

A Minimalist Movement Account of Ditransitives

Sam Wells

MA by Research

University of York
Language and Linguistic Science
December 2015

ABSTRACT

Within the generative literature, theories proposing derivations for the double object construction (DOC) *John gave Mary the book* and prepositional dative construction (PDC) *John gave the book to Mary* differ widely. Many linguists argue for an analysis within which both constructions originate from a Merge position corresponding to a PDC, before a movement operation derives the final DOC word order (Baker, 1997; Larson, 1988; Michelioudakis, 2011). However, others propose lexical analyses which require each construction to be derived from separate Merge positions (Bruening, 2010a, 2010b, 2014; Harley, 2002; Jackendoff, 1990; Pylkkänen, 2002, 2008).

At the core of a movement theory is the assumption that the thematic content of DOCs and PDCs is the same. This allows both constructions to be derived from the same Merge positions. Yet in a lexical approach, small meanings idiosyncratic to the DOC – often referred to as *Oehrle's Generalization* – are used to argue that both ditransitive frames have different thematic roles, the outcome being that the DOC and PDC can be derived from different Merge positions.

The aim of this thesis is to provide a Minimalist movement approach to the dative alternation within which *Oehrle's Generalization* represents an implicature and as such, is not represented at Merge. The analysis developed within draws on Michelioudakis (2011) who also provides a Minimalist movement account, but one which represents *Oehrle's Generalization* syntactically, albeit not at Merge. Ultimately, a system is developed where both frames of the dative alternation are derived from the same Merge positions before a last resort mechanism generates the final DOC word order.

TABLE OF CONTENTS

Abstract.....	2
Table of Contents.....	3
Acknowledgments.....	4
Author’s Declaration.....	5
Chapter 1: Introduction.....	6
1.1 Thesis aims.....	6
1.2 The dative alternation.....	6
1.3 Summary.....	11
Chapter 2: The Lexical and Movement Analyses.....	12
2.1 Minimalist assumptions.....	12
2.2 The UTAH and Minimalism.....	14
2.3 The UTAH and ditransitive verbs.....	17
2.3.1 <i>Oehrle’s Generalization</i>	17
2.3.2 Movement and the dative alternation.....	25
2.4 Summary.....	31
Chapter 3: Deriving Ditransitives.....	33
3.1 Michelioudakis (2011) and the dative alternation.....	33
3.2 Theoretical preliminaries.....	41
3.3 Deriving the dative alternation.....	44
3.3.1 Deriving the prepositional dative construction.....	45
3.3.2 Deriving the double object construction.....	47
3.4 Ditransitive passives.....	51
3.5 Deriving ditransitive passives.....	57
3.6 Summary.....	66
Chapter 4: Conclusion.....	68
Bibliography.....	71

ACKNOWLEDGEMENTS

Thanks go to my supervisor Dr Bernadette Plunkett. I'd also like to thank Dr Norman Yeo, Dr George Tsoulas and Dr Dimitris Michelioudakis for their feedback and encouragement. Finally, I would like to thank York University's Syntax and Semantics Research Group for the opportunity to showcase my material.

AUTHOR'S DECLARATION

No part of this thesis has previously been accepted for a degree, diploma or qualification other than MA by Research at the University of York. This thesis represents my own investigation and any other sources have been clearly referenced. No part of this thesis has been published or is under review for publication.

1: INTRODUCTION

1.1 Thesis aims

In the ditransitive literature, derivations for the double object construction (DOC) *John gave Mary the book* and prepositional dative construction (PDC) *John gave the book to Mary* can be separated into two groups. There are those who argue that both constructions originate from a base position corresponding to a PDC, before a movement operation derives the final DOC word order (Baker, 1997; Larson, 1988; Michelioudakis, 2011). At the core of a movement theory is the assumption that the thematic content of DOCs and PDCs is the same, and that there is a close relationship between syntactic structure and thematic roles. However, others propose lexical analyses which require that both constructions are derived from different base structures (Bruening, 2010a, 2010b, 2014; Harley, 2002; Jackendoff, 1990; Pykkänen, 2002, 2008). In a lexical approach, small meanings idiosyncratic to the DOC are used to argue that both ditransitive frames contain different thematic roles. The outcome of this assumption is that the DOC and PDC can be derived from different base positions. Therefore, the key difference between the movement and lexical analyses relates to whether the meaning idiosyncrasies of the DOC are argued to be thematic.

This dissertation evaluates both the movement and lexical analyses to determine which best accounts for ditransitives in a Minimalist setting. The outcome of this evaluation will be that representing small meaning differences at Merge is theoretically unsound. Thus, a ditransitive analysis is developed in chapter 3 which has at its core the argument that DOCs and PDCs are derived from the same base structures, and that a movement operation generates the linear order associated with the DOC.

Now what follows is a brief introduction to ditransitive verbs followed by outlines of the lexical and movement analyses.

1.2 The dative alternation

In English the objects of certain ditransitive verbs can be realized in one of two ways: prepositional dative constructions (PDCs) with the order (DO>IO) and double object constructions (DOCs) with the order (IO>DO). Examples of each construction are given below. The (a) sentences are PDCs while the (b) sentences represent corresponding DOCs:

- (1) a. John gave book to Mary.
b. John gave Mary the book.

- (2) a. John baked a cake for Mary.
b. John baked Mary a cake.

In early versions of generative grammar, two options were available for deriving the dative alternation. The first was to argue that PDCs and DOCs were related via a transformation. This necessitated that both constructions shared a common base structure to which a transformational rule was applied. Whether or not the rule was applied determined which construction was generated, e.g. if the PDC represented the base, applying the rule would have generated a DOC while not applying the rule would have generated a PDC. Typically, transformations were sensitive to only categorial information, and as such they could not explain non-categorial differences between the two constructions (Oehrle, 1976, p.9).

The second option was to argue that a transformation was not involved and that the DOC and PDC were derived from different base structures. One such theory was that of Oehrle (1976) who argued that the differences between the two constructions could not be captured by a transformational grammar. He proposed that DOCs contrast with PDCs in how they behave with pronominal objects. Specifically, he argued that sentences such as (3a) are grammatical while ones like (3b) and (3c) are not. The grammaticality judgements are Oehrle's:

- (3) a. John sent it to Arnold.
b. *John sent Arnold it.
c. *He didn't give you it, did he? (Oehrle, 1976, pp.166-7)

According to Oehrle, the differences between (3a) and (3b, c) are not categorial and consequently cannot be generated by a transformation. However, his most significant contribution to the ditransitive field is the argument that the DOC contains an entailment not found in the PDC. While a thorough examination of this analysis is provided in chapter 2, it can be summarized using the following examples (the judgements are Oehrle's):

- (4) a. I baked a cake for Max, but now that you're here, you may as well take it.
b. *I baked Max a cake, but now that you're here, you may as well take it. (Oehrle, 1976, p.109)

Oehrle argues that the contrast in grammaticality between (4a) and (b) originates from differences in intention between the DOC and PDC. He claims that the PDC contains two entailments: *I baked a cake; I intended that Max have the cake*. Note that there is no entailment that *Max received the cake*. In contrast, he argues that in the DOC, the intention of the subject is such that *I intended Max to have the cake* not just at the time of the baking

but also afterwards (Oehrle, 1976, p.104). Thus for Oehrle, there is a strong suggestion that *Max* actually received *the cake* in the DOC.

As the contrasts highlighted in (3) and (4) are not categorial, they illustrate the type of data that a transformational approach cannot explain (Ibid., p.277). Consequently, Oehrle derives the DOC and PDC from separate base structures and argues that the differences noted above – pronominal objects and entailments – are encoded in the lexicon.

In the current ditransitive literature, Oehrle's proposals have been developed, with many syntacticians arguing that the entailment differences are thematic (Beck and Johnson, 2004; Bruening, 2010a, 2010b, 2014; Harley, 2002; Pykkänen, 2002, 2008), the fallout being that DOCs and PDCs can be derived from different base positions. Adopting such a theory requires a hypothesis to dictate that the relationship between syntax and thematic information is a rigid one. One such hypothesis was proposed by Baker (1988, 1997):

(5) *Uniformity of Theta Assignment Hypothesis (UTAH)*

Identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure.

(Baker, 1988, p.46)

The term D-Structure was used during the pre-Minimalist period to describe a level of syntactic representation that illustrated the basic relationship between an argument and its predicate before any movement had taken place (Haegeman, 1994, p.304-5). In proposing UTAH, Baker argued that there was a strict relationship between thematic content and syntactic structures. For example, rather than mapping a specific predicate to a specific type of syntactic structure which, for example, could result in themes occupying different D-structure positions in transitive and ditransitive sentences, the UTAH in (5) ensured that a theme will occupy the same D-structure position across all types of sentence. Thus if the entailment differences between the DOC and PDC – referred to henceforth as *Oehrle's Generalization* – were argued to be thematic, then the UTAH became necessary as a means of forcing DOCs and PDCs to be derived from separate D-structures.

On the other hand (using Baker's (1988) terminology), the UTAH is also adopted by those who claim that DOCs and PDCs are derived from the same D-structure, (Baker, 1997; Larson, 1988; Michelioudakis, 2011). As mentioned above, the key distinction between theories which generate PDCs and DOCs from different underlying structures and those which do not can be reduced to whether the differences in entailment observed by Oehrle are thematic. Those who do not consider *Oehrle's Generalization* thematic typically argue that one construction represents the base, and the other construction is derived by a movement operation. Consequently, a situation has developed where those who argue for thematic

differences enrich the lexicon (a lexical approach) while movement analyses and the older transformational approaches propose a more complex syntactic component.

Differentiating the two ditransitive approaches is a non-trivial task for each has received much attention across the many instantiations of generative grammar. However, while a more detailed decomposition of each approach will be given in chapter 2, revising the UTAH and analysing the theoretical burden it carries provides a means with which to distinguish them even at this early stage.

As suggested above, a benefit of adopting UTAH is that it gives a theoretical solution to the problem of how thematic roles are mapped onto syntactic structures and how such structures represent natural language (Baker, 1997, p.73). This difficulty, known as the *linking problem*, diminishes somewhat with UTAH, a hypothesis which dictates that the relationship between thematic roles and syntactic structures should be consistent. It requires that a Theme always occupies the same initial position in a syntactic tree regardless of clause type. For example, using terminology from (5), the D-structure position of a Theme in a transitive clause (6) will be shared by the Theme in a passive clause (7):

(6) The man ate the fish.

(7) The fish was eaten by the man.

In (6) and (7), the Theme corresponds to *the fish* which suggests that in at least one of the constructions movement has taken place. The significance of UTAH is such that a child learning argument structure would only need to associate a Theme with one structural position. In contrast, if UTAH did not exist and Themes could be represented by multiple argument positions at D-structure, a child would need to learn which Theme position corresponded to which clause.

Thus, if the meaning differences captured by *Oehrle's Generalization* are thematic (Beck and Johnson, 2004; Bruening, 2010a, 2010b, 2014; Harley, 2002; Pytkänen, 2002, 2008), then the UTAH or UTAH-like principles would dictate that DOCs and PDCs should be derived from different D-structures. Yet this does not seem to make theoretical sense as small meaning differences are being represented by non-trivial syntactic differences. If this is true for ditransitives, then it should also be true for other constructions containing small thematic discrepancies. For example, should the following sentences be represented by different underlying structures?

(8) a. The man destroyed the house.

b. The crane destroyed the house.

c. The rock destroyed the house.

The man is the most animate argument while *the rock* is the least. If one argues that the distinctions captured by Oehrle need to be represented syntactically, then presumably the examples given in (8) would have to be derived from different D-structures. Thus while a UTAH sensitive to small thematic differences would still give a solution to the *linking problem*, the consequences of adopting such a hypothesis would include a very complex argument structure. However, deriving both frames of the dative alternation from the same D-structure would mean that UTAH need be sensitive to only broad thematic differences which mitigates the learnability problems associated with representing *Oehrle's Generalization* syntactically.

The argument against representing *Oehrle's Generalization* syntactically provides a means of differentiating the lexical approach from the movement analysis. The former entails a detailed argument structure while the latter requires a movement operation to derive at least one of the constructions. However, as highlighted in (8) the wider ramifications of a detailed argument structure suggest at this early stage that the movement analysis is the preferred option. Now, as each analysis is dependent on a version of UTAH, what follows is a description of where the hypothesis fits in a theory of generative grammar.

Adopting a view comparable to that of Chomsky (1995, pp.168-171), a language is split into two segments, a lexicon and a computational system. The lexicon determines all the lexical items which can be selected for processing by the computational system (CS). Using the lexical items, the computational system then produces a derivation (D), which generates syntactic objects containing both a semantic and phonetic component. These are labelled λ and π respectively (Chomsky, 1995, p.170). If the generated syntactic object is valid, then D is said to *converge*, but if the output of D is flawed in any way, D *crashes*. Chomsky further argues that there are two interface levels known as Logical Form (LF) and Phonetic Form (PF) which analyse λ and π to determine whether D has produced a syntactic object that is both semantically and phonetically legitimate. Thus, if λ is a valid semantic component, D *converges* at LF, but if λ is not semantically valid, D *crashes*. The same is also true for π and PF: if π is valid, D *converges* at PF, but otherwise *crashes* if not.

After outlining Chomsky's (1995) perspective on the computational system, UTAH's position within the theory can be determined. As LF is the interface which analyses semantic, and therefore thematic content, the UTAH should be viewed as an output condition at LF (Baker, 1997, p.122). Thus, UTAH interprets two constructions as having the same thematic roles only if, having checked, the arguments in both constructions were merged in the same place. Moreover, for a lexical analysis to derive the DOC and PDC from different Merge positions, it is necessarily the case that *Oehrle's Generalization* must be interpreted as capturing thematic differences.

The key approaches for deriving the dative alternation have now been superficially evaluated and it has been illustrated, at first glance, that a movement analysis is perhaps the best option as it creates a simpler argument structure.

1.3 Summary

Rather than assuming that UTAH is sensitive to small thematic differences i.e. *Oehrle's Generalization*, in later chapters I develop a movement analysis which focuses on the similarities between the DOC and PDC rather than the differences.

Chapter 2 provides a detailed evaluation of UTAH which concludes that UTAH or UTAH-like principles are needed in a grammar. The lexical and movement analyses then receive a similar examination, with the outcome being that the latter is the stronger approach. In chapter 3, I propose a derivation for the dative alternation and ditransitive passives which draws on aspects of Michelioudakis (2011). Finally, chapter 4 summarises the content of the dissertation, highlights some issues with the analysis and illustrates how the research can be developed in the future.

2: THE LEXICAL AND MOVEMENT ANALYSES

2 Introduction

The purpose of this chapter is to evaluate the lexical and movement analyses to determine which accounts for the dative alternation most adequately. However, in order to accomplish this objective, we need to develop a basic understanding of Minimalism and revisit where the *Uniformity of Theta-Assignment Hypothesis* (UTAH) fits within a Minimalist grammar.

2.1 Minimalism assumptions

The purpose of Minimalism is to continue reducing “the postulated richness of UG, to discover its actual nature” (Chomsky, 2013, p.38). In previous instantiations of generative syntax, the theoretical burden placed on UG was substantial. The same was also true with regards to the lexical and syntactic components of a grammar as many linguists argued that a phenomenon such as the dative alternation could be generated by enriching either the syntax or the lexicon. The transformational rule in (9) illustrates how the syntactic component was used to derive a DOC:

(9) **To-dative**

$$SD = X-V-NP_1-to-NP_2-Y$$

1 2 3 4 5 6

$$SC = X-V-NP_2-\emptyset-NP_1-Y$$

1 2 5 \emptyset 3 6

Conditions:

1) Term 2 has the transference property

2) Term 2 does not have the morphological structure $[X]_{\text{Prefix}} = [Y]_{\text{Stem}}$

(Oehrle, 1976, p.140)

The input of the rule, denoted by the structural description (SD), consists of a PDC containing the preposition *to*. Each element of the PDC is labelled and numbered. The structural change (SC), the operation by which the output of the rule is generated (Chomsky, 1981, p.86), indicates how these labels are rearranged to derive a DOC. The SC moves an element by copying it, moving the copy and then deleting the original. Deletion can also occur without copying. The SC in (9) generates a DOC by moving NP_2 to a position preceding NP_1 and deleting the preposition *to*. Finally, observe that the rule has conditions which specify any non-categorical information idiosyncratic to the output but not the input.

For example, condition 1 refers to the transfer component that is claimed to be inherent in the DOC (recall Oehrle's argument that the DOC contains an entailment of intention which the PDC is lacking) and so on. Notice also that separate rules would be needed to derive DOCs from *for*-PDCs as the rule in (9) is specific to PDCs containing *to*. Also, separate rules would be needed to derive ditransitive passives from active equivalents.

The theoretical burden placed on the syntactic component in a transformational grammar was vast, but the alternative at the time was no simpler. Eschewing transformational approaches, analyses such as Oehrle (1976) placed a greater strain on subcategorization frames and the lexicon. A subcategorization frame was contained within a verb's lexical entry and specified the type of VP that the verb appeared in. An example frame for a PDC is given below:

(10) *give*: V, [— NP, PP]

(Haegeman, 1994, p.42)

V denotes the category of *give* and [—] indicates *give*'s position relative to its arguments. Subcategorization frames generate D-structure trees. At this point in a transformational grammar, a rule such as (9) would apply to the output of (10) to derive a DOC S-structure. However, adopting a lexical grammar dictates that DOCs have their own subcategorization frames. Thus the lexical entry for *give* can be rewritten as the following:

(11) *give*: V, [— NP, NP] or V, [— NP, PP]

(Haegeman, 1994, p.42)

Verbs which alternate would have two subcategorization frames in their lexical entry for active variants and two for passive variants, while non-alternating ditransitives such as *put* and *deny* would have one transitive and one passive subcategorization frame.

In an effort to simplify the syntactic tools used in a generative grammar, the first attempt to apply a minimalist approach reduced all the above – transformations, D-Structure, S-structure, subcategorization frames – to the binary syntactic object (SO) building operation Merge (Chomsky, 1993). Simply put, Merge takes two SOs and combines them to form a larger SO. Finally, Chomsky proposes the *Strongest Minimalist Thesis* (SMT) which determines that '[a]ny departure from SMT – any postulation of descriptive technology that cannot be given a principled explanation – merits close examination, to see if it is really justified' (Chomsky, 2008, p.135). Thus, anything other than Merge needs to be thoroughly examined before it can be included in a Minimalist analysis.

Now that some basic Minimalist assumptions have been outlined, we can turn to the UTAH and to see whether it needs to be reformulated to work within the newer framework.

2.2 The UTAH and Minimalism

In Minimalism, it is necessary to reduce assumptions, constraints and other theoretical principles to “virtual conceptual necessity” (Chomsky, 1995, p.186) in an effort to align everything to the SMT. As a key part of the original formulation of UTAH is D-structure, and as both D-structure and S-structure are reduced to Merge, the following gives a brief explanation of what these levels of syntactic representation are and why they can be replaced.

In Chomsky (1981), D-structure was the output of the operation *Satisfy* which had the purpose of selecting lexical items from the lexicon and ordering them in a way compatible with X-bar theory that was representative of the basic relationship between argument(s) and the predicate. *Satisfy* was not a cyclic operation, it generated D-structure “all-at-once” (Chomsky, 1995, p.187), meaning that all the lexical items taken from the lexicon were arranged in a single action. Finally, S-structure was generated from D-structure by application(s) of *Move- α* , which created traces and coindexes between an item’s D-structure and S-structure positions (Chomsky, 1981, p.5).

