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How peripheral a phenomenon is it?: On the interaction of  
DP-internal ellipsis, degree inversion, and islands

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## **Abstract**

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In this dissertation I set out to solve a series of puzzles related to the notion of a DP periphery, defined as an area around the edge of a given domain targeted by operations such as movement and agreement. In solving these puzzles, I argue for a peripheral area in the nominal domain.

Early arguments for a peripheral boundary in the nominal domain are found in the justifications for a functional D as the head of the noun phrase (Abney, 1987; Szabolcsi, 1987, 1994; Horrocks & Stavrou, 1985). More recently, the nominal domain has been argued to contain a peripheral area on the basis of CP/DP parallelisms (Giusti, 1996; Aboh, 2004). Here I am minimally concerned with proposing functional projections as parallels to other domains; rather, I make use of DP-particular projections – such as DP and NumP – to account for the three puzzles I present.

I present the first puzzle in chapter 2: the licensing conditions for nominal ellipsis and nominal gapping in English and in French (Lobeck, 1995; Sleeman, 1996; Jackendoff, 1971; Yoshida, Wang, & Potter, 2012). I argue for a unified analysis of these phenomena, the mechanics of which serve as the functional basis for the remaining arguments in this dissertation. I propose a system of feature agreement, which I call *Mutual Agree*, in which nominal ellipsis is licensed when a higher, licensing head agrees with a lower, ellipsis head.

Mutual Agree not only accounts for all instances of nominal ellipsis and gapping in English and French, but it also restricts the ellipsis mechanism to only license ellipsis in appropriate contexts.

The second puzzle I consider (chapter 3) is the functional structure of phrases that undergo degree inversion (Matushansky, 2002; Den Dikken, 2006; Troseth, 2009). The main goals of the chapter are twofold. First I argue for an analysis of degree inversions that derives the interpretive parallels between simple degree inversion constructions and those with complex post-degree structure. I follow Troseth's (2009) proposal that degree inversions are derived via predicate inversion and then propose that the degree phrase predicates of these inversion constructions are complex, relative-like clauses. Second I argue that the variable ordering patterns found in degree inversions can be given a simple syntactic account if we assume that some degree words can take a null complement as opposed to an overt adjectival complement.

The features that are involved in Mutual Agree also play a role in degree inversion; I specifically argue that the feature of contrastive focus is what causes the movement of a predicative degree phrase out of the small clause configuration and to a prenominal position.

The final puzzle I present (chapter 4) explores the possibility of island 'repair' under nominal ellipsis (for discussions of repair in the clausal domain, see Ross, 1967, and Merchant, 2001). I first show that the system of Mutual Agree accounts for why certain elements, but not others, may escape nominal ellipsis in order to be candidates for island repair. I demonstrate that apparent repair of DP-internal island violations occurs in certain nominal ellipsis scenarios. I argue that this occasional repair is due to the fact that repair is only an illusion (Barros, Elliot, & Thoms, 2014, 2015). Repair effects are the result of the ellipsis site potentially containing a non-island-violating construction; this ambiguity results in acceptance of the ellipsis-containing structure.

I conclude in chapter 5 by returning to what the three preceding chapters reveal about

the function of projections in DP. I argue that the combination of (i) evidence from ellipses, (ii) evidence from ellipsis escape, and (iii) evidence from non-elliptical movement reveal what appears to be an articulated, albeit small, periphery of sorts.

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Any errors are my own.

## **DEDICATION**

To my husband, Silas, the better half of Team Manlove.

## Chapter 1

### A PERIPHERAL DISCUSSION

#### 1.1 *Three puzzles and a proposal*

The focus of this dissertation is a series of puzzles related to the notion of the *DP periphery*. My goal in presenting these puzzles is to argue for a peripheral area in the nominal domain. This is certainly not the first exploration of boundaries in DP; however it stands in contrast to classic discussions of the domain in that it is minimally concerned with identifying and/or proposing functional projections or parallels to other domains (such as CP). Instead, all of the puzzles are presented in the context of DP-particular projections - such as DP and NumP - rather than categories corresponding to CP layers.

I aim to solve three primary puzzles in the course of this dissertation and then use the solutions to argue for behavior in DP that is suggestive of an expanded periphery; more specifically, I suggest that the various DP-internal operations tend to target the same, left-peripheral area in the nominal domain. First, I look at the phenomenon of nominal ellipsis, in which certain DP-internal elements may license the deletion of their respective complements. The following examples show a numeral *two* licensing the deletion of a noun and a possessor *Ron's* licensing the deletion of a numeral and noun, respectively:

(1) Harry likes these two hippogriffs but I like those two ~~hippogriffs~~.

(2) Hermione read Harry's two books and Harry read Ron's ~~two books~~.

The data I am concerned with are that of nominal ellipses in English and French as well as nominal gaps, exemplified in (3).

- (3) Harry likes these two hippogriffs from England but I like those two ~~hippogriffs~~ from Spain.

I present a novel paradigm of French nominal gaps that parallel nominal gaps in English.

While nominal ellipsis is a widely-discussed topic, my analysis comes with two main benefits. First, it can account for the Saxon Genitive licensing of ellipsis, shown in (2), which is difficult to restrict under a minimalist account as I will discuss in detail. Second, it accounts for the nominal gapping licensing of ellipsis in both English and French, which differ from each other in similar respects to their elliptical counterparts.

My answer to this first puzzle identifies two functional heads on which the ellipsis mechanism appears to be centered - D(eterminer) and Num(ber), following Lobeck (1995), Sleeman (1993, 1996), and many others since.<sup>1</sup> Both of these heads play several roles in the syntactic licensing of ellipsis; moreover, their associated specifiers act as landing sites for elements escaping deletion. These positions are not novel to the discussion of nominal ellipsis; however, unlike previous accounts, I argue that D and Num on their own cannot be responsible for the licensing of nominal ellipses. Instead, I argue that in order for ellipsis to proceed, an agreement relationship must take place between these functional heads and a higher, licensing head. In this manner, the discussion of nominal ellipsis sets up the structure for the remainder of the dissertation, highlighting D and Num as potential centralized locations, but arguing that they cannot act independently as ellipsis licensors. Rather, ellipsis is a possible consequence of typical agreement relationships that obtain between DP-internal elements.

The second puzzle I consider is that of degree inversion in English, where a degree phrase appears to have moved from a prenominal position to a position before an indefinite article. Though degree inversion has also received previous attention, I argue for a syntactic parallel between simple degree inversions, inversions with postnominal arguments, and non-inverted constructions, shown in (4a) and (4b/c).

---

<sup>1</sup>See chapter 2 for extensive references.

- (4) a. Voldemort was [too powerful] a wizard.  
 b. Voldemort was [too powerful] a wizard to trust.  
 c. Voldemort was a wizard [too powerful] to trust.

I present a new analysis of degree inversion that can syntactically explain ordering restrictions that apply to particular degree words. For example, *too* and *such*, which both seem to undergo the same type of inversion, have different distributions:

- (5) a. Voldemort was [too powerful] a wizard.  
 b. Voldemort was [such] a [powerful] wizard.

My answer to this second puzzle involves an inversion mechanism that I argue to be triggered by the same feature that prompts movement in nominal ellipsis: Contrast. This feature on its own does not tell us a lot about structural position, but the intermediate and final landing sites of contrastively-moved elements do. In this manner, degree inversion gives us another clue as to the possible landing sites for movement.

Finally, the third puzzle I consider is that of island repair in the nominal domain under Noun Phrase Ellipsis (NPE). While island repair under ellipsis is in itself widely discussed, repair under NPE has received little attention. I fill this gap in the literature by presenting data that shows island repair under NPE seems to be possible in certain scenarios and then argue for an account of these repair effects on the basis of island evasion tactics.

From a broad perspective, the discussion of island repair under NPE does not appear as though it would have a lot to contribute to the debate on functional projections in DP, given most of the ‘excitement’ happens inside of the relative clause of an ellipsis site. However, as I demonstrate in the process of setting up elements for attempted repair, nominal ellipsis sites exhibit unique behavior: some types of constituents may be extracted from nominal ellipses while others may not. I argue for an account of this contrast that is based on available landing sites for a given type of element, referring back to evidence presented in the discussions of the first and second puzzles.

The major advantage of putting together these three puzzles that are typically discussed independently of one another is that they receive the same DP-internal agreement analysis. By unifying them under one analysis we get a broad perspective of the DP/nominal domain, revealing patterns in movement, deletion, and agreement that point toward identifying an area of the nominal domain as a periphery.

The remainder of this introduction is organized as follows. In the next section I place this dissertation in the context of research on DP domains as well as in discussions of peripheries. In section 1.3 I present an overview of the theoretical assumptions that I make for the current dissertation. Finally, I give a dissertation overview in section 1.4.

## **1.2 Peripheries in DP**

In this section I give a background of the discussion of peripheries and CP/DP parallelism. Although the latter does not play a role in the detailed arguments I present, the ultimate conclusions may have an impact on the debate. First, I briefly review the origins of the DP domain as the result of comparison of DPs to clauses. Second, I discuss the idea of peripheries and how the DP may feature some analog to the clausal left-periphery.

### *1.2.1 Background on DP-internal functional structure and DP/CP parallelism*

The earliest justifications for a functional D as the head of the maximal projection of the noun phrase (NP) are found in Abney (1987), Fukui and Speas (1986; as cited in Coene & d’Hulst 2003), Szabolcsi (1987, 1994), and Horrocks and Stavrou (1985).

Both Abney and Fukui and Speas propose D as the head of the noun phrase on the basis of parallelisms that emerge between D and I(nfl) or C. Abney’s analysis is based on agreement in possessive constructions that is pervasive in many languages, such as Yup’ik.<sup>2</sup>

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<sup>2</sup>Conventions: SG=singular, PL=plural, 1/2/3=1/2/3 person, M=masculine, F=feminine, NOM=nominative case, ERG=ergative case, ABS=absolutive case, DAT=dative case, POSS=possessive morpheme, SUBJ=subject agreement, OBJ=object agreement, PERF=perfective, ELA=elaborating mood, INTR=intransitive

- (6) a. angute-m kiputa-a- $\emptyset$   
           man-ERG buy-OBJ-SUBJ  
           ‘the man bought it’ (Abney, 1987:28)
- b. angute-m kuiga- $\emptyset$   
           man-ERG river-SUBJ  
           ‘the man’s river’ (Abney, 1987:28)

In such languages, possessor agreement is found on the possessed noun, as we see with *river* in (6b) and possessors are marked with ergative case. In a sentence, exemplified in (6a), the subject is marked with the same ergative case and the verb agrees with the subject in the same manner as possessums do with possessors.

In a similar vein, Szabolcsi (1987, 1994) argues that Hungarian possessors possess a [+/-poss] feature that is parallel to the [+/-tense] feature in Infl, given examples like the following where possessed nouns exhibit agreement with the possessor.

- (7) a. a te kalap-ja-i-d  
           the you(-NOM) hat-POSS-PL-2.SG  
           ‘your hats’ (Szabolcsi, 1994:1)
- b. (a) Mari kalap-ja-i  
           the Mari(-NOM) hat-POSS-PL(-3.SG)  
           ‘Mari’s hats’ (Szabolcsi, 1994:1)

In addition to the arguments for agreement, Horrocks and Stavrou (1985) also propose that the Greek noun phrase has a C position to which noun-phrase-internal *wh*-phrases move (and then through which they may be extracted), as shown in (8).

- (8) a. to vivlio tinos  
           the book who.GEN  
           ‘whose book’ (Horrocks & Stavrou, 1985:89)



b. *tinos to vivlio*

*who.GEN the book*

‘whose book’ (Horrocks & Stavrou, 1985:89)

These initial discussions proposing parallelism between the clausal and nominal domain have led to an extensive body of literature in defense of these similarities, as well as proposals for extensive ‘left-peripheral’ breakdowns in DP that parallel the left-periphery of CP as argued by Rizzi (1997) (see also Giusti, 1996; Laenzlinger, 2005, 2011, among many, many others).

I have provided this brief background of the justification for the functional projection DP in order to place the motivation for a discussion of peripheries in DP in the existing literature. Although my objective is **not** to argue for CP/DP parallelism, it would be impossible to discuss the breakdown of DP and its internal mechanisms without allusion to these arguments.

From here I move on to a more general concept - the idea of peripheries - which also finds its basis in the clausal domain.

### *1.2.2 Peripheries in the clausal context*

The concept of a periphery is elusive in the sense that there is no defining set of characteristics that a functional projection (or projections) **must** meet in order to be characterized as such. Instead, peripheries are defined by (i) the ‘collection’ of functions and features that occur on and around them and (ii) their relationship to the ‘core’ or central part of their given domain (Adger & De Cat, 2004). For a given periphery, such as CP or vP, the set of characteristics varies.

An advantage of the variable definition of a periphery is that it is compatible with a wide range of theoretical frameworks. Starting with Government and Binding theory (Chomsky, 1981, 1986), the distinction between argument and non-argument positions (A and A’, respectively) provided an initial distinction between those elements that were ‘central’ (A-positions) and those that were ‘peripheral’ (A’-positions). This distinction is most clearly

exemplified by the contrast between, for example, *wh*-phrases and theta-assigned arguments; *wh*-phrases occur hierarchically higher than subjects or objects, are A'-elements, and are clearly more peripheral.

In more recent syntactic theory, such as Minimalism (Chomsky, 1995, 2000), peripherality is more clearly defined by the way that elements are Merged into the structure: the core/lexical syntactic elements Merge first and the peripheral/functional elements later. Some, such as Rizzi (1997), Haegeman (2004), and Aboh (2004), take this functional buildup further, proposing 'rich' peripheries. For example, Rizzi (1997) assumes a CP-periphery that is composed of a range of functional projections:

- (9) [<sub>ForceP</sub> [<sub>TopicP</sub> [<sub>FocusP</sub> [<sub>TopicP</sub> [<sub>FinP</sub> [<sub>IP</sub>]]]]]] (Rizzi, 1997:297)

Rizzi argues for this expanded set of projections on the basis of how different movements interact with one another and are restricted in a given context. For example, the impossibility of focalized constituents co-occurring with *wh*-operators supports SpecFocusP as the position for both types of elements:

- (10) a. \*A chi IL PREMIO NOBEL dovrebbero dare?  
           To whom THE NOBEL PRIZE should.they give? (Rizzi, 1997:298)  
       b. \*IL PREMIO NOBEL a chi dovrebbero dare?  
           THE NOBEL PRIZE to whom should.they give? (Rizzi, 1997:298)

This range of projections captures a number of information-based movements (*e.g.* topic, focus) as well as operations such as *wh*-movement.

With respect to DP, there is less consensus on the peripheral status of the functional projection(s). For example, Haegeman (2004) argues for a DP left-periphery analogous to Rizzi's CP left-periphery on the basis of the behavior of possessor doubling (and extraction) in West Flemish. In order to account for the construction type, shown in (11) for Dutch, Haegeman proposes the functional structure in (12), which features two 'subject' positions.

(11) Peter z'n kat

Peter his cat (Haegeman, 2004:215)

(12) [<sub>DfinP</sub> [<sub>IP</sub> [<sub>NP</sub>]]] (Haegeman, 2004:236)

This structure stands in contrast to those proposed by Abney (1987), Corver (1990), Ritter (1991), and Szabolcsi (1994), where DP **is** the maximal projection but contains neither an inflectional phrase nor an instantiation of finiteness, given these features are assumed to be encoded in D. Nonetheless, the edge of DP is still arguably a peripheral region.

Other arguments for parallels to the left periphery can be found in the research on Topic and Focus projections in DP, as found in Giusti (1996), Bernstein (2001), Aboh (2004), Ntelitheos (2004), Svenonius (2004), and Corver and van Koppen (2009).

Giusti (1996) is among the earliest to suggest that TopicP and FocusP are present in the nominal domain, though she argues that both projections are not available in all languages and there is even variation language-internally. She specifically appeals to the ‘defectiveness’ of D: D is a unique functional head in that its specifier is a landing site for both A-movement (such as movement for valuation of possessive case) and A'-movement (such as *wh*-movement). Because of its functional ambiguity, Giusti argues that other DP-internal functional structure is equally ambiguous.

Giusti argues for the following functional projections in certain languages: a Foc(us)P in Albanian (immediately below D), a Top(ic)P in Italian and Serbo-Croatian (in the same position immediately below D), and a high TopP in Bulgarian. Of interest to the current discussion are the former two positions - the FocP/TopP immediately below D.

First, Giusti argues that a FocP is present in Albanian based on the behavior of adjectives. Adjectives in Albanian may precede or follow the head noun (following the head noun appears to be the default position on the basis of Giusti's discussion, though she does not explicitly say it); when adjectives precede the head noun they are emphasized:

- (13) a. një grua e bukur  
           a woman the nice  
           ‘a nice woman’ (Giusti, 1996:113)
- b. një e bukur grua  
           a the nice woman  
           ‘a *nice* woman’ (Giusti, 1996:113)

Moreover, there is no fixed hierarchy for adjectives which may precede the noun and receive emphasis, as shown in the following example:

- (14) a. tjetra grua e bukur  
           other-the woman the nice  
           ‘the *other* nice woman’ (Giusti, 1996:113-14)
- b. e bukura grua tjetër  
           the nice-the woman other  
           ‘the other *nice* woman’ (Giusti, 1996:113-14)

Giusti takes this as evidence that the prenominal adjective position is derived by movement. Finally, Giusti argues that this position is located immediately below D based on the fact that prenominal adjectives must follow demonstratives:

- (15) a. kjo (shumë) e bukur(a) grua tjetër  
           this (very) the nice woman other  
           ‘this *very nice* other woman’ (Giusti, 1996:114)
- b. \*e bukur(a) kjo grua  
           the nice(-the) this woman (Giusti, 1996:114)

Next, Giusti argues that a TopP is present in Italian below D on the basis of adjectival interpretation under variable ordering. In (16), (16a) means that the referent has either some or all white hair, while in (16b/c) the referent has all white hair. In (16c) the whiteness of the hair is given information prior to the utterance.

- (16) a. i suoi capelli bianchi  
           the his/her hair white (Giusti, 1996:117)
- b. i suoi bianchi capelli  
           the his/her white hair (Giusti, 1996:117)
- c. i bianchi, suoi capelli  
           the white his/her hair  
           ‘his white hair’ (Giusti, 1996:117)

Giusti takes these contrasts, in combination with evidence that this position is above all functional elements except D (not repeated here for the sake of brevity) as well as an argument that Italian does not allow DP-internal Focus, to argue that there is a TopP position in the Italian DP, but no FocP.

An interesting takeaway from this discussion is that it would appear there is crosslinguistic evidence for Topicalized and Focused constituents (*i.e.* contrastive constituents) to occupy the same general position in functional structure. This thought will become relevant in the chapters that follow, especially chapter 5.

Next, Aboh (2004) argues for a DP-peripheral structure that more closely follows Rizzi’s (1997) using evidence from Gungbe. The functional hierarchy he proposes is as follows:

- (17) DP > TopP > FocP > NumP

According to Aboh’s proposal, D is the equivalent of Rizzi’s Force head, Num is the equivalent of Infl, and Top and Foc are equal to their clausal counterparts.

Aboh presents arguments for Top and Foc on the basis of the articles available in the language, which bear specifications for both definiteness and specificity. I do not go into the argument for these positions here, but instead consider Aboh's proposal for D being analogous to ForceP and Num being analogous to Infl.

Aboh uses evidence from Hungarian to argue for DP/ForceP, as presented by Szabolcsi (1994). In (18a/b) we see that nominative and dative possessors occupy different positions in the DP, and the dative possessor may even raise out of the domain (18c) (Szabolcsi, 1994: 186-7, 205; as cited in Aboh, 2004:4):

- (18) a. (a) Mari kalap-ja  
           (the Mari(-NOM) hat-POSS-3SG  
           'Mary's hat'
- b. Mari-nak a kalap-ja  
           Mari-DAT the hat-POSS-3SG  
           'Mari's hat'
- c. [Péter-nek] mindenki csak [a kalap-já-t] látta  
           [Peter-DAT everyone only [the hat-POSS-3SG-ACC] saw  
           'As for Peter, everyone saw only his hat (no one saw his coat)'

Aboh argues that this construction is analogous to subject extraction, where the dative possessor is in ForceP (DP) on the edge of the domain, while the nominative possessor is lower in Infl.

