correct, leaving aside the details about the structure and the syntax of PP in Dutch. In fact, Koopman's proposal concerning the conditions on P-stranding, which, as she acknowledges, stems from Riemsdjik's (1978) analysis, follows naturally in present terms. As noted above, Dutch makes use of two mechanisms of checking the strong D (Case) feature of P: under spec-head agreement and under phi-feature realisation P. The availability of the former, along with language-specific properties associated with the licensing of the R-pronoun, as detailed by Koopman, should account for the possibility of stranding P. A relevant fact which follows naturally within the present approach is that R-pronouns are

morphologically marked as *inanimate* pronouns: on the assumption that the condition blocking P-stranding amounts to phi-feature realisation on P, it is not surprising that these elements, being unmarked for these features in their locative use, be the only ones allowed to strand P.

4.4 Cases in which P-stranding is not possible in English

In this section, I discuss the above-mentioned cases in which P cannot be stranded in English. Consider first the contrast in (4b) and (5), repeated here as (48a-b):

(48) a. Who did John travel with?

b. *His mother was travelled with by John

What seems to be relevant here is that (48b), but not (48a), is a passive construction. Note further that the active counterpart of (48b) is a symmetric predicate. The rationale is: X travelled with Y *entails* that Y travelled with X. Thus, (48) is ruled out by a more general constraint on passivising symmetric predicates (cf. Salles (1995)).

The ban on passive of syntactic predicates has been given a syntactic treatment in Roberts (1987). It is shown that in symmetric predicates, interpretation implies obligatory coreference between the two arguments: (49a), for instance, has a reciprocal interpretation for its second argument, whereas (49b) has a reflexive interpretation. These interpretations in turn do not hold of the passive predicates, illustrated in (50a) and (50b), respectively:

(49) a. John met Mary

b. John shaved

(50) a. John was met

b. John was shaved

(examples from Roberts (1987:203)

This is because coreference between the subject and the implicit argument is impossible in passives. Roberts argues that coreference between the subject and the implicit argument violates either the requirement that each thematic chain be associated with only one thematic role or the condition on chain-formation requiring that each position in a chain bind the next. In Roberts' theory, the representation of (50a), for instance, is as in (51):

(51) $John_i$ was meet-en_i t_i IMP_i

The chain licensing the implicit argument, which is formed at D-structure with the *-en* passive morpheme, is well-formed; the problem is that the argument *John* being coindexed with *-en* cannot form a chain with the empty category in the object position of V: either a situation in which one argument is associated with two thematic roles/positions is created, or, under the hypothesis of skipping the intervening coindexed *en*, the chain does not meet the above-mentioned requirement on the formation of the chain.

Consider now the contrast in (10), repeated here as (52):

(52) a. The bed was slept in

b. *New York was slept in

According to Anderson (1977, cited in Hornstein & Weinberg (1981)), *in the bed*, but not *in New York*, is interpreted as the thing *affected* by the action of the verb, that is, it has the status of a THEME in the sentence, hence passivisation is possible in (52a), but not in (52b). This idea is rejected in Hornstein & Weinberg (1981) (cf. section 4.2.1): they point out that Anderson's account does not explain why it is possible to say *The dog/the city was looked at* in which the same contrastive reading should be at stake (I shall return to this point). Hornstein & Weinberg (1981) discuss this problem in terms of Dresher's (1976, cited in Hornstein & Weinberg (1981)) proposal that the adjunct in (52a) is licensed within VP, whereas in (55b) it is licensed outside VP. This follows naturally within Hornstein & Weinberg's (1981) analysis in which it is argued that

reanalysis between V and P, which is a condition on P-stranding, is only possible within the VP domain (cf. section 4.2.1).

In present terms, however, the exact position where the adjunct is licensed is not relevant for P-stranding: recall that if there is no requirement on phi-feature realisation on P (amalgamating P and D), P-stranding should be possible, unless a more general principle blocks it, as noted in the analysis of (48). This is confirmed by the possibility of stranding P in constructions such as (53) involving PP adjuncts:

(53) a. What time did John arrive at?
b. Which day will John stay until?

Note that on the assumption that the PP adjunct in these constructions is not licensed within VP, these sentences are a problem for Hornstein & Weinberg's analysis.

I shall capitalise then on Anderson's claim that *in the bed* is interpreted differently as compared to *in New York*, which suggest that the subject of the passive construction should meet certain interpretive requirements. These requirements are met by the arguments *the dog* and *the city* in *The dog/the city was looked at* as well as *the bed*, in (52a), but not by *New York* in (52b). Consider first their active counterpart, illustrated in (54a) and (54b), respectively:

(54) a. John slept in the bed
b. John slept in New York

What I would like to propose is that the basic difference between these constructions is that the adverbial *in New York* in (54b) belongs to the group of so-called circumstancial adverbials, which comprise elements such as place, time, manner, means, company, reason, purpose (cf. Ruwet (1968); Cinque (1997)). Circumstantial adverbs of place apply to any event, as a contingency on eventhood (events take place somewhere). *In the bed* in (54a), on the other hand, is not a circumstantial adverbial, hence its interpretation is not built upon this contingency.

The interpretation of the adverbial in (54a) is determined by a lexical property of *sleep* which is also found in other unergative verbs as well, whereby the locative adverbial is interpreted as being acted upon. This is illustrated in (55)[70]:

(55) a. Mary spat on the bed
a'. The bed was spat on
b. Mary cried on the bed
b'. The bed was cried on

This property is presumably what is referred to as *affectedness* in Anderson's analysis. Note that (55b) allows for two interpretations: (i) one in which it is implied that tears are shed on the bed, hence *on the bed* is not interpreted as circumstantial adverbial rather as an *affected* argument - this is the interpretation licensing the passive construction (cf. (55b')); (ii) another in which *on the bed* is interpreted as a circumstantial adverbial - (the availability of two interpretations in these cases should be what makes the passive construction not so straightforward). In (55a), however, since the interpretation of the type in (i) is the obvious one (*spittle* in place of *tears*), there is not restriction on passivisation.

Other constructions may be found on the same basis, as illustrated in (56):

---

[70] Another piece of evidence that these verbs form a class is that similar contrasts are found in Portuguese, a language that does not have pseudopassives. Note in the active form (ib), two constructions are found: with a direct object and a PP:

(i) a. A cama foi cuspida (=The bed was spat)
b. Mary cuspiu a cama/ na cama (Mary spat the bed/ on the bed)

Interestingly, the active construction not always is found with a direct object, but still it is possible to find the passive counterpart, as in (ii):

(ii) a. A cama/ A parede foi escrita (=The bed/ The wall was written)
b. Maria escreveu na/?a cama (=M. wrote the bed/ on the bed)

However, the example with the verb *sleep* is less natural:

(iii) a. ?A cama foi dormida (=The bed was slept)
b. Maria dormiu na/*a cama (=M. slept the bed/ on the bed)
c. ??A cama foi brincada (=The bed was played)

But the example with *eat* is terrible:

(iv) A cama foi comida (=The bed was eaten)
Maria comeu a cama

(56) a. Mary ate on the bed
a'. The bed was eaten on
b. Mary played on the bed
b'. The bed was played on
c. Mary wrote on the bed
c' The bed was written on

This property, however, is not found with other unergatives, such as *laugh*, *shout*, *bleed*, as illustrated in (57), hence *on the bed* in these cases is interpreted as a circumstantial adverb, and passivisation is not possible, as expected:

(57) a. Mary laughed on the bed
a'. *The bed was laughed on
b. Mary shouted on the bed
b'. *The bed was shouted on

The descriptive generalisation then is that circumstantial adverbs cannot be found as subject of passives. Hence, (52b), (57a') and (57b') are ruled out for the same reason as **London was eaten in* is. Conversely, passivisation involving locative adverbials requires that they be interpreted as being acted upon. Given that this requirement does not hold for passive in general (cf. *John is believed to be smart*; *The film was enjoyed by John*; *The dog/the city was seen by John*), as pointed out to me by Ian Roberts (p.c.), what seems to be crucial here is that circumstantial adverbials cannot be found as the subject of passives.

Consider now the position of the adverbial. Note that the adverbials may co-occur, two orderings being allowed, as illustrated in (58a-b):

(58) a. John slept in the bed in New York

b. John slept in New York in the bed

However, as noted in Dresher (op.cit.), the alternating order in (58) is not a case of mere swapping positions, as illustrated by the minimal pair in (59):

(59) a. Which bed did John sleep in (in New York)?

b. Which city did John sleep in (?*in the bed)?