In Minimalism, the recursive, binary, SO-building operation, Merge superseded the levels of syntactic representation known as D-structure and S-structure. In more detail, Merge selects two SOs α and β and combines them to form a new SO $\{\alpha, \beta\}$. As Merge applies cyclically, there no longer needs to be a distinction between D-structure and S-structure for movement occurs inside the output of Merge as and when it is triggered. Thus, the SO realized as the output of the derivation D is the result of successive applications of Merge. The semantic component λ and phonetic component π of D’s output are then analysed respectively by LF and PF in the way described in chapter 1.

As the level of D-structure is lost, the definition of UTAH given in (5) is no longer valid and needs to be re-evaluated. Baker argues that if UTAH analyses “the tails of chains” to “factor out the conditions of movement” (Baker, 1997, p.122), it could be incorporated into a Minimalist approach. Such a constraint would, for example, analyse the chain left by an argument that has moved from [Spec, ν P] to [Spec, TP] and determine that the argument is an Agent based on its Merge position.

Even though a UTAH examining the ‘tails of chains’ seems compatible with Minimalism, Baker (1997) analyses this approach and argues that the Minimalist view on verbal decomposition makes UTAH redundant as a separate output condition at LF. Below I discuss this argument and maintain that the UTAH is still needed to analyse the chains left by movement.

Citing Chomsky (1995) and Hale and Keyser (1993), Baker (1997) argues that current views on lexical semantics decompose a transitive verb into a minimum of two predicates. A standard representation is given below:

(12) [x cause [y be/become PREDICATE]]

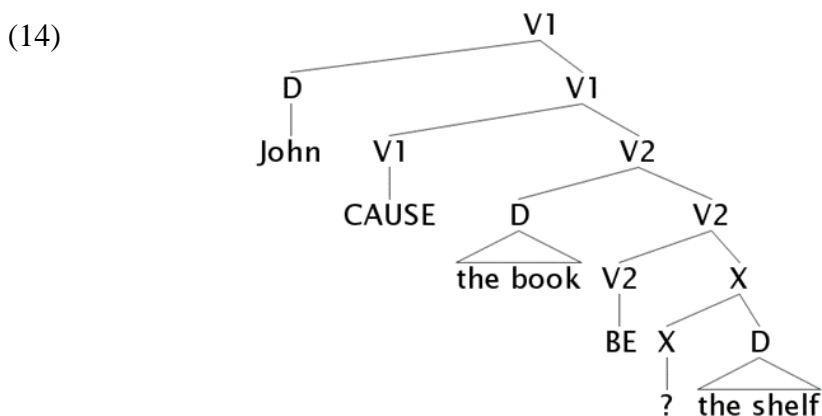
(Baker, 1997, p.123)

In the example above, *x* represents an Agent and *y* represents the Theme. Adopting proposals by Hale and Keyser (1993), Baker identifies *cause* with the highest head in a Larsonian VP-Shell and *be/become PREDICATE* with the head of the lower VP. Thus for Baker, the Agent is Merged higher than the Theme “by semantic compositionality: the agent is the argument of one predicate, the theme is the argument of another predicate, and the second predicate is the argument of the first” (Baker, 1997, p.123). However, there is a problem with this proposal. If *cause* has two arguments, the Agent and the lower VP, there is nothing in Baker’s proposal to indicate why the lower VP has to be the complement of the *cause* head and why the Agent has to be Merged in the specifier of the latter.

Baker (1997) then argues that the lower VP in a Larsonian VP-Shell expresses a *state* “created from a predicate and an individual, such that the predicate holds of the individual” (Baker, 1997, p.125). The *individual* Baker refers to is the Theme, while the Goal is an “argument which helps define the predicate that holds of the individual” (Ibid., p.125). Thus, Baker’s decomposition for the ditransitive *put* is as follows:

(13) *John put the book on the shelf* refers to an event which consisted of John causing a state, where the state consisted of a certain predicate holding of the book, and the predicate was being in a particular position with respect to the shelf. (Baker, 1997, p.125)

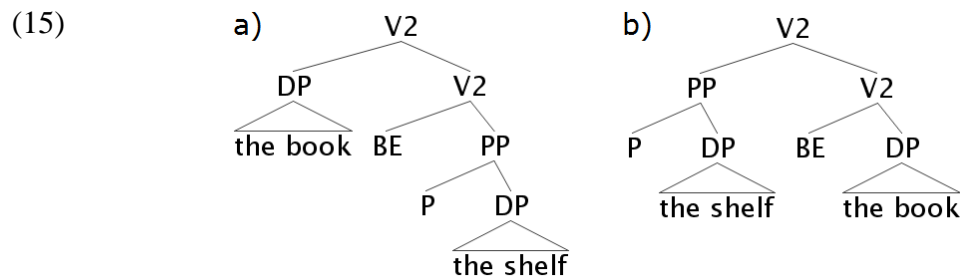
A tree representing Baker’s decomposition is given below:



(Baker, 1997, p.125)

According to this representation, BE selects two arguments and creates a state between them. Baker seems to argue that the Theme is structurally higher than the Goal because the Theme is a direct argument of BE whereas the Goal is contained within BE's complement and is consequently not a direct argument of BE (Baker, 1997, p.125).

However, nothing appears to constrain the order in which BE Merges its arguments. For example, if we assume that *the shelf* is a complement of the preposition *on*, it follows that BE selects two arguments, a DP and a PP. Also, following Chomsky (2000, p.133), assume that two linguistic items Merge to check a selection property of the one of the items, and that these selectional properties can be represented by unchecked c-selection features in the spirit of Adger (2003). From these assumptions, it would follow that BE has a [uD] and [uP] in its feature bundle and that neither the syntactic component nor LF contains a means of determining whether these features are checked in an appropriate order. Consequently, either of the following trees would be possible:



In the first example, [uP] has been checked first while in the second, [uD] has been checked first. Using c-selectional features in this fashion requires something to determine whether a predicate has satisfied its features in an appropriate order. However, Baker (1997, pp.125-6) argues that the purpose of the original UTAH was to constrain how a predicate represents its arguments in the syntax which was especially important if a predicate had more than one argument of the same category e.g. two DPs. Consequently, he posits that when a verb is decomposed in a way comparable to (14), the UTAH is redundant as each DP is selected by a separate predicate. Thus for Baker, UTAH is reduced “to a matter of ‘virtual conceptual necessity’” by compositional semantics and the addition of a “simple convention that an argument must be in a local configuration with its argument-taker” (Ibid.). Yet, while UTAH in its original guise may be redundant courtesy of the way verbs are decomposed in Minimalism, something is still needed to analyse whether a predicate has checked its c-selection features in the right order.

To summarize, it does not appear that UTAH can be reduced to a simple convention and compositional semantics. Something is needed to determine whether BE has satisfied its c-selectional features in the right order. Therefore, I adopt an overt UTAH which analyses the tail of an argument's chain to establish where the argument was initially Merged in order to assign it an appropriate thematic role. The mechanism of theta-assignment will be analysed in section 3.2.

Now that my position on the status of UTAH has been clarified, the remainder of the chapter examines how it has been incorporated into ditransitive analyses. As many theories use UTAH-like principles in conjunction with a version of *Oehrle's Generalization*, a more detailed explanation of Oehrle's argument is provided below.

2.3 The UTAH and ditransitive verbs

Oehrle's Generalization has been incorporated into many analyses which derive the DOC and PDC from different Merge positions. The general idea uses a hypothesis such as UTAH and an argument that the DOC and PDC do not share the same thematic roles. Consequently, UTAH dictates that any thematic differences have to be represented at Merge, the outcome being that the two frames of the dative alternation do not share Merge positions. The following section analyses *Oehrle's Generalization* to see whether the differences it allegedly captures hold up to evaluation.

2.3.1 Oehrle's Generalization

Oehrle (1976) examined the English dative alternation and tested two competing hypotheses. The first stated that the dative alternation was created via a transformation. This would dictate that the PDC and DOC share a D-Structure and that a transformational rule applied to the construction representing the base. Thus, if like in (9) the PDC represented the base, then the transformation would transform a PDC into a DOC. As transformations were argued to be contained within a grammar's syntactic component, the first hypothesis provided a syntactic solution to the dative alternation.

The second hypothesis argued that an alternating verb such as *give* had two subcategorization frames, one corresponding to a PDC and one to a DOC. Using this system, both constructions derived from distinct D-structures, meaning that many of the non-categorical idiosyncrasies peculiar to either the DOC or PDC were easier to explain. As subcategorization frames were found in the lexicon, this hypothesis provided a lexical explanation for the dative alternation.

Choosing a hypothesis was not easy as one required a more complex syntactic component and one required a more complex lexical component/lexicon, a point highlighted by Chomsky (1972), "[i]n general, it is to be expected that enrichment of one component of

the grammar will permit simplification in other parts... The proper balance between various components of the grammar is entirely an empirical issue” (Chomsky, 1972, p.13). Oehrle argued that enriching the lexicon provided the best explanation of the English dative alternation. He further argued that small differences between the two frames of the dative alternation, such as the extra entailment in the DOC, were difficult to explain with a transformational approach only sensitive to categorial information.

To solidify his argument, Oehrle suggested the following semantic representation of a PDC:

(16) John baked a cake for Mary.

NP_i bake NP_k for NP_j

i) at t_0 , B (NP_i , NP_k)

ii) at t_0 , I (NP_i , (H (NP_j , NP_k) at t' t_0))

$B(x, y) = x$ bake y / $H(x, y) = x$ have y / $I(x, y) = x$ intend y / $t_0 =$ tense referent

(Oehrle, 1976, p.108)

i) specified that at the time of the baking t_0 , which Oehrle referred to as the *tense-referent* (1976, p.104), NP_i baked NP_k , while ii) indicated that at t_0 i.e. the tense-referent, it was the intention of NP_i that NP_j have NP_k . However, as I was only valid at t_0 , there was no entailment that NP_j actually received the cake. In contrast, Oehrle’s representation of the DOC indicated that the intention holds not only at t_0 but also afterwards (represented by t_n):

(17) John baked Mary a cake.

NP_i bake NP_j NP_k

i) at t_0 , B (NP_i , NP_k),

ii) at $t_0 \dots t_n$, I (NP_i , (R (NP_j , NP_k) at t')),

$R(x, y) =$ a relevant relation is established between x and y

(Oehrle, 1976, p.104)

Comparing Oehrle’s DOC and PDC representations, the difference lies in ii) which indicates that at the time of the tense referent and afterwards, it was the intention of NP_i that a relevant relation, perhaps one of *transfer*, was established between NP_j and NP_k . He argued that the differences in grammaticality which he claimed were present in examples like (4), repeated

below for convenience, could be traced to the differences in the intention relation relative to the tense referent (the judgements are Oehrle's):

(18) a. I baked a cake for Max, but now that you're here, you may as well take it.

b. *I baked Max a cake, but now that you're here, you may as well take it.

(Oehrle, 1976, p.109)

In (18a) the intention relation holds at t_0 only, while in (18b) the intention relation holds at $t_0 \dots t_n$. Thus Oehrle claimed that examples such as (18b) were ungrammatical and that this originated from an intention conflict between the DOC and the rest of the sentence. In addition, he argued that this phenomenon was not just restricted to examples using *bake* and as such provided the examples below (the judgements are Oehrle's):

(19) a. John made the pancakes he gave Mary for Jack.

b. *John made Jack the pancakes he gave Mary.

(Oehrle, 1976, p.109)

(20) a. I bought my wife this tea-kettle, let me see, back in 1952.

b. Originally, I bought this tea-kettle for my wife, but I decided to keep it.

c. *Originally, I bought my wife this tea-kettle, but I decided to keep it.

(Oehrle, 1976, p.104)

Oehrle claimed that the examples in (19) and (20) illustrate a similar contrast to (18), in that an intention conflict exists between the DOC subject and the rest of the sentence.

To summarize, Oehrle argued that the DOC contained an entailment of intention that the PDC was lacking. Specifically, the DOC decomposition provided in (17) suggested that it was the intention of the Agent to establish a relevant relation between the Theme and the Goal not just at the time of tense referent i.e. at the time of baking, but also afterwards. This intention entailment alleged to be idiosyncratic to the DOC and not the PDC is referred to specifically as *Oehrle's Generalization*.

However, a problem arises in that the contrasts Oehrle uses to argue that the DOC contains an extra intention entailment are not consistent with my own judgements. For instance, to me there is no difference between the acceptability of (18a), (19a) and (20a) and their corresponding DOC sentences. The examples in (18) and (20) are perfectly acceptable while both ditransitives in (19) are very awkward, if not ungrammatical. Given this issue, I conducted a series of grammaticality judgement tests to determine whether my intuitions were shared by other native speakers of English. The data in question consisted of fifteen

ditransitive clauses and included (18), (19) and (20). This was presented to a group of eleven mostly British English speakers who had to judge each sentence using a 1-5 scale, where 1 was ungrammatical; 2 very awkward; 3 awkward; 4 slightly awkward; and, 5 grammatical. For clarity, I interpret examples with a scores of 4 and 5 to be acceptable sentences in English; for examples that scored a 3, there is no clear judgement whether they are acceptable or unacceptable; and finally, examples which scored a 1 or 2 are interpreted as unacceptable sentences in English. While eleven participants is not a large sample size, it is enough to offer an impression of how the data is interpreted by others especially given that most participants were consistent in their judgements. To illustrate, a table is provided below containing (18), (19) and (20), each example's average score, and finally, the highest and lowest scores for each sentence.

Examples	Highest (H) and lowest (L) scores	Average Score
(18) a. I baked a cake for Max, but now that you're here, you may as well take it.	H: 5 L: 4	4.81
(18) b. I baked Max a cake, but now that you're here, you may as well take it.	H: 5 L: 3	4.72
(19) a. John made the pancakes he gave Mary for Jack.	H: 5 L: 1	2.90
(19) b. John made Jack the pancakes he gave Mary.	H: 5 L: 1	2.59
(20) a. I bought my wife this tea-kettle, let me see, back in 1952.	H: 5 L: 4	4.81
(20) b. Originally, I bought this tea-kettle for my wife, but I decided to keep it.	H: 5 L: 5	5
(20) c. Originally I bought my wife this tea-kettle, but I decided to keep it.	H: 5 L: 4	4.81

Table 1: results of grammaticality judgements

The results gathered for examples (18) and (20) do not seem controversial and are consistent with my judgements. The only aspect of the table which needs highlighting is that the lowest score for (18b) is 3. At first glance, the result appears significant and could lend support to the argument that a DOC in that particular context is less grammatical than the corresponding PDC. However, it appears as though that particular score is something of an outlier as all the other participants graded (18b) as a 4 or better. Finally, if the judgements for (18) and (20) are represented by percentages, 85.45% of scores given were a 5; 12.72% were a 4; and 1.81% were a 3, meaning that for the majority of participants, (18) and (20) are perfectly grammatical.

As Oehrle used (18) and (20) to argue that the DOC contained an entailment that the PDC was lacking, the results weaken his argument as 54.54% judged the DOCs and corresponding PDCs to be a 5. If each participants' results are represented on a table, we get the following:

Participants	(18) a.	(18) b.	(20) a.	(20) b.	(20) c.
1	4	3	5	5	4
2	5	4	5	5	5
3	5	5	5	5	5
4	5	5	4	5	5
5	4	5	5	5	4
6	5	5	5	5	5
7	5	5	5	5	5
8	5	5	5	5	5
9	5	5	5	5	5
10	5	5	5	5	5
11	5	5	4	5	5
Average	4.81	4.72	4.81	5	4.81

Table 2: individual scores for (18) and (20)

Two points need highlighting. The first is that both examples in (18) scored an equal number of 5s. Admittedly, one participant gave the DOC in (18b) a 3, but other than that, the results for (18) indicate that the DOC and PDC were treated equally by most participants. The results for (20) present a similar picture: the DOCs in (20a) and (20c) both have two scores of 4. Significantly, the example which was supposed to contain an intention violation (20c) fared the same as the example containing no intention violation (20a). From these results it appears as though participants were not sensitive to the DOC's added intention entailment which significantly weakens Oehrle's argument.

The results for (19) are in one sense clear, and in another, confusing. On the one hand, the results clearly show that there exists little difference in grammaticality between the PDC in (19a) and the DOC in (19b), but on the other, it is confusing that both examples scored badly. If *Oehrle's Generalization* were to blame, it should be the case that only (19b)

was ungrammatical. However, as both examples are equally bad, something other than *Oehrle's Generalization* may be to blame.

If the individual results for (19) are represented by a table, we get the following:

Participants	(19) a.	(19) b.
1	3	1
2	3	1
3	2	5
4	5	2
5	2	2
6	4	4
7	4	4.5
8	3	3
9	1	1
10	4	3
11	1	2
Average	2.90	2.59

Table 3: individual scores for (19)

On the whole, participants gave (19a) and (19b) worse scores than (18) and (20). As both examples were to a large degree judged equally, it could be that something unrelated to *Oehrle's Generalization* is affecting the participants' judgments. If this is the case, then (19a) and (19b) are not appropriate examples for testing whether *Oehrle's Generalization* holds. Thus a number of examples are provided below which should highlight the intention entailment if it exists:

- (21) a. John made the pancakes for Jack but Mary ate them.
 b. ?John made Jack the pancakes but Mary ate them.
- (22) a. John made the pancakes for Jack but Mary ate them instead.
 b John made Jack the pancakes but Mary ate them instead.
- (23) a. Originally, John made the pancakes for Jack but Mary ate them.
 b. Originally, John made Jack the pancakes but Mary ate them.
- (24) a. I made this snack for the children, but as there's nothing else to eat, you may as well have it.
 b. I made the children this snack, but as there's nothing else to eat, you may as well have it.

- (25) a. Originally, I made this snack for the children, but as you're here, you may as well have it.
- b. Originally, I made the children this snack, but as you're here, you may as well have it.

According to my judgements the only awkward DOC is (21b). Note that the awkwardness of (21b) vanishes when an adverb is added to the sentence – see (22b) and (23b). According to Oehrle's analysis, it should be the case that the (b) sentences in (21)-(25) are ungrammatical as they should contain a clash of intention entailments. However, there does not appear to be a contrast in grammaticality between the (a) and (b) sentences and the awkwardness of (21b) can be ameliorated by adverbs. If the awkwardness of (21b) can be used as evidence for the existence of *Oehrle's Generalization*, the fact that the alleged entailment can be cancelled by an adverb suggests that Oehrle's argument does not capture an entailment, but rather an implicature.

Therefore, the discussion on *Oehrle's Generalization* has suggested that it should not be viewed as an entailment for two reasons. The first is that participants of grammaticality judgement tests were not sensitive to the intention differences which Oehrle claimed existed between the DOC and PDC. When asked to judge DOCs containing a supposed intention violation, most participants gave scores similar to those that they provided for the corresponding PDC. The second is that the awkwardness of examples such as (21b), which Oehrle would argue contain clashing intention entailments, can be cancelled by adding an adverb. The combination of these facts implies that *Oehrle's Generalization* does not capture an entailment, but an implicature.

The weakening of *Oehrle's Generalization* creates a problem for many theories which assume that it captures thematic differences between the DOC and PDC. Such theories often combine the alleged thematic differences with UTAH or UTAH-like principles to derive DOCs and PDCs from different Merge positions (Beck and Johnson, 2004; Bruening, 2010a, 2010b, 2014; Harley, 2002; Pytkänen; 2002, 2008). While I would argue that these theories are weakened by their association with *Oehrle's Generalization*, it may be the case that they incorporate or develop the generalization in such a way that the problems noted above are not as significant.