Next, Aboh argues that NumP is equivalent to Infl in that it hosts inflectional features such as deixis and plurality. He uses examples such as the following from Gungbe to show that the marker  $\ell\epsilon$ , below the numeral, expresses number and definiteness agreement:

- (19) a. Mì sà àkwékwè àtɔn ná mì  
           2PL sell banana five for 1SG  
           'Sell me five bananas' (Aboh, 2004:5)

b. Mì sà àkwékwè àtòn **le** ná mì

2PL sell banana five numb for 1SG

‘Sell me the five bananas’ (Aboh, 2004:5)

Ntelitheos (2004) similarly argues for a structure involving a nominal equivalent to FinP, however in his account it is DefP (DP), and the functional structure containing the Topic phrases and FocP extends beyond this projection:

(20) TopP > FocP > TopP > DefP

I do not go into the details of his argument here, but merely note that this analysis continues the pattern of (i) proposing that FocP and TopP are also found in DP and (ii) proposing that some existing DP-internal functional projection (NumP, DefP) is equivalent to Fin/Infl.

Finally, some, such as Cornilescu and Nicolae (2011), have taken the arguments for CP/DP parallelism even further to propose that C and *v* **both** have DP-internal analogues. On the basis of evidence from Romanian, Cornilescu and Nicolae (2011) argue that *d* and *n* are C and *v* parallels in the nominal domain. Evidence for their account comes from the contrasting behavior of lower and higher prenominal adjectives (arguably within a lower *n*-domain and a higher *d*-domain, respectively), as well as the focus-movement of an NP around a high determiner:

- (21) a. [DP<sub>outer</sub> cea [FP galbenă [DP<sub>inner</sub> cămașă]]]  
           cel yellow shirt (Cornilescu and Nicolae, 2011:60)
- b. [DP<sub>outer</sub> cămașă<sub>i</sub> [D' cea [FP galbenă [DP t<sub>i</sub>]]]]  
           shirt.the cel yellow (Cornilescu and Nicolae, 2011:60)

This dissertation stands in contrast to previous investigations into DP peripheries for two main reasons. First, I do not endeavor to propose clausal analogues in the nominal domain in the following ways: (i) all of the functional projections I assume are motivated

on the basis of behavior unique to DP (I do not assume projections corresponding to CP layers, such as Infl, Topic, and Focus); and (ii) I do not assume equivalent behavior for all landing sites. To clarify the latter point: evidence for movement of one element through a particular projection does not necessarily imply that other extracted elements pass through that same projection. This stands in contrast to the idea of, *e.g.* phases, where the phase edge constitutes an extraction site for all elements moving out of it. While distinguishing my dissertation in this manner may initially seem superfluous or otherwise unnecessary, it serves the purpose of preventing any leaps to conclusions on the basis of what we **expect** to see based on the clausal domain.

Second, while I use the relative position of constituents to determine order and functional position, the main interest of this dissertation lies with mechanisms in DP that have not been previously considered simultaneously. This can be considered in the context of the puzzles I presented in section 1.1. The account of nominal ellipsis that I argue for in chapter 2 makes several predictions of what is to be expected from attempts to repair nominal islands by ellipsis (the topic of chapter 4), such as which elements are expected to escape ellipses. This, in turn, answers questions raised on the behavior of degree inversion constructions under nominal ellipsis (the topic of chapter 3). The discussion of these interactions reveals that the seemingly independent phenomena I discuss actually have quite a bit in common: they tend to target the same areas of DP and they are licensed by similar (or the same) features. The revelation that they interact at all is what is central to this dissertation.

I now present the theoretical framework I assume as well as the basic functional projections I make use of throughout the following chapters.

### ***1.3 Theoretical framework and assumptions***

In this section I present the theoretical framework that I assume. First, I discuss my assumptions about features and agreement. Second, I present the functional projections that I use in the discussions that follow.



### 1.3.1 Framework

The framework I assume is that of the Minimalist Program as proposed and revised by Chomsky (1995, 2000, 2001, 2004, 2007, 2008). The output is derived via the operations of Merge and Agree. Merge is the combination of two syntactic objects into one large syntactic object, which may subsequently Merge with other objects. I assume Chomsky's (2004) distinction between External and Internal Merge: External Merge introduces new objects into a derivation; Internal Merge moves objects that are already present in the derivation. An Agree relation obtains between a probe and a goal, resulting in the valuation of uninterpretable features (uF) by interpretable (iF) ones.

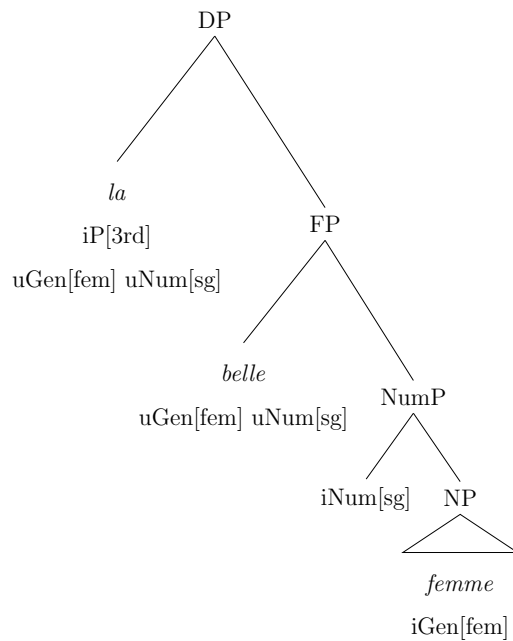
In the chapters that follow I also make use of feature bundles, which I describe in detail as they become relevant. All feature bundles receive similar notation. Interpretable features (iF) are associated with a valued feature surrounded in brackets [val], while uninterpretable features (uF) are initially associated with empty brackets [ ], which are filled in as the derivation continues.

One adjustment that I make from the classic Minimalist model relates to the syntactic status of the uninterpretable features that take place in Agree relations. Under a traditional account of Agree, uninterpretable features, once valued, are eliminated from the derivation. While this works quite well for one-time Agree relations, such as *wh*-movement, it runs into issues in the DP, where *concord* prevails and elements agree in gender, number, and case. One such example is French, as discussed in Carstens (2000, 2001).

- (22)
- |                   |                 |                    |
|-------------------|-----------------|--------------------|
| la                | belle           | fille              |
| the.3.FEM.SG      | pretty.3.FEM.SG | girl.3.FEM.SG(NOM) |
| 'the pretty girl' |                 |                    |

Several ways to account for concord have been proposed. First, Carstens (2000, 2001) proposes that interpretable phi-features in the DP can Agree with multiple uninterpretable counterpart features. This multiple-agreement is shown in the tree in (23), which is for the example in (22).

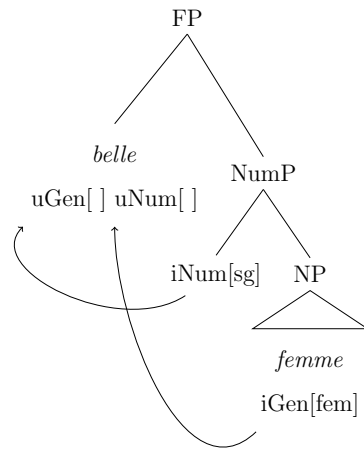
(23)



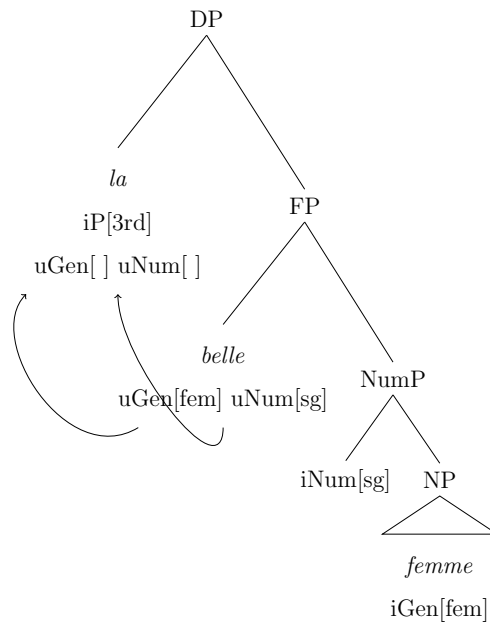
Under Carstens' account, however, uninterpretable features still delete once they are valued. Danon (2011) points out that this is problematic for the derivation at the point where DP must agree with, for example, T for case valuation; the only visible phi-feature is iP.

An alternative approach is offered by Frampton and Gutmann (2006) (and elaborated upon by Pesetsky & Torrego, 2007). They propose a mechanism of *feature sharing*, where uninterpretable features are not deleted once they are valued. Instead, they may go on to value other uninterpretable features of the same type. I represent this mechanism in the following steps, again using the French example in (22). In (24a), the interpretable features on N and Num value the uninterpretable ones on the adjective; in (24b), the uninterpretable features on the adjective can value those on D.

(24) a.



b.



For this dissertation, I adopt the feature-sharing mechanism for DP-internal concord, but acknowledge that similar methods for multiple agreement may function equally as well (such as Multiple Agree by Hiraiwa, 2001). Further, I assume traditional Agree mechanisms for other operations such as subject-predicate agreement.

### *Feature bundling*

In chapter 2 I present an account of ellipsis argued for by Aelbrecht (2009), who proposes that Dutch Modal Complement Ellipsis is the result of an Agree mechanism between two functional heads. I assume the basics of this theory, including an analog of a clausal feature-bundle.

Aelbrecht argues that all functional heads are composed of a bundle of features: categorial features (CAT), inflectional features (INFL), and selectional features (SEL):

(25) CAT [...]: specify the category of a lexical entry

INFL [...]: can be uninterpretable features, must be checked/valued

SEL [...]: encode what categories the head takes as a complement

For a head like Finite T, the features are as follows:

(26) CAT [T, [present]]

INFL [ $\text{u}\phi$ ]

SEL [ $\text{vP}$ ]

I propose the following bundle for DP elements; the main distinction is that INFL features are instead phi-features. The example here is for the Num head:

(27) CAT [Num]

$\phi$  [iNum]

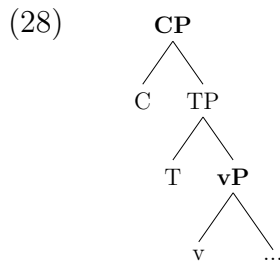
SEL [NP]

I will address the specifics of how these feature bundles work in chapter 2. For the time being, they should be taken as detailed representations of the features of each functional head.

*A note about Phase Theory*

I would be remiss to not mention Phase Theory, as a discussion of peripheries in current syntactic theory goes hand-in-hand with arguments for phasehood on the basis that phase heads/edges and peripheries share a wide range of characteristics, including the fact that peripheries and assumed phases overlap. In acknowledgement of this clear connection I briefly introduce it here. However, in keeping in line with the current objective of not assuming characteristics based on head status, I do not make any direct arguments for DP- or DP-internal phases.

Phase theory, as proposed and revised by Chomsky (2000, 2001, 2004, 2007, 2008), divides syntactic clauses into ‘domains’. Specifically, there is an upper domain CP and a lower domain *v*P.



The defining aspect of a phase is that it is semantically complete. For the CP phase, this means that Tense and Force must be valued; for *v*P all theta roles must be assigned (Chomsky, 2000). This split reduces computational complexity: once one phase is complete, the complement of the phase head is spelled-out and is frozen in place for the derivation.

The freezing of a phase is more succinctly described by the Phase Impenetrability Condition (PIC) (Chomsky, 2000; further revision to the PIC in Chomsky, 2001), which renders the complement of a phase head impenetrable for the remainder of a derivation once the phase has been completed and the next phase head is Merged. Thus, in the tree in (28) the complement of *v* (represented by ‘...’) becomes inaccessible once C (the next phase head) is Merged.

Diagnostics for phases are also relevant to the current discussion as they line up well with diagnostics for peripheries. Some can be applied at PF, some at LF, and some at the syntactic level of representation.

Citko (2014:65) identifies three useful PF diagnostics for phases:

- (29) a. Does X trigger Spell-Out?
- b. Does XP constitute (or determine) a prosodic domain?
- c. Can the complement of X be elided?

The third question (29c) is particularly relevant to the discussion of peripheries in this dissertation, as I demonstrate in chapter 2 and discuss in chapter 5.

Next, relevant LF questions (Citko, 2014:66):

- (30) a. Can an element moving through the edge of XP be interpreted at the edge of XP?
- b. Is XP a target for Quantifier Raising?

I consider the latter of these two questions in chapters 3 and 5.

Finally, two syntactic diagnostics fall out of Gallego's (2010) proposal that uninterpretable features play an important role in phase determination.<sup>3</sup>

- (31) Uninterpretable features signal phase boundaries (Gallego, 2010:151, as cited in Citko, 2014:68)

This leads to the following two questions (Citko, 2014:68):

- (32) a. Is XP a domain for feature valuation?
- b. Is X the source of uninterpretable features?

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<sup>3</sup>There are several other diagnostics that have been proposed but are not directly relevant to the current discussion. I direct the interested reader to Citko (2014).

Matushansky (2005) demonstrates that PF and LF diagnostics for phases contradict each other when applied to DP. PF diagnostics, when applied, point toward DP being a phase while LF diagnostics do not.

With respect to the PF diagnostics listed above, I look specifically at the ability to trigger Spell-out/ellipsis. As I discuss in chapter 2, more than one head in DP can license ellipsis, and D is one of them. This observation is best described in detail by Lobeck (1995), who argues that ‘strong’ agreement features present on D or Num can license ellipsis.<sup>4</sup> The examples in (33) show a numeral (a lower projection) and a possessor (a higher projection) licensing ellipsis (*cf.* Lobeck 1995):

- (33) a. Hermione has two cats and Harry has [DP [NumP three [NP ~~eats~~]].  
 b. Hermione’s two brooms are slower than [DP Harry’s [NumP ~~two~~ [NP ~~brooms~~]].

Matushansky argues against LF evidence supporting DP as a phase on the basis that DPs are not propositional and that they do not act as QR landing sites. Citko (2014) argues the opposite with respect to the second diagnostic. In the example in (34), *every city* can take scope over *someone*, which Citko takes as an indication that QR can target the edge of DP:

- (34) Two politicians spy on someone from every city.

every city >someone >two politicians (Larson, 1985:5, as cited in Citko, 2014:119)

Syntactically speaking, DPs exhibit domain-like behaviors with respect to hosting uninterpretable features, domain-internal feature-valuation, binding, and movement, as argued by Citko (2014). First, Ds arguably play host to uninterpretable Case features; though as Citko points out these features do not make D an active probe (but rather a goal). I would like to add that under the feature-sharing assumption that I assume for DP-internal concord D is in fact a type of probe - it bears uninterpretable Number and Gender features.

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<sup>4</sup>Please see chapter 2 for a more detailed discussion.

Next, DPs play host to several types of feature valuation. First, as I described above, DP-internal concord is the result of one feature being shared multiple times. Second, as Citko points out, the marking of genitive/possessive case is also a representative operation. As shown in the following example from West Greenlandic, in a possessive construction the possessor is marked with ergative case (the possessive case for this language).

(35) qasigissa-p ami-a panir-sima-suq

harbor.seal-SG.ERG skin-3SG.SG(ABS) dry-PERF.ELA.INTR-3SG

‘The seal skin was dry’ (“Ataarsuup irnikasia”, 2005:5)

Third, DPs that contain possessors act as binding domains, as shown in the following contrast (Citko, 2014:112):

- (36) a. \*John<sub>i</sub> likes [Mary’s descriptions of himself<sub>i</sub>].  
 b. John likes [Mary’s<sub>j</sub> descriptions of herself<sub>j</sub>].  
 c. John<sub>i</sub> likes these descriptions of himself<sub>i</sub>.

Finally, SpecDP is arguably an escape hatch for movement, as demonstrated in Szabolcsi (1983) for Hungarian. I do not include examples here, as I discuss the matter of ‘DP escape’ several times in the chapters that follow.<sup>5</sup>

I have presented this brief discussion of Phase Theory in order to highlight some of the arguments traditionally made for phase heads, as they exhibit some overlap with arguments for peripheries. I leave the discussion of phases here, since they will not play a role in the derivations presented in this dissertation.

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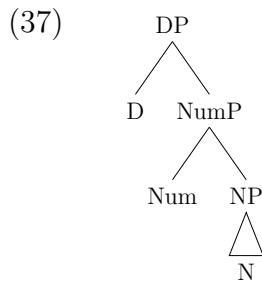
<sup>5</sup>A reviewer notes that the Topic/Focus movements discussed in section 1.2.2 (*e.g.* Giusti, 1996 and Aboh, 2002) could also be taken as evidence for the presence of uninterpretable features on the edge of the domain (DP) and the ability of a phrase (XP) to be interpreted there. I believe this is an excellent point; however, given the non-phase-based focus of the following discussion I will not go into any detailed discussion of the matter.



### 1.3.2 *Functional projections assumed*

The internal functional structure of DP is a subject of debate, with a wide range of variants based on (i) crosslinguistic differences and (ii) differences in assumptions as to the position of nominal modifiers such as adjectives. In order to forestall any issues with the puzzles I address in the following chapters on the basis of the assumed functional structure, I keep the DP structures that I use throughout this dissertation as minimal as possible. Crosslinguistic discussions of the relative ordering of these functional elements can be found in Alexiadou, Haegeman, and Stavrou (2007); Svenonius (2007); Zamparelli (1996), among many others.

The basic functional structure that I assume for DP is given in (37).



I first assume that a DP is the maximal projection of the noun phrase, following the arguments of Abney (1987) for English and Szabolcsi (1994) for Hungarian, among the many others that follow. Once again, arguments for CP/DP parallelism abound with respect to defending the necessity of a functional DP projection. In English definite elements such as definite articles and possessors are assumed to occupy this highest projection.

The Number projection (NumP) originates with Ritter's (1991) work on Hebrew genitive constructions and is further developed crosslinguistically by Bernstein (1991, 2001) and Picallo (1991). Elements typically assumed to occupy the Number projection include indefinite articles and numerals. I follow the traditional assumption that Num is the host of interpretable Number (iNum) features.

As French, a language with gender agreement, is one of the two central languages under consideration in chapter 2, I also must address the Gender (Gen) feature and where

it originates in DP. It has long been a matter of debate as to whether Gen is a feature of the noun itself or of a projection immediately (structurally) above the noun (Alexiadou, 2005; Bernstein, 1993b; Haegeman, 2000; 2001; Picallo, 2006; 1991; Ritter, 1993). Recently, arguments have pointed toward Gender being a feature of little *n*. In particular, Lowenstamm (2007) argues for little *n* as the host of gender features in French, Dobrovie-Sorin (2012) does so for English and Romance languages, and Kramer (2015) does so for a wide range of languages, with her primary arguments based in Amharic.

There is some debate as to the interpretability of the Gender features found on little *n*; for example, Kramer (2015) proposes that natural Gender is an interpretable feature while arbitrary (grammatical) gender is uninterpretable. As the outcome of this debate will ultimately have no effect on the topics in the following chapters, I will set it to the side and assume that Gender (in general) is a feature of little *n*. For consistency's sake, I will refer to this gender feature as iGen, while acknowledging that the matter may be slightly more complex. I refer the interested reader to King (2015), who presents an overview of the debate as well as an additional theory on the basis of Russian Gender agreement patterns.<sup>6</sup>

Structurally, then, I assume the following revised hierarchy for DP-internal structure:

$$(38) \text{ DP} > \text{NumP} > n\text{P} > \text{NP}$$

In the chapters that follow, the main language under consideration is English, which does not exhibit gender agreement. Rather than redundantly expressing the little *n* projection, I maintain the structure presented in (37) for English and use a little *n* structure in the relevant French discussions.