In Dresher (op. cit.), the contrast in (59) is taken as a piece of evidence for saying that *in New York* and *in the bed* occupy different positions - in particular, it is proposed that the former is a sentential adverb, whereas the latter is generated within VP.

I shall retain Dresher's analysis that these adverbials are licensed in different positions. As for circumstantial adverbials, I shall not go into the matter of determining what their position is, as this requires discussion on the rather extensive topic of adjunct placement which goes far beyond the scope of the present study (cf. Cinque (1997) for an approach along minimalist lines, in which it is assumed, following suggestion in Chomsky (1995) that they are generated within the VP shell). However, it is seems plausible to say that non-circumstantial adverbs are generated in the complement position of V_{EM} in the VP shell, as illustrated in (60) (cf. also Chapter 3):

(60) ... $[_{VP}$ $slept_{OR}$ $[_{VP}$ $V_{EM/\ slept}$ $[_{PP}$ in the bed]]]

In this sense, it is possible to say that circumstantial adverbials cannot be found in this position.

It remains to discuss the cases in (6), repeated here as (61), in which the possibility of stranding P is constrained by an intervening adverbial:

(61) a. This road was recently driven on.

b. *This road was driven recently on.

(examples from Chomsky (1995))

I shall (tentatively) assume, following Chomsky (1995), that the construction in (61) is a kind of Relativized Minimality violation. In particular, the Minimal Link Condition (MLC), which determines that K attracts F if F is the closest feature that can enter into a checking relation with a sublabel of K (cf. Chapter 1).

Consider first the active counterpart of (61a), illustrated in (62a). Chomsky (1995) suggests that this construction is projected as in (62b) - the adverbial is licensed within the VP shell, presumably in the specifier position of the lower VP:

(62) a. John drove recently on this road

b. [$_{VP}$ John drove [$_{VP}$ *recently* ~~drove~~ [$_{PP}$ on this road]]]

Chomsky further suggests that (63a) be discussed in terms of the proposal for (62a) - note that (62a) and (63a) have been discussed in the literature in terms of crosslinguistic variation with respect to V raising: the contrast between (63a) and (63b) indicates that in French, V raises to higher positions in the clause than in English (cf. Emonds (1978)):

(63) a. *John drove recently this car

b. Jean a conduit récemment cette voiture

Chomsky's analysis is that in (63a), the DP *this car* cannot raise to have its Case checked because there are two closer intervening elements, namely the subject *John* and *recently* (in the latter case, it is assumed that the adverb has features that the complex [Agr-V] can attract). He further suggests that under this view, it is possible to account for the ungrammaticality of (61b) as well: what happens is that the adverbial is a closer attractee than *the road*, hence the derivation crashes.

The same analysis should account for the ungrammaticality of (64a) (cf. its projection in (64b)), as opposed to (65a) (cf. its projection in (65b)):

(64) a. *John was given a book to

b. John was [$_{VP}$ given$_{\underline{OR}}$ [$_{VP}$ *a book* ~~given~~$_{\underline{EM}}$ [$_{PP}$ to ~~*John*~~]]]

(65) a. John was given a book

b. John was$_{EM}$ [$_{VP}$ given$_{\underline{OR}}$ [$_{VP}$ ~~*John*~~ ~~given~~$_{\underline{EM}}$ [$_{PP}$ P$_{WITH}$ *a book*]]]

Assuming that passive morphology *demotes* the OR thematic role, the DP *John* is merged in spec,IP, checking the strong D feature of I. The derivation crashes in (64a), because the closest thematic feature is EM, and this feature is licensed by the DP *a book* as well. In (62a), this problem does not arise, as the EM feature is available to be licensed by the DP *John* (note that the other DP *a book* is licensed within PP).

4.5 Conclusions

In this Chapter, I have discussed the crosslinguistic variation in the occurrence of P-stranding among Romance and Germanic languages. It was shown that the previous accounts relating P-stranding to V+P reanalysis face a number of problems. In particular, it is not possible to explain why the DP object of the reanalysed [V+P] complex behaves on a par with DP objects of P, not of V. Moreover, its formulation in terms of parametric variation in the governing properties of P as in Kayne's (1984) analysis, is based on the rather stipulative notion of structural/proper government, and predicts the clustering of ECM, DOC, P-stranding, pseudopassives whenever the relevant conditions on [V+P] reanalysis are met, which is not borne out by the facts among languages.

Given this, it was proposed that the problem be tackled from another point of view: instead of looking for the reasons why P can be stranded, it was asked why P-pied-piping is obligatory in the relevant languages. It was then argued that P-pied-piping is obligatory in Romance, German and Dutch, because P and D amalgamate in the syntax in these languages, [P+article/wh-pronoun] contraction being a

morphophonological expression of this phenomenon. The observation that [P+article/wh-pronoun] contraction always involves elements bearing phi-features led to the conclusion that the P+D amalgamation in the syntax amounts to phi-feature realisation on P. Given this, it was possible to say that (obligatory) P-pied-piping is determined by the grammaticalisation of phi-features on the D head. Phi-feature realisation on P in turn was taken to be equivalent of feature checking in the spec-head configuration, the latter corresponding to DP merge in spec,PP.

Chapter 5. Crosslinguistic variation in the occurrence of DOC

In this chapter, I shall discuss the crosslinguistic variation in the occurrence of Double Object Constructions. We have seen that DOC are found in English, as illustrated in (1) (within the Germanic group, it is also found in Dutch, and in so-called Mainland Scandinavian languages, which include modern Swedish, Danish, and Norwegian[71]):

(1) a. Mary gave John a book

As is well-known, DOC are not found in Romance languages, which only have the construction with the overt P, as illustrated in (2a-b) and (2c-d), from Portuguese and French, respectively:

(2) a. *Maria deu o João o livro

b. *Marie a donné Jean le livre

c. Maria deu o livro ao João

d. Marie a donné le livre à Jean

Since Kayne's (1984) influential work on the properties of English and French prepositions, it has been widely assumed that crosslinguistic variation in the occurrence of DOC is due to the governing properties of P (cf. also Haegeman (1986), Baker (1988); Larson (1988); Hale and Keyser (1993)). On the basis of a comparative study of English and French prepositional complementizers, Kayne argues that English P's, but not their Romance counterparts, are proper/structural governors, this property allowing for P to reanalyse with V, given the assumption that reanalysis is only possible between heads having the same governing properties (cf. Chapters 2 and 4). Reanalysis between V and P is then associated with various phenomena under crosslinguistic variation among English and Romance languages, namely ECM

[71] Cf. Holmberg and Platzack (1995)

constructions, P-stranding, and DOC. In DOC, which interests us particularly now, it is proposed that V reanalyses with a null P, and Case is transmitted through null P to its complement (cf. Chapter 2).

This formulation is reminiscent of the null-subject parameter, as proposed in Rizzi (1982), in which the positive value of the parameter predicts the clustering of specific (and apparently independent) properties, namely the occurrence of phonologically empty referential subject pronouns, the absence of overt expletive pronouns, the presence of free inversion, the apparent absence of complementizer-trace effects. Kayne's (1984) account of reanalysis in terms of parametric variation regarding the governing properties of P makes then the prediction that once P of a given language displays the property of being a proper governor, reanalysis with V is **automatic**, and all these constructions should be found, namely DOC, P-stranding in WH-movement and pseudopassives.