Harley (2002) assumes that *Oehrle's Generalization* captures thematic differences and as such must derive the DOC and PDC from different Merge positions. She follows Oehrle (1976, p.81) and argues that DOCs contain an animacy constraint requiring that the Goal is an animate constituent. Harley also argues that DOCs contain a possession element which necessitates that the Goal is interpreted as an animate possessor and the Theme a

possessee. The following examples are provided by Harley as evidence (the judgements are Harley's):

- (26) a. The editor sent Sue the article.
b. ??The editor sent Philadelphia the article.

(Harley, 2002, p.35)

Harley attributes the awkwardness of (26b) to the fact that *Philadelphia* as a town is not a [+animate] Goal. Conversely, she argues that when *Philadelphia* is interpreted as an animate branch of government or a Philadelphian academic publisher, the example becomes acceptable (Harley, 2002, p.35) as *Philadelphia* is then capable of possessing the Theme. Interestingly, even though I find it hard to agree with Oehrle's intention relation judgements, I accept the contrast illustrated by the examples in (26). This could suggest that the animacy constraint and intention relation are not related, as if they were, it would presumably be the case that the grammaticality judgements would always pattern the same. Furthermore, there are certain DOCs that are acceptable even when the Goal is incapable of possessing the Theme. Observe the following:

- (27) The editor sent Philadelphia the rations.

If one imagines a zombie apocalypse and a state of national emergency, the example in (27) would be an acceptable utterance even if *Philadelphia* referred to the entire city. If (27) is compared to (26b) we see that the former is acceptable with an inanimate Goal while the latter is not even though the only difference between the two is the Theme. This implies that the difference between the two examples is related to the type of argument representing the Theme and not whether the Goal is animate.

Despite these problems, Harley (2002) develops *Oehrle's Generalization* by suggesting that the animacy constraint is representative of a need to have a Goal capable of possessing a Theme. Thus she attributes the oddness of (26b) to the fact that an entire city cannot possess an article. Consequently, she proposes that the DOC contains a HAVE/POSSESSION component that establishes a possessor/possessee relationship between the Goal and Theme. This position is also supported by many others (Beck and Johnson, 2004; Bruening, 2010a, 2010b, 2014; Gropen et al., 1989; Pylkkänen; 2002, 2008). However, even though she develops *Oehrle's Generalization* by adding a POSSESSIVE/HAVE component and incorporating an animacy constraint, at the centre of her analysis is Oehrle's problematic intention entailment.

To summarise, the discussion of *Oehrle's Generalization* has highlighted two things. The first is that the grammaticality judgements used by Oehrle to develop his theory do not withstand evaluation. When the relevant examples were presented to a group of participants, their responses supported this position. Ultimately, this weakens Oehrle's theory and implies that the differences between the DOC and PDC should not be represented syntactically if a hypothesis like UTAH is adopted. Assuming that thematic differences are easier to elicit than non-thematic differences, it appears as though the intention relation is not a thematic phenomenon and therefore is not a valid argument for deriving the DOC and PDC from different Merge positions (D-structures for Oehrle). Also, after evaluating Harley (2002), it is evident that those who incorporate and develop *Oehrle's Generalization* face similar problems.

As lexical analyses incorporating UTAH and *Oehrle's Generalization* are flawed, the next section evaluates how UTAH interacts with movement approaches to determine whether they are more desirable than their lexical equivalents.

2.3.2 Movement and the dative alternation

Perhaps the most widely cited of the movement accounts is Larson (1988) who argues that the DOC and PDC are derived from the same D-structure and that a movement operation generates the dative alternation. His initial premise was to provide a structural account of the asymmetrical binding data provided in Barss and Lasnik (1986). A selection of comparable data from Aoun and Li (1989, pp.160-161) is given below:

Anaphor binding

- (28) a. I showed Mary herself.
 b. *I showed herself Mary.
 c. I showed Mary to herself.
 d. *I showed herself to Mary.

Quantifier Binding

- (29) a. I gave every worker_i's mother his paycheck.
 b. *I gave his_i mother every worker_i's paycheck.
 c. I gave/sent every check_i to its_i owner.
 d. ??I gave/sent his_i check to every worker_i.

Weak Crossover

- (30) a. Which man_i did you send his_i check?

- b. *Whose_i pay did you send his_i mother.
- c. Which check_i did you send to its_i owner?
- d. *Which worker_i did you send his_i check to?

Superiority

- (31) a. Who did you give which check?
 b. *Which check did you give who?
 c. Which check did you send to who?
 d. *Whom did you send which check to?
 (*To who did you send which check?)

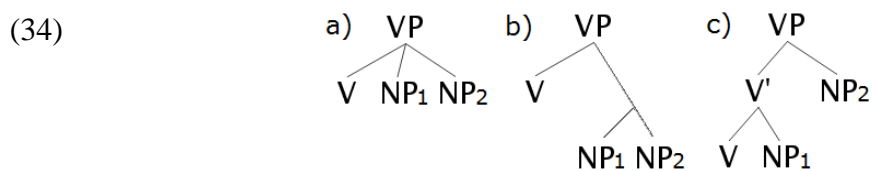
Each... the other

- (32) a. I showed each man the other's socks.
 b. *I showed the other's friend each man.
 c. I sent each boy to the other's parents.
 d. *I sent the other's check to each boy.

Negative Polarity

- (33) a. I showed no one anything.
 b. *I showed anyone nothing.
 c. I sent no presents to any on the children.
 d. *I sent any of the packages to none of the children.

Data of the type provided in (28)-(33) prompted Barss and Lasnik to argue that the trees proposed at the time for double object constructions were inadequate as none could guarantee that NP₁ asymmetrically c-commanded NP₂. The trees are presented below:



(Barss and Lasnik, 1986, p.350)

In (34), all three trees make the wrong binding predications for they either predict that both objects should be able to c-command¹ each other as in (a) and (b) or that NP₂ should c-

¹ Barss and Lasnik (1986) provided two definitions of c-command:

command NP₁ (c). To account for the asymmetric relationship between NP₁ and NP₂, Barss and Lasnik proposed that the definition of an element's binding domain should contain some mention of linear precedence:

(35) Y is in the domain of X iff X c-commands Y and X precedes Y.

(Barss and Lasnik, 1986, p.352)

This definition could be used in conjunction with either (34a) or (34b), as the reference to linear precedence would differentiate NP₁ from NP₂.

Larson (1988) examined the binding examples given in Barss and Lasnik (1986) and agreed that NP₁ should asymmetrically c-command NP₂ in the DOC frame. After reviewing their examples, he argued that the data could be interpreted in one of two ways:

(36) (a) the syntactic data noted are not in fact to be explicated by c-command alone; some other notions (such as linear precedence) must be invoked; or (b) these facts are indeed structural and some configuration other than ... [(34)] ... is involved.

(Larson, 1988, p.338)

Without seeming to consider (a), Larson pursued (b) and in the process developed the VP-Shell and a movement analysis of the dative alternation. He used ditransitive idioms as a diagnostic for structure. Take the following examples:

(37) a. Lasorda *sent* his starting pitcher *to the showers*.
b. Felix *threw* Oscar *to the wolves*.
c. Max *carries* such behaviour *to extremes*.

(Larson, 1988, p.340)

He argued that for two elements to receive an idiomatic interpretation, they must form a constituent at some point in the structure. At first glance, the examples in (37) seem problematic for it appears as though the verb and indirect object form a constituent to the

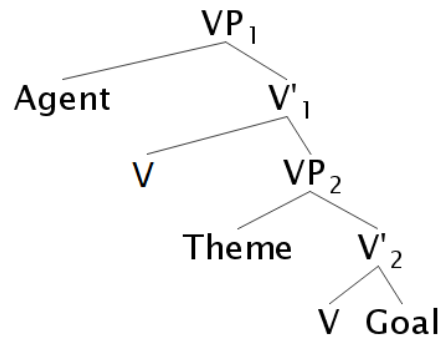
(i) X c-commands Y iff every maximal projection that dominates X also dominates Y.
(Aoun and Sportiche, 1981)

(ii) X c-commands Y iff the first branching node dominating X dominates Y.
(Reinhart, 1976)

Neither can be used in conjunction with the DOC trees in (34) to explain how NP₁ asymmetrically c-commands NP₂.

exclusion of the direct object. Consequently, Larson proposed a stacked VP structure (38) where the indirect object and verb form a constituent at D-structure. The lower V then moves from its initial position and adjoins to the higher V. The outcome is a structure compatible with the ditransitive data in (37).

(38)



(Larson, 1988, p.342)

However, as Larson was an advocate of UTAH and argued that DOCs and PDCs contained the same thematic roles, the structure in (38) must be shared by both frames of the dative alternation. The consequence was that a movement operation was needed to derive the DOC from a D-structure corresponding to the PDC.

Larson's analysis was reliant on the observation that the direct and indirect objects oppose each other in VP₂ in a relationship similar to that of the subject and object in a transitive sentence i.e. the subject is in the specifier while the Theme is the complement of the head. In VP₂ the Theme is in the specifier while the Goal is the complement of the head. As a consequence, Larson suggested that a passive-like movement operation could be used to derive the correct DOC word order. Applying such an operation to a transitive entailed "withdrawal of Case from an object position and suppression of thematic role assignment to a subject position" (Larson, 1988, p.351). The outcome was that the object had to move to the now vacant subject position to be assigned Case while the subject was adjoined to V' as an adjunct (Ibid.)

When he applied this operation to the lower VP, Larson replaced the notion of suppression with *argument demotion*, the definition of which is given below:

(39) *Argument Demotion:*

If α is a θ -role assigned by X, then α may be assigned (up to optionality) to an adjunct of X

(Larson, 1988, p.352)

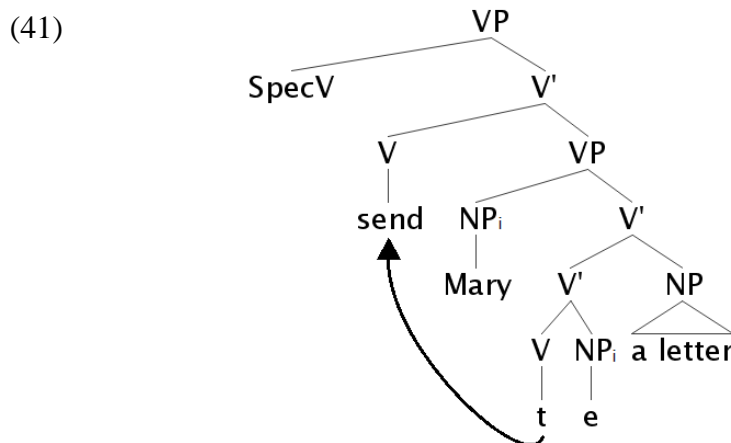
Larson combined (39) with evidence that the composite of the verb and Goal i.e. V', assigned a thematic role to the Theme. His examples are given below:

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

(Larson, 1988, p.340)

The Themes in (40a) and (b) are the same but their interpretation differs depending on how the Goal combines with the verb in each sentence. For example, in (a) *the Fifth Symphony* does not refer to the composition in a physical sense but is more metaphorical, with the example meaning something similar to *Beethoven created the Fifth Symphony* (Larson, 1988, p.340). In contrast, (b) refers specifically to *the Fifth Symphony* and suggests that a physical object transferred from *Beethoven* to *his patron*, possibly in the form of a manuscript (Ibid.). This data prompted Larson to argue that the “exact semantic role assigned to the direct object [...] depends on the nature of the recipient appearing in the goal phrase” (Ibid.).

When these assumptions – the passive operation, argument demotion and V' assigning a thematic role – are combined and applied to the lower VP in a VP-Shell, the outcome is the following: *to* is absorbed by the passive operation; the Theme is demoted and realized as a V' adjunct; and finally, the Caseless Goal moves into [Spec,VP] to be assigned Case. An output tree representing this analysis is given in (41). *a letter* is demoted and adjoined to V'; the Case on *Mary* is absorbed which triggers movement of *Mary* into the specifier of the lower VP (A-movement was triggered by the need to assign Case to an argument); the verb then adjoins to the head of the higher VP and assigns Case to *Mary*.



(Larson, 1988, p.353)

Note that Larson did not encode any of the differences captured by *Oehrle's Generalization* in the syntax, a point which is highlighted by Jackendoff (1990, pp.446-450). In addition, Larson's analysis does not provide an explanation for ditransitive verbs which appear to alternate but contain a preposition in both frames e.g. *blame*. Examples are provided below:

- (42) a. Bill blamed Harry for the accident.
b. Bill blamed the accident on Harry.

(Jackendoff, 1990, p.441)

Jackendoff argued that a lexical solution provided the best analysis for data like (42) as each frame could be subcategorized for a different preposition. Significantly, Larson (1990, p.609) agreed that deriving *blame*-type verbs from different D-structures provided a desirable solution for the following contrasts (the grammaticality judgements are Larson's):

- (43) a. John blamed the accident on Max.
b. John blamed Max for the accident.
- (44) a. John blamed his bad luck on the weather.
b. *John blamed the weather for his bad luck.

Larson argued that DOCs containing *blame*-type verbs contain an animacy constraint (see also Harley, 2002 and the discussion in the previous section) ensuring that the Goal is an animate constituent. Moreover, as we have already seen, Beck and Johnson, Bruening, Gropen et al., Harley and Pylkkänen have all argued that the animacy constraint, which they link to the DOC containing a POSSESSION/HAVE element, applies to all DOCs. As Larson (1988) acknowledges that the animacy constraint exists in certain IO>DO frames, and as many others argue that it applies in all IO>DO frames and that it represents a thematic difference between the DOC and PDC, one can question Larson's use of it for *blame*-type verbs.

Also, I do not agree with the contrast in grammaticality Larson (1990) claims between examples (43b) and (44b). Consider (44b) embedded in the following context:

- (45) John likes to gamble and so placed a large bet on a boat race across the Atlantic. However, despite wearing his lucky t-shirt, his boat was hit by a massive wave and sank. Fuming, *John blamed the weather for his bad luck.*

To me, (45) sounds perfectly acceptable. To confirm my intuitions, the examples in (43b) and (44b) were included in the grammaticality judgement tests mentioned above and it was found that they scored an average of 5 and 4.63 respectively. Thus, none of the participants who took part in the test observed the contrast Larson noted between (43b) and (44b) which suggests that for some native speakers of English, the contrast does not exist.

To summarize, Larson provided an account of the dative alternation where DOCs and PDCs were derived from a D-structure corresponding to the PDC. He proposed a movement operation based on that typically used at the time for passives which applied to the lower VP and generated the correct linear order. Deriving both constructions from a single base position by invoking the UTAH necessarily entailed that *Oehrle's Generalization* was not thematic. Consequently, it was surprising when he argued that the animacy constraint held for *blame*-type alternating verbs. Oehrle (1976) and Harley (2002) argue that the animacy constraint holds across all alternating ditransitive verbs, while Larson chose to represent the animacy constraint in the syntax only when he thought his analysis failed to generate the correct data. However, if the constraint held for *blame*-type verbs then one can question whether it should not also hold for *give*-type verbs.

2.4 Summary

In this chapter I have argued that UTAH cannot be reduced to a simple convention and compositional semantics. Something is needed to analyse the tail of an argument's chain to determine where it was Merged and to check that a predicate's selection features were checked in the right order.

The evaluation of *Oehrle's Generalization* determined that the differences in entailment between the DOC and PDC are not thematic. Oehrle's (1976) contrasts do not provide enough evidence to argue that the DOC's extra intention entailment actually exists. This was illustrated by native speakers of English performing acceptability judgements on his key examples.

However, many theories do use and develop *Oehrle's Generalization* to derive DOCs and PDCs from different Merge positions in an attempt to simplify the syntactic component. Yet even if *Oehrle's Generalization* captured thematic differences, complicating argument structure for the benefit of a simpler syntax could lead to linking problems. If slight meaning variations are interpreted as thematic differences, and need to be represented at Merge, the outcome is a convoluted theory of argument structure. Such an analysis would necessitate that the subjects in the following sentences originate from different Merge positions given that they are not equally animate:

(46) a. The rock smashed the glass.

- b. The crane smashed the glass.
- c. The man smashed the glass.

This leads to the discussion of Larson (1988) who does not represent any form of *Oehrle's Generalization* syntactically for basic alternating verbs and uses UTAH to derive the DOC and PDC from the same D-structure. Despite the theoretical benefits associated with Larson's argument, his analysis is not compatible with Minimalism. Thus in chapter 3 a minimalist account of the dative alternation is developed which incorporates a strong UTAH and the argument that the DOC and PDC contain the same thematic roles. As the analysis draws on that of Michelioudakis (2011), a thorough examination of his approach is provided first.

3: DERIVING DITRANSITIVES

3 Introduction

The purpose of this chapter is to develop an analysis that can derive the dative alternation and ditransitive passives without representing *Oehrle's Generalization* syntactically. The analysis provided in section 3.3 draws on Michelioudakis (2011) in that it incorporates feature inheritance (Chomsky, 2008) in conjunction with a split v and a strong feature capable of moving the Goal to a position c-commanding the Theme in the DOC frame. This chapter is structured as follows: section 3.1 provides an explanation of Michelioudakis (2011); section 3.2 clarifies several theoretical preliminaries needed to derive ditransitive clauses; section 3.3 provides derivations for PDCs and DOCs; sections 3.4 and 3.5 develop a method for deriving ditransitive passives; and finally, section 3.6 summarizes the contents of the chapter.

3.1 Michelioudakis (2011) and the dative alternation

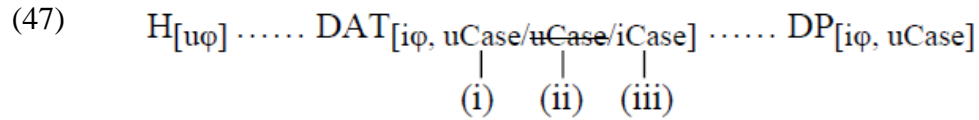
Michelioudakis (2011) proposes a system for deriving the dative alternation where DOCs and PDCs are Merged in the same positions before a movement operation generates the hierarchical structure of the DOC. At the core of Michelioudakis' (2011) analysis is the mechanism by which Case is assigned from Chomsky (2001), feature inheritance from Chomsky (2008), the Applicative head from Pylkkänen (2008), and finally a last resort mechanism.

Following Chomsky (2001), Michelioudakis argues that Case assignment requires a probe matching a full set of ϕ -features with the DP being assigned Case. He proposes that a probe contains within its feature bundle a $[u\phi]$ which has to be checked via Agree. Once an Agree relationship has been established, the probe is free to assign Case to the DP.

The Case-assignment is represented by $[uCase]$ features. The probe has a $[uCase:value]$ in its bundle while the DP possesses an unvalued $[uCase]$ feature. When an Agree relationship has been established between the probe and goal, the $[uCase:value]$ values the unvalued $[uCase]$ which allows both features to be checked.