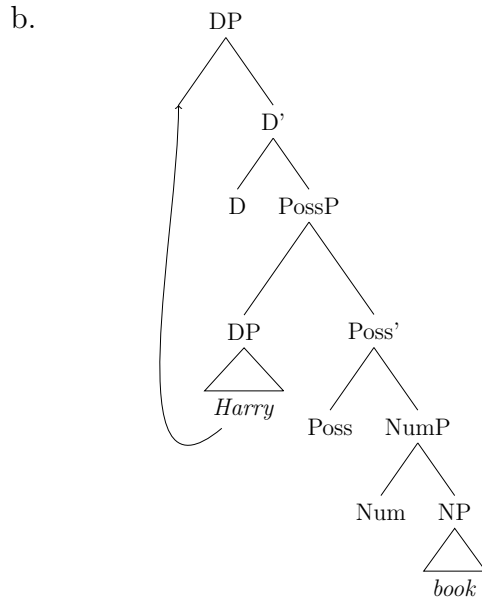
A simple structure as in (37)/(38) will not suffice for all derivations, however, as we also must take into consideration more complex DP structures such as possessive constructions (specifically, the Saxon genitive in English). I follow Valois (1991; see also Giorgi &

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<sup>6</sup>Thanks to Katy King for directing me toward the most influential discussions in this particular set of literature.

Longobardi, 1991) in the assumption that there exists also a PossP projection below DP, in which the possessor argument originates.

(39) a. Harry's book.



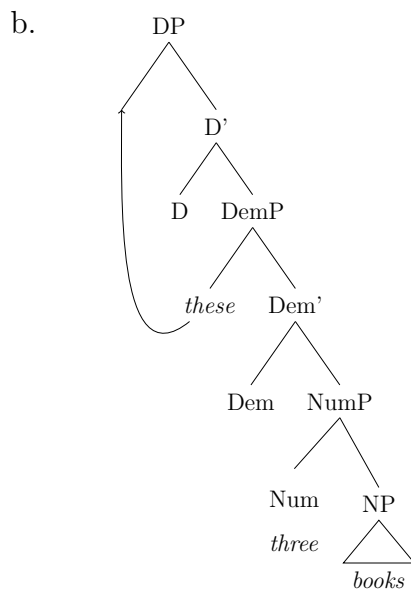
As shown in the construction, this DP begins in SpecPossP and moves to SpecDP for genitive case valuation.<sup>7</sup>

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<sup>7</sup> Another possible option is that the possessor raises from a position lower in the structure, such as SpecnP or SpecNP (see, for example, Julien 2005). Such an assumption presents no issues for the analyses I pursue in this dissertation, given the possessor raises to SpecDP in either scenario.

Next, demonstrative phrases (DemP) have also been argued to begin as specifiers to a Demonstrative projection (Brugè, 2002; Giusti, 1997, 2002; Grohmann & Panagiotidis, 2005; Panagiotidis, 2000; Shlonsky, 2004). As with possessor phrases, these too must move to SpecDP:

(40) a. These three books.



With respect to the position of adjectives, several structures are relevant. First, we must address how and where they attach in the structure. Second, we must address their internal functional structure.

Approaches to adjective position fall into two main categories: (i) those that assume adjectives occupy the specifiers of distinct functional projections (Cinque, 1990, 1993, 2010; Crisma, 1993; Laenzlinger, 2005; Scott, 2002, a.o.) and (ii) those that assume adjectives are adjuncts to functional projections (Bernstein, 1993a; Carstens, 1991; Kennedy, 1997; Rijkhoek, 1998; Svenonius, 1993; Valois, 1991, a.o.). For the purpose of this dissertation I assume the adjunction analysis; I briefly defend this choice in the paragraphs that follow.

Cinque (1990) argues for adjectives occupying specifier positions of distinct functional projections on the basis of restrictions on adjective ordering. First, adjectives tend to follow

a set order crosslinguistically; second, there is a limit on the number of attributive adjectives one can include in a DP (maximum of seven).<sup>8</sup> As Cinque states, neither of these restrictions is expected under an adjunction analysis, as adjunction is traditionally understood to be unrestricted.

Rijkhoek (1998) argues that these restrictions are not necessarily ruled out assuming an adjunction analysis as long as adjunction is in itself restricted (*i.e.* if there is a limit to the number of adjuncts per projection). Moreover, Svenonius (1993) points out that a specifier analysis requires the postulation of a large number functional projections purely to host a single category of adjective.

Svenonius (1993) defends the adjunction analysis of attributive adjectives for three reasons. First, attributive adjectives are optional in structure and they may be iterated (the latter possibility is not available to predicative adjectives, as I will discuss in chapter 3) (*cf.* Svenonius, 1993:442):

- (41)    a. the bear  
           b. the enraged bear  
           c. the enraged hungry bear

Second, the semantics of attributive modification follow that of other adjuncts in that they combine with a noun and return a noun (there is no change in syntactic category).

Third, in Germanic languages with adjectival agreement (such as Norwegian) attributive adjectives and predicative adjectives have different agreement paradigms in some scenarios, suggesting that agreement may be assigned in a different manner in the two types. Specifically, an additional paradigm is available for attributive adjectives that follow a strong determiner (42c) (Svenonius, 1993:444):

- (42)    a. Det bryggeriet er grønt.  
           that brewery is green.N

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<sup>8</sup>This may arguably be a processing constraint, though I will not argue for or against this assumption.

- b. Det er et grønt bryggeri.  
     that is a green.N brewery
- c. Det er det grønne bryggeriet.  
     that is the green.WK brewery

For these basic reasons, I adopt an adjunction approach to adjectives.<sup>9</sup>

The next question to address is **where** these adjectives attach in structure. For reasons of space, I will not go into an extensive defense of the precise structural position of each kind of adjective. With this in mind, we need at least general positions. Scott (2002), building on Cinque (1994; see also Laenzlinger, 2005) proposes the following extended hierarchy of adjective types:

- (43) Ordinal > Cardinal > Subject Comment > Evidential > Size > Length > Height  
     > Speed > Depth > Width > Temperature > Wetness > Age > Shape > Color >  
     Nationality/Origin > Material

Svenonius (2007) argues that while this ordering is more or less accurate, a general functional structure sufficiently provides the adjunction sites for different adjective sites. He assumes the expanded internal structure of DPs in (44).

- (44) Dem > Art > Num > UNIT > Pl/SORT > Adj > n > N (Svenonius, 2007:27)

Though this hierarchy features a position for adjectives, Svenonius adds that adjectives may more-or-less “Merge in whatever position makes sense for their interpretation” (p. 39). However, the Merge positions are determined by the layers of DP as he has proposed in (44). Thus, focused adjectives will take a position higher in the structure, count adjectives will be found near Num (or UNIT in classifier languages), subsecutive adjectives, such as scalar

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<sup>9</sup>Though I assume the adjunction approach for the reasons described here, the reader should note that a specifier approach to adjectives would, in theory, work with the structures that I assume.

adjectives, will be found near SORT, and idiomatic adjectives will be found in the lower NP area. Though I do not assume Svenonius' structure, these classifications transfer well to the structure I do assume:

- (45) DP *focused adjectives* > NumP *count adjectives* > nP *subsecutive adjectives* > NP *idiomatic adjectives*

For the time being, this general understanding of adjective position and ordering will suffice. I will introduce additional details as relevant in the discussion of adjectival licensing of ellipsis in chapter 2.

The final issue with respect to functional structure is the internal structure of the adjective phrase. The Degree Phrase (DegP) was originally argued to be the maximal projection of AP in Abney (1987) and Bernstein (1993a) and has since been adopted for adjective-internal structure (see specifically Corver, 1990 and Kennedy, 1997). Additionally, Corver (1997) proposes an intermediate functional projection in DegP, Q(uantifier)P, which dates back to Bresnan's (1973) analysis of comparative structures in English.

Using data from Dutch, Corver argues that the Deg head serves an identificational purpose (placing an adjective on a scale) while the Q head serves a quantificational purpose (quantifying the extent of the 'presence'). Two pieces of evidence for this split position come from Dutch pronominalization and topicalization. First, Dutch APs may be fully pronominalized, as shown by the bolded constituent in (46); partial pronominalization is also possible, as long as the adjective is introduced by a Q element (not Deg), demonstrated in the contrast in (47).

- (46) Bang voor honden, Jan is 't gelukkig nooit geweest

Afraid of dogs, Jan has **it** fortunately never been

'Fortunately, Jan has never been afraid of dogs' (Corver, 1997:308)

- (47) a. Bang voor honden, Jan is 't<sub>i</sub> tegenwoordig gelukkig  
 Afraid of dogs, Jan is it at-present fortunately  
 ...[QP een stuk [Q minder [AP t<sub>i</sub>]] dan vroeger]  
 ...a lot less than in-the-past (Corver, 1997:311)
- b. \*Bang voor honden, Jan is 't<sub>i</sub> helaas  
 Afraid of dogs, Jan is it unfortunately  
 ...[DegP even t<sub>i</sub> als Piet]  
 ...as as Piet (Corver, 1997:311)

Second, Q-elements may be stranded in topicalization constructions, while Deg-elements cannot, as shown in the contrast between (48a) and (48b), respectively.

- (48) a. Bang voor honden<sub>i</sub> denk ik dat hij  
 Afraid of dogs think I that he  
 ...[een stuk minder t<sub>i</sub> dan Piet] is  
 ...a lot less than Piet is (Corver, 1997:313)
- b. \*Bang voor honden<sub>i</sub> is hij [veel te t<sub>i</sub>]  
 Afraid of dogs is he much too (Corver, 1997:313)

I assume Corver's functional structure for the DegPs presented in this dissertation:

- (49) DegP > QP > AP

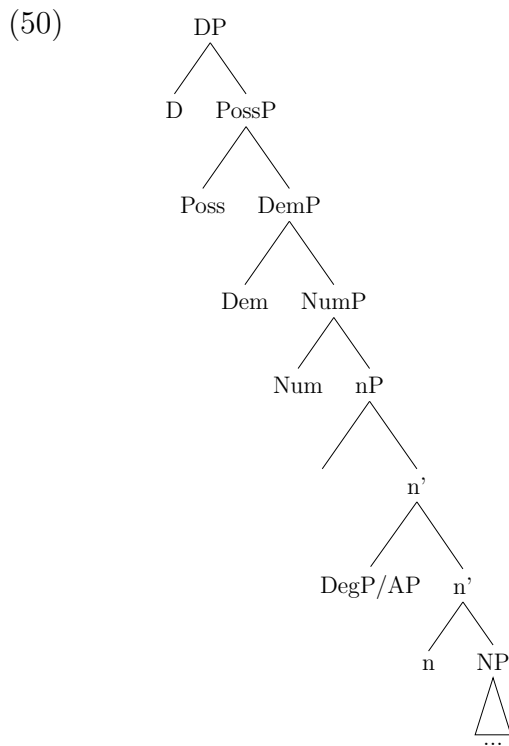
In this section I have presented the basic functional structure that I assume for the data sets discussed throughout the following chapters. Where relevant, I introduce additional details with respect to the particular lexical items that occupy these projections as well as constituents that may move to them.

I do not assume independent functional projections for Topic and Focus in DP (see proposals, though, by Aboh, 2004; Corver & van Koppen, 2009; Dimitrova-Vulchanova &



Giusti, 1998; Ishane & Puskás, 2001). There are two reasons for this. First, as Giusti (1996) points out, Focus/Topic projections are ‘defective’ both language-internally and crosslinguistically in that there does not appear to be any pervasive pattern, unlike with projections such as Num or D. Second, as I have mentioned several times throughout the chapter so far, my goal is to keep the structures under consideration here as minimal as possible. If it is possible to account for any Topic and Focus movement without positing additional functional projections with only that unique purpose, then it should be done. I will return to this idea in chapter 5.

An expanded structure is presented in (50), including the adjectival projection that will be most relevant to the discussion of nominal ellipsis in chapter 2.



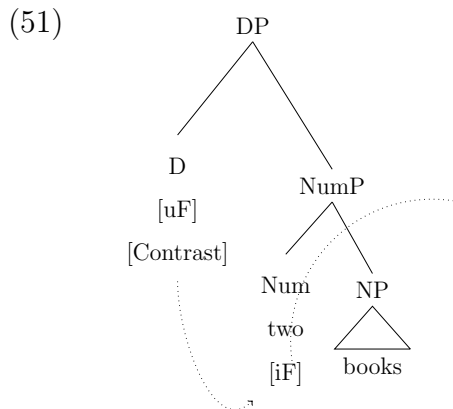
This concludes my presentation of the theoretical, functional, and structural assumptions that I make for the arguments I present. In the next section I give a preview of each of the remaining chapters.

## 1.4 Dissertation overview

The remainder of this dissertation is structured as follows.

**Chapter 2.** In chapter 2 I argue for a new account of ellipsis in the nominal domain that appeals to the traditional mechanism of Agree. The goal of this chapter is to present an account of nominal ellipsis that encompasses all nominal ellipses (including nominal gaps) in English and in French. As I will demonstrate, an account of nominal ellipsis in English must appropriately restrict the ellipsis mechanism to allow deletion below a possessor (which occupies SpecDP) but not allow, for example, deletion below a definite article (in D); the mechanism I propose accounts for this restriction. Furthermore, nominal gapping in French, of which I present a full, novel paradigm, requires a syntactic analysis.

I propose that nominal ellipsis proceeds by a mechanism of Mutual Agree, whereby contrastive features are shared with a licensing head, which in turn licenses the ellipsis of an ellipsis head when agreement takes place between a probe and a goal. A basic mechanism is shown in (51), where D licenses the ellipsis of the complement of Num when it probes for an uninterpretable feature.



This mechanism has the advantage of allowing licensing only when contrastive features are present (even if it is not the licensing head itself that is contrastive) and only when a probe-goal relation is established; the combination of these two restrictions results in appropriately restricted ellipses in both English and French.

Of relevance to the wider objective of this dissertation is the set of licensing and ellipsis heads that I argue for. For English, ellipsis may occur below the D and Num heads (NumP and nP/NP ellipsis, respectively); for French, ellipsis may occur below the D, Num, and nP heads (NumP, nP, and NP ellipsis, respectively). I argue that (i) this variation is reducible to the agreement relations that obtain in English and French and (ii) the escape of certain elements reveals certain landing sites for movement.

**Chapter 3.** In chapter 3 I propose that the following three constructions are derived from the same base structure, (52c):

- (52) a. Voldemort was [too powerful] a wizard.  
 b. Voldemort was [too powerful] a wizard to trust.  
 c. Voldemort was a wizard [too powerful] to trust.

The mechanism of interest is *degree inversion*, exemplified in (52a), where a degree phrase appears to front around its associated indefinite article.

While degree inversion has received attention in the literature (Borroff, 2006; Matushansky, 2002; Troseth, 2009, to name a few), I demonstrate that a new analysis is needed to account for the parallels that emerge between examples (52a) through (52c), as well as for the ordering restrictions that arise in cases of simple degree inversion (52a).

I argue that degree inversions are triggered by a form of contrastive movement, causing them to target a peripheral position in DP. It is this portion of the discussion that is relevant to the objective of this dissertation: I argue that SpecNumP is the initial target for degree inversion, while SpecDP is the ultimate landing site.

**Chapter 4.** In chapter 4 I return to the topic of nominal ellipsis, only this time with more attention to what happens internal to the ellipsis site. I present a novel set of data that not only demonstrates that extraction from nominal ellipsis is possible in certain constructions but that repair of island violations (specifically violations of the Complex NP Constraint) is also sometimes possible.

Of particular interest to the current dissertation is the fact that only **certain** constituents may be extracted from nominal ellipses (island or not). I appeal to the analysis of nominal ellipsis that I present in chapter 2 to explain the restriction. I ultimately propose that while there are multiple possible landing sites in DP, some are available to only a certain set of constituent types.

**Chapter 5.** In chapter 5 I return to what the three preceding chapters reveal about the function of projections in DP. I argue that the combination of (i) evidence from ellipses, (ii) evidence from ellipsis escape, and (iii) evidence from non-elliptical movement reveal what appears to be an articulated, albeit small, periphery of sorts. Specifically, the D and Num heads each act as a peripheral ‘head’. The former, which is the maximal projection of the domain, is a landing site for *wh*-moved and elements involved in agreement operations with D; the latter is an intermediate landing site for contrastive elements in general.

## Chapter 2

# MUTUALLY AGREEABLE: UNIFYING NOMINAL ELLIPSIS AND NOMINAL GAPPING IN ENGLISH AND FRENCH

### 2.1 Introduction

In this chapter I argue for a new account of ellipsis in the nominal domain that appeals to the traditional mechanism of Agree, which stands in contrast to previous accounts of nominal ellipsis (see Jackendoff, 1971, 1977; Lobeck, 1995; Sag, 1980; Williams, 1977, among many others). In the context of this dissertation, the data and analysis presented in this chapter pinpoint an area in the DP domain on which ellipsis operations are centered, which I investigate further in the chapters that follow.

The discussion in this chapter focuses on two types of constructions - nominal ellipses and nominal gaps. Example (1) shows noun phrase ellipsis (NPE), where the NP may be elided in the presence of, for example, a numeral; example (2) shows the ellipsis of the complement of a Saxon Genitive possessor (Jackendoff, 1971, 1977; Lobeck, 1995; Sag, 1980; Williams, 1977). Saxon Genitive licensing arguably gives rise to the deletion of a larger structure than NP, as shown in (2b); following Saab (2014) I refer to this informally as NumP ellipsis or NumPE.

(1) Harry likes these two hippogriffs but I like [those [two [<sub>NP</sub> ~~hippogriffs~~]]].

(2) a. Hermione read Harry's book and Harry read Ron's ~~book~~.

b. Hermione read Harry's two books and Harry read Ron's ~~two books~~.

Example (3) shows a nominal gap; gaps occur when a noun is apparently deleted between an ellipsis licenser and a postnominal modifier.<sup>1</sup>

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<sup>1</sup>I use the term *modifier* here in a very descriptive sense.

(3) Hermione read Harry’s book of Quidditch and [Ron’s ~~book~~ [of chess]].

Following Yoshida (2005) and Yoshida, Wang, and Potter (2012), I consider nominal gapping to be an instance of nominal ellipsis where remnants have moved out of the ellipsis domain to adjoin to a higher functional projection.<sup>2</sup>

The objective of this chapter is to present an account of nominal ellipsis that encompasses all nominal ellipses and nominal gaps in English and French. I present two primary contributions to the nominal ellipsis literature. First, I provide novel data from French nominal gapping constructions, arguing that, like English nominal gaps, French nominal gaps pattern with ellipses. Second, I present a new ellipsis mechanism, which I term *Mutual Agree*, which unifies aspects of structural and feature-based ellipsis mechanisms. Mutual Agree accounts for two main discrepancies in English and French ellipses: (i) it predicts that the Saxon Genitive and certain quantifiers may license ellipsis, but not other high-DP elements and (ii) it provides a principled explanation for non-licensing of certain nominal gaps in French. As I will discuss in the sections that follow, accounting for the Saxon Genitive licensing of ellipsis (or, more specifically, accounting for the higher-DP elements that **do not** license ellipsis) has proven problematic under current ellipsis theories.

The structures I propose for French nominal gaps are of additional interest to theories on nominal gapping in general. Specifically, though Yoshida et al. (2012) argue for a deletion-based account of nominal gapping in English, they suggest that that source of nominal gaps in N-raising languages, such as Romance languages, might fall under a movement-based account as has been suggested for verbal gapping. I present diagnostics as well as an analysis that show that a split between gapping analyses in English and French may not be necessary, despite the N-raising status of the latter language.

I argue that nominal ellipses are licensed by a mechanism of Agree between a licensing head and an ellipsis site, inspired by Aelbrecht’s (2009) treatment of Dutch Modal Comple-

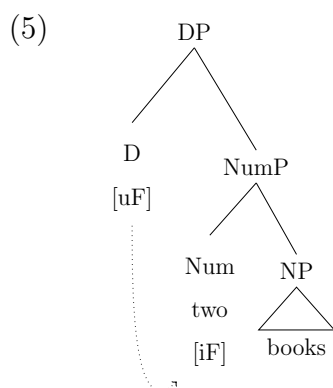
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<sup>2</sup>Historically, gapping in the nominal domain has been argued to not be an instance of ellipsis (Jackendoff, 1971); verbal gapping has received a non-ellipsis analysis (Johnson, 1996), though Johnson does not argue similarly for nominal gapping (nor does he present an account for nominal gapping).

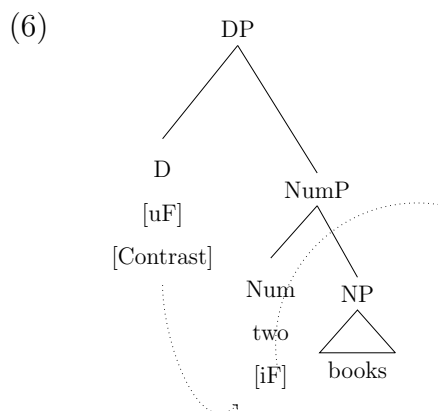
ment Ellipsis. In a sentence like (4), for example, the ellipsis head Num is licensed by the higher functional head D.