However, as noted in Zhang (1990), the predictions of Kayne's theory are not borne out: although it is true that once a language has pseudopassives, both P-stranding (with WH-movement) and DOC are also found, English being the well-known example, there are languages that have P-Stranding (with WH-movement) and DOC, but do not have pseudopassives, such as Danish, as illustrated in (3):

(3) *at Peter blev grinet af
that P. was laughed at
(from Vikner (1990), cited in Holmberg and Platzack (1995:220))

And there are languages that do not have either pseudopassives or P-stranding with WH-movement, but do have DOC, such as Chinese, as illustrated in (4):

(4) a. Wo song le Lisi yi ben shu
I give ASP L. one copy book
I gave Lisi a book

b. Wo song le yi ben shu gei Lisi
I give ASP one copy book to L.
I gave a book to Lisi
(examples from Zhang (1990:312))

Interestingly, the latter case is also observed within the Romance group as well, in the Minas dialect of Brazilian Portuguese (henceforth BPMinas), which behaves as the other Romance languages regarding P-stranding, but allows a variety of DOC, as illustrated in (5) (cf. also Scher (1996)):

(5) a. Maria deu o João o livro.
M. gave the J. the book

b. Maria mostrou o menino a escola.
M. showed the boy the school

Apart from this, as has been already pointed out (cf. Chapter 2 and 4), it is not clear in Kayne's (1985) theory what exactly proper government is. As noted in Roussou (1996, 1997), the notion of **proper government** is rather stipulative, as it does not follow from any principle within the GB framework. Another problem, which has been discussed in Chapter 4 in more detail, is that the notion of reanalysis between V and P has been questioned as well. As pointed out in the literature (cf. Baltin and Postal (1996), and references cited there), there is evidence that the NP in the syntactic environment of V and P renalysis behaves not as an independent NP direct object but as a PP object.

In the present analysis, both the notion of proper government and the reanalysis hypothesis will be dispensed with: as argued in Chapter 3, DOC in English is a projection of two lexical heads, namely V and null P, argument licensing within the

configuration projected by these heads being determined under a correlation with the aspectual interpretation of the predicate. A question that remains is how to account for crosslinguistic variation in the occurrence of DOC - in particular, what prevents DOC from occurring in Romance languages. Another striking question is what makes BPMinas behave like English with respect to DOC, and like Romance languages with respect to P-stranding. Is there a correlation between the conditions licensing DOC in this variety of BP and those licensing DOC in English?

What I would like to propose is that DOC is not found in Romance languages because these languages do not a have a null P[72]. In this respect, I follow Roberts' (1996) idea that variation occurs with respect to whether a given category is phonetically realised. Interestingly, the status of P with respect to whether it is phonetically realised or not is taken to be relevant in Kayne's (1995) analysis of the English possessive construction, namely *John's car*, as opposed to its absence in languages such as French. According to Kayne, the English construction is projected in a configuration in which an (abstract) P (in Kayne's terms, a prepositional determiner) takes a complement XP headed in English by *'s*, and by a null element in French (and in other Romance languages), as illustrated in (6):

(6) D^{o} $[_{PP}$ P_{e} $[_{XP}$ YP$[X^{o}$ ZP$]]]$

Kayne claims that in *John's car*, P is null, the possessor argument being licensed in situ by *'s*; in French, as well as in other Romance languages, if P remains empty, the null counterpart of *'s* in X^{o} cannot license the arguments in situ (cf. **Jean la voiture*), thus P has to be phonetically realised as *de*, *la voiture* raising to spec,PP, giving rise to *la voiture de Jean*, as desired.

Kayne's analysis is particularly relevant to the present discussion as the null P is associated with possession interpretation, exactly as proposed here with respect to DOC. However, it should be noticed that in Kayne's analysis, the impossibility of

[72] CF. Emonds (1993) for an account in which the absence of DOC in Romance languages is due to the absence of a morpheme licensing the relevant configuration. In particular, this element is taken to

having a null P in this position in Romance languages is not attributed to absence of a null P in this language; rather what is said is that P cannot be phonetically null in this position. In present terms, however, it should be said that a necessary, but not sufficient, condition for the projection of *John's car* is that P be phonetically null: apart from this, the equivalent of *'s* in X^o must be overtly realised. Thus, *John's car* is not found in Romance languages because P is always overtly realised (P is never null in these languages) in the first place. In BPMinas, the necessary condition is fulfilled, given that P may be phonetically null, but this is not sufficient: the equivalent of 's is always null, hence the equivalent of *John's car* is not found.

The natural question is then what determines that null P be found in this variety of BP (and in English) giving rise to DOC. I will argue that the emergence of DOC in BPMinas correlates with some changes undergone by Brazilian Portuguese in its development from European Portuguese, in particular the (tendency to the) loss of clitic pronouns: we shall see that this phenomenon leads to the loss of the morphological distinction between accusative and dative. Given this, it will be possible to establish a correlation between the emergence of the null P and the loss of the morphological distinction between accusative and dative pronouns. This analysis will bring support to Roberts' (1993) observation that there is a resemblance between the development of Modern English from Old English and that of Brazilian Portuguese from European Portuguese (cf. also Lightfoot's (1991)).

The correlation between the emergence of DOC and loss of the accusative-dative distinction is essentially based on an idea that has been around, namely that there is a correlation between the loss of the distinction between accusative-dative in English and the emergence of pseudopassives with nominative subjects (cf. Jespersen (1974), cited in Kayne (1984), Kayne (1984), Lightfoot (1980)). Kayne (1984) explores this correlation proposing that the loss of the morphological distinction between accusative and dative indicates that P is a structural/objective Case assigner in English, a fact that is further taken to be contingent on the fact that P in English behaves syntactically as a proper/structural governor (cf. above, and Chapter 4). However, in Kayne's analysis

---

be an applicative-like morpheme, an equivalent of what is found in DOC constructions in languages such as Indonesian (cf. Chapter 2).

the implication is not bi-directional: that is, the ability to assign structural Case does not imply that the distinction between accusative-dative is absent. As observed by Kayne, this is due to the fact that there are languages, such as Icelandic, which have the dative-accusative distinction in the system of object pronouns but in which P can be stranded, indicating that P governs structurally.

As far as pseudopassive constructions are concerned, what seems to be a principle of UG is that once certain conditions are met, namely that the predicate be non-stative and non-reflexive (whether dyadic or triadic), passivization is always possible. This principle interacts then with another principle of UG establishing that the PP should not be found in the subject position (for discussion on this matter, cf. Emonds (1985)). Accordingly, if a language has a device avoiding PP in that position, passivization should be possible. Icelandic, for instance, makes use of quirky subjects. In English, it is the possibility of stranding P. Accordingly, so-called *pseudopassives* are not directly related to the absence of the morphological distinction between accusative and dative. However, we shall see below that Kayne's intuition that there is a correlation among DOC, P-stranding in WH-questions and pseudopassives, and ECM constructions is on the right track.

In section 5.1, I will present some aspects concerning the syntax of DOC in BPMinas; in section 5.1.1, I discuss the emergence of DOC in BPMinas taking into consideration the development of Brazilian Portuguese from European Portuguese; in section 5.1.2, I shall establish a parallel between DOC in BPMinas and English; in section 5.2. a summary will be provided; in section 5.3, I will discuss the correlation between P-stranding and DOC.

5.1 DOC in the Minas dialect of Brazilian Portuguese

In this section, I shall present some aspects of the syntax of DOC in BPMinas, taken in a comparative perspective with DOC in English. As pointed out in Scher (1996), DOC in the BPMinas is less productive than in English: it is found as a substitute for the construction with the *to*-phrase, that is, *true* ditransitives (henceforth

the *possession* construction) (cf. (1)), but not in benefactive constructions, as illustrated in (7):

(7) a. Maria comprou um presente para o Pedro
M. bought a present for P.

b. *Maria comprou Pedro um presente
M. bought Pedro a present
(examples from Scher (1996))

Moreover, DOC in BPMinas differs from English DOC in that it allows for both orders *possessor/possessee* and *possessee/possessor*, as illustrated in (8a) and (8b), respectively. In English, instead, the order *possessee/possessor* requires that P be overt, as illustrated in (9)[73]:

(8) a. Maria deu o João o livro
M. gave the J. the book

b. Maria deu o livro o João
M. gave the book the J.
(examples adapted from Scher (1996:30))

(9) Mary gave a book *(to) John

Consider now WH-constructions involving the indirect object. Apparently, MinasBP allows for extraction of the indirect object - contrary to English, in which the equivalent of (10) is ungrammatical (cf. the gloss; also Chapter 3, for further discussion on the English case):

(10) Quem (que) Maria deu o livro?
Who (that) M. gave the book
Who did Mary give the book *(to)

[73] However, constructions such as (i) are attested dialectally in English (mainly in British English):
(i) Mary gave it him/me

Consider now passivization: in BPMinas, passivization is not possible with the *indirect* argument, as illustrated in (11a), although with the *possessee* argument it is marginally accepted, as shown in (11b)[74]:

(11) c. *O João foi dado o livro
The J. was given the book

d. ?O livro foi dado o João
The book was given the J.