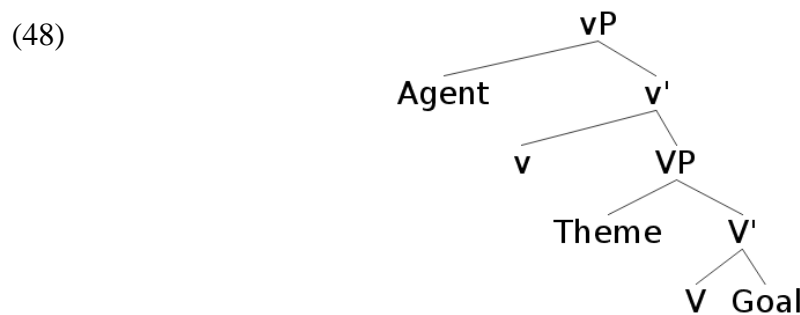
Michelioudakis' (2011) argument is reliant on proposals by Chomsky (2000, 2001) concerning when a goal is available for an Agree relationship to be established. Firstly, Michelioudakis (2011, p.44) argues that for a DP to be an eligible goal, it must possess an unvalued $[uCase]$ feature. Secondly, a probe cannot see below an already-valued $[uCase]$ feature. For example, in a configuration where DP_1 c-commanded DP_2 and DP_1 possessed a valued $[uCase]$ feature while the $[uCase]$ on DP_2 was unvalued, a probe c-commanding DP_1 would not be able to establish an Agree relationship with DP_2 as DP_1 would act as a "defective intervener" (Ibid.). Thirdly, if DP_1 possessed an interpretable or lexically assigned

Case feature, the probe would be free to Agree with DP₂ as “only [uCase] can make a DP visible to a φ-probe” (Ibid.). Michelioudakis (2011, p.45) represents these assumptions in the following diagram:



(i) represents a situation where H_[uφ] would Agree with DAT as [uCase] is an active goal; (ii) illustrates DAT’s valued [~~uCase~~] acting as a defective intervener between H_[uφ] and DP; and (iii) represents the type of feature needed for DP to be invisible to the probe H_[uφ]. Thus DP can only get its [uCase] feature valued when DAT is assigned lexical/inherent Case.

If this type of Case analysis is applied to the tree provided in (48), one of two outcomes is possible:



The first is that the Goal contains a preposition which assigns Case to its complement with v assigning Case to the Theme, and in the second, the tree in (48) represents an English DOC, the outcome being that the Goal is without a Case-assigning preposition and inaccessible to a Case-assigning head. Theme would either have a [uCase] needing a value or Theme would possess a valued [~~uCase~~] that would act as a defective intervener between Goal and a Case-assigning head. In either situation, Goal would not be able to receive a Case marking.

To provide an extra Case assigning head, Michelioudakis (2011) follows Harley (2002) and Beck and Johnson (2004) and argues that verbs which take part in the dative alternation split into two distinguishable elements, v_{CAUSE} and v_{TRANSFER}. He argues that verbs such as *teach* contain two meaning components which can be seen when they are compared to other verbs which only contain one of the two elements. Using examples from standard Modern Greek, which patterns in same way as English, he contrasts *teach* (49) with *learn* (50) and *study* (51):

(49) Matheno ston Kosta /tu Kosta latinika.

Teach.1SG to-the Kostas.ACC/the Kostas.DAT/GEN Latin.ACC

‘I teach Kostas Latin.’

(Michelioudakis, 2011, p.91)

Both v_{CAUSE} and $v_{TRANSFER}$ are contained in (49). The first person singular subject causes their knowledge to be transferred to Kostas. Thus (49) can be interpreted as “ x causes a transfer of x ’s knowledge of something to y ” (Michelioudakis, 2011, p.91), where x is the first person subject, *something* is *latinika*, and y is *Kosta*. Next, he observes that the following example only contains a $v_{TRANSFER}$ component:

(50) O Kostas (*epitidhes) emathe latinika sto scholio (*ja na
The Kostas.NOM (on purpose) learned.3SG Latin at-the school.ACC (for to
mas endiposiasi).
us.ACC.CL impress.PFV.3SG)

‘Kostas learned Latin at school (*on purpose/*to impress us).’

(Michelioudakis, 2011, p.91)

Knowledge of *Latin* is transferred to *Kostas* without a *cause* element which suggests that only $v_{TRANSFER}$ is contained in (50). Also, the fact that *on purpose* and *to impress us*, which both imply a *cause* element, are ungrammatical when modifying (50) also suggests that v_{CAUSE} is absent. Thus Michelioudakis proposes the following decomposition, “ x comes to possess some knowledge” (Ibid.), where x is interpreted as *Kostas* and *some knowledge* is interpreted as *latinika*. Finally, he argues that (51) only contains a v_{CAUSE} component:

(51) O Kostas (epitidhes) emathe latinika monos tu /me methodho
The Kostas.NOM (on purpose) learned Latin alone he.GEN.CL/with method
anef dhidhaskalu (ja na mas endiposiasi).
without teacher.GEN (for to us.ACC.CL impress.PFV.3SG)

‘Kostas studied Latin by himself (on purpose/to impress us).’

(Michelioudakis, 2011, p.92)

In this last example no transfer has taken place, but *Kostas* is causing himself to come by some knowledge of *Latin*. The grammaticality of the adjuncts *on purpose* and *to impress us* further suggests that (51) contains a v_{CAUSE} element, while the fact that no one transfers the knowledge to *Kostas* implies that it does not contain v_{TRANSFER} . Michelioudakis (Ibid.) decomposes (51) into the following, “*x* causes some knowledge to be known by *x*” where *x* is *Kostas* and *some knowledge* is *latinika*.

As both *v* components appear distinguishable it seems reasonable to assume that a *v*-head containing both v_{CAUSE} and v_{TRANSFER} may split in special circumstances. We shall see that during Michelioudakis’ (2011) DOC derivation, both *v*-heads are needed: one head assigns Case to the Theme and the other assigns Case to the Goal.

Also, following arguments from the *Distributed Morphology* (DM) framework, Michelioudakis claims that a *v* also functions as a *verbaliser* in that it determines the syntactic category of the root it selects (Michelioudakis, 2011, p.89). This general principle - the categorization of unspecified roots – is a core assumption of the DM approach:

(52) *Categorization Assumption*

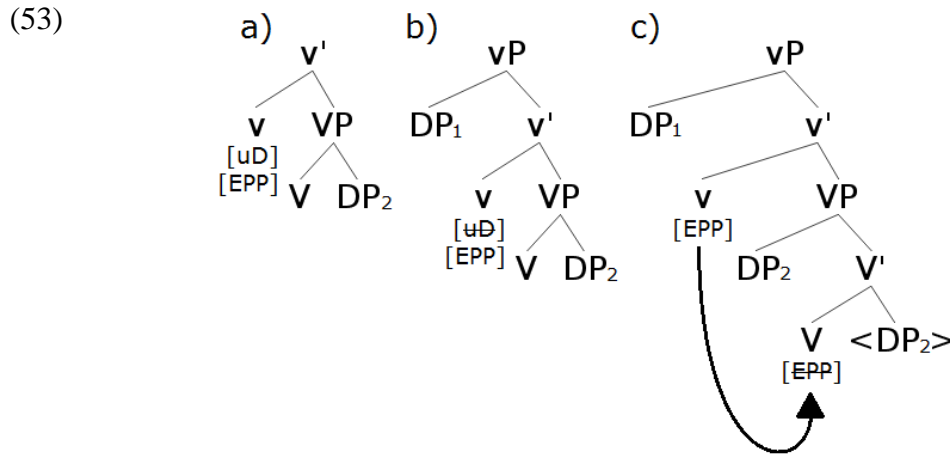
Roots cannot appear without being categorized; Roots are categorized by combining with category-defining functional heads.

(Embick and Noyer, 2007, p.296)

Traditional categories such as N, V, A and P, are formed by Merging an unspecified root with a categorizing head (*n*, *v*, *a*, *p*). Moreover, Embick and Noyer (2007, p.296) argue that “[r]oots are language-specific combinations of sound and meaning” and as such represent an “open class” of items which “can be added to an individual’s grammar at any time”. Thus, for a root to become verbal, it has to be verbalised by a *v*. Specifically, I assume that in Michelioudakis’ (2011) analysis, a root is verbalised when it is head-adjoined to a *v*. Consequently, if the root does not head-adjoin to *v*, the *Categorization Assumption* will be violated and the derivation will crash.

Following Chomsky (2008, p.148), Michelioudakis (2011) assumes that a phase head transfers its EPP and Case-assigning features to the head of its complement via feature inheritance. In Chomsky’s system, the lower phase head is *v* and head of its complement is V. If Merge occurs before Move as Chomsky (1995, p.348) argues, it must be the case that the *c*-selection features on a phase head are checked before EPP and Case-assigning features are inherited by the head of *v*’s complement. To illustrate, a transitive *v* presumably contains within its feature bundle a [uD] feature alongside its EPP and [uCase:value] features. The Merge over Move constraint dictates that the [uD] is satisfied before the EPP and Case

features spread. The following trees provide an example (note that the only transferable feature illustrated is the EPP):



Little v is Merged with VP. Then the subject is Merged to satisfy v 's [uD]. Finally, v 's transferable feature is inherited by the head of its complement. This feature triggers movement of the object into Spec,VP.²

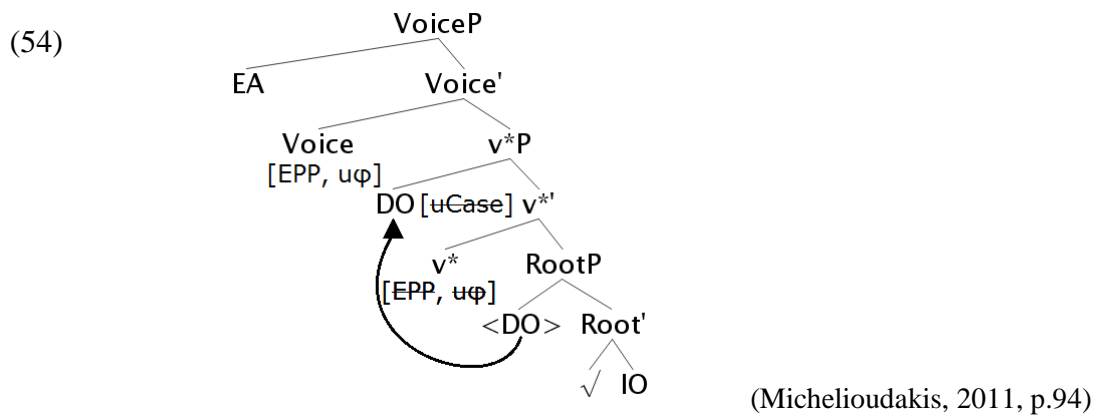
However contra Chomsky (2008), Michelioudakis (2011) adopts an argument by Kratzer (1996) and posits that the lower phase head is Voice and that it Merges above v . He suggests that Voice is the locus of features such as [\pm agentive], [\pm transitive] and those associated with *Burzio's Generalization*³ (Michelioudakis, 2011, p.89). As *Burzio's Generalization* applies to Voice and not v , Michelioudakis argues that Voice's feature bundle contains an uninterpretable ϕ feature; a feature representing Voice's ability to assign Case, i.e. a [uCase:value] which Agrees with and values an unvalued [uCase:] on a DP; and finally an EPP feature. Thus C transmits its feature to T, and Voice transmits its feature to v .

Michelioudakis (2011, p.94) illustrates how these constraints and assumptions combine to generate a PDC using the following tree⁴:

² This argument dictates that the *Extension Condition*, i.e. that “[o]perations preserve existing structure” (Chomsky, 2000, p.53), no longer holds.

³ *Burzio's Generalization* can be defined as “[a]ll and only the verbs that can assign a theta-role to the subject can assign Accusative Case to an object” (Burzio, 1986, p.178).

⁴ *External Argument* (EA) refers to the argument Merged external to the \sqrt{P} . In active contexts, this is typically the Agent but could also include Causer, Instrument and others.



In (54), RootP is generated and v^* is then Merged. Voice is Merged to v^*P before its EPP and Case-assigning features are inherited by v^* . These features assign Case to DO and trigger its movement into Spec, v^*P . For an English-type language, the DP in the IO would be assigned Case by a preposition.

In order to derive a DOC Michelioudakis (2011) develops his PDC theory in two respects. The first is that an extra Case-assigning head is needed to Agree with the IO and the second is that a method is needed for moving the IO_{DP} to a position where the DO_{DP} is not a defective intervener.

Michelioudakis argues that the two verbal meaning components of a ditransitive verb can split into two separate v -heads, v_{CAUSE} and $v_{TRANSFER}$ (Michelioudakis, 2011, p.48). One head assigns Case to one of the internal arguments while the other head assigns Case to the other internal argument. Also, as the DOC contains no Case-assigning preposition, he argues that both v_{CAUSE} and $v_{TRANSFER}$ inherit Voice's ability to assign Case (Michelioudakis, 2011, p.90).

However, the tree in (54) indicates that even with a split v , the DO would still intervene between the extra Case-assigning head and the IO. Michelioudakis (2011) follows Adger and Harbour (2007) and proposes that the DOC contains an animacy constraint which does not appear in the PDC (see section 2.2.1 and the discussion on Harley (2002) about how the animacy constraint can be viewed as a development of *Oehrle's Generalization*). Michelioudakis (2011, p.50) argues that as the animacy constraint is a feature of only the DOC, it is not "a lexical requirement of ditransitive predicates/roots". As he adopts UTAH and generates the DOC and PDC from the same Merge positions, Michelioudakis cannot propose that a predicate encodes the animacy constraint at Merge. Thus he argues that, as the animacy constraint is specific to the IO>DO frame, the DOC must contain an extra head

capable of encoding it (Ibid.). Consequently, Michelioudakis (2011) follows many (Bruening, 2010a, 2010b, 2014; Pylkkänen, 2002, 2008) in arguing that the DOC contains an Applicative head (Appl) which encodes the meanings idiosyncratic to the construction. However, rather than following Pylkkänen and assuming that Appl is an argument introducer i.e. that the Goal is Merged in Spec,ApplP, Michelioudakis (Ibid.) argues that Appl is Merged in between the split *vs* and that it possesses a strong feature “whose role is to guarantee the animacy of the indirect object”. The feature, [uParticipant*], probes for a matching feature contained on just animate Goals, meaning that the only type of argument that can be moved into Spec,ApplP is an animate Goal. Michelioudakis (2011) provides a mechanism for Merging the Applicative head connected to the need of assigning the Goal DP case. He proposes that as soon as the Theme intervenes between a Caseless Goal and a Case-assigning head, Appl Merges immediately. He provides the following trigger:

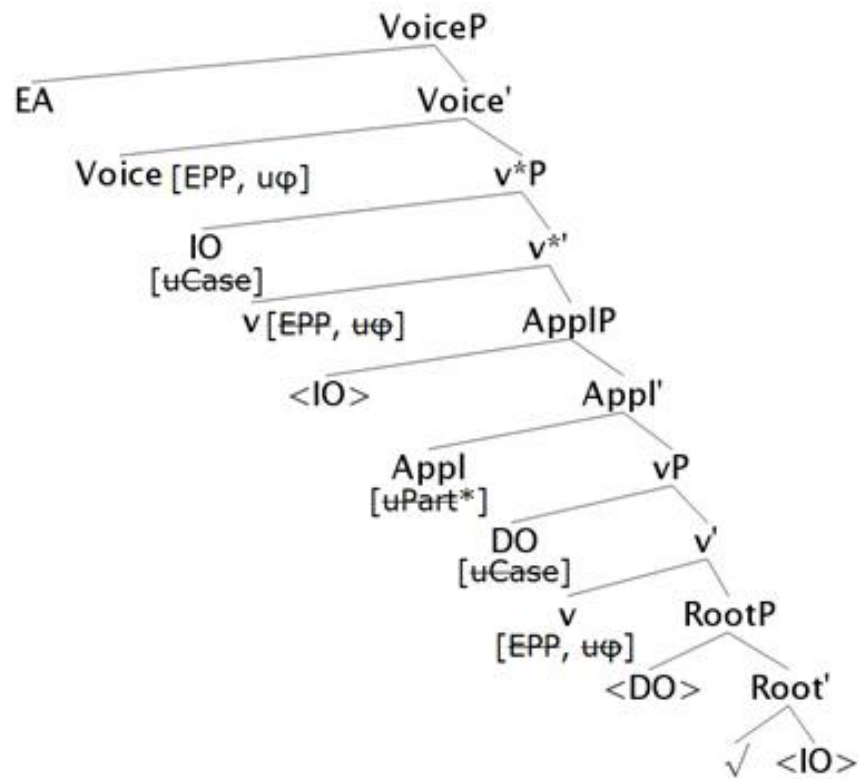
(55) *Trigger for Merging Appl*

If an argument α with a [uCase] feature is merged in a position inaccessible to any Case assigning head, then, Appl must merge as soon as possible.

(Michelioudakis, 2011, p.93)

Following Chomsky (2001), Michelioudakis (2011) argues that a valued [~~u~~Case] acts as a defective intervener if a probe tries to Agree with a lower unvalued [uCase] feature. As the Theme c-commands the Goal at Merge, the Theme’s [~~u~~Case] blocks the Goal from being assigned Case. However, as the last resort Merges an Appl possessing a strong feature, the Goal can move to a position where the Theme no longer intervenes between it and a Case-assigning head. Appl will never be Merged in an English PDC as the Theme does not block the Goal from being assigned Case. Michelioudakis (2011, p.94) provides the following tree to illustrate how the constraints and assumptions explained above combine to generate a DOC:

(56)



A derivation of (56) would proceed as follows: IO and $\sqrt{\quad}$ Merge; DO Merges and Root projects Maximal; v Merges with RootP; as the Theme intervenes between a Case-assigning head and the Goal, (55) applies and Appl is Merged; [uPart*] triggers movement of IO into [Spec,ApplP]; the highest v is then Merged; Voice Merges with vP and Voice's ability to assign Case, EPP feature and [uφ] are inherited by both v -heads; finally, inherited EPP features move IO into the specifier of the higher vP and DO into the specifier of the lower vP and both internal arguments are assigned Case.

To summarise, Michelioudakis' (2011) derivation achieves an IO>DO structure for the DOC and a DO>IO structure for the PDC. In addition, it incorporates a rigid UTAH and derives both constructions from the same Merge positions, with the consequence that the animacy constraint is not encoded at Merge.

As Michelioudakis provides a Minimalist approach to the dative alternation, his theory will serve as the basis for the analysis developed in this dissertation. However, two alterations will be made to the way in which he derives a DOC. Firstly, my analysis will not utilize an Applicative head for the reasons discussed in chapter 2 and secondly, I argue that the last resort mechanism should apply after Voice's features have spread to v .

3.2 Theoretical preliminaries

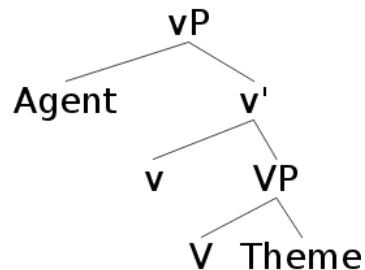
Following Baker (1997) and his initial Minimalist interpretation of UTAH, I take the hypothesis to be an output condition at LF. To function, the UTAH needs to contain a means of associating arguments with specific Merge positions. For this purpose, Baker (1997, pp.120-1) proposes (57) which I shall call the *Linking Hypothesis*:

(57) *Linking Hypothesis*

- a. An Agent is the specifier of the higher VP of a Larsonian structure.
- b. A Theme is the specifier of the lower VP.
- c. A Goal, path or location is the complement of the lower VP.

Despite that the linking hypothesis in (57) can be applied to ditransitive clauses, it is problematic when used with transitive clauses. If a Larsonian VP-Shell of the type proposed by Chomsky (1995, p.352), see (58), is adopted for transitive clauses, (57b) and (57c) are awkward.

(58)



The definition in (57b) fails to account for analyses which argue that there is no specifier in the lower VP of a transitive clause. One such argument is that of Chomsky (1995), “[t]he head-complement relation is the 'most local' relation of an XP to a terminal node Y, all other relations within YP being head specifier” (1995, p.245). In (58), the XP in the most local relationship with V i.e. sisterhood, is the Theme, meaning that according to Chomsky (1995), the Theme is the complement of V. As such, there are no specifiers in the VP which causes Baker’s linking hypothesis to fail to account for the position of Themes in transitive clauses. A related problem occurs with (57c) in that the complement of the lower VP (assuming *complement of VP* is synonymous with *complement of V*) is interpreted as a Goal, even though in (58) the complement of V is the Theme.