- (4) Harry read three books and Ron read [<sub>DP</sub> [<sub>Num</sub> two [<sub>NP</sub> books]]].

Licensing comes down to a basic Agree relation: D probes for a particular feature on Num, and the reflex of D probing Num licenses ellipsis:



I argue that this ‘reflex’ is D sharing a contrastive focus feature with Num, which signals that ellipsis may proceed. This feature is privative - in non-contrastive, non-ellipsis contexts it is unvalued.



As long as three conditions are met, ellipsis may occur:

(7) Conditions for ellipsis under Mutual Agree

- a. Some element in the domain must be marked as contrastive.
- b. The licensing head and the ellipsis head must be separate.
- c. The licensing head must probe the ellipsis head for *independent reasons* (such as agreement for concord), **not** for the sake of licensing ellipsis.

In this way, the Agree relationship is similar to that between T and a subject DP, where T probes the subject DP for its phi-features, and in return supplies the DP with a Case value (Chomsky, 1995, 2000). I dub this mechanism Mutual Agree as a reflection of the fact that a relationship obtains between a probe and goal, which not only results in the goal sharing a feature value to the probe but also results in the probe valuing a privative feature on the goal.

There are two primary differences between traditional Agree and/or feature sharing and Mutual Agree. First, the DP domain is subject to some form of concord, and the act of D probing Num is one instance of this; the presence of PL, for example, is shared throughout the DP (*i.e.* more than one instance of agreement happens). Therefore this mechanism cannot be identified as classic Agree. Second, the contrastiveness feature must move from probe to goal during downward agreement, parasitic on the relationship established between the probe and goal. Unlike feature sharing, which is not necessarily directional and does not need to obtain between a traditional probe and traditional goal, Mutual Agree must occur in a traditional probe-goal configuration. Therefore this mechanism cannot be identified as feature sharing.

This chapter is organized as follows. In section 2.2 I present the data for both English and French, clearly describing scenarios in which NPE may be licensed. In this section I also outline the existing data on NP gapping in English and present a novel data set from French. At the end of the section I motivate the need for a novel analysis of nominal ellipsis. In section 2.3 I propose that nominal ellipsis is the result of a mechanism of Mutual Agree



between an ellipsis head and a licensing head. This proposal builds on Aelbrecht (2009), who proposes an Agree relation for Dutch Modal Complement Ellipsis. I demonstrate that the mechanism accounts for all English data by restricting the mechanism to prevent over-licensing of ellipses. In section 2.4 I demonstrate that the licensing mechanism not only extends to French but also straightforwardly explains the differences that surface between English and French licensing. In section 2.5 I first argue that nominal gapping in English and French is in fact an instance of nominal ellipsis and then I demonstrate how the proposed mechanism of Mutual Agree accounts for the data. Finally, I conclude in section 2.6.

## **2.2 Data and research questions**

The following subsections contain ellipsis and gapping data from English and French. As the array of existing literature on the subject clearly illustrates, there is an enormous range of pertinent data; therefore, I include a sample of construction types, pointing out generalizations and key exceptions.

Original discussion of nominal ellipsis constraints is found in Jackendoff (1971, 1977), Sag (1980), and Williams (1977); Lobeck (1995) is an additional, highly celebrated consideration of NPE in English, French (based upon arguments by Barbaud (1976), Ronat (1977), and Sleeman (1993)), and German. More recently, French has been further discussed by Pollock (1998), Kupferman (1999), and Bouchard (2002), and English has been examined by Günther (2013). Discussions of NPE have also been expanded to a number of other languages and language groups.<sup>3</sup>

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<sup>3</sup>Non-French Romance, such as Spanish or Catalan (Coene, 1999; Eguren, 2010; Kester & Sleeman, 2002; Lobeck, 2007; López, 2000; Luján, 2000; Martí Girbau, 1999, as cited in Lobeck, 2007) has been of particular interest, as well as Romanian (Cornilescu & Nicolae, 2012). Outside of Romance, contributions have been made for Greek (Alexiadou & Gengel, 2012; Giannakidou & Stavrou, 1999) and Dutch (Corver and Van Koppen, 2011).

### 2.2.1 *English*

The first portion of the data covers known cases of nominal ellipsis in English. The second portion covers English nominal gapping.

#### *Ellipsis*

As has been observed in the past, two positions in the English DP appear to license nominal ellipsis: a higher head corresponding to D(eterminer) elements and a lower head corresponding to Num(ber) elements (Jackendoff, 1971, 1977; Lobeck, 1995; Sag, 1980; Williams, 1977). As with any argument for DP-internal projections, whether these licensing heads are D and Num precisely is up to question (and part of the subsequent discussion in this chapter); therefore, in the data I present I merely mark apparent ellipsis boundaries with brackets. Strikethroughs indicate elided domains.

Unless otherwise noted, all examples here correspond to data presented in Lobeck (1995:42-90). In (8) I give a list of element types that license ellipsis in English. Of note here are examples (8f), (8g), and (8h). These are scenarios in which adjectives license ellipsis. First, (8f), we have what Kester (1996a, 1996b) refers to as *the human construction*, which licenses ellipsis only when the adjective is preceded by a definite article.<sup>4</sup> Second, (8g), mass nouns may elide under adjectives. Third, (8h), superlative adjectives license ellipsis.

#### (8) English nominal ellipsis licensors

##### a. *Saxon Genitive*

Harry's wand is more valuable than [Hermione's [~~wand~~]].

##### b. *Plural demonstrative*

These hippogriffs like dead rats more than [those [~~hippogriffs~~]].

##### c. *Each and all*

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<sup>4</sup>I adopt this term throughout this chapter, as it is a classic way to describe ellipses of this type.

We bought some hippogriffs yesterday and [each [~~hippogriff~~]] is fat.

We bought some hippogriffs yesterday and [all [~~hippogriffs~~]] are fat.

d. *Numeral*

Two hippogriffs need less food than [three [~~hippogriffs~~]].

e. *‘Weak’ quantifier*

Harry’s few hippogriffs were no match for [Hermione’s [many [~~hippogriffs~~]]].

I bought some cauldrons yesterday and you bought [some [~~cauldrons~~]], too.

f. *Adjective in ‘the human construction’*

Malfoy likes the rich wizards and Harry likes the poor ~~wizards~~.

g. *Adjective preceding a mass noun*

You should never mix old wine with new ~~wine~~.

h. *Superlative adjective* (cf. Panagiotidis 2002:57)

Of all the hippogriffs, these are [the meanest/the most beautiful [~~hippogriffs~~]].

Next, I list elements that do not license ellipsis in English (9). Because superlatives — but not comparatives — have been discussed by both Kester (1996a, 1996b) and Panagiotidis (2002), I have added the data in (9e), demonstrating that comparatives do not have the same licensing ability as superlatives.<sup>5</sup>

## (9) English non-licensors

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<sup>5</sup>Note that the construction in (9e) should not be confused with comparative deletion/subdeletion, which is exemplified here:

(i) *Comparative deletion, subdeletion* (Lobeck, 1995:37)

a. Herbert is more understanding than Mathilda is [ ].

b. Herbert is more understanding than he is [ ] intelligent.

This structure is quite different from what I am concerned with and beyond the scope of this chapter, so I do not discuss it further. I refer the interested reader to Williams (1977) for an overview of comparative deletion.

a. *Article and possessive pronoun*

\*I fed a/the/his hippogriff yesterday and you fed [a/the/her ~~hippogriff~~] too.

b. *Singular demonstrative*

\*This hippogriff likes dead rats more than [that ~~hippogriff~~].

c. *Every*

\*We bought some hippogriffs yesterday and [every ~~hippogriff~~] is fat.

d. *Adjective*

\*I like a blue cauldron and you like [a [green ~~cauldron~~]].

\*I like two blue cauldrons and you like [two [green ~~cauldrons~~]].

e. *Comparative adjective*

\*Ron made a good potion, but Hermione made [the/a better ~~potion~~].

*cf.* Ron made a good potion, but Hermione made [the/a [better one]].

This data will be essential for later discussion of how to restrict the ellipsis licensing mechanism.<sup>6</sup>

In the next section, I move on to nominal gapping.

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<sup>6</sup>English also has the phenomenon of *one*-insertion, which is arguably tied to ellipsis because it is licensed in a similar environment. *One*-insertion occurs in scenarios where ellipsis cannot be licensed (*i.e.* those in (9)); it behaves as a noun:

(i) I saw [several cats] on the step. But [the black one] went away. (Günther, 2013:51)

*cf.* \*I saw several cats on the step. But the black ~~eat~~ went away.

Günther (2013) argues that the licensing conditions of *one* are in alternative distribution with elided nouns. *One*-insertion differs from elided nouns in three ways (p. 55):

(2) a. It has a phonological form, *one*

b. It hosts number morphology, singular *one* or plural *ones*

c. It is incompatible with a mass reading

*e.g.* ‘\*The advice you gave was more useful than the one I received from the Dean.’ [advice = mass]

Günther (2013) argues for an account where *one* is always inserted in ellipsis environments and is deleted when it is not necessary. Since *one*-insertion plays a minimal role in what I discuss in this chapter, I leave the matter to this footnote and refer the interested reader to Günther for a detailed discussion.

### *Gapping*

The phenomenon of NP gapping is exemplified in (10) (Jackendoff, 1971; Johnson, 1996; Yoshida, 2005; Yoshida et al., 2012)<sup>7</sup>:

- (10) Hermione read Harry's book of poems and [Ron's ~~book~~ [of haikus]].

Nominal gapping is possible both when the DP is in subject position (11) and when it is in object position (12):<sup>8</sup>

- (11) ?Harry read several books on linguistics but Chomsky's ~~book~~ on syntax was by far his favorite.

- (12) Harry read two books on quidditch and Ron read three ~~books~~ on the Dark Arts.

Older discussions of nominal gapping argue that it is not nominal ellipsis (Jackendoff, 1971, 1977).<sup>9</sup> The view I take here is the opposite: nominal gapping **is** nominal ellipsis, as argued explicitly by Yoshida et al. (2012).<sup>10</sup>

In what follows, I review data from Yoshida et al. (2012) (with some additions) that demonstrates that gapping is possible in every instance where ellipsis is licensed and, contrastively, that there are no instances of gapping where ellipsis is disallowed.

<sup>7</sup>See also Lobeck (2007) for a summary of previous accounts.

<sup>8</sup>Presumably this could extend to adjuncts as well:

(i) ?I baked a cake for Susan's birthday last week and Harry baked pie for Margie's ~~birthday~~ last month.

The reading seems somewhat degraded but perhaps this is due to the sheer weight of the adjoining elements.

<sup>9</sup>See also Johnson (1996, 2000, 2009) for an alternative view of gapping in general (VP gapping). Although Johnson argues that verbal gapping is ATB-movement, he does not explicitly assume that the same analysis applies to nominal gapping (nor does he imply that it is a correct assumption)

<sup>10</sup>Though it will not be of direct relevance here, there are those who argue that verbal gapping is also ellipsis: Sag (1980), Pesetsky (1982), Jayaseelan (1990), Coppock (2001), Yoshida (2005), Toosarvandani (2013), and Yoshida et al. (2012). I do not make any assumptions about the status of verbal gapping.

The data in (13) and (14) are from Yoshida et al. (2012) unless printed in boldface, which indicates new additions. Each example consists of an ellipsis construction followed by its gapped counterpart.<sup>11</sup>

(13) English nominal gapping licensors

a. *Saxon Genitive*

- (i) Harry's wand is more valuable than [Hermione's [~~wand~~]].
- (ii) Harry's wand from Ollivander's shop is more powerful than Krum's ~~wand~~ from Gregorovitch's shop.

b. *Plural demonstrative*

- (i) These hippogriffs like dead rats more than [those [~~hippogriffs~~]].
- (ii) These hippogriffs with blue wings like dead rats more than those ~~hippogriffs~~ with red wings.

c. *Each and all*

- (i) We bought some hippogriffs yesterday and [each/all [~~hippogriff~~]] is/are fat.
- (ii) We bought some hippogriffs yesterday and **each**/all ~~hippogriff~~ with blue wings is/are fat.

d. *Numeral*

- (i) Two hippogriffs need less food than [three [~~hippogriffs~~]].
- (ii) Two hippogriffs with huge appetites need more food than three ~~hippogriffs~~ with dietary restrictions.

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<sup>11</sup>Yoshida et al. (2012:488) consider instances of gapping under *all* to be fully grammatical, using the following as an example:

(i) The books are new, and all ~~books~~ of music are on sale.

Though this judgment may be subject to (i) idiolectal differences and (ii) differences in the nature of the NP complement, for the purpose of simplicity I follow their judgment.

e. *‘Weak’ quantifier*

- (i) Harry’s few hippogriffs were no match for [Hermione’s [many [~~hippogriffs~~]]].
- (ii) Harry’s few hippogriffs with blue wings were no match for Hermione’s **many** ~~hippogriffs~~ with red wings.

f. *Adjectives in ‘the human construction’*

- (i) Malfoy likes the rich wizards and Harry likes the poor ~~wizards~~.
- (ii) ?Malfoy likes the rich wizards from London and Harry likes the poor ~~wizards~~ from Devon.

g. *Superlative*

- (i) Of all the hippogriffs, Harry’s are the meanest ~~hippogriffs~~.
- (ii) Of all the hippogriffs, Harry’s are the meanest ~~hippogriffs~~ in Britain.

(14) English non-licensors (nominal gapping)

a. *Article and possessive pronouns*

- (i) \*I fed a/the/his hippogriff and he fed [a/the/her [~~hippogriff~~]].
- (ii) \*I fed a/the/**his** hippogriff with red wings and he fed a/the/**her** ~~hippogriff~~ with blue wings.

b. *Singular demonstrative*

- (i) \*This hippogriff likes dead rats more than [that [~~hippogriff~~]].
- (ii) \*This hippogriff with blue wings likes dead rats more than that ~~hippogriff~~ with red wings.

c. *Every*

- (i) \*We bought some hippogriffs yesterday and [every [~~hippogriff~~]] is fat.
- (ii) \*We bought some hippogriffs yesterday and every ~~hippogriff~~ with blue wings is fat.

d. *Descriptive Adjective*

- (i) \*I like a blue cauldron and you like [a [green [~~cauldron~~]]].
- (ii) \*I like a blue cauldron from Wales and you like [a [green [~~cauldron~~ from Scotland]]].

e. *Comparative Adjective*

- (i) \*Ron made a good potion, but Hermione made the/a better ~~potion~~.
- (ii) \***Ron made a good potion for warts, but Hermione made [the/a [better [~~potion~~]] for warts.**

The bolded data does not yield anything surprising, but completes the paradigm.

I summarize a comparison of English NPE and gapping in the following table:



## (15) Licensing environments for NPE and gapping in English

DP Element	NPE?	Gapping?
Saxon Genitive	Yes	Yes
Possessive Pronoun	No	No
Demonstratives		
Singular	No	No
Plural	Yes	Yes
Quantifiers		
Universal <i>every</i>	No	No
Universal <i>all</i>	Yes	Yes
Distributive <i>each</i>	Yes	Yes
<i>Many/some, etc.</i>	Yes	Yes
Numerals	Yes	Yes
Articles		
Definite <i>the</i>	No	No
Indefinite <i>a</i>	No	No
Adjectives		
Descriptive	No	No
Human const.	Yes	Yes
Superlative	Yes	Yes
Comparative	No	No

As the judgments line up with no notable variation (see, however, footnote 11 on page 43), the data from Yoshida et al. and the additional data presented here show clearly that nominal gapping is to be expected in any scenario in which nominal ellipsis is licensed.

As I will be proposing a mechanism that should be crosslinguistically extendable, in the next section I present data from the second language under consideration — French. I

have selected French for a few reasons. From a theoretical perspective, French is different from English in that it is a Romance language in which N-raising is an active mechanism. As Yoshida et al. (2012:493) argue, languages with N-raising have different options with respect to how gapping is licensed and derived. In brief, because head-raising in general is possible in Romance languages, head-raising for the purpose of, for example, ATB-movement (an alternative option to the ellipsis analysis of gapping) is theoretically possible. Empirically speaking, gapping in French does not appear to have been previously explored; at minimum, no full paradigms are readily available.

### 2.2.2 French

In this section I present the data on French nominal ellipsis and gapping simultaneously. As the simultaneous presentation shows, the pattern noted with the English data is — for the most part — extended to French. From the licensor/non-licensor paradigm I deliberately exclude the universal quantifier *tout*, as ellipsis and gapping do not have identical distributions. I discuss this as well as some brief facts about adjectival licensing of ellipsis after the general presentation of data.

For the paradigms in (16) and (17), the (i) examples are nominal ellipses and the (ii)/(iii) examples are nominal gaps. Most examples of **nominal ellipsis** (i) are from Lobeck (1995) and Sleeman (1993, 1996). From what I have been able to find, there is no current research on nominal gapping in French. Unless otherwise noted, the **nominal gapping** examples (ii)/(iii) are judgments from a native speaker of French (a native of Brittany).

I begin with the licensors of nominal ellipsis and nominal gapping.

#### (16) French nominal ellipsis/gapping licensors

##### a. Numeral

- (i) J’ai acheté trois livres hier, et [deux ~~livres~~] sont vraiment intéressants.

I bought three books yesterday, and [two ~~books~~] are truly interesting. (Lobeck, 1995:130)

- (ii) J'ai acheté trois livres hier, et [deux ~~livres~~ de Chomsky] sont vraiment intéressants.  
I bought three books yesterday, and [two ~~books~~ by Chomsky] are truly interesting.

b. *'Weak' quantifier*

- (i) J'achetais beaucoup de livres et [plusieurs/aucun ~~livre(s)~~] (ne) sont intéressants.  
I bought a lot of books and [several/none ~~books~~] are interesting. (Lobeck, 1995:132)
- (ii) J'achetais beaucoup de livres et [plusieurs/aucun ~~livre(s)~~ de Chomsky] (ne) sont intéressants.  
I bought a lot of books and [several/none ~~books~~ by Chomsky] are interesting.

c. *Descriptive adjective (partitive/specific)*

- (i) De ces robes, je préfère [la ~~robe~~ verte foncée].  
Of these dresses, I prefer the green deep  
'Of these dresses, I prefer [the deep green (one)].' (Sleeman, 1996:33)
- (ii) De ces robes, je préfère [la ~~robe~~ verte foncée de chez Chanel].  
Of these dresses, I prefer the green dark of Chanel  
'Of these dresses, I prefer [the dark green ~~dress~~ by Chanel].'
- (iii) De ces robes, je préfère [la ~~robe~~ verte foncée de Robert].  
Of these dresses, I prefer the green dark of Robert  
'Of these dresses, I refer [Robert's dark green ~~dress~~].'

d. *The human construction* <sup>12</sup>

- (i) Le grand garçon de Nice jouait avec le petit.  
The big boy from Nice was-playing with the little (one). (Lobeck, 1995:132)
- (ii) ?Le grand garçon de Nice jouait avec le petit de Paris.  
The big boy from Nice was-playing with the little (one) from Paris.

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<sup>12</sup>My consultant notes that in *the human construction*, *petit* is understood as a **noun**, not an adjective.

e. *Superlative*

- (i) De ces filles, Hermione est [la plus intelligente ~~fil~~e].  
 Of these girls, Hermione is [the most intelligent ~~girl~~]. (*cf.* Sleeman, 1993:273)
- (ii) Hermione est la fille plus intelligente dans la classe et...  
 Hermione is the girl most intelligent in the class and...  
 ...Pansy est [la ~~fil~~e moins intelligente [dans l'école entière]].  
 ...Pansy is [the ~~girl~~ least intelligent [in the entire school]].

Next, I present the non-licensors of nominal ellipsis/gapping. In French, the indefinite article is the numeral *un* (which, being a numeral, licenses ellipsis), therefore for the purpose of discussion I will be treating it as a numeral rather than an article. Because comparative constructions involving nominal ellipsis do not appear to be present in the existing French literature, I have provided the example in (17h).<sup>13,14</sup>

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<sup>13</sup>To create a comparative construction involving ellipsis is a little more complicated due to the fact that the form is the same as a superlative except the definite article is not present:

- (i) De ces filles, Hermione est plus intelligente que Parvati.  
 Of these girls, Hermione is more intelligent than Parvati.