Apart from the above-mentioned differences, DOC in BPMinas patterns with English DOC in that the first complement asymmetrically c-commands the second, as indicated by the minimal pairs in (12), involving *bound-pronouns*:

(12) a. Eu mostrei cada pai$_i$ seu$_i$ filho
I showed each father his son

b. */?Eu mostrei seu$_i$ pai cada filho$_i$
I showed his father each son

Given this, a question that arises is whether DOC in BPMinas can be analysed in the same way as English DOC has been analysed in Chapter 3. And if so, how the above-mentioned differences between DOC in English and BPMinas are accounted for. The hypothesis that I would like to investigate is that DOC in BPMinas is indeed projected like DOC in English. That is, it is a projection of V and null P, giving rise to

---

[74] Note that BPMinas, but not English, allows for the order V PP DP with overt P, as illustrated in (i):

(i) Maria deu pro João o livro
M. gave for-the J. the book

I take this case to correlate with the fact that V moves to higher positions in the clause in BPMinas (and in the other Romance languages) than in English. This correlation is based on the contrast illustrated in (i) and (ii), from French and English - this contrast as well as its correlation to Verb-movement were first discussed in Emonds (1978):

(i) a. Jean embrasse souvent Marie
b. *Jean souvent embrasse Marie

(ii) a. *John kisses often Mary
b. John often kisses Mary

On the assumption that the position of the adverbial is the same in both languages, the different orders in (i) and (ii) show that the verb occupies a different position in both languages.

a configuration in which the first complement asymmetrically c-commands the second. Within this configuration, the minimal pairs in (12) are accounted for.

As mentioned above, the natural question then is what determines that null P be found in this variety of BP (and in English) giving rise to DOC. This is what will be discussed in the next section.

5.1.1 The emergence of DOC in BP Minas and its correlation other aspects of the syntax of Brazilian Portuguese

It is well-known that Brazilian Portuguese has undergone various changes that make it differ from European Portuguese and other Romance languages in many significant ways (cf. Roberts & Kato (1993)). In this section, it will be shown that some of these changes, in particular the ones affecting the system of personal pronouns, interact allowing for an account of the correlation between occurrence of DOC and P-stranding,

A very interesting fact about the syntax of object pronouns not only in BPMinas, but also in the other varieties of BP is the (tendency to the) loss of clitics, both accusative and dative (cf. (Omena (1978), Duarte (1989); Cyrino (1993); Nunes (1993), among others). As a consequence, only the construction with the overt preposition is found[75], as illustrated in (13a), whereas 3rd. person nominative pronouns, and under more restrictive conditions, null objects (on the latter, cf. Duarte (1986); Kato (1991), among others) are attested in the object position as substitute for the accusative clitics, as illustrated in (13b):

[75] It should be noticed that the preposition *para* stands as a substitute for the construction with the preposition ***a*** (cf. *Maria deu o livro **ao** João*) - this is due to a process of change leading to the loss of ***a*** in this, among other, syntactic contexts (cf. Ramos (1989)). I shall return to this matter shortly (cf. section 5.1.2), as this change will be shown to correlate with other aspects of the syntax of DOC in BPMinas.

(13) a. Maria deu [*-lhe] o recado [para[76] ele]
M. gave 3rdp.sing.DAT the message to him
b. Maria viu [*-o] /[ele]/∅ no parque.
M. saw 3rdp.sing.ACC/NOM/∅ in-the parc

As a matter of fact, as far as the 3rdp. dative clitic is concerned, it has not disappeared completely from the system of clitic pronouns. What happens is that *lhe* has been reanalysed as a pronoun referring to the person to which the sentence is addressed[77] - thus, a sentence such as *Maria lhe deu/deu-lhe o recado* (compare to (12a)) may still be found, although it arises in a context in which *lhe* corresponds to the person that is addressed to in the discourse (=Mary gave *you the message*). Moreover, *lhe* is also found as a (direct) object pronoun (again referring to the person that is addressed to in the discourse), as in *Maria lhe viu* (=Mary saw *you*) - in this respect, *lhe* retains its [+animate] feature, and follows the paradigm of 1st and 2nd person object pronouns in this language which has syncretic forms for both the direct and the indirect objects.

All these observations apply to the syntax of BPMinas as well[78]. However, as pointed out above, apart from what is shown in (13), BPMinas also has DOC, as illustrated in (14) - that is, on a par with the overt P construction, BPMinas has DOC (exactly like English):

(14) Maria deu ele o recado
M. gave 3rd.p.NOM the message

---

[76] *Pra* is a contracted form for *para a*(=for the). Other contracted forms are *pras* (=para+as (fem.pl.)) and *pro(s)* (=para+o(s) (masc. sing./pl./)).

[77] This is further related to the fact that in this variety, the person addressed in the discourse is associated with a pronominal form that triggers 3rd person inflection on the verb. This situation affects the syntax of possessive pronouns, giving rise to ambiguity: 3rd person form of possessive pronoun may be associated with either somebody that is referred to in the discourse (that is, 3rd person) or the person that is addressed in the discourse, as illustrated in (ia) and (ib), respectively:

(i) a. O seu livro (=O livro de Paulo)
The 3rdposs. book (=The book of Paulo)
b. O seu livro (=your book)

[78] In fact, it seems that the tendency to the loss of clitics is more advanced in BPMinas than in the other varieties of BP: in the former, the loss of reflexive pronouns is rather consistent, as it affects not only 3rd, but also 1st and 2nd person, as illustrated in (i):

(i) a. Eu (me) informei sobre o jogo
b. Ele (se) informou sobre o jogo
I/He 1st/ 3rd p.REFL inform about the game

What I would like to propose is that (14) is a development of the facts described in (13). Note that in Portuguese (as well as in other Romance languages), 1st and 2nd person clitic pronouns have syncretic pronominal forms for the accusative and the dative. The morphological distinction between accusative and dative arises only among 3rd person clitic pronouns. Thus, once 3rd person clitic pronouns are lost (or reanalysed, as shown above), the morphological distinction between accusative and dative is lost as well.

What happens then is that in the varieties that are associated with (13) only the construction with the overt P is available, contrary to the previous stage, in which the construction with the clitic is found as a substitute for the one with the overt P. What I would like to propose is that the emergence of DOC in BPMinas expresses a further development associated with the loss of 3rd. person clitic pronouns in Brazilian Portuguese, and the loss of the morphological distinction between accusative and dative.

Crucially, the emergence of DOC is contingent on the loss of the morphological distinction between accusative and dative in the system of object pronouns. In other words, the loss of the morphological distinction between accusative and dative in the system of object pronouns should be seen as a necessary condition for the emergence of DOC. However, the fact that DOC is not found in the other varieties of BP indicates that the loss of the morphological distinction between accusative and dative in the system of object pronouns is a necessary but not sufficient condition for the emergence of DOC. A further development is required, which has been made in BPMinas, but not in the other varieties of BP - DOC indicates so.

My proposal is that the emergence of null P within the grammatical system of BPMinas is the next stage in this process. Accordingly, null P is incompatible with a grammar in which the morphological distinction between accusative-dative is found. In fact, what this observation suggests is that null P should be analysed as the grammatical reanalysis of the morphological distinction between accusative and dative as it gives rise to a construction that substitutes for the one with the accusative and

dative clitics - this should translate the well-known correlation between DOC and possession interpretation (cf. Green (1974); also Chapter 1 and 3).

The prediction then is that languages having DOC should not have the morphological distinction between accusative and dative. This is confirmed among Romance and Germanic languages, as illustrated in (15):

(15)

	+/–DOC	+/–acc-dat
Romance	–	+
German	–	+
Icelandic	–	+
English	+	–
Dutch[79]	+	–
MainlandScan	+	–
BPMinas	+	–

Looking at the emergence of DOC in BPMinas in terms of the development of Brazilian Portuguese from European Portuguese, various similarities arise with the processes of change undergone by English in its development from Old English, confirming Roberts' (1993) suggestion. In fact, as extensively discussed in the literature, the evolution of Modern English from Old English has been shown to involve the loss of clitic pronouns (cf. Lightfoot (1991); Kayne (1985); Van Kemenade (1987)) - note however, that the correlation between these topics is not presented as formulated in the present approach, in which the emergence of DOC follows from the loss of the accusative-dative distinction in the system of clitic pronouns.