Adger (2003, p.139) addresses the issues associated with Baker’s (1997) linking hypothesis by incorporating the more restrictive structural term *daughter* instead of *complement* and *specifier*:

- (59) a. NP daughter of vP \rightarrow interpreted as Agent
 b. NP daughter of VP \rightarrow interpreted as Theme
 c. PP daughter of V' \rightarrow interpreted as Goal

The linking hypothesis in (59) is more constrained than Baker's in the sense that, for example, when there is no V' , no argument can be interpreted as a Goal. However, as the ditransitive derivations developed in later sections rely on the more complex version of the VP-Shell developed in Michelioudakis (2011), I suggest that the revised linking hypothesis in (60) be adopted:

- (60) a. α daughter of VoiceP \rightarrow interpreted as Agent
 b. α daughter of \sqrt{P} \rightarrow interpreted as Theme
 c. α daughter of \sqrt{V} \rightarrow interpreted as Goal

Thus, following many analyses (Bruening, 2010a, 2010b, 2014; Cuervo, 2003; Krazer, 1996; Michelioudakis, 2011; Pylkkanen, 2002, 2008), I assume that Voice introduces the Agent, and not v . Following Michelioudakis (2011), the function of v is as a verbalizer and inheritor of Voice's features while the $\sqrt{\theta}$ -selects the Theme and Goal. Finally, the phrasal categories in (60) have been replaced with α to make the hypothesis function in the PDC and DOC frames. As I argue that both frames of the dative alternation are derived from the same Merge positions, I require a linking hypothesis which is applicable to DP and PP Goals.

Moving on to Case-assignment, I follow Michelioudakis (2011) and assume that a DP is assigned structural Case by Agreeing with a functional head bearing a Case feature and an unchecked $[u\phi]$. In the analysis proposed below, $[u\phi]$ and $[uCase:value]$ enter the derivation as part of a phase head's feature bundle. Also following Michelioudakis (2011), I assume that Voice's $[u\phi]$ and $[uCase:value]$ spread to all the v -heads in their c-command domain. The relevant c-command domain can be defined in terms of Chomsky's (2001, p.14) reformulated *Phase Impenetrability Condition II*.

- (61) *Phase Impenetrability Condition II (PIC)*

The domain of H is not accessible to operations at ZP; only H and its edge are accessible to such operation.

Michelioudakis (2011, pp.129-130) interprets the constraint in (61) to mean that the complement of Voice i.e. the vP , is only inaccessible to operations when C projects

maximal. I adopt Michelioudakis' interpretation of PIC II for the analysis in this chapter. Thus, if H is Voice and ZP is the maximal projection of the next higher phase, the ν P will be available for computation until C projects to CP. Similarly, when the maximal projection ZP is VoiceP and H is the next lowest phase head e.g. a C in a clause such as *I know that John saw the dog*, Voice's features could only be inherited by all the relevant heads higher than the TP in the complement clause. Everything below the TP in the complement clause would have transferred and as such be inaccessible for further computation. Therefore, assuming an analysis incorporating a split ν P (Michelioudakis, 2011) and Chomsky's PIC II, Voice's c-command domain could include up to a maximum of two ν -heads as any ν s within the complement clause would have already transferred.

Following Chomsky (2001, p.6) Case assignment is reliant on full ϕ -Agreement. Thus, if a functional head is to assign a DP Case, the DP must possess a full set of interpretable ϕ -features. These ϕ -features must check the $[\text{u}\phi]$ on the functional head to allow the uninterpretable feature to be deleted. After full ϕ -Agreement, the $[\text{uCase: value}]$ Agrees with and values the $[\text{uCase:}]$ enabling both features to be checked.

Finally, a note on how Case is assigned by prepositions. It seems reasonable to assume that a preposition assigns Case using a similar configuration to ν and T. For example, the Case assigning head contains in its feature bundle a $[\text{uCase: value}]$ and a $[\text{u}\phi]$. The $[\text{u}\phi]$ is checked by a matching set of interpretable ϕ -features on the DP which enables the $[\text{uCase: value}]$ to Agree with and value the $[\text{uCase:}]$ on the DP.

If this Case analysis is correct, the distinction between structural and lexical Case cannot stem from the mechanism by which the Case is assigned, but rather the head which possesses the Case assigning features. For example, in the analysis given above structural Case features are inherited by ν and T from a phase head, whereas a lexical Case assigning head has the relevant features in its feature bundle when it is Merged.

For the purposes of this dissertation, lexical Case is assigned by P while structural Case features are inherited by T and ν from phase heads.

The final theoretical preliminary to be clarified is theta-assignment. A reasonable assumption is that thematic roles are associated with θ -selection, in the sense that, when a linguistic item (LI) Merges with a predicate to satisfy a θ -selection feature, the LI is assigned a thematic role at some point in the computational process. From this it follows that in a ditransitive, the lower V, or $\sqrt{\quad}$ (Michelioudakis, 2011), contains in its feature bundle two θ -selection features. Each of these θ -selection features is associated with a thematic role. Constituents are Merged to satisfy the features before specific thematic roles are assigned at LF by the output condition UTAH.

I argued in section 2.2 that the UTAH analyses the tail of an argument's chain to determine where it was Merged. Once an argument's Merge position has been determined,

UTAH assigns an appropriate thematic role to that argument using the linking hypothesis in (60). For example, an argument daughter of VoiceP is an Agent; an argument daughter of \sqrt{P} is a Theme; while an argument daughter of \sqrt{V} is a Goal.

As Voice introduces the Agent, it is also reasonable to assume that Voice contains within its feature bundle a $[u\theta]$ which UTAH will associate with the Agent thematic role. Also, following Michelioudakis (2011) I assume that Voice possesses a $[u\phi]$, a $[uCase:value]$ and an EPP feature which spread to v . As Merge occurs before Move (Chomsky, 1995), a DP is selected and Merged into Spec, VoiceP to satisfy the $[u\theta]$ feature on Voice before Voice's EPP feature, $[u\phi]$ and $[uCase:value]$ are inherited and checked.

A clarification is now needed on how UTAH interacts with the PIC II and phase theory. A derivation generates a syntactic object containing both a semantic and phonetic component, λ and π respectively. Given that λ is analysed at LF and that UTAH is an output condition at LF, it seems reasonable to assume that UTAH uses λ to determine where an argument was initially Merged. However, given that a clause transfers phase by phase, and that after a phase has transferred i.e. after a phase's λ and π components have transferred to LF and PF respectively, the phase is no longer accessible to further operations, a situation could develop where an argument moves from its Merge position into a higher phase. If an argument did cross a phase boundary, the lower phase would transfer without an argument's full chain being available for analysis at LF.

The ramifications of this problem can be avoided if Chomsky's (2001) PIC II definition is analysed in more detail. If *operations* is interpreted as referring to syntactic operations only i.e. operations taking place in overt syntax, the PIC II would have no effect on anything taking place at LF. In fact, it must necessarily be the case that the PIC II does not affect LF operations at all. If it did, *Quantifier Raising* – which is argued to be an LF phenomenon (Hornstein, 1995) – would not take place.

As the theoretical preliminaries have been concluded, the next section provides a mechanism for deriving the dative alternation without representing *Oehrle's Generalization* syntactically.

3.3 Deriving the dative alternation

Combining the argument that both frames of the dative alternation contain the same thematic roles with a strict version of UTAH entails that PDCs and their corresponding DOCs are derived from the same Merge positions. Consequently, at least one of the constructions must contain some form of movement operation to derive the final word order. The linking hypothesis in (60) suggests that a PDC could be derived without changing the structural hierarchy generated by the arguments' Merge positions: the Agent c-commands the Theme and the Theme c-commands the Goal. Therefore, following Larson (1988) and

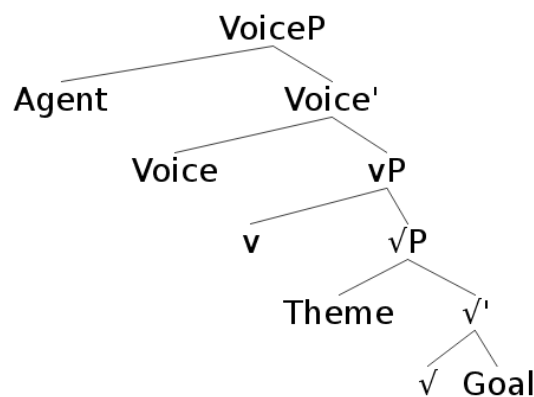
Michelioudakis (2011) the derivation below will assume that the hierarchical structure of the PDC represents the base. As a consequence, deriving the DOC will require moving the Goal to a position where it c-commands the Theme.

The structure of this section is as follows: section 3.3.1 provides a derivation for a PDC while section 3.3.2 provides a derivation for a DOC.

3.3.1 Deriving the prepositional dative construction

The linking hypothesis in (60) provides the argument positions needed to derive a prepositional dative construction. If we assume that *v* is required as a verbaliser (Michelioudakis, 2011, p89), and that it is Merged immediately above the root, we get the following structure:

(62)

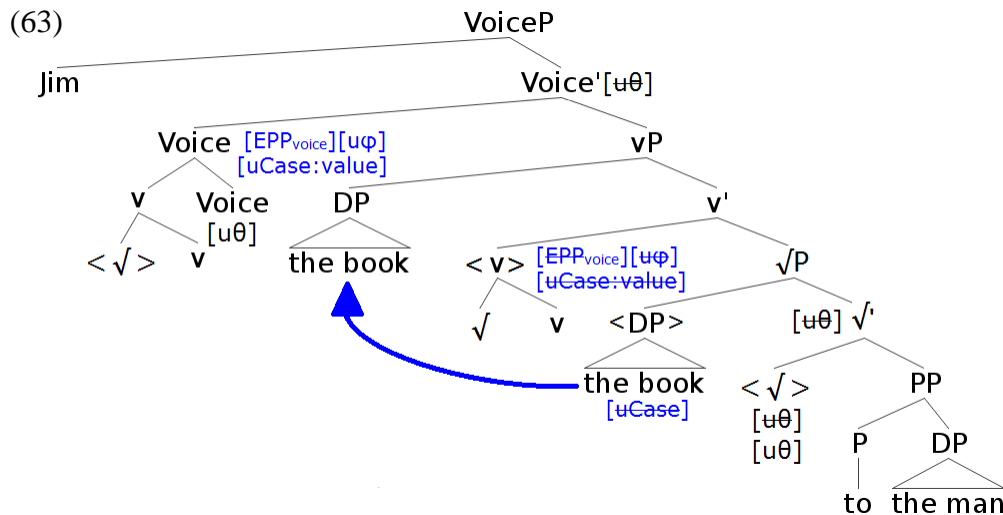


The argument structure in (62) is identical to the structure posited by Michelioudakis (2011) in (54). As mentioned above, the phase head is Voice, and following Chomsky (2008) and Michelioudakis (2011), Voice's EPP, [uCase:value] and [u ϕ] features are inherited by *v*.

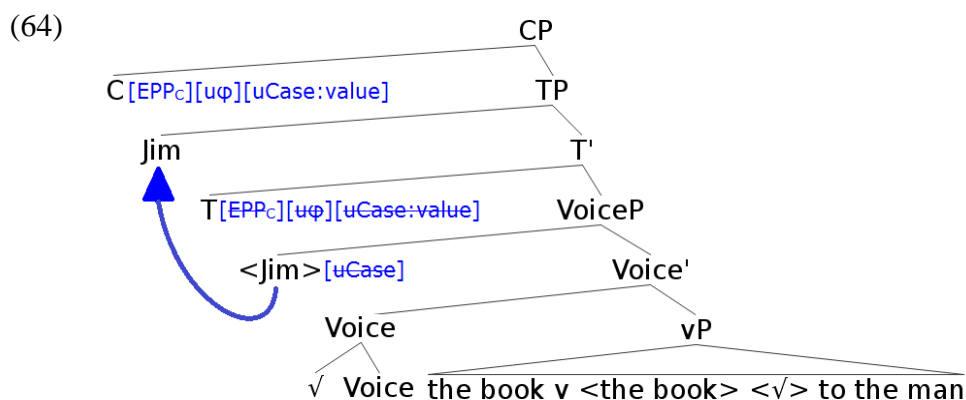
Now, I illustrate how the assumptions and constraints evaluated above combine to produce the prepositional dative construction, *Jim gave the book to the man*. Finally, I assume that all DPs and PPs have been derived separately and are waiting in the computational system ready to be Merged.

First, *the book* and *to the man* are Merged with the $\sqrt{}$ to satisfy the θ -selection features on $\sqrt{}$. Little *v* is then Merged with \sqrt{P} . Following Michelioudakis (2011), I assume that *v* is a verbaliser and that $\sqrt{}$ head-adjoins to *v*. Voice is Merged to \sqrt{P} . *Jim* is Merged to satisfy Voice's [u θ] before its EPP, [u ϕ] and [uCase:value] features are inherited by *v*. The EPP feature triggers movement of *the book* into Spec, \sqrt{P} . As *the book* has a full set of ϕ -feature, it Agrees with [u ϕ], enabling the uninterpretable feature to be checked. The full ϕ -Agreement between *the book* and *v* allows [uCase:value] to value the [uCase:] feature on *the book*. Both features can then be checked.

I propose that for $\sqrt{\text{v}}$ to be interpreted as an active verb, the $\sqrt{\text{v}}$ - v complex must raise to Voice. If Voice is the locus of a clause's active voice, a verbalised $\sqrt{\text{v}}$ would need to head-adjoin to Voice in order for it to be interpreted as an active verb. Michelioudakis proposes something similar by arguing that Voice consists of features such as $[\pm\text{agentive}]$ and $[\pm\text{transitive}]$ (Michelioudakis, 2011, p.89). I argue that Voice not only contains a $[\pm\text{agentive}]$ and $[\pm\text{transitive}]$, but also $[\text{active}]$ and $[\text{passive}]$ features which determine whether $\sqrt{\text{v}}$ is interpreted as an active or passive verb. A tree representing the VoiceP is provided below:



The final stages of the derivation involve Merging T and C. C's EPP, $[\text{u}\phi]$ and $[\text{uCase:}\text{value}]$ are inherited by T. The combination of these features move *Jim* to Spec,TP and assign it Case. A final output tree follows:



The output tree for *Jim gave the book to the man* is identical to that of Michelioudakis (2011) and appears to represent an uncontroversial method for deriving the PDC. It follows Chomsky (2008) in its use of feature inheritance and unspecified $\sqrt{\text{s}}$ s; the VP-Shell resembles that of Larson (1988), Hale and Keyser (1993) and many others; the idea that Voice is the

phase head and Merged above some form of vP has been widely used in the literature (Bruening 2010a, 2010b, 2014; Cuervo, 2003; Kratzer, 1996; Michelioudakis, 2011; Pylkkänen 2002, 2008).

3.3.2 *Deriving the double object construction*

A DOC derivation entails many of the same principles used to generate a PDC. However, when comparing the two it is evident that a DOC requires at least two significant additions. The first is that, there is no preposition to assign Case to the indirect object. Michelioudakis (2011) argued that as a last resort, v can split into two separate functional heads which inherit Case-assigning features. The second is that the indirect object in a DOC needs to move to a position where it c-commands the Theme. However, unlike Michelioudakis (2011) I do not assume that *Oehrle's Generalization* must be represented syntactically in English, meaning that my DOC derivation should not contain an Applicative head. Consequently, the feature which Michelioudakis (2011) claims repositions the indirect object and the landing site of [Spec,AppIP] are not available to me. However, if the split v -heads are examined and developed slightly, a solution can be found.

Michelioudakis (2011) argues that the two components of a split v represent v_{CAUSE} and v_{TRANSFER} . The purpose of the split v is to provide an extra Case-assigning head for the Goal in a DOC derivation. However, if the arguments remained in their Merge positions even after the v was split, the Theme would still intervene between the extra Case-assigning head and the Goal. Thus Michelioudakis uses an Applicative head possessing a strong feature to reposition the Goal to [Spec,AppIP], enabling the argument to be assigned Case. He argues that Appl is Merged as a last resort when the Theme intervenes between the Goal and a Case-assigning head.

However, there are two problems with the last resort mechanism provided by Michelioudakis (2011). The first is connected to the use of the Applicative head while the second is related to when the last resort applies in a derivation. Each problem will be discussed in turn.

Michelioudakis (2011) follows Adger and Harbour (2007) and assumes that DOCs are subject to an animacy constraint dictating that the Goal has to be an animate constituents. In section 2.3.1, I argued that analyses incorporating the animacy constraint are flawed, at least for English, due to the constraint's association with *Oehrle's Generalization*. Thus I discard the Applicative head and all it encodes from my analysis. As removing Appl also removes the strong [uPart*] feature, I argue that the last resort provides one of the v -heads with a strong feature which moves the Goal past the intervening Theme to a position where it can be assigned Case.

As the strong feature does not have a motivation other than as a means of moving the Goal to a position where it c-commands the Theme, I propose that the feature can be connected to the contrast observed between examples (21) and (22). These examples were used to argue that *Oehrle's Generalization* captured an implicature rather than an entailment and are repeated below:

(65) a. John made the pancakes for Jack but Mary ate them.

b. ?John made Jack the pancakes but Mary ate them.

(66) a. John made the pancakes for Jack but Mary ate them instead.

b. John made the Jack the pancakes but Mary ate them instead.

In chapter 2, it was established that the contrast between (65a) and (b) did not provide evidence for an entailment difference between the DOC and PDC as the awkwardness of (b) can be cancelled with adverbs. A similar contrast can also be found in other ditransitive examples:

(67) a. John sent the letter to the Post Office

b. ???John sent the Post Office the letter.

(68) a. John gave the paper to Philadelphia.

b. ??? John gave Philadelphia the paper.

As mentioned during the discussion of *Oehrle's Generalization*, the awkwardness of (67b) and (68b) can be ameliorated if the Goal argument is understood to be animate and capable of engaging in a possessor/possessee relationship with the Goal. *Philadelphia* qua town is incapable of possessing *the paper* for a town cannot be interpreted as an animate argument. The same is also true for *the Post Office*. However, if *Philadelphia* and *the Post Office* are personified i.e. understood as an animate entity – a journal that has its headquarters in *Philadelphia* and a body of people who work for *the Post Office* – the awkwardness can be cancelled. Many argue that the DOC contains a POSSESSIVE/HAVE component that encodes this possession relationship. However, arguing that the DOC contains a possessor/possessee relationship between the Goal and Theme is problematic for the contrast highlighted below:

(69) a. John sang Mary the song

b. *John sang Mary the song but then he took it back.

(70) a. John gave Mary the book.

b. John gave Mary the book but then he took it back.

The example (69b) is anomalous for it does not contain a specific transfer of possession, with the result that there is nothing for *John* to retrieve. However, in (70b) there is a definite transfer of possession between *John* and *Mary*, which enables *John* to take *the book* from *Mary*. If the DOC does indeed contain an implicature that the PDC is lacking – the examples in (65)-(70) suggest that it should – it does not seem appropriate to call it possession.

Instead, it could be that the implicature is one of *affectedness* and that the Goal must be *affected* by the verb. While *affectedness* is hard to specify (Yeo, 2015), the notion is broad enough to include DOCs which contain a possession implicature e.g. (70a), and also those which do not (69a). If it is argued that the *affectedness* implicature is universally present in all DOCs, it provides a means with which to formulate the strong feature i.e. as a [uAffected*] feature which probes for an *affected* argument. This feature ensures that a DOC contains an *affected* Goal argument.