By using an indefinite *une*, it is possible to set up a construction that deletes a head noun:

- (ii) Des ces filles, Hermione est une fille plus intelligente que Parvati.  
 Of these girls, Hermione is a girl more intelligent than Parvati.
- (iii) \*De ces filles, Hermione est une fille plus intelligente que Parvati.  
 Of these girls, Hermione is a ~~girl~~ more intelligent than Parvati.

Unfortunately, the fact that the indefinite article is also the numeral for one can skew judgments, so some speakers may not accept ((ii)); ((iii)) is decidedly disallowed.

<sup>14</sup>Lobeck marks *chacun* as being followed by an elided constituent [e], arguing that it is a partitive counterpart of *chaque*. Arguably, however, the former does not involve ellipsis since it behaves like a pronoun in having gender matching and is followed only by nominal complements:

- (i) chacune \*(de mes) filles (Lobeck, 1995:127)

## (17) French nominal ellipsis/gapping non-licensors

a. *Demonstrative (singular)*

- (i) \*J'ai acheté un livre hier, mais [ce
- ~~livre~~
- ] est plus intéressant.

I bought a book yesterday, but [this ~~book~~] is more interesting. (Lobeck, 1995:130)

- (ii) \*J'ai acheté un livre de cent pages hier, mais [ce
- ~~livre~~
- de cinquante pages] est plus intéressant.

I bought a book of a hundred pages yesterday, but [this ~~book~~ of fifty pages] is more interesting.

b. *Demonstrative (plural)*

- (i) \*J'ai acheté un livre hier, mais [ces
- ~~livres~~
- ] sont plus intéressants.

I bought a book yesterday, but [these ~~books~~] are more interesting. (Lobeck, 1995:130)

- (ii) \*J'ai acheté un livre de Chomsky hier, mais [ces
- ~~livres~~
- de Rowling] sont plus intéressants.

I bought a book by Chomsky yesterday, but [these ~~books~~ by Rowling] are more interesting.

c. *Chaque (distributive quantifier)*

- (i) \*J'achetais beaucoup de livres, et [chaque
- ~~livre~~
- ] est intéressant.

I bought many books, and [each ~~book~~] is interesting. (Lobeck, 1995:132)

- (ii) \*J'achetais beaucoup de livres et [chaque
- ~~livre~~
- avec une couverture] est intéressant.

I bought many books and [each ~~book~~ with a cover] is interesting.

d. *Definite article (singular)*

- (i) \*J'ai acheté un livre hier, mais [le
- ~~livre~~
- ] n'est pas intéressant.

I bought one book yesterday, but [the ~~book~~] isn't interesting. (Lobeck, 1995:130)

- (ii) \*J'ai acheté un livre hier, mais [le ~~livre~~ de Chomsky] n'est pas intéressant.  
I bought one book yesterday, but [the ~~book~~ by Chomsky] isn't interesting.

e. *Definite article (plural)*

- (i) \*J'ai acheté deux livres hier, mais [les ~~livres~~] ne sont pas intéressants.  
I bought two books yesterday, but [the ~~books~~] aren't interesting. (Lobeck, 1995:130)
- (ii) \*J'ai acheté des livres hier, mais [les ~~livres~~ de Chomsky] ne sont pas intéressants.  
I bought two books yesterday, but [the ~~books~~ by Chomsky] aren't interesting.

f. *Possessive pronoun*

- (i) \*J'ai acheté une voiture hier, mais [sa ~~voiture~~] est plus intéressante.  
I bought a car yesterday, but [her ~~car~~] is more interesting. (Lobeck, 1995:130)
- (ii) \*J'ai acheté une voiture de Peugeot hier, mais [sa ~~voiture~~ de Volkswagen] est plus intéressante.  
I bought a car by Peugeot yesterday, but [her ~~car~~ by Volkswagen] is more interesting.

g. *Descriptive adjective (non-partitive adjective)*

- (i) \*Le garçon intelligent jouait avec [le ~~garçon~~ stupide].  
The boy intelligent was playing with the stupid  
'The intelligent boy was playing with [the stupid (one)].' (cf. Sleeman, 1993:275-276)
- (ii) \*Le garçon intelligent de Nice jouait avec [le ~~garçon~~ stupide de Paris].  
The boy intelligent from Nice was playing with the stupid from Paris  
'The intelligent boy from Nice was playing with [the stupid (one) from Paris].'

h. *Comparative adjective*

- (i) \*De ces filles, Hermione est [une ~~fil~~e plus intelligente que Pansy].  
Of these girls, Hermione is [a ~~girl~~ more intelligent than Parvati].

- (ii) \*De ces filles (de quelques écoles), Hermione est [une ~~file~~ de Hogwarts plus intelligente que Pansy].

Of these girls (from several schools), Hermione is [a ~~girl~~ from Hogwarts more intelligent than Pansy].

A few notes are in order with respect to descriptive adjectival licensing of ellipsis. Sleeman (1993, 1996) (building on Barbaud, 1976 and Ronat 1977) has observed that adjectival licensors in French bear a ‘partitive’ interpretation. Having a partitive interpretation, in the traditional sense, is being able to combine with a partitive PP, as shown in the examples in (16c).

However, some non-partitive adjectives, which cannot combine with partitive PPs (18), do allow ellipsis (19).

- (18) \*Je préfère l’autre de ces robes. (Sleeman, 1996:33)

I prefer the other of these dresses.

- (19) Je prends l’autre (Sleeman, 1996:15)

I (will) take the other (one).

This discrepancy causes Sleeman to propose that it is not simply partitivity that allows adjectives to license ellipsis, but instead some sense of specificity (“potentially but not necessarily specific,” 1996:34). This follows Enç (1991), who links partitivity to specificity.<sup>15</sup>

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<sup>15</sup>In a similar vein, there is extensive discussion on the use of *en*-insertion in ellipsis environments where the elided NP is indefinite and singular. I briefly relegate discussion of this phenomenon to this footnote as it is not directly relevant to the discussion at hand but is still a part of nominal ellipsis in French.

In ((i)a), *(de) livres* ‘(of) books’ has been replaced by *en*, but the numeral *trois* ‘three’ remains. The example in ((i)b) shows a non-ellipsis construction.

- (i) a. Jean en a lu trois.  
       Jean en has read three. (Pollock, 1998:301)  
       b. Jean a lu trois (de) livres.  
       Jean has read three (of) books. (Pollock, 1998:301)

At this point, we are left with the universal quantifier *tout*. In ellipsis contexts, the universal quantifier *tout* is licensed when the quantifier is in subject position.

(20) *Tous (universal quantifier)* ((a) Lobeck, 1995:132; (b) not in literature)

a. J'achetais beaucoup de livres et [tous [~~livres~~]] sont intéressants.

I bought many books and [all [(the) ~~books~~]] are interesting.

Thus *en*-insertion appears to be a type of ‘rescue’ mechanism for the ‘ellipsis’ of indefinite NPs, similar to *one*-insertion in English.

As a final note on *en*, the behavior of indefinite objects is clearly contrasted with that of indefinite subjects; namely, *en* does not need to be inserted in an ellipsis context if it is the subject that is being elided.

(ii) *Context: ‘I met three gentlemen yesterday.’*

Trois parlent litalien.

‘Three speak Italian.’ (*cf.* Sleeman, 2003:119)

*cf.* \*\*Trois en parlent litalien.

We can see in the translation line for ((ii)) that English does not exhibit the same asymmetry.

There are several different functional situations of *en*, as described by Pollock (1998) adverbial clitic *en*, adnominal *en*, and quantitative *en*. Quantitative *en*, as shown in ((i)) is of concern to the current discussion. As an adverbial clitic, *en* functions as the clitic counterpart of an adverbial such as *de ce fait* ‘thereby’ in ((iii)).

(iii) a. Jean en a avalé son chapeau.

Jean EN has swallowed his hat. (Pollock, 1998:300)

b. De ce fait Jean a avalé son chapeau.

Thereby Jean has swallowed his hat. (Pollock, 1998:300)

Adnominal *en* takes the place of an adnominal complement, such as *de ce livre* ‘this book’ in ((iv)).

(iv) a. Jean en a lu la première partie.

Jean EN has read the first part. (Pollock, 1998:300)

b. Jean a lu la première partie de ce livre.

Jean has read the first part of this book. (Pollock, 1998:300)

Nominal gapping also requires *en*-insertion in indefinite objects, as shown in ((v)).

(v) *‘En’-insertion in gapping*

a. \*J’ai acheté un livre de Chomsky et Marie a acheté [~~deux livres~~ de Polinsky].

I bought a book by Chomsky and Marie bought [two ~~books~~ by Polinsky].

b. J’ai acheté un livre de Chomsky et Marie en a acheté deux de Polinsky.

I bought a book by Chomsky and Marie EN bought two by Polinsky.



b. \*Jachetais beaucoup de livres et j'aime tous [~~(les) livres~~].

I bought many books and I like all [~~(the) books~~].

The examples in (21b/c) and (22b) show that gapping below *tout* is disallowed in both subject **and** object positions. The (a) examples are ellipses.<sup>16</sup>

(21) *Gapping below 'tout' subject position*

a. J'ai acheté beaucoup de livres et [tous ~~livres~~] sont intéressants.

I bought a lot of books and all (the) ~~books~~ are interesting.

b. \*J'ai acheté beaucoup de livres et [tous ~~livres~~ de Chomsky] sont intéressants.

I bought many books and [all ~~books~~ of Chomsky's] are interesting.

c. \*J'ai acheté beaucoup de livres de Chomsky et de Polinsky et...

I bought many books of Chomsky's and of Polinsky's and...

...[tous ~~livres~~] de Chomsky sont intéressants.

...[all ~~books~~] of Chomsky's are interesting.

<sup>16</sup>My consultant notes that gapping in subject position (in general) is slightly degraded, as demonstrated in ((i)) for adjectives and ((ii)) for numerals. I do not discuss this point further, as for both of these, the construction is acceptable in spoken but not written French, suggesting that the degradation may be pragmatic in nature.

(i) J'ai acheté beaucoup de robes...

I bought many dresses...

a. ...mais la robe rouge de chez Chanel m'a coûté le plus.

...but the dress red by Chanel cost me the most.

b. ?...mais la ~~robe~~ rouge (de chez Chanel) m'a coûté le plus.

...but the ~~dress~~ red (by Chanel) cost me the most.

(ii) a. J'ai vu cinq hommes et trois parlent l'italien.

I saw five men and three speak Italian.

b. J'ai vu cinq hommes et trois hommes du parlement parlent l'italien.

I saw five men and three men of parliament speak Italian.

c. ?J'ai vu cinq hommes et trois ~~hommes~~ du parlement parlent l'italien.

I saw five men and three ~~men~~ of parliament speak Italian

(22) *Gapping below ‘tout’ object position*

a. \*J’ai acheté beaucoup de livres et j’aime [tous ~~livres~~].

I bought a lot of books and I love [all (the) ~~books~~].

b. \*J’ai acheté beaucoup de livres et j’aime [tous ~~(les)~~ livres de Chomsky].

I bought many books and I like [all (the) books of Chomsky’s].

*Cf.* J’ai acheté beaucoup de livres et j’aime tous ce de Chomsky.

2.2.3 *Summary of data*

As I have reviewed in the previous two subsections, ellipsis and gapping licensing in English and French appear to involve the same sets of elements, with a few variations.

Importantly, almost all of the data support the conclusion that gapping is nominal ellipsis in both English and French, given the licensing environments are almost identical, with only slight discrepancies. The table in (23) summarizes.

## (23) Licensing environments for NPE and gapping in French

DP Element	English NPE	Gapping	French NPE	Gapping
<b>Saxon Genitive</b>	<b>Yes</b>	<b>Yes</b>	–	–
Possessive Determiner	No	No	No	No
Demonstratives				
Singular	No	No	No	No
<b>Plural</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No</b>
Quantifiers				
Universal <i>every</i>	No	No	-	-
<b>Universal <i>all/tout</i></b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>
<b>Distributive</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No</b>
Weak	Yes	Yes	Yes	Yes
Numerals	Yes	Yes	Yes	Yes
Articles				
Definite	No	No	No	No
Indefinite	No	No	–	–
Adjectives				
<b>Descriptive</b>	<b>No</b>	<b>No</b>	<b>Yes</b>	<b>Yes</b>
Human const.	Yes	Yes	Yes	?Yes
Superlative	Yes	Yes	Yes	Yes
Comparative	No	No	No	No

In the sections that follow I present a mechanism that can account for these discrepancies between English and French as well as language-internal puzzles that arise, to the exclusion of the distributive *chaque* in French.<sup>17</sup>

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<sup>17</sup>See Footnote 14 - Lobeck's suggestion that *chaque* must occur as its counterpart *chacun* to be considered 'partitive' suggests that this supposed quantifier's behavior falls more in line with adjectives when it comes to ellipsis contexts.

The data presented in this section leads us to the following question:

- (24) Can any existing accounts of ellipsis explain the observed data involving English and French ellipsis **and** gapping?

In the next section I briefly review the existing types of accounts for nominal ellipsis, answering the preceding question with a negative. In particular, I reveal that current accounts do not simultaneously (i) account for the Saxon Genitive licensing of ellipsis and (ii) unify the mechanism of English and French ellipsis licensing.

#### 2.2.4 *The licensing of nominal ellipsis*

What exactly licenses nominal ellipsis has been a subject of intense debate since original discussions of NPE in the 1970s. Accounts of NPE licensing range from those who suggest that features are responsible for ellipsis-licensing (*e.g.* Lobeck, 1995; Sleeman, 1996) to those who argue that particular domains are eligible for ellipsis (*e.g.* Bošković, 2014; Gengel, 2007). In this section, I present a representative subset of accounts for ellipsis licensing in NPs, indicating the advantages and disadvantages of each.

The following table is a sample of different perspectives of NPE licensing.<sup>18</sup>

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<sup>18</sup>It is important to note that contrast conditions are rather essential for ellipsis licensing because of the contrastive nature of remnants. This category is devoted to accounts that rely heavily on the contrastiveness of elements (placing less emphasis on non-contrastive, deletable things). This is somewhat intuitive (*i.e.* we don't necessarily 'care' about deleted things), but has its downsides. Since contrastiveness is an assumption that must be made for the purpose of ellipsis licensing, it does not necessarily occupy a category of ellipsis licensing on its own but instead contributes to all others. For this reason, I do not discuss acceptance/rejection of contrast conditions here.

## (25) Different Perspectives on NPE Licensing

Quantification	Partitivity	Sleeman, 1993, 1996
	Plurality	Günther, 2013
Definiteness		Cornilescu & Nicolae, 2012
Phasehood		Bošković, 2014; Gengel, 2007; Rouveret, 2011
(Heavy) Contrast Conditions		Eguren, 2010; Giannakidou & Stavrou, 1999
Morphological Markers	Selection	Jackendoff, 1971; Kester, 1996a, 1996b; Lobeck, 1995
	Other	Alexiadou & Gengel, 2012; Bernstein, 1993a
Other		López, 2000 (D-linking); Saab, 2014 (size of ellipsis site); Saab & Lipták, 2016

In the following subsections, I review each category in brief, discussing the most recent instantiations of each type of proposal.<sup>19</sup>

**Quantification.** Sleeman (1993, 1996) argues that partitivity licenses noun phrase ellipsis in French. This interpretation has served as a basis for quantification-based accounts of nominal ellipsis. As discussed extensively in Günther (2013), the idea of ‘partitivity’ is too vague to be extended crosslinguistically; she instead proposes that ellipsis is licensed by a countability requirement (in addition to a contrast condition). This approach emulates a classifier-like approach to ellipsis: specifically, DPs without this a count projection such as NumP do not license ellipsis.

Günther’s account elegantly captures all instances of ellipsis where NumP appears to be the licensing head. However, it does not explain why ellipsis is licensed by the Saxon

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<sup>19</sup>Except Heavy Contrast Conditions. See previous footnote.

genitive in English.<sup>20</sup> The reason it does not work for the Saxon Genitive is the simple fact that possessors can license ellipsis regardless of whether they are singular, plural or mass, meaning countability is irrelevant:

- (26) a. Hermione's textbook is more useful than Ron's ~~textbook~~. *Possessor=SG*  
 b. The students' wands were more beat up than the teachers' ~~wands~~. *Possessor=PL*  
 c. Wine's best friend is chocolate, while beer's ~~best friend~~ is bacon. *Possessor=MASS*

**Definiteness.** Cornilescu and Nicolae (2012) make definiteness a large aspect of ellipsis licensing in Romanian by following the logic that (i) definiteness is required to establish anaphoricity and (ii) anaphoricity is what makes deletion licit in DPs.

An apparent problem for ellipsis-licensing in this manner is that indefinite quantifiers such as *some* or *any* may also license ellipsis:

- (27) Harry got three cards from admirers but Ron didn't get any ~~cards from admirers~~.

Cornilescu and Nicolae argue that even constructions such as (27) contain silent definite complements. In the following examples from Romanian, the demonstrative in (29) and (30) share the same definite morphological marker *ia* despite the absence of the definite noun in (30). As shown by the contrast in marking between (28) and (29)/(30), the latter two examples are definite (Cornilescu & Nicolae, 2012:1104).

- (28) acești doi copii

these two children

- (29) copiii aceștia doi

children.the these two

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<sup>20</sup>Günther (2013:59) leaves the issue of the Saxon genitive open.

(30) *aceștia doi*

these two

Unfortunately, this explanation does not extend to English for three reasons. First, definiteness is not expressed on nouns and there is no direct evidence for definiteness occurring anywhere lower than D. Second, many elements that mark definiteness in English do not license ellipsis, such as definite articles and possessive pronouns, as described above. Third, we run into issues in cases of forced definiteness, as in (31b):

(31) a. I'll buy two broomsticks and you'll buy three ~~broomsticks~~.

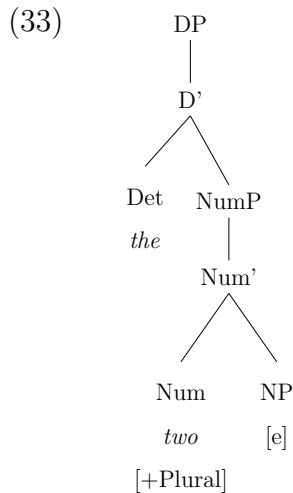
b. \*I'll buy the two broomsticks and you'll buy the three ~~broomsticks~~.

Thus definiteness may not be the licensing factor for ellipsis.

**Morphological Markers.** Though the accounts that fall under this category may vary in a number of ways, the primary determiner of ellipsis licensing is some manner of morphological marking. For example, Lobeck (1995) identifies three morphologically-marked features in English *plurality*, *possessiveness*, and *partitivity* that can license ellipsis. Elided constituents must be properly governed by the elements bearing these features.

For example, in the sentence in (32) the NP is governed by the head Num. Num bears the morphologically-marked (“strong”) feature [+Plural], making it a possible ellipsis licenser. The structure in (33) shows the configuration, where [e] represents the elided NP (Lobeck, 1995:89).

(32) Both students attended the rally, and [<sub>DP</sub> the two [e]] felt it was important.



Even though Lobeck's account is clearly empirically-justified, Saab (2014) and others argue that apparent morphological licensing is simply the reflex of syntactic configuration (*i.e.* the **configuration** is responsible for the licensing of ellipsis, rather than the presence of strong features). I present Saab's argument in more detail in **Other configurations** below.

**Phasehood.** One perspective of the ellipsis licensing as a structural configuration is that of phases as ellipsis sites. Gengel (2007) argues for ellipsis by phases, but focuses only on the clausal domain. Bošković (2014), on the other hand, argues for a phase-based count of ellipsis whereby the maximal projection of a lexical category (VP, PP, AP, DP) is a phase, and only phases and phase complements can undergo ellipsis.

Phase-based accounts are convenient in that they rely only on structural determination; further, in Bošković's account, for example, the possibility of eliding phases or complements can be used to explain why certain constructions are not elided. However, there are a few inescapable issues with a Bošković-style account. First, it's not clear what determines whether a full phase or its complement will be elided, especially in the nominal domain. Second, in NPE constructions where more than one functional element remains, it is neither the DP phase nor its complement that is being elided:

- (34) I'll feed [DP these [NumP two [NP ducks]]] and you can feed [DP those [NumP three [NP ~~ducks~~]]].