[79]Prescriptive grammars of Dutch describe the language as marking the accusative/dative distinction morphologically, but this is no longer observed in the modern language.

In Van Kemenade for instance, the syntax of clitic pronouns in Old English is discussed in relation to the conditions determining P-stranding in OE, as the latter is restricted to (clitic)-pronoun extraction in this language. The correlation between P-stranding and clitics will prove to be relevant below within a broader discussion establishing a correlation between DOC and P-stranding. Before I turn to this matter, let us consider now the above-mentioned differences between DOC in BPMinas and in English.

5.1.2 DOC in BPMinas as opposed to DOC in English

The discussion in section 5.1.1 led to the conclusion that DOC in both BPMinas and English are projections of V and null P. In this sense, argument licensing within the configuration projected by V and null P should be determined in terms of a correlation with the aspectual interpretation of the predicate, as proposed in Chapter 3. It remains to account for the differences between DOC in BPMinas and English which have been pointed out in section 5.1. It will be shown that these differences are due to language-specific facts which do not affect the primary conditions on the projection of these constructions.

A difference between DOC in BPMinas and English is that in the former (but not in the latter), both *possessor/possessee* and *possessee/ possessor* orders are found, as illustrated in (8a-b), repeated here as (16a) and (16b), respectively:

(16) a. Maria deu o João o livro
b. Maria deu o livro o João
(examples adapted from Scher (1996:30))

In present terms, what should be said is that (16a) and (16b) are projected as in (17a) and (17b), respectively:

(17) a. ... deu_{OR} [$_{VP}$ o João [V_{EM} [$_{PP}$ P_{WITH} o livro]]]
b. ... deu_{OR} [$_{VP}$ o livro [V_{EM} [$_{PP}$ $P_{WITH/DEL}$ o João]]]

Both *possessor/possessee* and *possessee/possessor* orders are possible here due to a lexical property of (null) P_{WITH}, namely that it gives rise to comitative interpretation, allowing any of its arguments to license the EM feature. A difference arises between these constructions, though: in the former, the argument *o João* measures out the event by providing both the scale along which the event progresses and the endpoint, exactly as in English DOC (PP is independently required by the conditions determining the representation of (transfer of) the possession); in the latter, the *path-terminus* is at stake, hence *o livro* provides the scale, and PP the endpoint - note that in this case, nothing requires that the endpoint be introduced by an overt P, since null P_{WITH} takes an argument, namely *o João*, which itself does the job. Hence, (17b) is aspectually interpreted under the *path-terminus* pattern exactly like the construction with the overt P (cf. (18)):

(18) a. Maria deu o livro **pro** João

b. ... deu_{OR} [$_{VP}$ o livro [V_{EM} [$_{PP}$ pro João]]]

A question that arises is why is it that the equivalent of (16b) is not found in English (cf. (9), repeated here as (19)), if null P_{WITH} is available in this language. What makes it obligatory that P be overt whenever the order is *possessee/possessor* in English?

(19) Mary gave a book *(**to**) John

What I would like to suggest is that these facts respectively interact with another fact in each language, namely that BPMinas does not have DOC with benefactive constructions, which English does have, as illustrated in (7), repeated here as (20):

(20) a. Maria comprou um presente **pro** Pedro

b. Mary bought a present **for** Peter

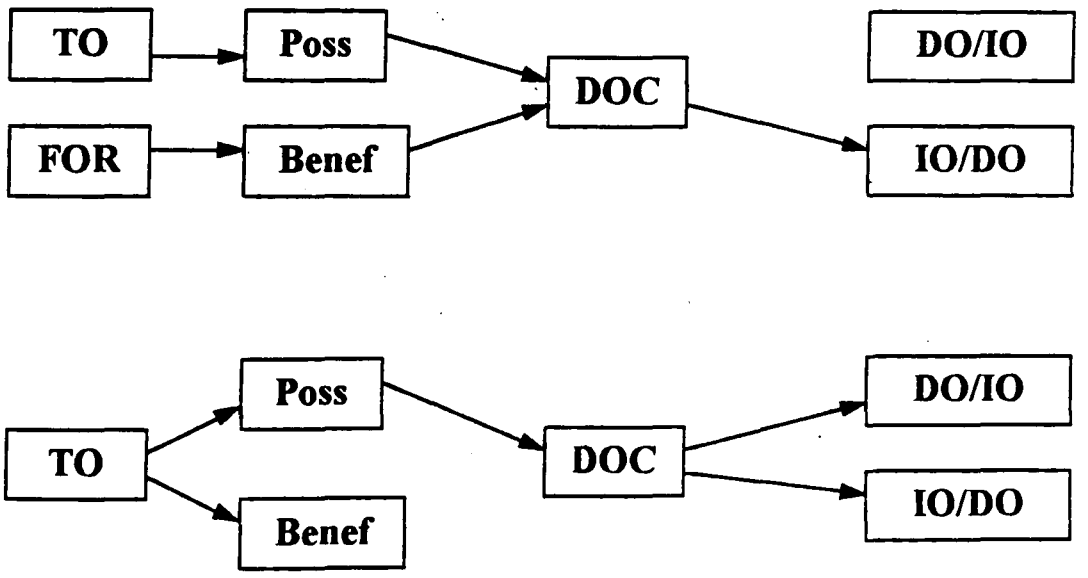
c. *Maria comprou Pedro um presente

d. Mary bought Peter a present

(examples from Scher (1996))

Note that in English, each construction is associated with a different P: *to* and *for*, respectively (cf. (19) and (20b)), suggesting that *to* and *for* are specialised prepositions in this language (that is, they cannot be interchanged in each context). In Portuguese (and BPMinas), instead, *pro* (=*para*+*o*) occurs in both in (18) and (20a). This is expressed in the following diagram (where *possessor*=indirect object (IO); and *possessee*= direct object (DO)):

(21)



These facts seem to correlate with another aspect of the syntax of Brazilian Portuguese (and BPMinas), namely the (tendency to the) loss of the preposition *a* in various syntactic contexts. For instance, in constructions with *a*+(acc)object (cf. *acompanha (a)o pai* (=follow the father)) (as pointed out in Ramos (1989), the loss of *a* in this context is mainly determined by changes *in the basic word order* in BP, in particular in the subject-verb order; (ii) in constructions with [*a*+dative] complement: the preposition *para* (=for) substitutes for *a* (cf. *Maria deu o recado pro /ao João*).

Others contexts are constructions involving verbs such as *obey* and *pay* (cf. *Maria obedece (**a**)os pais*))[80].

What I would like to suggest is that the impossibility of having DOC with benefactives in Portuguese correlates with the fact described in (ii), namely the (tendency to the) loss of *a* and its being substituted for *para* in the context of dative complements, giving rise to a situation in which the same preposition is used in the possession and the benefactive construction (cf. (18a) and (20a)). In English, instead, the possibility of having DOC with both benefactives and possession constructions correlates with the fact that each construction has a different P, namely *to* and *for* (cf. (19) and (20b)). The intuition is that this *ambiguity* blocks benefactive DOC in BPMinas, and the *specialisation* renders *to* obligatory whenever the order is *possessee/possessor*.

These facts can be accounted for as follows: recall that in BPMinas both (17a) and (18a) are taken to be aspectually interpreted under the *path-terminus* pattern (cf. (17b), (18b)), giving rise to the same interpretation. This amounts to saying that a given aspectual pattern is associated with two different constructions. In this sense, it is possible to say that these constructions are isomorphic with respect to the licensing the aspectual features, differing only with respect to whether P is null or overt. A condition on the occurrence of this isomorphism is that the process creating the isomorphism only apply to constructions having the same interpretation. This condition is fulfilled in BPMinas, since the DOC is only found among possession constructions (DOC is not found with benefactives). In English, instead, since DOC is associated with both possession and benefactive interpretation, it is not possible to have two different constructions interpreted under the same aspectual pattern.

The facts concerning the formation of WH-constructions, illustrated in (10), repeated here as (22), follow naturally within the present approach compared to the English counterpart:

---

[80] For an analysis of the latter constructions, cf. Kayne (1985)

(22) a. Quem (que) Maria deu o livro?
Who (that) M. gave the book
a'. *Who did Mary give the book

b. O que (que) Maria deu o João?
What (that) M. gave the J.
b'. ?What did Mary give John

Recall that it has been argued in Chapter 3 that the variable needs to be bound in the relevant D (Case) position. Note that in both (22a-b), the variable position is within PP (cf. (17a) and (17b), respectively), which in turn is the thematic position, hence the sentence is grammatical (in the English example in (22a'), the variable position is spec,V_{EM}, but it cannot be bound in this position because the copy of the WH-phrase is thematically associated with the properties of both V and P (cf. Chapter 3)).