The second problem relates to Michelioudakis' (2011) argument that the last resort applies "as soon as possible". During syntactic operations, last resorts should apply as late possible in an attempt to give the problem they are solving a chance to solve itself. Also, as it applies before Voice has been Merged to vP , it is necessarily the case that the last resort applies before any Case-assigning probes have been Merged into the tree. If there are no Case-features, then it should be the case that the Goal cannot be "inaccessible to ... [a] Case-assigning head".

However, both problems can be resolved if the last resort applies immediately after Voice's features have spread to v . This being the case, v would possess a [u ϕ] capable of determining whether the Goal is inaccessible to a Case-assigning head, meaning that v would be capable of triggering the last resort mechanism. Also, applying the last resort just after v has inherited Voice's features delays its use for as long as possible. If the mechanism applied any later, a v -head would not be able to assign Case to the Goal, meaning that the extra Case-assigning head would be redundant. Also, arguing that the split takes place after inheritance allows Chomsky's (2008) proposal that a phase head spreads to the head of its complement to be retained. In addition, I argue that when v splits, its inherited features are copied onto each head.

Finally, I propose that [uAffected*] is assigned to the lowest v -head which Michelioudakis (2011) labels $v_{TRANSFER}$. If the [uAffected*] was assigned to v_{CAUSE} the Goal would move further than it needs in order for the Theme not to intervene between it and a

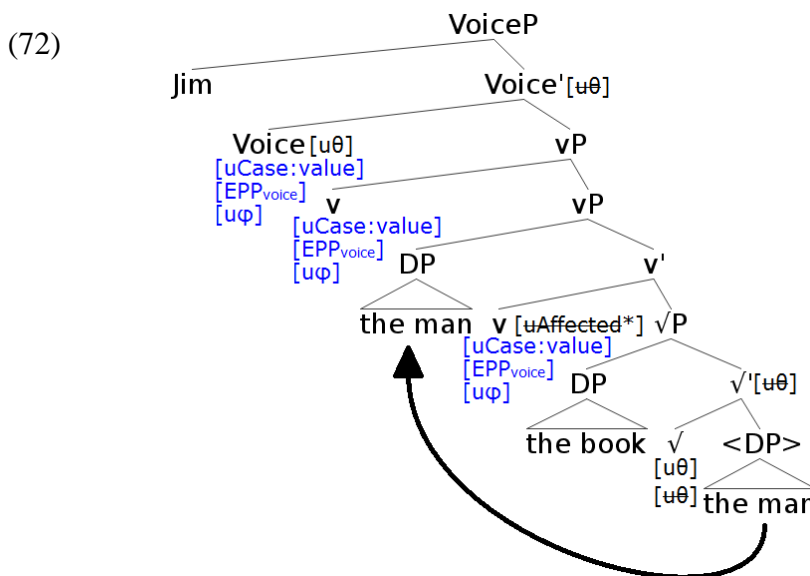
Case-assigning head. Assigning the strong feature to v_{TRANSFER} creates the shortest movement for the Goal to be assigned Case. When these aspects are combined in a single last resort definition, we get the following:

- (71) As soon as the Theme intervenes between the Goal and a Case-assigning head, v splits into v_{CAUSE} and v_{TRANSFER} , and v_{TRANSFER} acquires a $[\text{uAffected}^*]$ feature which is checked immediately.

To summarize, when v inherits Voice's features, the $[\text{u}\phi]$ determines that the Goal is inaccessible to a Case-assigning head. Little v splits into v_{CAUSE} and v_{TRANSFER} and v_{TRANSFER} is assigned a $[\text{uAffected}^*]$ which triggers movement of the Goal into $\text{Spec},v_{\text{TRANSFER}}\text{P}$. The Goal is then assigned Case by v_{CAUSE} while the Theme is assigned Case by v_{TRANSFER} .

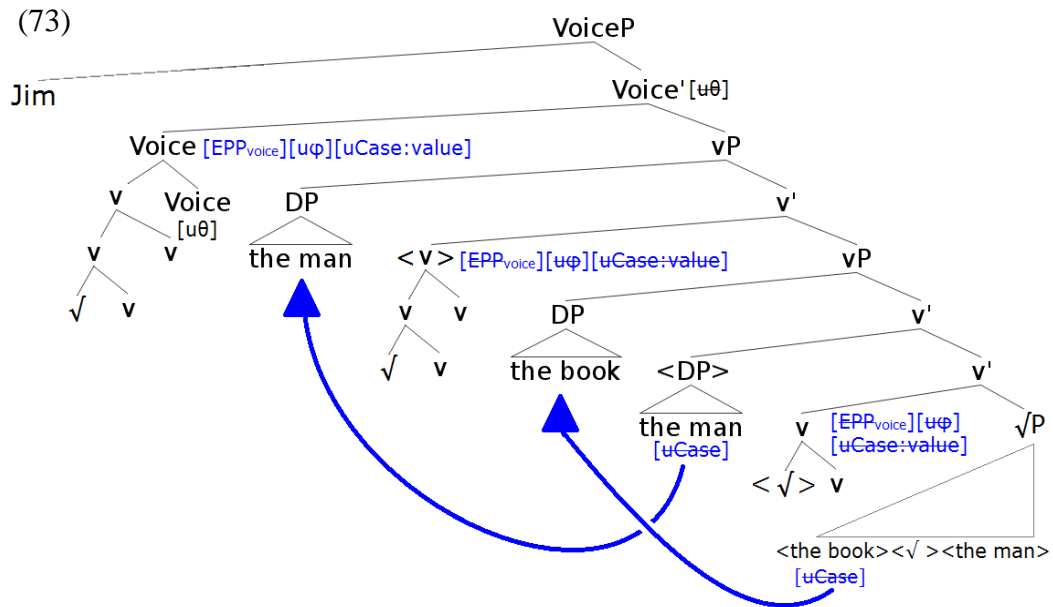
As the DOC analysis has been concluded, what follows is a demonstration of how *He gave Jim the book* is derived. Assume that the DP has already been generated and is in the computational system waiting to be Merged.

Merge *the man* and *the book* with \checkmark . Little v Merges with RootP . Voice Merges with $v\text{P}$. Merge *Jim* to satisfy Voice's $[\text{u}\theta]$ feature. Voice's EPP, $[\text{u}\phi]$ and $[\text{uCase:value}]$ are inherited by v . As the Theme intervenes between a Case-assigning head and the Goal, the last resort mechanism in (71) applies, causing the v to split and v_{TRANSFER} to acquire a $[\text{uAffected}^*]$ feature. The $[\text{uAffected}^*]$ triggers movement of the Goal into $\text{Spec},v_{\text{TRANSFER}}\text{P}$. An intermediate tree is provided below:



The EPP, $[\text{u}\phi]$ and $[\text{uCase:value}]$ features on v_{CAUSE} move the Goal into $v_{\text{CAUSE}}\text{P}$ and assign it Case while the EPP, $[\text{u}\phi]$ and $[\text{uCase:value}]$ on v_{TRANSFER} assign the Theme Case and move it

into v_{TRANSFER} P. Finally, I argue that for a ditransitive \checkmark to become fully verbalised it must move through both v -heads and into Voice. If the \checkmark only moved into v_{TRANSFER} it would not be encoded with a *cause* component nor be interpreted as an active verb. Thus the \checkmark and v_{TRANSFER} complex adjoin to v_{CAUSE} before the entire complex, including v_{CAUSE} , adjoins to Voice. An intermediate tree is provided below:



The final part of the derivation involves Merging T and C. However, as it proceeds in the same way as the PDC derivation illustrated by (64) a final output tree is not needed. The only difference between a PDC derivation and a DOC derivation is the last resort mechanism which splits v and assigns a $[u\text{Affected}^*]$ feature to v_{TRANSFER} .

As an analysis of the dative alternation has been developed, the next sections determine whether it can be extended to ditransitive passives.

3.4 Ditransitive passives

In order to derive ditransitive passives, Michelioudakis (2011) adopts the passive analysis of Collins (2005) who develops a ‘smuggling’ approach where the external argument is always present and Merged in the position it occupies in active clauses. He examines the following data:

(74) a. Such privileges should be kept to oneself.

(Baker, Johnson and Roberts, 1989, p.288)

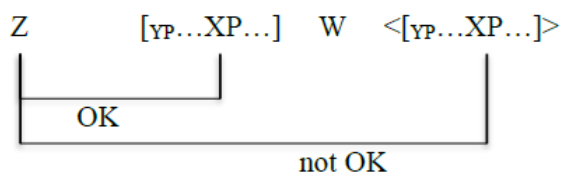
b. Damaging testimony is always given about oneself in secret trials.

(Roberts, 1987, p.318)

Collins (2005) argues that the reflexives in examples such as (74) are bound by a covert external argument. In long passives, he argues that the external argument is represented by the overt *by*-phrase. As Collins reasons that the external argument, covert or otherwise, is Merged in the same position as the external argument in an active clause (which for Collins is Spec, ν P), a DP will intervene between the EPP and Case-assigning features on T and the Theme (or Goal in the case of DOC passives). Consequently, Collins' argues that the Theme is 'smuggled' past the external argument so that it can Agree with T's features. He (2005, p.97; illustration from Michelioudakis (2011, p.131)) defines smuggling in the following way:

- (75) Suppose a constituent YP contains XP. Furthermore, suppose that XP is inaccessible to Z because of the presence of W (a barrier, phase boundary, or an intervener for the Minimal Link Condition and/or Relativized Minimality), which blocks a syntactic relation between Z and XP (e.g., movement, Case checking, agreement, binding). If YP moves to a position c-commanding W, we say that YP smuggles XP past W. This is illustrated as follows:

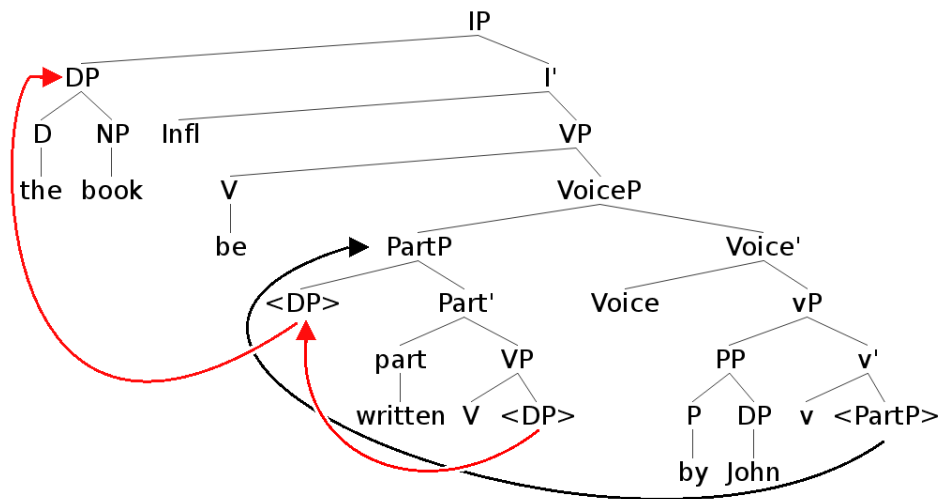
Smuggling illustration:



In a passive, W represents the external argument, XP represents the Theme (or Goal) and Z represents T. As the external argument intervenes between T and the Theme, the Theme is not able to Agree with T's features unless YP moves to a position c-commanding the external argument.

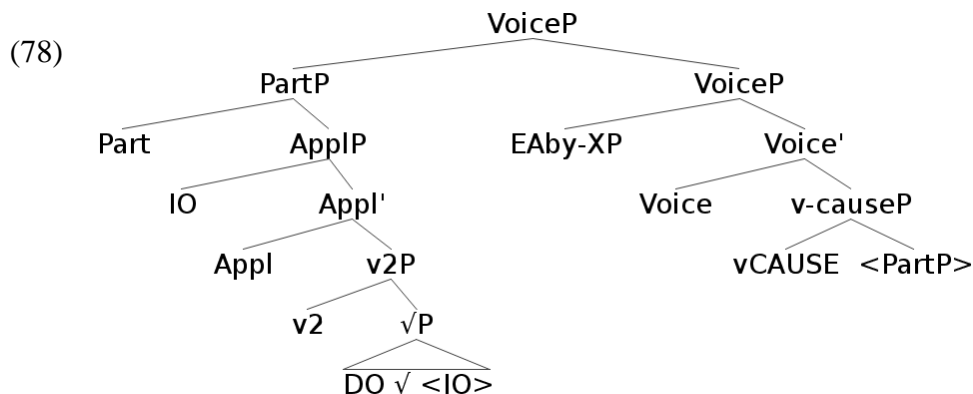
Collins argues that YP represents the participle phrase PartP whose head is Merged to the VP (or \sqrt{P} to use Michelioudakis' terminology). V adjoins to the head of PartP. He also incorporates a VoiceP and argues that PartP moves to VoiceP's left-edge (he posits that Voice is a phase head). If PartP did not move to Spec, VoiceP, he argues the Theme would be invisible to T's probing [$u\phi$] and Case-features given that the EA is Merged in Spec, ν P. Finally, Collins (2005) proposes that the smuggling is triggered by the need for the Theme to Agree with T's EPP and Case assigning features. Collins (2005, p.90) illustrates his approach by providing the following tree:

(76)



Even though Michelioudakis (2011) incorporates Collins (2005) with minimal changes, he does modify the analysis in the following ways: Voice introduces the external argument and Part selects a \sqrt{P} . Michelioudakis (2011, p.129) illustrates how both analyses can be combined using the bracketed string in (77). The example in (78) provides my interpretation of how (77) would look as a tree:

(77) [_{VoiceP} [_{PartP} Part [_{AppIP} IO_{DP} Appl [_{v2P} v2 [_{\sqrt{P}} DO $\sqrt{}$ <IO>]]]] [_{VoiceP} EA_{by-XP} Voice [_{v-causeP} v_{CAUSE} [<PartP>]]]]



Notice that Michelioudakis (2011) merges the external argument (including the *by*) in Spec, VoiceP. The representations in (77) and (78) suggest that adopting Collins (2005) creates an inconsistency between Michelioudakis' active and passive analyses. Collins makes "the assumption that V does not raise to v in the passive. Rather V raises to Part, and then PartP raises to Spec, VoiceP" (Collins, 2005, p.90). While this may not be problematic for Collins, the same is not true for Michelioudakis who adopts \sqrt{s} rather than Vs. If head-adjointing a $\sqrt{}$ to v enables it to become verbalised, the fact that $\sqrt{}$ never head-adjoints to

$v_{\text{CAUSE}}P$ in a DOC passive could be problematic, as $\sqrt{\quad}$ will not be encoded with the v_{CAUSE} component of its verbal meaning. A $\sqrt{\quad}$ that has not been fully verbalised should violate the *Categorization Principle* in (52).

Also, there exists a set of ditransitive passive data, known as Theme-passive DOCs, which Michelioudakis' (2011) analysis purposefully disallows. Theme-passive DOCs are not available in all dialects of English and Michelioudakis (2011, p.130) develops a grammar for those varieties which do not allow Theme-passives to occur. Theme-passive DOCs differ from conventional DOC passives in that it is the Theme and not the Goal that appears to satisfy T's EPP feature.

The examples in (79) illustrate how Theme-passive DOCs pattern in a North Yorkshire dialect of British English. The following are attested in speech:

- (79) a) It were given us/me.
b) It were given 'im/'er.
c)?It were given him/her.
d) ??? It were given Andy.
e) ??/* It were given the man.

When the Theme is passivized, the examples get less grammatical as the Goal argument increases in heaviness. If we assume that pronouns are just Ds (Adger, 2003) and that proper names are DPs which contain N-raising (Longobardi, 1994), the data in (79) seems to suggest that Theme-passive DOCs work best when the Goal is a bare D. Also, Theme-passive DOCs are not permitted when the Theme is a heavy constituent. Compare the following with (79a):

- (80) *The book on the shelf were given me.

In the North Yorkshire dialect there are no heaviness restrictions on passivized Goals:

- (81) a) I were given it.
b) We were given it.
c) He were given it.
d) She were given it.
e) Andy were given it.
f) The man were given it

Finally, when the Goal is passivized there are no restrictions on the length of the Theme:

- (82) a) I were given a Porsche GT3 RS.
- b) We were given a Porsche GT3 RS.
- c) He were given a Porsche GT3 RS.
- d) She were given a Porsche GT3 RS.
- f) Andy were given a Porsche GT3 RS.
- g) The man were given a Porsche GT3 RS.

Just for comparison, in Standard English DOC passives it is not possible to passivize the Theme (83a); there are no heaviness restrictions on the Goal when the Goal is passivized (83b); and likewise, when the Goal is passivized, there are no heaviness restrictions on the Theme (83c):

- (83) a) *It was given the man.
- b) The man was given a red and black Bentley Continental GT.
- c) The man on the Clapham omnibus was given a car.

The examples in (83) do not pattern like Standard English DOC passives. Also, note that even though Theme-passive DOCs share a similar linear order to Standard English PDC passives, the Theme-passives cannot be analysed in the same way. For example, consider the passive PDCs in (84):

- (84) a) It was given to us/me.
- b) It was given to him/her.
- c) It was given to Andy.
- d) It was given to the man.

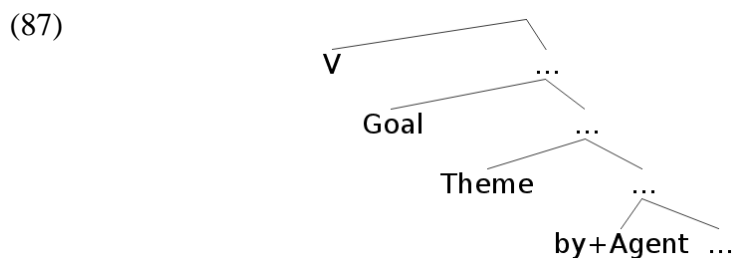
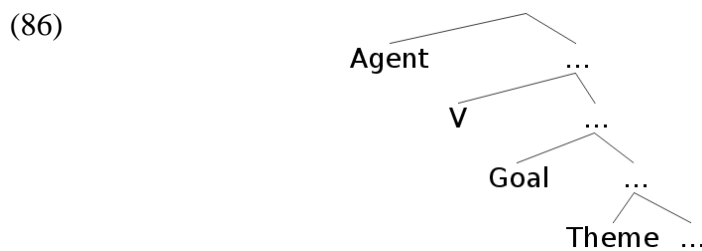
There are no contrasts in acceptability between light and heavy goals: pronouns, proper names and full DPs are all fine. In addition, passive PDCs contain no heaviness restrictions on passivized Themes. Compare (80) with the following:

- (85) The book on the self was given to him.

As passive PDCs are not subject to the same heaviness restrictions as Theme-passive DOCs, it does not seem appropriate to treat Theme-passive DOCs as PDC passives with null prepositions.

Nevertheless analysing Theme-passives as passive DOCs with an extra level of movement is also problematic as many ditransitive theories cannot explain how the Theme and, not the Goal, appears in [Spec,TP].

Haddican (2010) provides an explanation but as he argues for a lexical analysis in the spirit of Pylkkänen (2002, 2008), he suffers from the issues noted in section 2.3.1. Consequently, his analysis will not be explored here. In general, movement analyses struggle with Theme-passive DOCs courtesy of basic superiority. Typical DOC and DOC passive c-command structures are given in (86) and (87) respectively:



The structures in (86) and (87) represent a point in a derivation just before an argument moves into [Spec,TP] to satisfy T's EPP feature. In both active and passive DOCs, the Goal c-commands the Theme which is problematic given that the Theme can be passivized. Also, since either the Theme or Goal can be passivized in certain contexts (see the contrast between (79a) and (81a)), it would seem that in a grammar capable of producing Theme-passive DOCs, there are options regarding which argument satisfies T's EPP feature. Furthermore, something is needed to explain why Theme-passive DOCs become degraded when either internal argument is a heavy constituent.