Finally, the issue of phases being the determiners of elidable domains is complicated by the fact that it is undecided whether (i) DP is a phase and/or (ii) there is a phase inside DP.

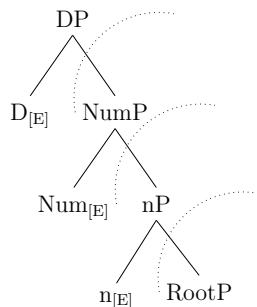
**Other configurations.** Saab (2014) argues that the ellipsis-licensing head ‘selects’ the size of the elliptical site; depending on the elliptical domain, the morphological effects as noted in, for example, Lobeck, follow naturally.

Saab argues that there are (crosslinguistically) three ellipsis sites in DP. The construction in (36) marks ellipsis heads with [E] and their respective ellipsis domains (*cf.* Saab, 2014:26).

(35) Ellipsis sites in DP

- a. Num as licensing head selecting *n*P
- b. D as licensing head selecting NumP
- c. *n* as licensing head selecting RootP

(36) Structural configuration



In languages where Num selects *n*P, such as Hungarian, number and case morphemes are stranded, since they fall outside of the ellipsis site:

(37) Mari a régi kis ház-ak-at látta. Én az új nagy-[]-\*(ok-at).

Mari the old all house-PL-ACC saw I the new big-PL-ACC

‘Mari saw the old small houses and the big new ones.’ (Saab, 2014:30)

In languages where the stranded affixes do not occur, such as Spanish and other Romance languages, agreeing morphemes appear on determiners:

- (38) ¿Qué/cuáles libros de Borges y \*qué/cuáles libros de Bioy...?

What/which.PL books of Borges and \*what/which.PL books of Bioy

‘Which books of Borges and which ones of Bioy...?’ (Saab, 2014:30)

Second, in languages where D selects NumP such as English, there is an absence of government effects on number (meaning agreement with the following verb can be either singular or plural):

- (39) John’s book is on the table and Peter’s ~~book(s)~~ is/are on the desk.

Finally, in languages where *n* selects RootP, such as Japanese, the genitive remnant *no* licenses deletion, as in (40).

- (40) [Rooma no hakai]-wa [Kyooto no ~~hakai~~]-yorimo hisan data

Rome *no* destruction-TOP Kyoto *no* ~~destruction~~-than miserable was

‘Rome’s destruction was more miserable than Kyoto’s.’ (Saab, 2014:32)

In this manner, Saab’s account can capture the crosslinguistic effects of nominal ellipsis.

A few questions remain with this type of account. First, there is no clear way to determine where an [E]-feature will appear crosslinguistically. Second, and perhaps more relevant for English, is that NumP ellipsis is often disallowed (*i.e.* ellipsis is not possible under determiners, some quantifiers, and possessive pronouns, as discussed in section 2.2.1). Identity alone cannot predict this restriction, otherwise we might expect all quantifiers to license ellipsis.

In the previous paragraphs I have discussed the strengths of former accounts as well as their weaknesses. One resounding problem in the exiting literature is that modern accounts

seem to have difficulty explaining why the Saxon genitive but no other ‘D-elements’ in English license NPE. From this discussion I raise the following two research questions:

- (41) a. Can nominal ellipsis be given a unified account that explains discrepancies between English and French?
- Can we derive the Saxon Genitive licensing of ellipsis in English without positing an *ad-hoc* solution?
  - Can we derive French adjectival ellipsis licensing as well as the pattern of non-licensing of demonstratives?
- b. Is the ellipsis mechanism proposed extendable to English and French gapping?

In the next section I argue for an account of nominal ellipsis and gapping in English and French based on a system of Mutual Agree.

### **2.3 A Mutual Agree account of nominal ellipsis in English**

In this section I present a unified account of nominal ellipsis and gapping, taking into consideration the old and new data from the preceding section. First, I argue that restricting the licensing environments for nominal ellipsis is dependent upon two factors: (i) the timing of the ellipsis and (ii) the licensing and ellipsis heads. I then briefly review an account of ellipsis in the clausal domain that makes a similar case (Aelbrecht, 2009). In section 2.3.1 I adopt the general idea behind Aelbrecht’s mechanism — that ellipsis is licensed as a reflex of Agree — but make several key changes: (i) ellipsis licensing requires the sharing of a contrastive focus feature, (ii) the contrastive focus feature can hypothetically originate on any head in the DP (not just the licensor or ellipsis head), and (iii) ellipsis occurs in a normal probe-goal configuration where the probe is hierarchically above the goal. I demonstrate how all nominal ellipses in English can be accounted for by using this mechanism. In section 2.3.3 I briefly discuss the role of identity. Finally, I address how the mechanism prevents over-licensing of ellipsis.

### 2.3.1 *Nominal ellipsis as Agree and immediate Spell-out*

In this section I present two main arguments. First, I argue that the timing of nominal ellipsis is such that (null) spell-out occurs at the Merge of a (non-phase) head above the ellipsis licensing head. Second, I argue that the licensing head licenses the deletion of only its complement.

#### *Timing of ellipsis*

There are varying views on the timing of ellipsis, though four primary possibilities can be distinguished. The first possibility is for ellipsis to proceed the moment the ellipsis head is Merged (*e.g.* Num in an NP ellipsis construction). The second possibility is that the full derivation is completed and then ellipsis applies to domains that have been marked for deletion; examples include accounts that require the full derivation to be available to determine the size of the domain to be elided (see *MaxElide* by Fiengo & May, 1994; Kennedy, 2002; Merchant, 2008) or accounts based in semantic recoverability (Lobeck, 1995). The third possibility, which is framed in phase theory, is that ellipsis domains coincide with phases, and the Merge of the next higher phase head which normally triggers phonological spell-out triggers deletion/null spell-out (Bošković, 2014, Corver & Van Koppen, 2009, Gengel, 2007, Rouveret, 2011). Finally, the fourth possibility is that a higher head licenses ellipsis of the complement of a lower head upon Merge, though it does not necessarily coincide with a phase head (Aelbrecht, 2009). These options are summarized here:

#### (42) *Timing of ellipsis*

Option A: Spell-out occurs at the Merge of the licensing head

Option B: Spell-out occurs at the end of the derivation

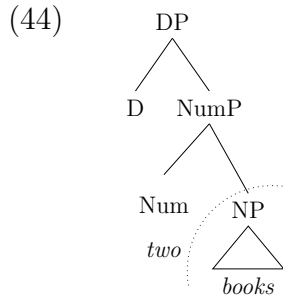
Option C: Spell-out occurs at the Merge of the next phase head

Option D: Spell-out occurs at the Merge of some higher (non-phase) head

On the basis of the following discussion I assume option D to be correct for the nominal domain - that spell-out occurs at the Merge of some higher (non-phase) head.

In order to keep the discussion simple, I first consider only cases of NP ellipsis, *i.e.* ellipses that are apparently licensed by Num. I give the example in (43) to use as a constant throughout the discussion:

- (43) Ron wanted three books and Hermione wanted [<sub>DP</sub> [<sub>NumP</sub> two [<sub>NP</sub> ~~books~~]]].



**Option A: spell-out occurs at the Merge of the licensing head.** If ellipsis occurs when this head is Merged, then no elements should be able to escape ellipsis.

- (45) Ron wanted three books on magic and Hermione wanted [<sub>DP</sub> [<sub>NumP</sub> two [<sub>NP</sub> ~~books~~ [<sub>PP</sub> ~~on magic~~]]]].

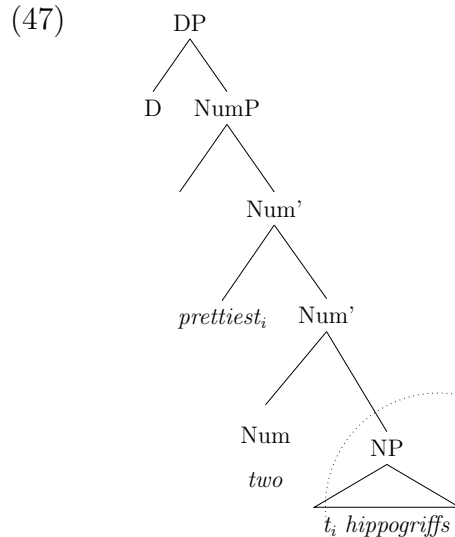
This idea does not work for DP, as two types of elements are able to escape ellipsis: adjectives and right-adjoined PP remnants. I go through each of these in turn.

It is possible for adjectives to intervene between NumP and the ellipsis site, as shown in the following examples:

- (46) *There's a group of hippogriffs of varying beauty*

- a. I'll buy the two prettiest hippogriffs. *No ellipsis*
- b. I'll buy the two prettiest ~~hippogriffs~~. *Ellipsis, no apparent movement of adjective*
- c. I'll buy the prettiest<sub>i</sub> two t<sub>i</sub> ~~hippogriffs~~. *Ellipsis, movement of adjective*

The tree in (47) is for (46c); as shown, the adjectival modifier has moved out of the NP to adjoin to NumP.



Second, gapped remnants are also common. Under an ellipsis account of gapping, as I assume, these remnants will have moved from the ellipsis site to a higher functional projection.

- (48) Harry's wand from Ollivander's shop is more powerful than Krum's ~~wand~~ from Gregorovitch's shop.

I argue that this movement to a higher functional projection is the rightward movement of postnominal modifiers to an adjunct position above NP (*e.g.* NumP). I do this for two primary reasons.

First, Yoshida (2005) and Yoshida et al. (2012) (see also Jayaseelan (1990)) argue for a rightward-movement analysis of gapped remnants on the basis of patterns of P-stranding. Rightward movement, such as Heavy NP Shift, does not allow P-stranding, as shown in (49) (Baltin & Postal, 1996; Ross, 1967; Wexler & Culicover, 1980) By contrast, rightward movement, such as topicalization, does allow P stranding, as shown in (50) Ross (1967).

- (49) a. I talked  $t_{PP}$  yesterday [ $_{PP}$  about [ $_{NP}$  the man I recently met]].

b. \*I talked [<sub>PP</sub> about t<sub>NP</sub>] yesterday [<sub>NP</sub> the man I recently met]. (Yoshida, 2005:391)

(50) a. [<sub>PP</sub> about [the man I recently met]], I talked t<sub>PP</sub> yesterday.

b. [<sub>NP</sub> the man I recently met], I talked about t<sub>NP</sub> yesterday. (Yoshida, 2005:392)

The restriction seen in Heavy NP Shift constructions is paralleled in nominal gaps: prepositions cannot be stranded.

(51) John read Bill's book of music and Mary's ~~book~~ \*(of) poems. (Yoshida et al., 2012:487)

Thus, if gapping involved the leftward movement of PP, it would be unclear why preposition stranding is not allowed. Under a rightward movement account, it is expected as a stranded preposition would fall inside the ellipsis site.

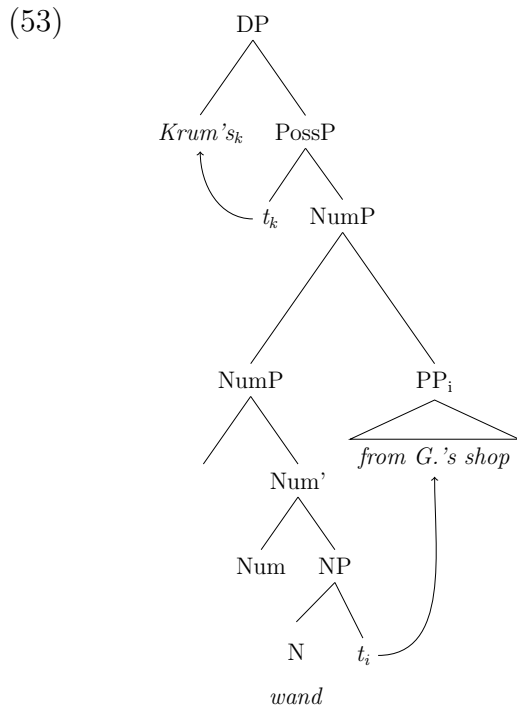
Second, I would like to point out the data in (52). If gapping were leftward movement of PP, it would be challenging to derive examples where a numeral or other low functional element precedes the PP remnant, since leftward movement would cause the PP to adjoin to Num, at its lowest:

(52) a. Ron read two books on potions and Harry read [<sub>DP</sub> [<sub>NumP</sub> Num<sub>three</sub> [<sub>NP</sub> ~~books~~ [<sub>PP</sub> on quidditch]]]].

b. \*Ron read two books on potions and Harry read [<sub>DP</sub> [<sub>NumP</sub> Num<sub>[on quidditch]<sub>i</sub></sub> Num<sub>three</sub> [<sub>NP</sub> ~~books~~ t<sub>i</sub>]]].

In order to allow for this type of movement, *three* would need to raise above PP once PP has adjoined to NumP. There does not seem to be any evidence for this type of movement, though. Therefore, based on these facts and other evidence presented in Yoshida et al. (2012), I assume that gapped remnants are right-adjoined in functional structure.

Using example (48), the tree in (53) demonstrates that *from Gregorovitch's shop* has moved from its initial position:



Thus, not only can elements occur between the ellipsis head and ellipsis site, but right-adjunction also gives evidence that elements can escape from an ellipsis domain.

This evidence indicates that an immediate spell-out option is not feasible for the nominal domain. If the complement of Num were to elide immediately at the Merge of Num, then nothing would escape.

**Option B: spell-out occurs at the end of the derivation** (*Fiengo & May, 1994; Kennedy, 2002; Lobeck, 1995; Merchant, 2008*). As pointed out by Aelbrecht (2009:109): “If ellipsis happens at the end of the derivation, no syntactic differences are expected between an elliptical sentence and its non-elliptical counterpart.”

As it turns out, syntactic differences do occur. If spell-out is postponed to the end of the derivation (as in completion of the entire clause), we should expect some uncommon extraction scenarios. Specifically, any elements that typically move out of the domain via SpecDP, such as *wh*-phrases, should be able to escape ellipsis. As it would happen, we can find counterevidence for this parallelism in the non-extraction of *wh*-phrases.



In (54), I give a gapping construction where the PP modifier *about Voltaire* has escaped ellipsis via right-adjunction to a higher functional projection.

(54) I saw one lecture about Chomsky and you saw two ~~lectures~~ about Voltaire.

The non-ellipsis form of this construction allows the PP to be extracted via movement to the left periphery<sup>21</sup>:

(55) I saw one lecture about Chomsky...

- a. ...[About who(m)]<sub>i</sub> did you see two lectures t<sub>i</sub>?
- b. ...[Who(?/\*m)]<sub>i</sub> did you see two lectures about t<sub>i</sub>?

When the NP is elided, on the other hand, the non-preposition-stranding form is very awkward, and the preposition-stranding form becomes completely unacceptable<sup>22</sup>:

(56) I saw one lecture about Chomsky...

- a. \*/?\*...[About who(m)]<sub>i</sub> did you see two ~~lectures~~ t<sub>i</sub>?
- b. \*...[Who(m)]<sub>i</sub> did you see two ~~lectures~~ about t<sub>i</sub>?

The ungrammaticality in (56b) may possibly be due to the fact that *who* has moved out of an already-moved element, which is restricted due to Freezing Effects, or the restriction on

<sup>21</sup>Depending on the speaker, the construction in (55) may sound better/worse with/without the stranded preposition, hence the use of both (a) and (b) examples. Both are equally possible.

<sup>22</sup>A reviewer notes that the following is also unacceptable:

- (i) \*Which lecture did you see two about Chomsky?

However, the construction in (ii) is fine:

- (ii) Which lecture did you see about Chomsky?

This is related to extraposition of PP, which is a topic I consider in chapter 3 in detail.

moving out of already-moved elements (Takahashi, 1994; Wexler & Culicover, 1980; Yoshida, 2005) (generalized from Wexler and Culicover’s Freezing Principle, which a restriction on movement from subjects). The same cannot be said for (56a); instead, the restriction seems to be on leftward-moving the *wh*-phrase.

I argue that this degradation is a direct result of the fact that ellipsis must occur within the DP derivation. First, the PP modifier is unable to escape the ellipsis domain via *wh*-movement through SpecDP; this occurs because the domain is marked for (null) spell-out and frozen prior to the Merge of the extraction site. I discuss this more below, as it serves as the basis for the mechanism I propose.

Second, the PP modifier cannot first move rightward to escape ellipsis (as we saw with gapping) and then reverse its direction to leftward move out of the DP once SpecDP becomes available. This is also arguably reducible to Freezing Effects. This idea is demonstrated in the following examples. Once the DP *a picture of Chomsky* has been rightward moved around the PP *to Sabbagh*, we cannot proceed with *wh*-movement, as shown in (57b).

- (57) a. You gave  $t_i$  to Sabbagh **a picture of Chomsky<sub>i</sub>**.  
 b. \*Who<sub>i</sub> did you give  $t_i$  to Sabbagh **a picture of  $t_i$** ?  
*cf.* Who<sub>i</sub> did you give a picture of  $t_i$  to Sabbagh?

Given the impossibility of demonstrating that the Freezing Principle can be extended to full constituents (since the re-movement of *about whom* in (56) leaves nothing behind), we might further reduce the restriction to something along the lines of Fox and Pesetsky’s (2004) and Sabbagh’s (2007) *Order Preservation* as proposed for Right Node Raising scenarios, but the general principle remains the same: something prevents a *wh*-constituent from moving

rightward to escape ellipsis and then leftward to escape DP.<sup>23,24</sup>

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<sup>23</sup>I mention *Order Preservation* here given extraposition is subject to strict locality requirements (Ross, 1967), as demonstrated in the following examples from Sabbagh where an extraposed element cannot move completely out of its vP:

- (i) Josh [<sub>vP</sub> returned [ ] to the library for Jamie], **each of the books she checked out last week.** (Sabbagh, 2007:350)
- (ii) \*Max said that he was going to [<sub>vP</sub> return [ ] to the library] yesterday, **each of the books that he checked out last week.** (Sabbagh, 2007:350)

Unlike previous accounts for RNR, which are couched in terms of the Right Roof Constraint (RRC), or a restriction on the upper boundary of movement (Akmajian, 1975; Johnson, 1986; McCloskey, 1999; Ross, 1967, as cited in Sabbagh 2007), *Order Preservation* (Fox & Pesetsky, 2004; Sabbagh, 2007) gives a simple account for restrictions on the basis of ordering constraints.

(iii) *Order Preservation*

The linear ordering of syntactic units is affected by Merge and Move within a Spell-Out Domain, but is fixed once and for all at the end of each Spell-Out Domain. (Sabbagh, 2007:378)

To put in the perspective of right extraposition: as long as the constraint on ordering is obeyed, rightward movement does not have any bounds. This is shown in the contrast between ((iv)a) and ((iv)b); in ((iv)a), *a Broadway musical* only moves from its theta position in the vP (*i.e.* it can move freely within its Spell-Out Domain), but in ((iv)b), *a Broadway musical* has moved around a depictive modifier (*i.e.* out of its Spell-Out Domain):

- (iv) a. [Max [<sub>vP</sub> described  $t_i$  for Sam] **a Broadway musical<sub>i</sub>** drunk.]
- b. \*[Max [<sub>vP</sub> described  $t_i$  for Sam] drunk] **a Broadway musical<sub>i</sub>**.] (Sabbagh, 2007:383)

As long as elements are extraposed to the edge of a spell-out domain, they are able to continue moving.

Generalizing this concept to DPs, as long as a PP extraposes to the edge of a spell-out domain, it may continue moving to the right. However, once its spell-out domain has been completed, leftward movement is no longer allowed. For the sake of exposition, let us assume that D and Num determine spell-out. In an example like ((v)), the gapped remnant has right-adjoined to Num, escaping NPE and completing the spell-out domain.

- (v) I saw one lecture about Chomsky and you saw [<sub>DP</sub> [<sub>NumP</sub> two [<sub>NP</sub> ~~lectures~~  $t_i$ ] <sub>Num</sub> [<sub>PP</sub> about Voltaire]<sub>i</sub>]].