Consider now passivization, illustrated in (11), repeated here as (23) - compared to English:

(23) a. *O João foi dado o livro
The J. was given the book
a'. John was given the book

b. O livro foi dado o João
The book was given the J.
b'. ?The book was given John

The facts in (23b) follow easily within the present approach: the DP *o livro* is merged in spec,IP, checking the strong D feature of I, and licensing the closest aspectual feature in the predicate, namely the EM feature (cf. Chapter 3)) - this should further

interact with the fact that passive morphology *demotes* the OR feature (assuming some version of Roberts' (1987) approach to passives). This is illustrated in (24):

(24) $[_{IP}$ O livro foi/EM $[_{VP}$ dado$_{\text{OR}}$ $[_{VP}$ ~~dado~~$_{\text{EM}}$ $[_{PP}$ P$_{\text{WITH}}$ o João]]]]

As for (23a), things are not very clear. In present terms, these constructions should pattern like English (cf. (23a')) - I leave this case as a topic for future research.

5.2 On the correlation between DOC and P-Stranding

It remains to discuss the correlation between DOC and P-stranding. Recall that it has been argued that a property distinguishing Romance languages and English is that in the former, but not in the latter, the syntactic relation between P and D involves phi-feature realisation on P, the pervasive phenomenon of contraction between P and definite articles in Romance languages indicating so (also relevant is the fact that in English, phi-features are not grammaticalised in the system of articles). Given this, it was possible to account for the possibility of stranding P in English, but not in Romance languages: it was proposed that the absence of phi-features on P allows for P-stranding; and conversely, phi-features on P disallow P-stranding (cf. Chapter 4).

It has been also shown that the emergence of DOC in PBMinas correlates with the (tendency to the) loss of 3rd. person clitics in PBMinas and other varieties of Brazilian Portuguese. But object clitic pronouns are basically phi-features. Also, as proposed in Kayne's (1991) analysis of clitic placement, clitics are left-adjoined to a functional head, as illustrated in (25) - crosslinguistic variation (at least) among Romance languages depending on whether the functional head hosting the clitic pronoun is AgrS, C, or other (cf. Kayne (1991); Rouveret (1992); Madeira (1995)):

(25) ... $[_{FP}$ [cl [F]] ... $[_{VP}$ V]

Interestingly, what this formulation amounts to saying is that phi-features are realised on a given head (in particular, on one of the extended projections of the verb the clitic is associated with).

Other approaches establish that clitics adjoin to V (cf. Borer (1984) for a proposal in which clitics attach to V functioning as a spell out or a morphological realisation of the verb's Case feature) - note that this does not really matter for the above-mentioned observation that clitics amount to phi-features realisation on a given head. However, as noted in Kayne (1995:43), the advantage of a proposal establishing that clitics adjoin to a functional head, rather than to (finite) verbs, is that it may provide an account of the fact that in the Germanic strict verb-second languages the weak pronouns, which in a number of ways are similar to Romance clitics, always seem to count for verb-second, as illustrated in (26) (cf. also Cardinaletti (1995)):

(26) a. Gestern hat sich der Hans ein Buch gekauft
yesterday has REFL the Hans a book bought
'Yesterday Hans has bought himself a book'

b. *Gestern sich hat der Hans ein Buch gekauft

(examples from Kayne (1995:43)

Kayne observes that the effect of the clitic on the verb-second structure would not be captured if *sich* were adjoined to the (finite) verb, as nothing would prevent V from adjoining to the highest head position, that is, the one whose specifier *gestern* occupies, as required by the verb-second syntax. Instead, if *sich* must adjoin to a functional head distinct from that containing the finite verb, then V cannot meet the verb-second requirement, and (26b) is excluded, as desired - Kayne's proposal will prove to be relevant below, as Romance and German will be unified under the formulation that clitics correspond to phi-features on a given extended projection of V.

Thus, the loss of clitic pronouns in English should indicate that the ability to realise phi-features on F has been lost. Moreover, recall that phi-features may not be realised on P in English, hence the possibility of stranding P; in Romance languages, instead, both possibilities exist, that is, phi-features on P, as indicated by [P+article]

contracted forms and the impossibility of stranding P, and on F, as indicated by the presence of clitics. Note that in the BPMinas dialect what happens is that the loss of 3rd person clitics points to a change in the ability to realise phi-features on X. However, clitic pronouns are still found, so far what happened was the loss of the accusative-dative distinction, a necessary condition for the emergence of null P, and consequently of DOC.

We have seen in Chapter 4 that in Romance languages (BPMinas included), phi-features may be realised on P, as indicated by [P+article] contraction (as well as the impossibility of stranding P). Given this, it is possible to draw the following generalisation: if phi-features are realised on F (giving rise to clitics), then phi-features are realised on P, blocking P-stranding. Conversely, if phi-features are not realised on P, allowing for P to be stranded, then phi-features are not realised on F, hence clitics should not be found. This is borne out by the facts among Romance and Germanic languages, as illustrated in table (27):

(27)

	+/–P-strand.	+/–clitics
Romance	–	+
BPMinas	–	+
German	–	+
Dutch	–	+
English	+	–
MainlandScand	+	–
Icelandic	+	–

In English, the loss of clitic pronouns is completed (cf. Kemenade (1987)), and P-stranding is found. The same holds for MainlandScand. languages: clitic pronouns are not found (cf. Holmberg and Platzack (1995)), and P can be stranded. In Romance languages as well as in German and Dutch, instead, clitic pronouns are found, and P cannot be stranded. In BPMinas as well as in other varieties of Brazilian Portuguese,

there is a tendency to the loss of clitics, but clitics are still found (as pointed out above, so far, this tendency has crucially affected 3rd person clitic pronouns, leading to the loss of the morphological distinction between accusative and dative pronouns), and P cannot be stranded.

Under this view, it is also possible to account for what is going on in Icelandic, a language that has P-stranding and does not have DOC. Recall that Icelandic was a problem for Kayne's (1984) theory: since P-stranding is allowed in this language, P reanalyses with V, behaving therefore as a structural governor; however, in spite of being a structural governor, P in this language does not assign objective Case, contrary to all the other languages allowing for P-stranding, leading to the conclusion that objective Case implies structural Case, although structural government may not imply structural Case. In present terms, the analysis is as follows: Icelandic, which is a language with rich case morphology, has the morphological distinction between accusative and dative in the system of personal pronouns, hence null P is not found in this language, and DOC does not arise. Moreover, Icelandic, like English, does not have clitic pronouns (cf. Holmberg & Platzack (1995)), hence phi-features cannot be realised on F. On the other hand, P can be stranded in this language, indicating that phi-features cannot be realised on P.

Thus, what is under variation is the ability to realise phi-features on X (where X is P or the relevant F(unctional)-head licensing the clitic pronoun). In Romance languages, German and Dutch, but not in English and Scandinavian languages, phi-features may be realised on X, as indicated by the presence of clitics and [P+D] contracted forms (cf. [P+article] in Romance languages and German, and/or [P+WH-pronoun] in Dutch, German and Romance languages) (cf. also Chapter 4). The parameter is therefore as in (28), and its setting among Romance and Germanic languages is summarised in (29):

(28) +/–phi-feature on X

(29)

	+/–phi-feature on X (X=P/F)
Romance	+
BPMinas	+
German	+
Dutch	+
English	–
MainlandScan	–
Icelandic	–

In Romance languages, the positive setting of the parameter is determined by the presence of obligatory [P+article] contraction. This further interacts with the grammaticalisation of phi-features on the D category, as noted in Chapter 4. In German and Dutch, the positive setting is determined by the presence of *pre-* and *post*postions, and further interacts with the fact that these languages display SOV basic word order. In the absence of these trigger experiences, the negative value is set, by default.