Now that an explanation of ditransitive passives has been provided, what follows is an analysis suggesting how they can be generated given the approach developed thus far.

3.5 Deriving ditransitive passives

It seems reasonable to argue that active and passive sentences both contain a *cause* element given the following examples:

- (88) a. The fish was eaten on purpose.
b. The fish was eaten on purpose by the man in the restaurant.

The fact that the examples in (88) are acceptable whilst containing the PP adjuncts *on purpose*, suggests that passives contain a v_{CAUSE} component. Thus, I assume that passive and active clauses share $v\text{P}$ structures. Given this assumption, I suggest that the differences between a passive clause and active equivalent derive from differences in the Voice head.

Certain approaches argue that passives do not contain a lower phase (see Chomsky, 2000, 2001, 2008; Irwin, 2011), which would entail that $\text{Voice}_{\text{PASS}}$ is not a phase-head. According to arguments by Chomsky (2001), a non-phasal head would not possess any EPP or Case-assigning features. Thus, if $\text{Voice}_{\text{PASS}}$ was a non-phasal head, it would not possess EPP, $[\text{u}\phi]$ and $[\text{uCase: value}]$ features, with the result being that neither the Theme nor the Goal in a DOC would be assigned Case or undergo EPP movement. This would entail that the DOC analysis developed in section 3.3.2 would not be transferrable to passive clauses. Therefore, I follow Michelioudakis (2011), Collins (2005) and others (Legate, 2003; Marantz, 2007) in assuming that a passive clause does contain a lower phase and as such propose that $\text{Voice}_{\text{PASS}}$ spreads its features to the head of its complement.

However, if $\text{Voice}_{\text{PASS}}$ possessed an EPP and a full set of Case assigning features, a problem would arise in that the Theme (and the Goal in a DOC) would be assigned (accusative) Case. As a consequence, passivized Themes in simple passives and PDCs and passivized Goals in DOCs would bear accusative Case rather than the nominative Case exemplified by (89):

- (89) a. He was killed.
b. He was given to the overlord.
c. He was given the book.

Thus a passive analysis is needed that can account for the data in (89) and that is compatible with the active analysis developed in the previous sections.

To begin, I propose that $\text{Voice}_{\text{PASS}}$ does not possess any Case-assigning features and that, as a consequence, only an EPP feature is inherited by v . In (89a) and (b), the EPP feature of $\text{Voice}_{\text{PASS}}$ is inherited by v and it triggers the movement of the Theme into $\text{Spec},v\text{P}$.

After T and C have been Merged, C's EPP, [u ϕ] and [uCase:value] are inherited by T. The combination of these features moves the Theme into Spec,TP and assign it nominative Case.

However, despite that this passive analysis is applicable to PDC and transitive passive clauses, if Voice does not assign Case, the DOC last resort would not apply as v would not inherit Case features. Also, as a DOC passive does not contain a preposition, there needs to be a mechanism for assigning Case to the argument that does not agree with T. These problems can be solved if two aspects of the grammar are examined in more detail: the first is how uninterpretable features are checked and the second is feature inheritance.

Chomsky (2001, p.6) provides two theses for the checking of uninterpretable features. These are provided in (90):

- (90) a. Goal as well as probe must be active for Agree to apply.
b. α must have a complete set of ϕ -features (it must be ϕ -complete) to delete uninterpretable features of the paired matching element β .

The thesis in (90a) proposes that for an Agree relation to be established, the probe and goal need to be active i.e. have uninterpretable features in need of checking, while (90b) suggests that for an uninterpretable feature to be checked, there must be full ϕ -Agreement between the probe and goal. This assumption has already been adopted for Case assignment but the thesis in (90b) suggests that it should apply when any uninterpretable feature is checked. Thus if α is taken to be a DP and β a v -head possessing an EPP feature – a strong D feature in the spirit of Chomsky (1995, p.232) – it follows that ϕ -Agreement is needed between the DP and v -head in order for EPP movement to take place. As Case-assignment and EPP movement are both dependent on ϕ -Agreement, it must be that a head possessing just an EPP feature must also have a ϕ -probe in its feature bundle. Thus, as Voice_{Act} and Voice_{Pass} come with [u ϕ] features, the last resort can be modified in the following way:

- (91) As soon as the Theme intervenes between the Goal and a ϕ -probe, v splits into v_{CAUSE} and v_{TRANSFER} , and v_{TRANSFER} acquires a [uAffected*] feature which is checked immediately.

The last resort mechanism has been re-formulated in such a way that is broad enough to apply in active and passive contexts while retaining the impetus of Michelioudakis' (2011) original i.e. assigning Case to the Goal.

The second problem, that there is no means of assigning Case to the Theme in a passive DOC, can be mitigated if a proposal by Michelioudakis (2011) is analysed further and developed slightly. Recall that he adopts an approach to passives by Collins (2005)

Merged, its ϕ -probe examines the structure and finds that DO and IO are Caseless. C then spreads its features to T and v_{CAUSE} to ensure that both arguments acquire a Case marking. The features on T move the Goal into Spec,TP and assign it Case while the features on v_{CAUSE} do the same for the Theme.

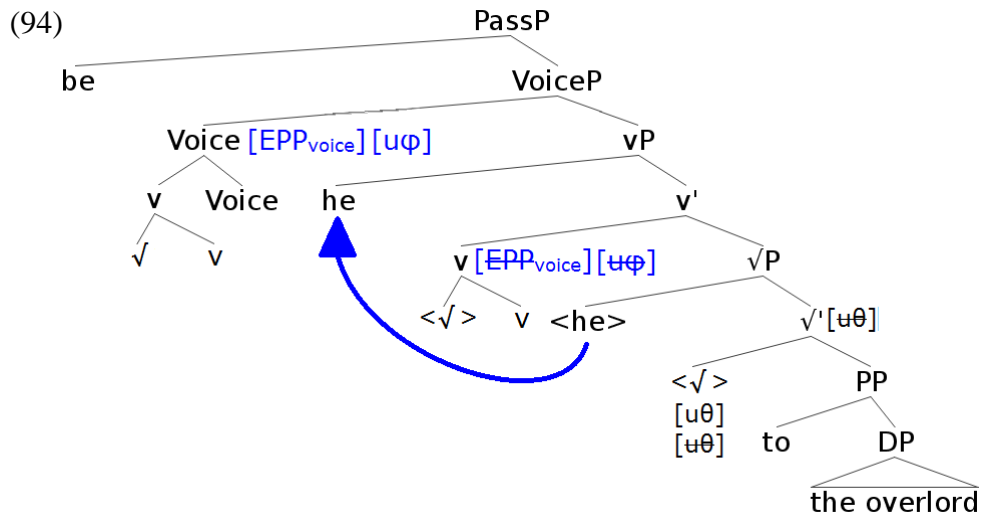
Now, I turn to how the Case feature on v_{CAUSE} can be interpreted as accusative even though it is inherited from C. Chomsky (2001, p.6) argues that “[s]tructural Case is not a feature of the probes (T, v), but it is assigned a value under agreement... The value assigned depends on the probe: nominative for T, accusative for v ”. Thus, rather than a phase-head possessing specific nominative or accusative Case features, we can argue that they possess generic [uCase:value] features which get inherited by T and v . The Agree relationship between the inherited probe and the goal provides the specific Case values: if the Agree relationship is between a DP and T, the value will be nominative, whereas an Agree relationship between a DP and v will be valued accusative. This mechanism provides an explanation for why, when C’s Case-assigning features are inherited by v , the value is accusative and not nominative.

Finally, a clarification is needed on the composition of the *by*-phrase and the Agent thematic role.

Michelioudakis (2011, p.89) argues, that $\text{Voice}_{\text{Act}}$ is the locus of features associated with *Burzio’s Generalization*, which can be defined as “[a]ll and only the verbs that can assign a theta role to the subject can assign Accusative Case to an object” (Burzio, 1986, p.178). If *Burzio’s Generalization* holds for Voice-heads (which I argue it does), and $\text{Voice}_{\text{Pass}}$ does not assign accusative Case, then it must also be that $\text{Voice}_{\text{Pass}}$ does not assign a thematic role. As for the composition of the *by*-phrase, I shall remain ambivalent but suggest that it should be treated as an adjunct.

Now that a basic passive theory has been outlined, what follows are two brief passive derivations, one for a PDC and one for a DOC, which illustrate how the passive theory developed above interacts with the ditransitive theory from previous sections. The first is for the passive PDC *he was given to the overlord*, and like the derivations above, I assume that the DPs and PPs have already been built and are waiting in the computational system.

To the overlord and *he* are Merged with $\sqrt{\quad}$. Little v is then Merged with \sqrt{v} . \sqrt{v} head-adjoins to v . $\text{Voice}_{\text{Pass}}$ then Merges with v P. $\text{Voice}_{\text{Pass}}$ ’s EPP and [u ϕ] are inherited by v . *He* checks the [u ϕ] on v . The full ϕ -Agreement between *he* and v enable the EPP to trigger movement of *he* into Spec, v P. The $\sqrt{\quad}$ and v complex head-adjoins to $\text{Voice}_{\text{Pass}}$. *Be* Merges to $\text{Voice}_{\text{Pass}}$ P and projects to PassP. An intermediate tree is given below:



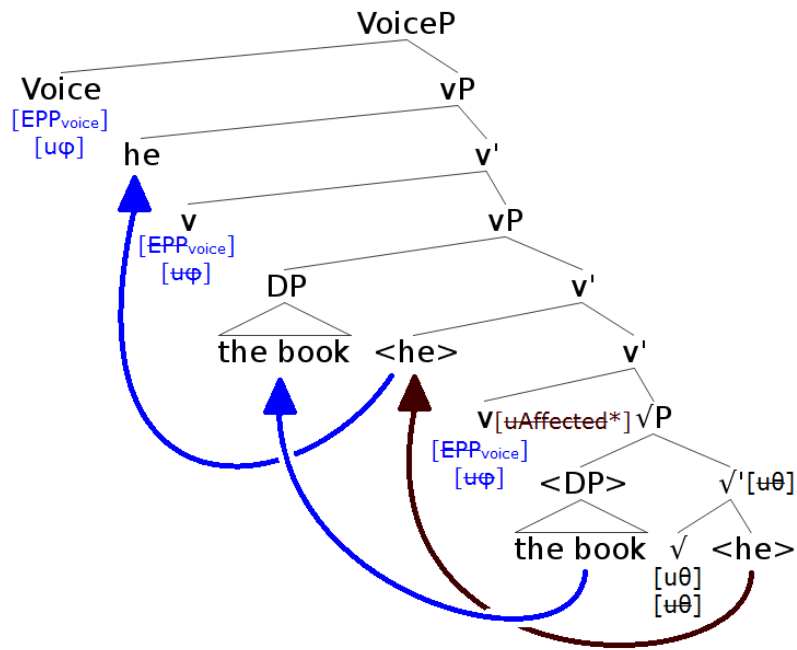
T Merges with PassP and *be* head-adjoins to T. Finally, C is Merged to TP. C's EPP feature, [uφ] and [uCase:value] are inherited by T. As *he* possesses a full set of φ-features, the [uφ] on T can be checked. The EPP feature triggers movement of *he* into Spec,TP. Finally, [uCase:value] Agrees with [uCase:] on *he*, allowing both uninterpretable features to be checked.

The difference between a PDC and a passive PDC is related to the distinction between Voice_{Act} and Voice_{Pass}. While Voice_{Act} transfers a full set of features and introduces an external argument, Voice_{Pass} does not introduce an external argument nor assign Case features to *v*_{CAUSE}. The idiosyncrasies of Voice_{Act} and Voice_{Pass} are enough to derive the differences between active and passive PDCs. Also, the theoretical developments needed to derive a passive – EPP being reliant on φ-agreement, Case-assignment, the last resort using φ-probes – can and should be applied to the active analysis developed in the previous sections.

Deriving a DOC passive combines the DOC derivation developed in section 3.3.2 with the passive analysis above. To illustrate, what follows is a demonstration of how *he was given the book* can be generated.

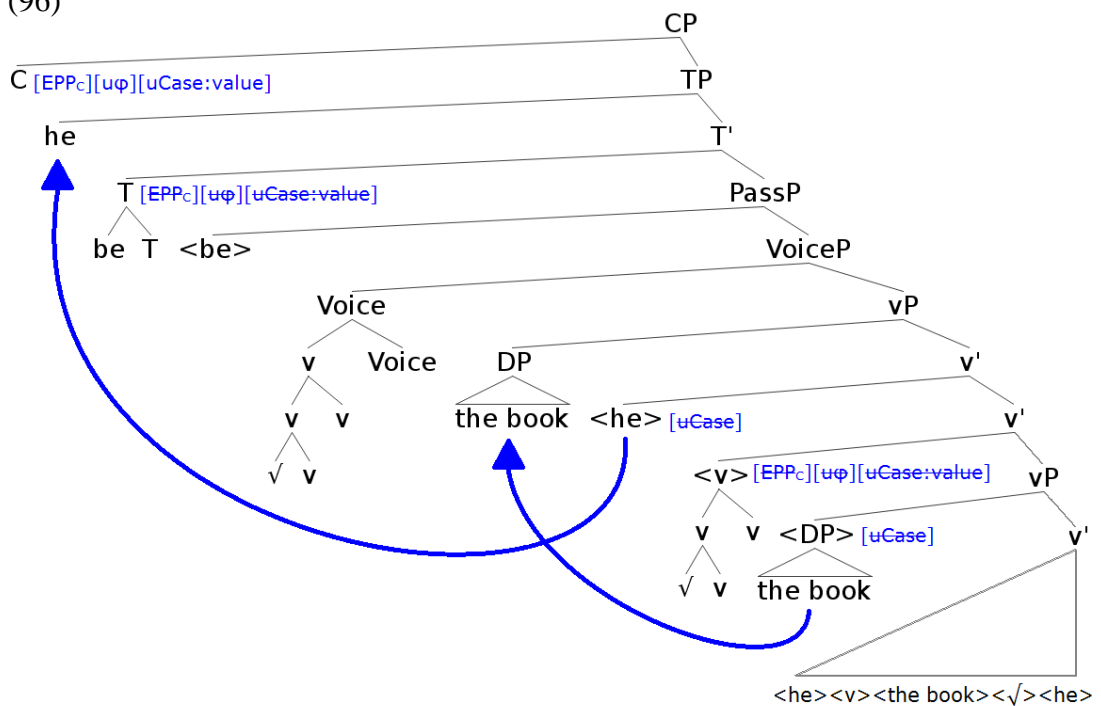
He and *the book* Merge with *√*. Little *v* Merges with *√*P. Voice Merges with *v*P. Voice's EPP and [uφ] are inherited by *v*. The [uφ] on *v* triggers the last resort mechanism causing *v* to split into *v*_{CAUSE} and *v*_{TRANSFER}. The [uAffected*] on *v*_{TRANSFER} triggers movement of the Goal into Spec,*v*_{TRANSFER}P. The EPP feature on *v*_{CAUSE} moves the Goal into Spec,*v*_{CAUSE}P while the EPP feature on *v*_{TRANSFER} moves the Theme into Spec,*v*_{TRANSFER}P. An intermediate tree is provided below:

(95)



\bar{v} moves through each v until it reaches $\text{Voice}_{\text{Pass}}$. *be* is Merged to VoiceP . T Merges with PassP and *be* head-adjoints to T . The $[u\phi]$ on C determines that the Theme and Goal are Caseless and spreads its $[u\text{Case:value}]$, EPP and $[u\phi]$ features to T and v_{CAUSE} . The features on T move the Goal into Spec,TP and assign it Case while the features on v_{CAUSE} move the Theme into $\text{Spec, } v_{\text{CAUSE}}\text{P}$ and assigned it Case. A final output tree is provided below:

(96)



To summarize, the derivations above highlight how ditransitive passives can be generated using the same mechanisms as their active counterparts and a limited number of extra theoretical developments. It has been argued that the distinction between $\text{Voice}_{\text{Act}}$ and $\text{Voice}_{\text{Pass}}$ accounts for the differences in behaviour between active and passive clauses. For example, $\text{Voice}_{\text{Act}}$ introduces an Agent and possesses EPP, $[\text{u}\phi]$ and Case features while $\text{Voice}_{\text{Pass}}$ does not introduce an Agent nor possess a Case feature.

Before proposing a preliminary analysis of Theme-passive DOCs, we first need to review the data. Firstly, it appears as though the Theme can only be passivized when it is syntactically and phonologically light:

- (97) a) It were given us/me.
 b) ??/* It were given the man.

The examples in (97) seem to suggest that Theme-passive DOCs work best when the Goal is a bare D. Also, as we saw earlier, it is not possible to passivize a heavy Theme:

- (98) a. *The book on the shelf were given 'im.
 b. */??The book were given 'im.
 c. Book were given 'im.

As the Theme gets lighter, the examples in (98) become more acceptable. This can be seen particularly well if (98b) and (98c) are compared; the overt determiner in (b) is distinctly less grammatical than the covert (or absent) determiner in (c). In contrast, when the Goal is passivized, there are no restrictions on the heaviness of the Theme or Goal:

- (99) a. The man were given it
 b. The man were given a Porsche GT3 RS.

The DOC passive derivation developed in the previous section predicts that it should not be possible to derive Theme-passive DOCs as the Goal will intervene between the Theme and the EPP feature on T. However, the data above suggests that it is possible in at least some dialects for the Theme to satisfy T's EPP feature.

In DOC passives, Voice is Merged, its features are inherited by ν before the last resort is triggered by the $[\text{u}\phi]$. The $[\text{uAffected}^*]$ on ν_{TRANSFER} moves the Goal into $\text{Spec},\nu_{\text{TRANSFER}}\text{P}$. Then, the inherited EPP and $[\text{u}\phi]$ features on the ν -heads are satisfied by the Goal and Theme. As seen earlier, this DOC passive derivation enables the Goal to agree

with the EPP and Case features of T. It was also argued the C's features can be inherited by v_{CAUSE} to provide a Case-marking for the Theme.

If Theme-passives are derived from the same Merge positions as other freely alternating ditransitives – which I argue to be the case given the evaluation of UTAH in chapter 2 – the difference between a structure where the Goal is visible to T's EPP and one where the Theme is visible to T's EPP can be traced to the last resort mechanism. If the last resort did not apply in a DOC passive, the Goal would never move to a position where it c-commanded the Theme, meaning that the Theme would satisfy T's EPP feature. This provides a means of differentiating those dialects of English which allow Theme-passive DOCs and those which do not.

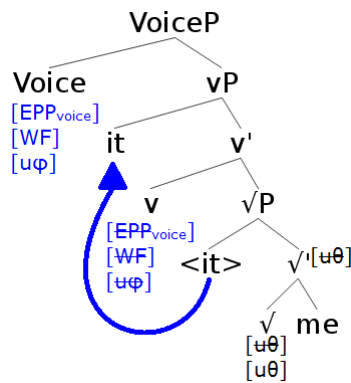
With this in mind and given the analysis developed earlier, I propose that a grammar capable of producing Theme-passive DOCs contains the option of suppressing the last resort mechanism when both internal arguments are light constituents. A suitable constraint would be the following:

- (100) When the Theme and Goal are light constituents, the last resort can be optionally suppressed.