At this point, the adjunct can either continue moving rightward and adjoin to D or stop moving altogether. It cannot move leftward, as that would violate *Order Preservation*. The schematic in ((vi)a) shows the initial order; ((vi)b) shows the order after rightward adjunction; ((vi)c) shows the violating movement to the left:

- (vi) a. <sub>Num</sub>two <sub>N</sub>lectures <sub>PP</sub>about Voltaire
- b. <sub>Num</sub>two <sub>N</sub>lectures  $t_i$  <sub>PP</sub>about Voltaire<sub>i</sub>
- c. \*<sub>PP</sub>about Voltaire<sub>i</sub> <sub>Num</sub>two <sub>N</sub>lectures  $t_{i1}$   $t_{i2}$

<sup>24</sup>A reviewer suggests that another possibility is late insertion of adjuncts, which would preclude any movement. A potential negative side-effect of this assumption for the current analysis is that right-adjunction

So far, we have determined that null-spell-out cannot be immediate and that it cannot be postponed to the end of the derivation, meaning it must occur within the course of the derivation.

**Option C : ellipsis occurs when the next higher phase head is Merged, assuming a phasal analysis of domains** ((Bošković, 2014), Corver and Van Koppen, 2009, Gengel, 2007, Rouveret, 2011. The benefit of this option is that spell-out is delayed to a point where elements may escape, but the ‘time period’ for extraction is restricted. The idea of phasal spell-out is actually quite similar to what Aelbrecht (2009) proposes for Dutch MCE, as it “allows for differences between ellipsis and non-ellipsis, since...the ellipsis site is frozen for any syntactic operations...” (p. 109).

There are reasons to avoid a phase-based approach to spell-out timing, however. This argument is clearest in Aelbrecht’s data for Dutch Modal Complement Ellipsis (MCE), as I discussed in section 2.3.2, due to the fact that in Dutch ellipsis domains do not necessarily coincide with phasal domains. Moreover, to claim that ellipsis is dependent on phases obligatorily places the entire discussion in phase theory. There are two consequences of this: (i) we will have to firmly argue for specific phases in DP<sup>25</sup>; and (ii) we will have to rely only on these phase boundaries to derive all restrictions on ellipsis. As I discussed in section 2.2 with

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would not necessarily be “escape” movement (a diagnostic I use here). However, since complement stranding is still possible with NPE, as shown in (i), I do not pursue this line of reasoning as it does not present any immediately concerning issues:

- (i) I saw two ~~books~~ of poems.

<sup>25</sup>Or we will have to employ known phase heads external to DP. Since assumed phases are CP and vP (Chomsky, 2001, *et seq.*), it is possible that one of these is what triggers ellipsis inside DP. This is a far-fetched and very unlikely scenario, given that we have little to no reason to believe that a DP-external head is responsible for DP-internal mechanisms. Given the discussion above related to the impossibility of *wh*-extracting from an elided NP, C is likely not the licenser, or else we would expect extraction to be possible. Situations where NPE is possible in subject position are counterevidence to v being the licenser given the subject Merges after v. Moreover, NPE in adjuncts poses a problem for both vP and CP as ellipsis licensors, since the position of adjuncts varies to a point where it would be impossible for C or v to account for all instances of adjunct-internal NPE.

- (i) For two years, Hermione thought she would fail Potions, and for three ~~years~~ Harry thought he would fail Defense Against the Dark Arts.

respect to phase-based and configuration-based theories, an account of nominal ellipsis that is fully dependent upon the domain cannot explain ellipsis restrictions, as some heads such as D are the location of both ellipsis licensors (*e.g. Harry's*) and non-licensors (*e.g. the*).

The list in (58) summarizes what I have demonstrated in the preceding pages:

- (58) a. *Ellipsis must be triggered by a higher head.* Immediate spell-out at the Merge of the ellipsis heads traps elements in NP that should otherwise be able to escape.
- b. *Ellipsis must be timed to occur in the course of the derivation.* Derivation-final spell-out cannot account for non-parallelism between non-ellipsis and ellipsis constructions.
- c. *While the heads in question align with possible phase heads, we cannot conclusively rely on phase heads as ellipsis heads.* This subsumes the challenge of arguing conclusively for two phases in DP as well as aligns with the arguments of Aelbrecht (2009) for Dutch MCE.

The data indicate that ellipsis spell-out must occur sometime before the end of the derivation, but not immediately, in order to account for the observed extraction data. Further, while a phase-based theory offers a neat template for this timing scenario, we should avoid it for reasons related to restricting the ellipsis domain. I propose that the licensing of ellipsis in the nominal domain is the result of a higher D-head licensing the ellipsis of the complement of a lower D-head (**Option D**. Aelbrecht, 2009). Before I launch into the details of this mechanism, I must first address the specific heads that are involved in the licensing relationship.

### *Licensing heads and ellipsis heads*

In this section I argue for the specific heads and domains involved in nominal ellipsis. As I discussed in the previous section, I assume that two heads are involved in nominal ellipsis - a licensing head and an ellipsis head. In this section I argue (i) that in NPE (lower nominal

ellipses) the ellipsis head is Num, which licenses the ellipsis of its complement NP, and the licensing head is D and (ii) that in NumPE (higher nominal ellipses) the ellipsis head is D, which licenses the ellipsis of its complement (NumP/PossP/DemP, construction-specific), and the licensing head is a phrase in its specifier (such as a possessor phrase).

Previous accounts of English nominal ellipsis argue for two ellipsis heads, D and Num. For example, in possessive constructions, the D head is responsible for licensing ellipsis as well as eliding its complement; in numeral constructions, the Num head is responsible (Merchant, 2001, 2008; Rouveret, 2011; Saab, 2014; Sag, 1980; Williams, 1977; among many others). Since I demonstrated in the last section that the ellipsis mechanism must occur as a reflex of agreement between an ellipsis head and a licensing head, what remains to be determined is the licensing head.

**Lower ellipses (NPE).** I argue that the licensing head of NPE is D, for several reasons. First, based on the data presented throughout this section, it is clear that ellipsis must be delayed until at least the end of DP construction, in order for NP modifiers to move either leftward (*e.g.* focused adjectives) or rightward (*e.g.* PP remnants) out of the eliding domain. Second, we have no reason to believe licensing is caused by something outside of the DP domain, as the most likely candidates (phase heads) have no conceivable way of deriving the correct results (see footnote 25, page 73).

My third reason for selecting the D-head pertains to characteristics of D itself. Much like phasal domains, DP is ‘complete’ in the sense that it is fully valued with its agreement features (phi-features) by the Merge of D. Further, it is the host of other features such as definiteness (see Borer, 1988; Coppock & Wechsler, 2012; Danon, 2010; Kramer, 2010; Wintner, 2000 for discussions of definiteness as a syntactic feature) and Focus (Corver & van Koppen, 2009, among others). Since ellipsis can only be licensed under proper identity, the value of phi and other pertinent agreement features must be known in order for the derivation to proceed.<sup>26</sup>

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<sup>26</sup>D has also been treated as a licensor by Lobeck (1995) who argues that in the absence of an overt Num head, D may license the ellipsis of Num’s complement through head-government.

Therefore, I propose that in lower ellipses (NPE), the licensing head is D, but the ellipsis head remains Num as in previous accounts.

**Higher ellipses (NumPE).** The next question to answer is what happens in higher ellipses – *i.e.* ellipses that are apparently triggered by the Saxon genitive:

(59) I like Ron's hippogriffs but you like Hermione's ~~hippogriffs~~.

This phenomenon has not gone unobserved, as discussed in the brief review of literature in section 2.2.4. Lobeck, for example, argues that 'D' elements such as possessives and plural demonstratives can license ellipsis on the basis of them having strong agreement features. Further, Saab (2014) argues that D in English can elide its complement on the basis that there is an absence of morphological agreement effects for the category of number (*i.e.* possessives need not agree in number the way other licensing elements do). In cases of possessor licensing, number mismatch is not expected, given a possessor cannot be inflected (and number is frozen on Num in the ellipsis site); the following demonstrates:

(60) John's book is on the table but Peter's is on the desk. (Saab, 2014:30)

(61) %John's book is on the table but Peter's are on the desk. (Saab, 2014:30)

The difference between (60) and (61) is dialectal, however, and not necessarily indicative of a full D-complement being elided.

To demonstrate that the complement of D is in fact what is being elided, I would like to discuss the data in the following two paradigms, which show that a difference in interpretation emerges when a numeral is included in the ellipsis under a possessive.

(62) I like Ron's two hippogriffs, but...

a. ...You like Hermione's [three ~~hippogriffs~~].

b. ...You like Hermione's [~~two~~ hippogriffs].

OR

...You like Hermione's [hippogriffs].

(63) I saw Ron's best hippogriffs and...

a. You saw Hermione's [worst ~~hippogriffs~~].

b. You saw Hermione's [~~best~~ hippogriffs].

OR

You saw Hermione's [hippogriffs].

In both (b) examples, two interpretations are possible. In the first interpretation, *two* and *best* are not included in the ellipsis, respectively (so Hermione could have any number or kind of hippogriffs). In the second interpretation, *two* and *best* can be, respectively, recovered (so Hermione has two hippogriffs and her best hippogriffs).

The implication of this second set of data is that there are two elidable domains in DP, which is, as I have stated, a pretty standard assumption. The first is the complement of Num, or what has been historically referred to as NPE, while the second is the complement of a higher functional projection either D or (potentially) Poss.<sup>27</sup>

For derivations where D is the ellipsis head, there are two reasonable choices for the licensing head: (i) D is the licensing head and elides its own complement or (ii) D is the ellipsis head, and a lower FP can move to a position above D where it may probe D and license ellipsis. I argue for the latter.<sup>28</sup>

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<sup>27</sup>This fact is a key distinction from Lobeck (1995), who argues that D and Num can both *license* ellipsis, but the elided domain is always NP.

<sup>28</sup>There is also the possibility that the size of the ellipsis domain changes. Specifically, if we assume a variable ellipsis domain approach along the lines of Bošković (2014), either the complement of NumP (NP) or NumP itself (along with its complement) can be elided. I do not discuss this option, given there is no clear way to predict whether it is just the complement that gets elided or if the ellipsis head is included.

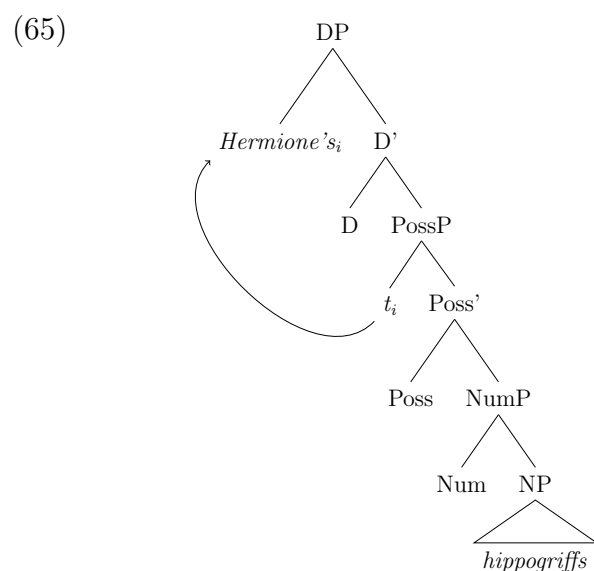


The first option — that D can license itself, making licensing and ellipsis simultaneous and immediate at the Merge of D — comes with some inherent flaws. Specifically, elements that occur any lower than D do not have a chance to escape. This includes not only elements like possessors (which must move up to SpecDP), but any contrastive remnants, such as the bolded constituent in (64):

(64) I like Ron’s hippogriffs from Britain and you like Hermione’s ~~hippogriffs~~ **from France**.

Further, we expect to see all ‘D’ elements (such as *the*) licensing ellipsis, which is not the case. Thus, without positing any extra stipulation on delaying spell-out and restricting licensing elements, having D as the licenser and ellipsis head does not work.

I therefore argue that D is the ellipsis head and it may be licensed by a phrase (FP) that moves to its specifier. Before the Merge of D in an example like (59), the possessor begins in SpecPossP and then moves to SpecDP for genitive Case assignment (Giorgi & Longobardi, 1991; Valois, 1991; see chapter 1). In this manner it is triggered to move to the position without being probed by D:



The moment the possessor moves to SpecDP is the moment it probes D (*i.e.* for Case). At this point in time, some aspect of the possessor is able to trigger the ellipsis of D. I argue in the next section that this is a contrastiveness feature, but set it to the side for the time being.

I adopt this approach because of two large benefits. First, remnants still have the opportunity to escape ellipsis: at the Merge of D, the possessor moves to SpecDP for genitive Case, licensing ellipsis, and at the same time remnant elements such as gapped PPs may to do the same (except they are right adjoining to D instead of moving leftward).<sup>29</sup> For example, in a construction like (66), the PP *from Britain* right adjoins to D prior to the movement of Hermione to SpecDP, the latter of which triggers ellipsis.

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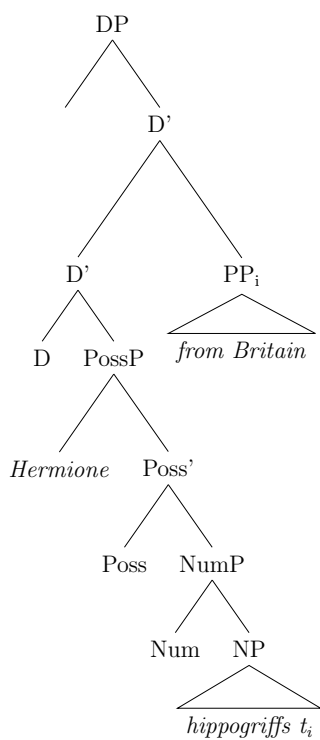
<sup>29</sup>A reviewer wonders whether the Adjunction Prohibition (Chomsky, 1986; McCloskey, 2005) (the general restriction on adjunction to a projection selected by a ‘lexical class’) would prevent this from being an option.

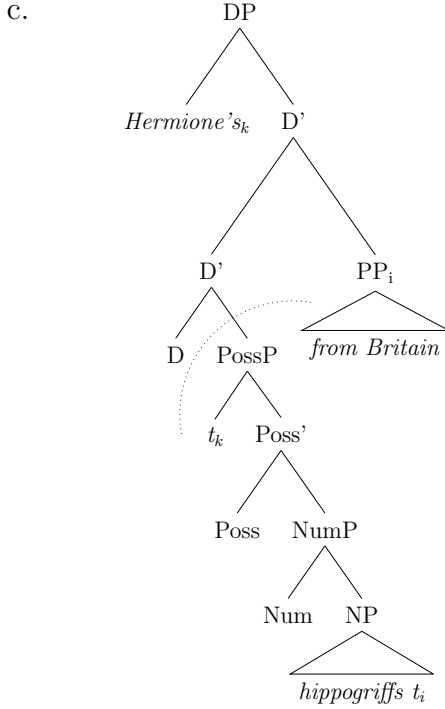
If we assume that the prohibition holds for nominal constructions, a few alternatives are available to bypass the issue. Under the analysis that I argue for throughout this dissertation (in this chapter and the chapters to follow), the Num projection is the landing site for contrastively marked elements, at least initially. It would seem possible then that the contrastive PP raises to NumP for its contrastive reasons. From there, a few options are left: it raises to D for some independent reason, it moves out of DP entirely, or the ellipses we see with nominal gaps under possessors are actually NP ellipses (smaller ellipses).

An alternative option is that DP is the maximal projection of the nominal domain but there is an additional (intervening) head that is instead what is selected by the lexical head, such as a CaseP.

- (66) a. You liked Ron's hippogriffs from Ireland and I liked Hermione's ~~hippogriffs~~ from Britain.

b.





The second benefit is that any element that moves to SpecDP, assuming it meets other licensing conditions, may license ellipsis. I argue that this is the case for plural demonstratives<sup>30</sup> (Alexiadou et al., 2007; Brugè, 2002; Giusti, 1997, 2002; Panagiotidis, 2002; Shlonsky, 2004) and apparent D quantifiers that license ellipsis (*each* and *all*) (Cirillo, 2009; Giusti, 1990; Shlonsky, 1991; Zamparelli, 2000).

While it may seem strange to have the licenser of the higher ellipsis (NumPE, which elides under D) Merge lower in the functional structure (such as SpecPossP, which is below D), it is quite compatible with the current approach. As I stated previously, I propose that in order for ellipsis to proceed, an agreement relationship must obtain between an ellipsis head and its licenser. The specifics of this relationship are to be determined by the particular head(s) involved. In the case of D as the ellipsis head, in all scenarios where an apparent D-element licenses ellipsis, that element does not initially Merge in D but instead moves to its specifier. Moreover, D has no need to probe any of these elements, so an agreement

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<sup>30</sup>See the end of section 2.3.4 for a discussion of failed licensing by singular demonstratives.

relation does not occur until each moves to D for some functional purpose (such as Genitive Case or Definiteness). Only then does ellipsis proceed.

This proposal is not unlike EPP-driven movement as proposed by Bošković (2007:619), where it is the moving element itself that causes movement, rather than the head to which it moves. This idea is based on the traditional Case Filter, where a Case assigner is required to be in a Spec-head configuration with the DP receiving case.

In this section, I have discussed the motivation for ellipsis-licensing in DP as an Agree-based mechanism, where the licensing head must Agree with the ellipsis head in order for ellipsis to proceed. I have proposed that Num and D are both ellipsis heads. Further, I have argued that licensing heads are variable based on whether a contrastive Agree relation is established between it and the ellipsis head: for example, if D establishes an Agree relation with Num that marks Num as contrastive, ellipsis may proceed.

What remains to be proposed is the precise mechanism that licenses and executes ellipsis. As a basis for this, I turn to Aelbrecht's (2009) account of Dutch Modal Complement Ellipsis.

### *2.3.2 Mutual Agree: Nominal ellipsis licensing in English*

In this section I present a mechanism of ellipsis I term Mutual Agree, by which the agreement of a contrastively-marked probe with an ellipsis-licensing goal (ellipsis head) triggers the mechanism of ellipsis. Mutual Agree finds a broad basis in Aelbrecht (2009), who presents an account of Dutch Modal Complement Ellipsis (MCE) whereby ellipsis is not simply licensed by the presence of an E-feature on a head, but instead is the result of an Agree relation between a licensing site and licensing head.

The account I present here deviates from Aelbrecht's MCE account in the following respects. First, the probe-goal agreement that triggers ellipsis is the result of regular feature-sharing mechanisms that occur in DP (*e.g.* agreement of D with Num in order to value Number); under Aelbrecht's account the ellipsis head probes up to its licensor (described briefly below) on the basis of a set of unvalued inflectional features. Second, ellipsis is

triggered only when the licensing head is marked with a contrastive feature (which it may acquire from any element within its domain); for Aelbrecht, no such feature is shared. I argue that this contrastiveness is an essential aspect of licensing and that it can be represented in the syntax without positing any additional semantic or pragmatic rules.

This section is organized as follows. I first present a brief overview of Aelbrecht's account of Dutch MCE in order to establish the basis for Mutual Agree. I then propose a series of changes to the mechanism, presenting the proposal for Mutual Agree. In the third subsection I briefly discuss the issue of semantic identity; I wrap up the section by discussing the restrictions on ellipsis that the licensing mechanism naturally derives.

### *Agreement-based ellipsis licensing*

Dutch MCE is the deletion of an infinitival complement of a modal; in the example in (67) the complement of the negated modal *moey* 'must' can be elided:

(67) Je mag langskomen vanavond, maar je moey niet [~~langskomen vanavond~~].

you are.allowed.to pass.by tonight but you must not pass.by tonight

'You can drop by tonight, but you don't have to' (Aelbrecht, 2009:49)

As Aelbrecht discusses, Dutch MCE differs from VP ellipsis in a number of respects. For these reasons, existing accounts of VPE cannot be directly extended to MCE. Further, Dutch MCE behaves differently in certain respects from MCE in other languages such as French (Aelbrecht, 2009:74-75).<sup>31</sup>

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<sup>31</sup>For example, in Dutch MCE topicalization is degraded (i), while it is not in French (ii):

- (i) \*Ik kan de boodschappen doen, maar de afwas, kan ik niet. I can the shopping do, but the dishes, can I not  
'I can do the shopping, but the dishes, I can't.' (Aelbrecht, 2009:75)
- (ii) Je peux faire les courses, mais la vaisselle, je ne peux pas.  
I can do the shopping, but the dishes, I NE can not  
'I can do the shopping, but the dishes, I can't.' (Aelbrecht, 2009:74-5)

Aelbrecht presents six ways in which Dutch MCE differs from other types of MCE: (i) it only occurs with root modals, (ii) it deletes a complete constituent, (iii) it is possible when the subject is a *there*-expletive, (iv) it blocks modal morphology that would otherwise appear in non-ellipsis constructions, (v) it can take an embedded antecedent and allows for form mismatches, and (vi) it has clear restrictions on extraction. In the previous section I demonstrated that English DPs demonstrate restrictions on extraction; this is the clearest parallel that we can draw between nominal ellipsis and Dutch MCE. The following Dutch data demonstrate.