5.3 Conclusions

In this chapter, I have discussed the crosslinguistic variation in the occurrence of DOC among Romance and Germanic languages. It was argued that the emergence of these constructions is contingent on the presence of a null P_{WITH} in the grammatical system of the language. It was further argued that a necessary condition for the emergence of the null P_{WITH} is that the language does not have the morphological distinction between accusative and dative. This hypothesis proved to be right among Romance and Germanic languages: English, Dutch, Mainland Scandinavian languages, and the Minas dialect of Brazilian Portuguese do not have the accusative-dative

distinction and do have DOC. Conversely, Romance languages have the accusative-dative distinction in the system of clitic pronouns and do not have DOC (the same holding for German and Icelandic which were not discussed in detail).

These conclusions allowed then for an interesting correlation with the facts concerning crosslinguistic variation in the occurrence of P-stranding, giving support to Kayne's (1984) hypothesis that there is a correlation between P-stranding and DOC: it was possible to show that the conditions blocking P-stranding in Romance languages (as well as in German and Dutch), as formulated in Chapter 4, namely the fact that in these languages, phi-features are realised on P correlate with the presence of clitics in a given language, as clitics as well amount to phi-feature realisation on a given (functional) head. Given this, it was possible to show that a single parameter holds among Romance and Germanic languages determining a correlation between two phenomena apparent disconnected: namely the presence of clitics and the possibility of stranding P.

In this sense, this analysis follows from the assumptions of the minimalist framework, crosslinguistic variation being determined in terms of the morphological properties of the relevant languages. A number of related facts remained untouched in the present analysis. In particular the conditions licensing ECM constructions, which were connected to these facts in Kayne's analysis. The investigation of ECM will lead to a discussion on the properties of prepositional complementizers, among other facts associated with these constructions. I shall leave these issues for future work.

References

Arad, M. (1996) 'A Minimalist View of the Syntax - Lexical Semantics Interface', *UCL Working Papers in Linguistics* 8.

Baltin, M. and Postal, P.M. (1996) 'Remarks and Replies', *Linguistic Inquiry* 27(1): 127-145.

Baker, M. (1988) *Incorporation*. Chicago: University of Chicago Press.

Barss, A. and H. Lasnik (1986) 'A Note on Anaphora and Double Objects', *Linguistic Inquiry* 17: 347-354.

Bobaljik, J. (1995) Morphosyntax: the syntax of Verbal Inflection. Doctoral dissertation, MIT.

Borer (1984) *Parametric Syntax*. Dordrecht: Foris.

Borer, H. (1994) 'The projection of arguments', *UMass Occasional Papers in Linguistics* 17:19-47. University of Massachusetts, Amherst: GLSA.

Borer, H. (1996) 'Passives without Theta Grids', to appear in Lapointe (ed.) *Morphological Interfaces*. CSLI, Stanford.

Borsley, R. D. (1989) ' An HPSG approach to Welsh', *J. Linguistics* 25, 333-354.

Cardinaletti, A. (1995) ' Pronouns in Germanic and Romance languages: an overview', to appear in Henk van Riemsdijk (ed.), *Clitics in the Languages of Europe*. Berlin: Mouton de Gruyter.

Cinque, G. (1997) *Adverbs and functional heads: a cross-linguistic perspective*. Oxford: Oxford University Press (in press).

Cottell, S. (1996) 'VP-clefting and the internal structure of VP', ms. Bangor: University of Wales.

Cyrino, S. (1993) 'Observações sobre a mudança diacrônica no português do Brasil: objeto nulo e clíticos'. in I. Roberts and M. A. Kato (eds.), *Português Brasileiro - uma viagem diacrônica*. Campinas: Editora da Universidade de Campinas.

Chomsky, N. (1981) *Lectures on Government and Binding*. Dordrecht: Foris.

Chomsky, N. (1986a) *Knowledge of Language: Its Nature, Origin and Use*. New York: Praeger.

Chomsky, N. (1986b) *Barriers*. Cambridge, Mass.: The MIT Press.

Chomsky, N. (1993) 'A minimalist program for linguistic theory', in K. Hale and S. J. Keyser (eds.), *The view from building 20 - Essays in linguistics in honour of Sylvain Bromberger*. Cambridge, Mass: The MIT Press, 1-52.

Chomsky, N. (1995) *The Minimalist Program*. Cambridge, Mass.: The MIT Press.

Dowty, D. (1979) *Word meaning and Montague Grammar*. Dordrecht: Reidel.

Duarte, M. E. L. (1989) 'Clítico Acusativo, Pronome Lexical e Categoria Vazia no Português do Brasil', in Tarallo, F. (ed.) *Fotografias Sociolinguísticas*. Campinas: Pontes / Editora da Universidade de Campinas.

Emonds, J. (1978) ; The Verbal Complex V'-V in French', *Linguistic Inquiry* 9: 151-175.

Emonds, J. (1985) *A unified theory of syntactic categories*. Dordrecht: Foris.

Emonds, J. (1993) ' Projecting indirect objects' *The Linguistic Review* 10: 211-263.

Figueiredo e Silva, M. Cristina (1994) La Position du Sujet en Portugais Brésilien (dans les phrases finies et infinitives). Doctoral dissertation, Université de Génève.

Freeze, R. (1992) 'Existentials and other locatives', *Language* 68(3): 553-595.

Fujita, K. (1996) ' Double Objects, Causatives, and Derivational Economy', *Linguistic Inquiry* 27(1): 146-73.

Gardner, H. (1985) *The mind's new science - a history of the cognitive revolution*. New York: Basic Books.

Green, G. M. (1974) *Semantics and Syntactic Regularity*. Bloomington: Indiana University Press.

Grimshaw, J. (1990) *Argument Structure*. Cambridge, Mass. : The MIT Press.

Gruber, J. (1976) *Lexical Structure in Syntax and Semantics*. Linguistic Series No. 25, Amsterdam: North Holland.

Haegeman, L. (1986) 'The double object construction in West Flemish', *The Linguistic Review* 5: 281-300.

Haider, H. (1992) ' The Basic Branching Conjecture', ms. University of Stuttgart.

Hale, K. and Keyser, S. J. (1991) ' On the syntax of argument structure', *Lexicon Project Working Papers*, Center for Cognitive Science, MIT.

Hale, K. and Keyser, S. J. (1993) 'On Argument Structure and the Lexical Expression of Syntactic Relation' , in K. Hale and S. J. Keyser (eds.), *The view from building 20 - essays in linguistics in honour of Sylvain Bromberger*. Cambridge, Mass.: The MIT Press.

Hale, K. and Keyser, S. J. (1997) 'The basic elements of argument structure', ms., MIT.

Helmantel, M. (1996) ' Where is 'there' in Dutch? R-word-PP revisited', ms. University of Leiden.

Helmantel, M. (1997) ' Aspect and Adpositions: the Point of View of Dutch and German', ms. University of Leiden.

Hendrich, R. (1988) *Anaphora in Celtic and Universal Grammar*. Dordrecht: Kluwer.

Higginbotham, J. (1985) 'On Semantics', *Linguistic Inquiry* 16:547-593.

Higginbotham, J. (1994) 'Aspect and Events', ms., Oxford University.

Higginbotham, J. (1996) ' Class notes', Girona: GLOW Summer School.

Holmberg, A. (1987) ' The Structure of NP in Swedish', *Working Papers in Scandinavian Syntax*, University of Stockholm.

Holmberg, A. and Platzack, C. (1995) *The Role of Inflection in Scandinavian Syntax*. Oxford: Oxford University Press.

Hornstein, N. (1995) *Logical Form: from GB to Minimalism*. Oxford: Blackwell.

Hornstein, N. & Weinberg, A. (1981) 'Case Theory and Preposition Stranding', *Linguistic Inquiry* 12(1): 55-91.

Jackendoff, J. (1990a) *Semantic Structures*, Cambridge, Mass.: The MIT Press.

Jackendoff, J. (1990b) 'On Larson's Treatment of the Double Object Construction', *Linguistic Inquiry*, 21(3), 427-456.

Jackendoff, J. (1992) *Languages of the Mind - Essays on Mental Representation*. Cambridge, Mass.: The MIT Press.

Jaeggli, O. (1980) 'Remarks on 'to' Contraction', *Linguistic Inquiry* 11:239-245.

Johnson, K. (1991) 'Object Positions', *Natural Language and Linguistic Theory* 9: 577-636.

Kato, M. (1991) 'The Distribution of Pronouns and Null Elements in Object Position in Brazilian Portuguese', in W. Ashby et al. (eds.) *Linguistic Perspectives on Romance Languages*. Philadelphia: J. Benjamins.