An aspect of this definition that would need developing is the precise mechanism by which the last resort can be suppressed, but due to space constraints it will not be attempted here. However, as a preliminary argument, it could be that a grammar capable of producing Theme-passive DOCs has an additional feature on Voice, a *weight* feature which probes for light constituents after it has been inherited by v . When this feature has been checked by the internal arguments, similarly to how I have argued that the $[\text{u}\phi]$ inherited by v can detect the Goal even though the Theme intervenes, the last resort has the option of being suppressed. As was shown with the passive examples in (97a) and (99a), it must be that a Theme-passive grammar contains a modicum of optionality as both Theme-passives and passive DOCs are possible even when the internal arguments are light constituents. If this Theme-passive analysis is on the right track, a derivation of *it were given me* would proceed in the following way.

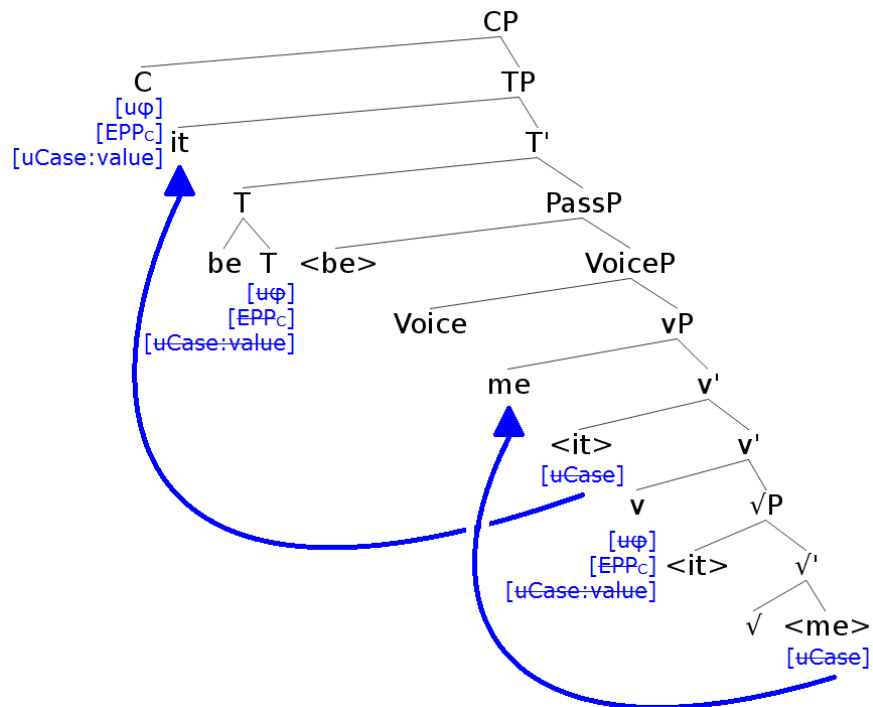
It and *me* Merge with $\sqrt{}$. Little v Merges with $\sqrt{\text{P}}$. Voice Merges with $v\text{P}$ and its features are inherited by v . The weight feature [WF] on Voice determines that the Theme and Goal are light constituents which allows the last resort to be suppressed. $\sqrt{}$ head-adjoins to v before the $\sqrt{}-v$ complex adjoins to Voice (not illustrated). The inherited features trigger movement of *it* into Spec, $v\text{P}$. An intermediate tree is provided below:

(101)



Be then Merges with VoiceP before *T* merges with PassP and *be* head-adjoins to *T*. Finally, *C* merges with TP. *C*'s [uφ], EPP and [uCase:value] features are inherited by *T* and *v* using the mechanism developed for assigning Case to the Theme in the Goal-passive derivation. The features on *T* trigger movement of the Theme into Spec,TP and assign it Case while the features on *v* move and assign Case to the Goal. As the Agree relationship between the probe and the goal provides the specific Case values, the Theme is interpreted as being assigned nominative Case while for the Goal, the value is accusative. A final output is provided below:

(102)



While the proposed Theme-passive derivation needs to be developed, it is hoped that the analysis can serve as a foundation on which can be built further research aimed at providing

a comprehensive account of how Theme-passives can be derived using a ditransitive movement analysis that does not represent *Oehrle's Generalization* syntactically.

3.6 Summary

The purpose of this chapter was to provide a movement analysis of ditransitive clauses without representing *Oehrle's Generalization* syntactically. The chapter began with an examination of Michelioudakis (2011) who develops an approach that incorporates a v capable of splitting into two separate heads, v_{CAUSE} and v_{TRANSFER} . The split is caused by a last resort mechanism that applies when the Theme intervenes between the Goal and a Case-assigning head. To provide a means of moving the Goal to a position where it can be assigned Case, Michelioudakis proposes that an Applicative head possessing a strong feature is Merged as part of the last resort. Once the Goal moves and Voice's features have spread to both v -heads, v_{CAUSE} assigns Case to the Goal and v_{TRANSFER} assigns Case to the Theme.

Several theoretical preliminaries were then clarified and these included the mechanism by which UTAH assigns thematic roles, Case-assignment and θ -selection. After the clarification, a PDC derivation was provided. The final output tree is uncontroversial and identical to that of Michelioudakis (2011). In contrast, the DOC derivation required reformulating for I argued that the animacy constraint should not be represented syntactically. As a consequence, Appl was not included in the last resort and instead, a [uAffected*] feature was assigned to v_{TRANSFER} . It was also argued that the last resort applies after Voice's features have been inherited by v . Following Michelioudakis (2011), I adopted feature inheritance (Chomsky, 2008) and the Case-assignment mechanism from Chomsky (2001). When these developments are combined, a DOC can be derived without encoding *Oehrle's Generalization* in the syntax.

The chapter then moved on to Michelioudakis' (2011) ditransitive passives analysis and the problems associated with Collins (2005), i.e. $\sqrt{\text{ }}$ not raising to Voice in passives and the availability of Theme-passive DOCs in some dialects of English.

In order to account for these issues, I developed an approach where $\text{Voice}_{\text{PASS}}$ is a phase head possessing [u ϕ] and EPP features. Following Chomsky (2001, p.6), I argued that checking uninterpretable features requires full ϕ -Agreement. This provided a means of reformulating the last resort to the following:

- (103) As soon as the Theme intervenes between the Goal and a ϕ -probe, v splits into v_{CAUSE} and v_{TRANSFER} , and v_{TRANSFER} acquires a [uAffected*] feature which is checked immediately.

The previous instantiation of the last resort was reliant on the Goal being inaccessible to a Case-assigning head. However, as Voice_{PASS} does not assign Case, (103) ensures that the last resort can also apply in passive contexts. Also, following Michelioudakis (2011), I propose that C's EPP, [$\mu\phi$] and [uCase:value] are inherited by T and v_{CAUSE} , enabling both internal arguments to be assigned Case. The probe determines the Case value: a [uCase:value] on v is interpreted as accusative while a [uCase:value] on T is interpreted as nominative. Finally, I argued that *Burzio's Generalization* holds with the outcome that Voice_{PASS} does not introduce an external argument.

Finally, I proposed a preliminary analysis for deriving Theme-passive DOCs. Given the discussion of UTAH developed in chapter 2, it was assumed that Theme-passive verbs assign the same thematic roles as other freely alternating verbs. As the last resort governs whether the Goal c-commands the Theme in DOCs and DOC passives, I proposed that the last resort could be suppressed when both internal arguments were light constituents. Finally, and like in passive-DOCs, I argued that T and v can inherit C's features.

Therefore, a Minimalist analysis has been developed which generates the dative alternation and ditransitive passives and a foundation has also been outlined for Theme-passives DOCs that uses many of the same principles and constraints.

4: CONCLUSION

This dissertation evaluated the lexical and movement analyses to determine which best accounted for ditransitives in a Minimalist setting. The outcome of this evaluation suggested that representing small meaning differences at Merge was theoretically unsound given that the differences were argued to not be thematic. Thus a ditransitive movement analysis was developed that does not represent *Oehrle's Generalization* syntactically and that can be applied in active and passive contexts.

The following summarizes the argument and provides further research questions to indicate where this analysis can be developed in the future.

In chapter 2, I argued that an overt version of UTAH is a necessary component of any grammar as it prescribes that thematic information is represented syntactically in a consistent manner. Furthermore, I evaluated Baker's (1997) attempt to reduce the hypothesis to compositional semantics and found that a grammar without UTAH does not appear to have a means of checking whether a predicate's arguments are Merged in an appropriate order.

The discussion then turned to *Oehrle's Generalization* and how it could be combined with the UTAH. Many linguists use *Oehrle's Generalization* or something related, e.g. the animacy constrain, HAVE component, POSSESSIVE component, to derive the DOC and PDC from different Merge positions (Beck and Johnson, 2004; Bruening 2010a, 2010b, 2014; Harley, 2002; Oehrle, 1976; Pylkkänen 2002, 2008). However, using a group of eleven native English speakers, it was indicated that the judgements Oehrle used to develop his theory were not shared by others. As a consequence, analyses which incorporate *Oehrle's Generalization* or a related development are weakened.

Therefore, I turned to Larson (1988) who provided an account of the dative alternation where DOCs and PDCs were derived from a D-structure corresponding to the PDC. He applied a movement operation used at the time for passives to the lower VP in a VP-Shell to derive the IO>DO word order associated with the DOC. However, even though Larson's analysis generated freely alternating verbs such as *give* without incorporating *Oehrle's Generalization*, his analysis is not compatible with Minimalism.

This led to Michelioudakis (2011) who develops a Minimalist movement analysis that encodes *Oehrle's Generalization* syntactically, albeit not at Merge. Despite the theoretical issues associated with Michelioudakis (2011) – *Oehrle's Generalization* and when his last resort applies – several of his key principles were retained in the analysis put forward in chapter 3. For example, the function of *v* as a verbaliser and the way it inherits [uφ], [uCase:value] and EPP features from the phase head were preserved. In addition,

following Michelioudakis it was argued that v can split in certain circumstances, and that when it does, both heads possess features inherited from the phase head. However, contrary to his analysis, I proposed the following last resort mechanism:

- (104) As soon as the Theme intervenes between the Goal and a ϕ -probe, v splits into v_{CAUSE} and v_{TRANSFER} , and v_{TRANSFER} acquires a [uAffected*] feature which is checked immediately.

The [uAffected*] ensures that the Goal will never be stranded below the Theme without being assigned Case.

In section 3.5, the focus changed from active ditransitives to their passive equivalents. I argued that $\text{Voice}_{\text{PASS}}$ is a phase head possessing [$u\phi$] and EPP features and that checking uninterpretable features requires full ϕ -Agreement. Following Michelioudakis (2011), C's EPP, [$u\phi$] and [uCase:value] are inherited by T and v_{CAUSE} , which allows the internal argument to be assigned Case. The Case value is determined by the probe: nominative for T and accusative for v . Finally, I argued *Burzio's Generalization* holds, with the outcome that $\text{Voice}_{\text{PASS}}$ does not introduce an external argument.

I then addressed Theme-passive DOCs and suggested a preliminary analysis based on that which was developed for DOC passives. As the last resort governs whether the Goal c-commands the Theme in a DOC, I proposed that in a Theme-passive DOC the last resort could be suppressed when both internal arguments are light constituents. Finally, and like in DOC passives, I suggested that T and v can inherit C's features. This enables the Theme and Goal to be assigned Case.

Therefore, the research aim has been accomplished. However, as the focus of the thesis has primarily been on *give*-type verbs, many areas have been left unanalysed and many questions still need to be answered. One such question relates to how this analysis could be modified to work cross-linguistically. For instance many languages, among them Modern Greek and French (see Michelioudakis, 2011), contain restrictions on the person and Case of pronominal objects in ditransitive clauses. A definition of the Person Case Constraint is given below:

- (105) The Person Case Constraint (PCC)

In a ditransitive, where both internal arguments are realized as phonologically weak elements, the direct object must be third person.

(Adger and Harbour, 2007, p.4)

In a French ditransitive where the internal arguments are pronominal clitics, the clitic assigned accusative Case must be third person:

(106) On me le montrera.
one me.dat it.acc show.fut
'They will show it to me.'

(107) *On me lui montrera.
one me.acc him.dat show.fut
'They will show me to him.'

(Adger and Harbour, 2007, p.3)

Furthermore, the example in (106) is also problematic in that *me* has been assigned dative Case even though there is no overt preposition. Currently, there is nothing in my analysis to account for this type of data.

We could also ask how the analysis in chapter 3 accounts for English *spray-load* verbs which take part in the *locative alternation*. Examples are provided below:

(108) a. John loaded the hay onto the truck
b. John loaded the truck with hay

(109) a. John sprayed the paint onto the wall
b. John sprayed the wall with paint

No aspect of my analysis can explain why there is a preposition in the (b) sentences. The easiest solution would be to claim that the two constructions are completely unrelated and that the data in (108) and (109) does not provide evidence for a second ditransitive alternation. Yet this solution does not seem satisfactory as the locative and dative alternations share properties which suggest that both phenomena should be analysed in a similar fashion (see Bruening (2001) for scope freezing evidence).

The questions highlighted above only represent a small amount of what this thesis leaves uncovered and unsolved. However, it is hoped that the approach put forward serves as a foundation on which can be built further research aimed at providing a comprehensive Minimalist account of ditransitive verbs.

Bibliography:

- Adger, D. (2003). *Core Syntax: Minimalist Approach*. Oxford: Oxford University Press.
- Adger, D. and Harbour, D. (2007). Syntax and Syncretisms of the Person Case Constraint. *Syntax*, 10/1, 2-37.
- Aoun, J. and Sportiche, D. (1981). On the Formal Theory of Government. *The Linguistic Review* 2, 211-236.
- Aoun, J. and Li, Y. A. (1989). Scope and Constituency. *Linguistic Inquiry*, 20/2, 141-172.
- Baker, M. (1988). *Incorporation: A Theory of Grammatical Function Changing*. Chicago: University Press of Chicago.
- Baker, M. (1997). Thematic Roles and Syntactic Structure. In L. Haegeman (ed.), *Elements of Grammar*. Dordrecht: Kluwer. 73-137.
- Baker, M., Johnson, K. and Roberts, I. (1989). Passive Arguments Raised. *Linguistic Inquiry* 20, 219-251.
- Barss, A. and Lasnik, H. (1986). A Note on Anaphora and Double Objects. *Linguistic Enquiry*, 17, 347-54.
- Beck, S. and Johnson, K. (2004). Double Objects Again. *Linguistic Inquiry*, 35/1, 97-124.
- Bruening, B. (2001). QR Obeys Superiority: Frozen Scope and ACD. *Linguistic Inquiry*, 32/2, 233-273.
- Bruening, B. (2010a). Double Object Disguised as Prepositional Datives. *Linguistic Inquiry*, 41/2, 287-305.
- Bruening, B. (2010b). Ditransitive Asymmetries and a Theory of Idiom Formation. *Linguistic Inquiry*, 41/4, 519-562.

- Bruening, B. (2014). Double Object Constructions and Prepositional Dative Constructions are Distinct: A Reply to Ormazabal and Romero. To appear in *Linguistic Inquiry*. (Revised 09/16/2014).
- Burzio, L. (1986). *Italian Syntax: A Government and Binding Approach*. Dordrecht: D. Reidel Publishing Company.
- Chomsky, N. (1972). *Studies on Semantics in Generative Grammar*. Berlin: De Gruyter.
- Chomsky, N. (1981). *Lectures on Government and Binding*. Dordrecht: Foris Publications
- Chomsky, N. (1993). A Minimalist Program for Linguistic Theory. In K. Hale and J. Keyser (eds.), *The View from Building 20*. Cambridge, MA: MIT Press. 1-52.
- Chomsky, N. (1995). *The Minimalist Program*. Cambridge, MA: MIT Press
- Chomsky, N. (2000). Minimalist Inquiries: The Framework. In Roger Martin, David Michaels and Juan Uriagereka (eds.), *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*. Cambridge, MA: MIT Press. 89-155.
- Chomsky, N. (2001). Derivation by Phase. In Michael Kenstowicz (ed.), *Ken Hale: A Life in Language*. Cambridge, MA: MIT Press. 1-52.
- Chomsky, N. (2008). On Phases. In R. Freidin, C. P. Otero and M. L. Zubizarreta (eds.), *Foundational Issues in Linguistic Theory: Essays in Honor of Jean-Roger Vergnaud*. Cambridge, MA: MIT Press. 133-166.
- Chomsky, N. (2013). Problems of Projection. *Lingua*, 130, 33-49.
- Collins, C. (2005). A Smuggling Approach to the Passive in English. *Syntax*, Vol. 8, 81-120.
- Cuervo, M. (2003). *Datives at Large*. MIT, PhD.
- Embick, D. and Noyer, R. (2007). Distributed Morphology and the Syntax/Morphology Interface. In G. Ramchand and C. Reiss (eds.), *The Oxford Handbook of Linguistic Interfaces*. Oxford: Oxford University Press.

- Gropen, J., Pinker, S., Hollander, M., Goldberg, R. and Wilson, R. (1989). The Learnability and Acquisition of the Dative Alternation in English. *Language*, 65/2, 203-257.
- Haegeman, L. (1994). *Introducing the Government and Binding*. Oxford: Blackwell Publishers.
- Haddican, W. (2010). Theme-Goal Ditransitives and Theme Passivisation in British English Dialects. *Lingua*, Vol. 120, 2424–2443.
- Hale, K. and Keyser, J. (1993). On Argument Structure and the Lexical Expression of Syntactic Relations. In K. Hale and J. Keyser (eds.), *The View from Building 20: A Festschrift for Sylvain Bromberger*. Cambridge, MA: MIT Press. 53-108.
- Harley, H. (2002). Possession and the Double Object Construction. *Yearbook of Linguistic Variation 2*. Amsterdam: John Benjamins Publishing Company, 29-68.
- Hornstein, N. (1995). *Logical Form: from GB to Minimalism*. Oxford: Blackwell Publishers.
- Irwin, P. (2011). Intransitive Sentences, Argument Structure, and the Syntax-Prosody Interface. In Mary Byram Washburn et al. (eds.), *Proceedings of the 28th West Coast Conference on Formal Linguistics*. Somerville, MA: Cascadilla Proceedings Project. 275-284.
- Jackendoff, R. (1990). On Larson's Treatment of the Double Object Construction. *Linguistic Inquiry*, 21/3, 427-456.
- Kratzer, A. (1996). Severing the External Argument from its Verb. In J. Rooryck and L. Zaring (ed.), *Phrase Structure and the Lexicon*. Dordrecht: Kluwer Academic Publishers.
- Larson, R. (1988). On the Double Object Construction. *Linguistic Inquiry*, 19/3, 335-391.
- Larson, R. (1990). Double Objects Revisited: Reply to Jackendoff. *Linguistic Inquiry*, 21, 589-632.
- Legate, J. (2003). Some Interface Properties of the Phase. *Linguistic Inquiry*, 34/3, 506-515.

- Longobardi, G. (1994). Reference and Proper Names: A Theory of N-Movement in Syntax and Logical Form. *Linguistic Inquiry*, 25/4, 609-665.
- Marantz, A. (2007). Phases and Words. In Hyoon-Sook Choe (ed.), *Phases in the Theory of Grammar*. Seoul: Dong In. 191-220.
- Michelioudakis, D. (2011). *Dative Arguments and Abstract Case in Greek*. University of Cambridge, PHD.
- Oehrle, R. (1976). *The Grammatical Status of the English Dative Alternation*. MIT, PhD.
- Pylkkänen, L. (2002). *Introducing Arguments*. MIT, PhD.
- Pylkkänen, L. (2008). *Introducing Arguments*. Cambridge, MA: MIT Press.
- Reinhart, T. (1976). *The Syntactic Domain of Anaphora*. MIT, PhD
- Roberts, I. (1987). *The Representation of Implicit and Dethematized Subjects*. Dordrecht: Foris.
- Yeo, N. (2015). *Maximality and the Ba-construction*. [Unpublished presentation]. University of York: Syntax and Semantics Research Group.