Kayne, R. (1984) *Connectedness and Binary Branching*. Dordrecht: Foris.

Kayne, R. (1991) 'Romance Clitics, Verb Movement, and PRO', *Linguistic Inquiry* 22: 647-686.

Kayne, R. (1993) 'Toward a Modular Theory of Auxiliary Selection', *Studia Linguistica* 47: 3-31.

Kayne, R. (1994) *The Antisymmetry of Syntax*. Cambridge, Mass.: The MIT Press.

Kemenade, A. van (1987) *Syntactic Case and Morphological Case in the History of English*. Dordrecht: Foris.

Koopman, H. (1993) 'The Structure of Dutch PPs', ms. UCLA.

Larson, R. K. (1988) 'On the Double Object Construction', *Linguistic Inquiry* 19(3): 335-91.

Levin, B. and M. R. Hovav (1995) *Unnacusativity: At the Syntax-Lexical Semantics Interface*. Cambridge, Mass.: The MIT Press.

Lightfoot, D. (1991) *How to Set Parameters: Arguments from Language Change*. Cambridge, Mass.: The MIT Press.

Lombard, L. B. (1985) 'How not to Flip the Prowler: Transitive Verbs of Action and the Identity of Actions' , in E. LePore, and B. P. McLaughlin (eds.) *Actions and Events - Perspectives on the Philosophy of Donald Davidson*. Oxford: Basil Blackwell.

Madeira, A.M. (1995) *Topics in Portuguese Syntax: the licensing of T and D*. Doctoral dissertation, University College London.

Manzini, M.R. (1995) 'From Merge and Move to Form Dependency', *UCL Working Papers*.

Manzini, M. R. and A. Roussou (1997) 'A Minimalist Theory of A-Movement and Control', ms. Florence/ UCL and University of Wales, Bangor.

McCloskey, J. (1990) 'Irish Resumptive Pronouns', in Hendrick, R. (ed.) *Syntax and Semantics - The Syntax of the Modern Celtic Languages* 23. London: Academic Press.

Nunes, J. (1993) 'Direção de cliticização, objeto nulo e pronome tônico na posição de objeto em português brasileiro', in I. Roberts and M. A. Kato (eds.), *Português Brasileiro - uma viagem diacrônica.* Campinas: Editora da Universidade de Campinas.

Omena, N. P. de (1978) *Pronome Pessoal de Terceira Pessoa: suas Formas Variantes em Função Acusativa*. MA dissertation, PUC-Rio, Rio de Janeiro.

Pagotto, E. (1993). 'Clíticos, Mudança e Seleção natural', in I. Roberts and M. A. Kato (eds.) *Português Brasileiro - uma Viagem Diacrônica*. Campinas: Editora da Universidade de Campinas.

Pesetsky, D. (1995) *Zero Syntax*. Cambridge, Mass: MIT Press.

Pinker, Steven (1989) *Learnability and Cognition - The Acquisition of Argument Structure*. Cambridge, Mass.: The MIT Press.

Pollock, J.-Y. (1989) 'Verb Movement, Universal Grammar, and the structure of IP', *Linguistic Inquiry* 20: 365-324.

Pustejovsky, J. (1991) 'The Syntax of Event Structure', *Cognition* 41: 47-81.

Radford, A. (1997) *Syntactic Theory and the Structure of English: a minimalist approach*. Cambridge: Cambridge University Press.

Ramos, J. (1989) 'O Emprego de Preposições no Português do Brasil', in Tarallo, F. (ed.) *Fotografias Sociolinguísticas*. Campinas: Pontes / Editora da Universidade de Campinas.

Riemsdijk, H. van (1978) *A Case Study in Syntactic Markedness - The Binding Nature of Prepositional Phrase*. Dordrecht: Foris.

Riemsdijk, H. van (1990) 'Functional Prepositions', in H. Pinkster, and I. Genee (eds.) *Papers presented to Simon C. Dik on his 50th birth day*. Dordrecht: Foris.

Rizzi, L. (1982) *Issues in Italian Syntax*. Dordrecht: Foris.

Rizzi, L. (1984) 'Spiegazione e Teoria Grammaticale', ms. Padua: CLESP (second printing: Unipress, Padua, 1990).

Rizzi, L. (1990) *Relativized Minimality*. Cambridge, Mass.: MIT Press.

Roberts, I. (1985) 'Oblique Case in the History of English', *Studies in Syntax, Southern California Occasional Papers in Linguistics* 10: 143-61.

Roberts, I. (1987) *The Representation of Implicit and Dethematized Subjects*. Dordrecht: Foris.

Roberts, I. (1993) 'O Português Brasileiro no Contexto das Línguas Românicas', in I. Roberts and M. A. Kato (eds.) *Português Brasileiro - uma viagem diacrônica*. Campinas, Editora da Universidade de Campinas.

Roberts, I. (1996) 'Language change and learnability', talk presented at the LAGB Autumn Meeting, Cardiff, Wales.

Roberts, I. (1997) *Comparative Syntax*. London: Arnold.

Roberts, I. and M. A. Kato (eds.) (1993) *Português Brasileiro - uma viagem diacrônica*. Campinas: Editora da Universidade de Campinas.

Roberts, I. & Roussou, A. (1997) 'Interpretability vs. feature checking', talk presented at the LAGB Spring Meeting, Edinburgh, Scotland.

Rooryck, J. (1996) 'Prepositions and Minimalist Case Marking', in H. Thráinsson, S.D. Epstein and S. Peter (eds.) *Studies in Comparative Germanic Syntax II*. Dordrecht: Kluwer Academic Press.

Ross, J. R. (1972) 'Act', in Harman and Davidson (eds.), *Semantics of Natural Language*. Dordrecht: Reidel, 70-126.

Roussou, A. (1996) 'Specifiers, head-dependencies and asymmetric relations', talk presented at the 19th GLOW Colloquium, Athens.

Rouveret, A. (1991) 'Functional Categories and Agreement', *The Linguistic Review* 8: 353-87.

Rouveret, A. (1992) 'Clitic placement, Focus and the Wackernagel position in European Portuguese', in L. Rizzi (ed.), *Clitics in Romance and Germanic*. 103-139.

Ruwet, N. (1968) *Introduction à la grammaire générative*. Paris: Plon.

Salles, H. M-L. (1995) 'Preposition Pied-piping and Preposition Stranding: a Minimalist Approach', *Research Papers in Linguistics* 6: 97-123, Bangor: University of Wales.

Salles, H. M-L. (1996) 'Double Object Constructions: a Minimalist Approach', *Research Papers in Linguistics* 8: 66-84, Bangor: University of Wales.

Salles, H. M-L. (1997) 'On the Correlation between Double Object Constructions and P-stranding', *Research Papers in Linguistics*, Bangor: University of Wales.

Scher, A. P. (1996) *As construções com dois complementos no inglês e no português do Brasil*. MA dissertation, Universidade de Campinas.

Schmitt, C. J. (1996) *Aspect and the Syntax of Noun Phrases*. Doctoral dissertation, University of Maryland.

Smith, C. S. (1991) *The Parameter of Aspect*. Dordrecht: Kluwer Academic Publishers.

Stowell T. (1981) *The Origins of Phrase Structure*. Doctoral dissertation, MIT.

Tenny, C. (1994) *Aspectual Roles and the Syntax-Semantics Interface*. Dordrecht: Kluwer.

Tsimpli, I.-M. (1992) *Functional Categories and Maturation: the Prefunctional Stage of Language Acquisition.* Doctoral dissertation, University College London.

Verkuyl, H. (1993) *A Theory of Aspectuality: the Interaction Between Temporal and Atemporal Structure*. Cambridge: Cambridge University Press.

Whitney, R. (1983) 'The Place of Dative Movement in a Generative Theory', *Linguistic Analysis,* 12(3): 315-322.

Williams, E. (1938) *From Latin to Portuguese, Historical Phonology and Morphology of Portuguese Language*. Philadelphia: University of Pennsylvania Press.

Williams E. (1987) 'Implicit arguments, the binding theory, and control', *Natural Language and Linguistic Theory* 5: 151-180.

Zhang, S. (1990) 'On the Correlation between the Double Object Constructions and Preposition Stranding', *Linguistic Inquiry* 21(2): 312-316.