In Dutch MCE, subjects can undergo extraction but objects and adjuncts modifying the verb phrase cannot. Example (68) shows subject extraction:

(68) Karel moet studeren, maar hij kan niet [~~studeren~~].

Karel must study but he can not ~~study~~

‘Karel has to study, but he can’t.’ (Aelbrecht, 2009:62)

In (69), a *wh*-object cannot be extracted from the ellipsis site. Object scrambling, topicalization, and adjunct extraction are also disallowed.<sup>32</sup>

(69) Ik weet niet wie Kaat WOU uitnodigen, maark ik weet wel wie ze MOEST \*(uitnodi-  
gen).

I know not who Kaat wanted to invite but I know AFF who she must.PST invite

‘I don’t know who Kaat WANTED to invite, but I do know who she HAD to.’ (Aelbrecht, 2009:66)

Importantly, adjuncts occurring in TP or higher in the structure can escape ellipsis:

---

<sup>32</sup>These examples are not repeated here but can be found in Aelbrecht (2009:68,75,79).

(70) Gisteren moest ik nog volgende week optreden en nu moet ik pas de week erna optreden

Yesterday must.PST I still next week perform and now must I only the week there.after  
perform

‘Yesterday I had to perform next week still, and now I only have to the week after  
that.’ (Aelbrecht, 2009:77-78)

Thus, the extraction data with respect to MCE indicate that elements external or peripheral to the ellipsis site may be extracted (subjects and TP-or-higher adjuncts), while internal elements (objects) may not be extracted by any means.

Based on the preceding data, Aelbrecht argues that a new ellipsis mechanism is required to account for Dutch MCE. Existing ellipsis options based on accounts of MCE and VPE fall short in several respects, two of which are directly relevant to the current discussion. First, the pattern of limited extraction shown in (68) through (70) cannot be explained under existing accounts. Aelbrecht argues that the limited extraction pattern is due to immediate spell-out of the ellipsis site upon the Merge and Agree of the licensing head with the ellipsis head (similar to what I argued for in the previous section; for Aelbrecht Agree is an upward mechanism). Existing accounts, such as Merchant (2001), assume the licensing and ellipsis head to be one and the same. Thus, if spell-out is immediate, no extraction is expected; if spell-out is delayed to the end of the next phase (CP), all (extractable) elements should be subject to extraction. As we can see in the examples, however, neither of these options is the case. Second, ellipsis interacts with known phases but does not necessarily coincide with phase boundaries.<sup>33</sup>

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<sup>33</sup>In the previous section I discussed several reasons to not assume a phase-based approach to ellipsis. Aelbrecht (2009:123-124) adds several more reasons:

- (i)
  - a. Ellipsis displays an asymmetry between the two heads involved, while there is no such asymmetry between phase heads.
  - b. There is no ellipsis edge, no automatic escape hatch.
  - c. Ellipsis licensors are not necessarily phase heads, nor are the ellipsis sites the phasal domains.
  - d. Ellipsis affects the entire complement of [E], while phases only affect their own phasal domain.



Aelbrecht's account of Dutch MCE is based on two primary claims. First, ellipsis is licensed via an Agree relation between an [E]-feature and the ellipsis-licensing head. Second, ellipsis occurs as soon as the licensing head is Merged, rendering the ellipsis site inaccessible for further syntactic operations and blocking PF vocabulary insertion.

The [E]-feature is based on that of Merchant (2001), which, when present on the licensor, triggers the deletion of its complement. Semantic recovery is based on mutual entailment and the notion of *givenness* (Merchant, 2001:26):

- (71) An expression E counts as *e*-given iff E has a salient antecedent A and, modulo  $\exists$ -type shifting,
- (i) A entails F-clo(E) and,
  - (ii) E entails F-clo(A).

In brief, Merchant places a strict restriction on the relationship between the antecedent and the elided constituent: they must mutually entail each other. Only when *e*-givenness holds may a constituent elide.

Aelbrecht points out that a direct adaptation of Merchant's account is problematic because a licensing head and ellipsis site do not always stand in a head-complement relation with one another, as in (67) above for Dutch, where negation stands between the licensing modal and ellipsis site. This fact also occurs in English, as in the following example where *been* stands between the licensing head *have* and the ellipsis site<sup>34</sup>:

- (72) a. I hadn't been thinking about that. Well you should have been [~~thinking about that~~]!
- b. Ezra hasn't finished yet, but I really want him to have [~~finished~~.

---

<sup>34</sup>The fact that *have* is the licenser is demonstrated by examples like the following, where non-finite elements (including *been*) cannot license ellipsis:

(i) \*I hadn't been thinking about it, but I recall Morgan having been.

- c. Morgan hadn't thought about it, but it certainly would have been wise to have  
~~[thought about it]~~.(Aelbrecht, 2009:96)

In order to account for intervening elements, Aelbrecht proposes that the licensing head and ellipsis site do not have to stand in a head-complement relation with one another.

In Aelbrecht's version of the [E]-feature, each head in a derivation has a feature bundle consisting of categorial features (CAT), inflectional features (INFL), and selectional features (SEL):

(73) CAT [...]: specify the category of a lexical entry

INFL [...]: can be uninterpretable features, must be checked/valued

SEL [...]: encode what categories the head takes as a complement

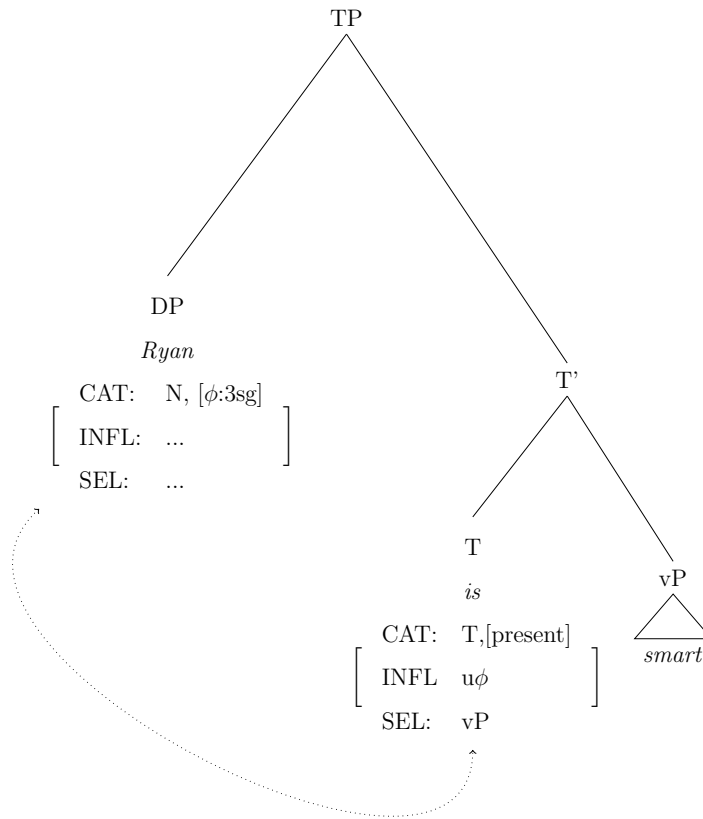
As an example, the non-ellipsis tree given in (113) for *Ryan is smart* has the feature bundles specified in (112). The probe-goal relation depicted shows the  $u\phi$  on the T head probing for the  $\phi$ -features on the subject DP.<sup>35</sup>

(74)	Finite T:	CAT	[T, [present]]	DP:	CAT	[N, [ $\phi$ :3sg]]
		INFL	[ $u\phi$ ]		INFL	[...]
		SEL	[vP]		SEL	[...]

---

<sup>35</sup>Aelbrecht leaves the SEL feature unspecified, but only because it is not 'relevant for the point at hand' (footnote 77, p. 100). Since schematically the complement of T is vP, I have copied Aelbrecht's structure and filled in the bundle accordingly for the sake of representational completeness, recognizing that the complement may in fact be a small clause instead.

(75)



In an elliptical derivation, the [E]-feature bundle is present. It has several unique properties: (i) it is optional, (ii) it is only compatible with certain heads, and (iii) it has uninterpretable features that correspond with the INFL of a certain head (the licensor) (uMod in (77)).<sup>36</sup> The example in (76) shows the extraction of the subject *hij* 'he'; (77) gives a schematic example of subject extraction, which demonstrates that subject movement is triggered before the ellipsis-licensing head (a root modal) Merges and triggers the immediate ellipsis of the complement of T (*cf.* Aelbrecht, 2009:137-138).

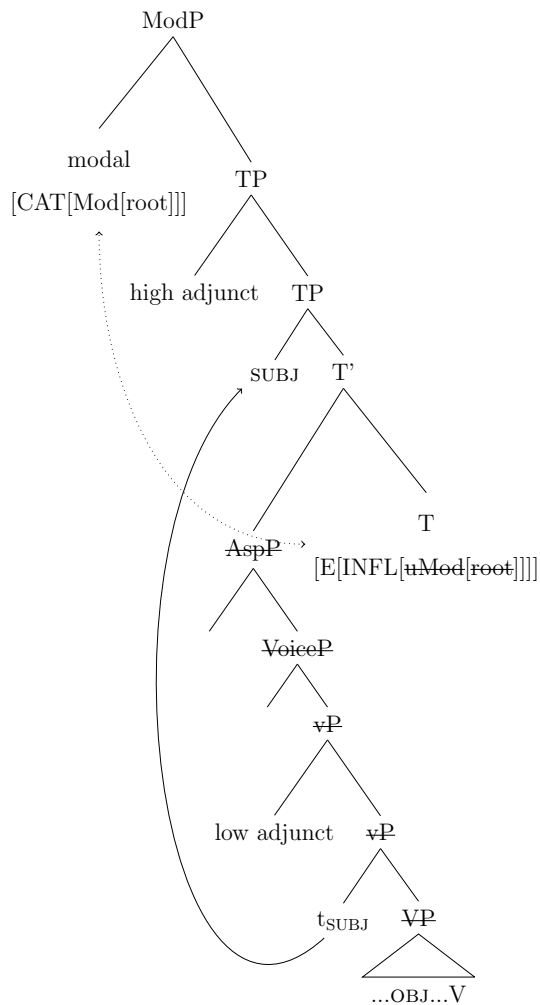
(76) Die broek MOET nog niet gewassen worden, maar hij MAG al wel [tdie rok gewassen worden].

<sup>36</sup>Recall that MCE in Dutch is only compatible with root modals.

those pants must still not washed become but he may already PRT washed become

'Those pants dont have to be washed yet, but they can be.'

(77)



On the other hand, objects do not escape due to the fact that they do not move to a peripheral position of the ellipsis site prior to the Merge of the licensing head.

Thus the immediate spell-out of the ellipsis site upon insertion of the licensing head explains the restrictions on extraction in Dutch MCE discussed in the previous section. Those elements that are not peripheral to the ellipsis site (*i.e.* objects) are unable to escape

ellipsis. Moreover, the fact that the licensing head and ellipsis head do not need to stand in a head-complement relation with one another allows for intervening elements that are not licensors (*i.e.* subjects).<sup>37</sup>

In the next section, I propose that an account of nominal ellipsis in English where ellipsis licensing occurs as an Agree relation can capture all of the data.

### *Applying Mutual Agree*

In this section, I adopt the principles of Aelbrecht’s MCE account to the nominal domain, making several primary adjustments, as I describe below. Even though I take observations from previous accounts of nominal ellipsis into consideration, the derivations I present here are unique in that ellipsis must be licensed via an agreement between two heads. The fundamental aspect of Mutual Agree is that it restricts licensing by only being possible when the following conditions are met:

#### (78) Conditions for ellipsis under Mutual Agree

- a. Some element in the domain must be marked as contrastive.
- b. The licensing head and the ellipsis head must be separate.
- c. The licensing head must probe the ellipsis head for *independent reasons* (such as agreement for concord), **not** for the sake of licensing ellipsis.

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<sup>37</sup>One question that may arise from this discussion is how an Aelbrecht-style account can account for, *e.g.*, sluicing, given the ellipsis head in a sluice is C (the ‘highest’ head in the domain). Aelbrecht answers this question by assuming a Van Craenenbroeck-style (2010) analysis of the Dutch CP which builds upon Rizzi’s (1997) expanded left periphery. In brief, there are two C heads on the left periphery. CP1, the higher of the two, is equivalent to ForceP in Rizzi’s analysis and is the clause-typing head; this is the licensing head in the ellipsis derivation - when it is interrogative it may act as a licensor. CP2, the lower of the two, is equivalent to FocP in Rizzi’s analysis and is the ellipsis head; when CP1 is interrogative it may license the ellipsis of the complement of CP2. The hierarchical structure is given here:

(i) CP1 > CP2 > TP

In this manner, ellipsis via Agree can be maintained even in sluiced constructions.

First, I present feature bundles à la Aelbrecht with several key changes. Bundles consist of Categorical (CAT), Inflectional (INFL), and Selectional (SEL) features, as in Aelbrecht. However, because Inflectional features are not an aspect of the DP domain, DP bundles instead contain Phi ( $\phi$ ) features. Since English DPs do not have grammatical gender or person, I ignore both for the time being but return to gender during the discussion of French NPE.

I also argue for a Focus (FOC) feature that values a privative (+ or no value) Contrastive (Co) feature. I argue that the FOC feature is present in ellipsis constructions due to the focused nature of ellipsis remnants. Others have argued for DP-internal Focus projections (Aboh, 2004; Corver and Van Koppen, 2009; Giusti, 1990) for similar reasons.<sup>38</sup> Undeniably remnants bear some focused interpretation, though whether they move to a Focus projection in English is a little less certain. Therefore I maintain that Focus/Contrastiveness features exist but the DP domain does not necessarily contain corresponding functional projections.

The Co(ntrastive) feature is privative for two reasons. First, since contrastiveness is not a feature of all derivations, the uCo value of a non-contrastive derivation will need to be valued by some default mechanism; a privative feature requires no such default mechanism. Second, as I will demonstrate throughout the following discussion, in some constructions the ellipsis head is non-contrastive on its own, but can license ellipsis anyway if a higher functional head is contrastive. The contrast in contrastiveness would be a conundrum for an uninterpretable feature, which can only be valued once before it is deleted, but not necessarily

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<sup>38</sup>For example, Corver and Van Koppen argue for Focus-movement based on the behavior of focused adjectives. In Dutch, the order of adjectival elements is fairly rigid except in cases like the following where the focused element moves from its default position (Corver and van Koppen, 2009:3-4):

- (i) a. de roze Amerikaanse auto's  
           the pink American cars  
           'the pink American cars'
- b. de AMERIKAANSE roze auto's  
           the American(STRESS) pink cars  
           'the AMERICAN pink cars'

so for a privative one.

The examples in (79) and (80) are feature bundles for the functional heads involved in NPE, D and Num.

(79) Licensing head: D

CAT	[D]
$\phi$	[uNum]
SEL	[NumP]
FOC	[+/-Co]

(80) Ellipsis head: Num

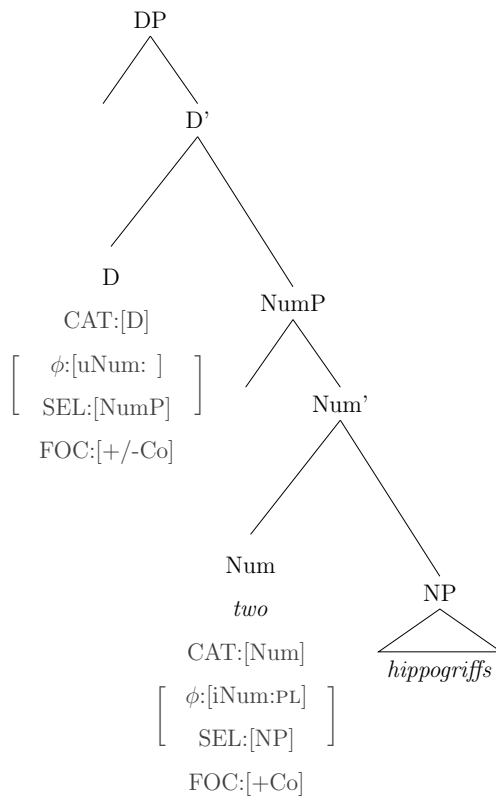
CAT	[Num]
$\phi$	[iNum]
SEL	[NP]
FOC	[+/-Co]

As an initial example, I derive (81) as (82).

(81) Three hippogriffs need more food than [two ~~hippogriffs~~].

The tree in (82) shows the two relevant feature bundles pre-Agree. On the Num head, which contains the E-feature, interpretable  $\phi$ -features are present as well as a + value for FOC.

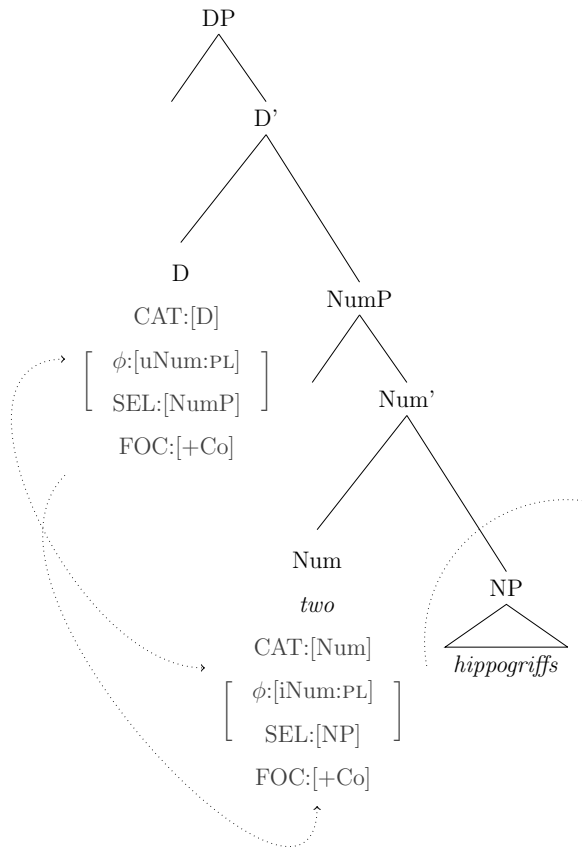
(82)



In the tree in (83), agreement occurs between D and Num. Specifically, the D-head probes for the interpretable Num value on the Num head (dashed line with two arrows). At the same time, the FOC feature values the D head as +Co (dashed line with one arrow). It is this simultaneous Agree that licenses ellipsis: at the point where the D-head is valued as contrastive, its simultaneous Agree relation with Num signals to the E-bearing head that it may elide its complement (dashed line). Ellipsis is therefore immediate.



(83)



There are a few important aspects to highlight about the tree in (83). First, the Agree relations depicted are simultaneous, as in a traditional probe-goal relationship. This simultaneity will be important for derivations where the element on the Num head is not the contrastive element. In such relationships, the D-head will receive a +Co value, which it will transfer to Num once the Agree relation has been established. In other words, the licenser D is 'set' to +Co if there is **some** element in the DP marked as +Co. This predicts that if a DP contains a contrastive element, ellipsis should be possible. That this is true is borne out in data such as the following, where a non-contrastive numeral intervenes between the +Co element and the ellipsis head:

(84) Ron made the **worst** two potions and Hermione made [the **best** two ~~potions~~].

In (84), the contrastive element is the adjective *best*. Thus, FOC on the Num head cannot automatically receive a +Co value.

The tree in (85) shows a pre-Agree DP construction. Note that adjectival focus movement out of NP has already occurred. Nothing hinges on the movement occurring prior to the Agree relation, as simultaneous movement and Agree will work equally as well; I use it here for clear exposition.<sup>3940</sup>

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<sup>39</sup>Basically, as long as the adjective can escape pre-ellipsis, no issues arise.

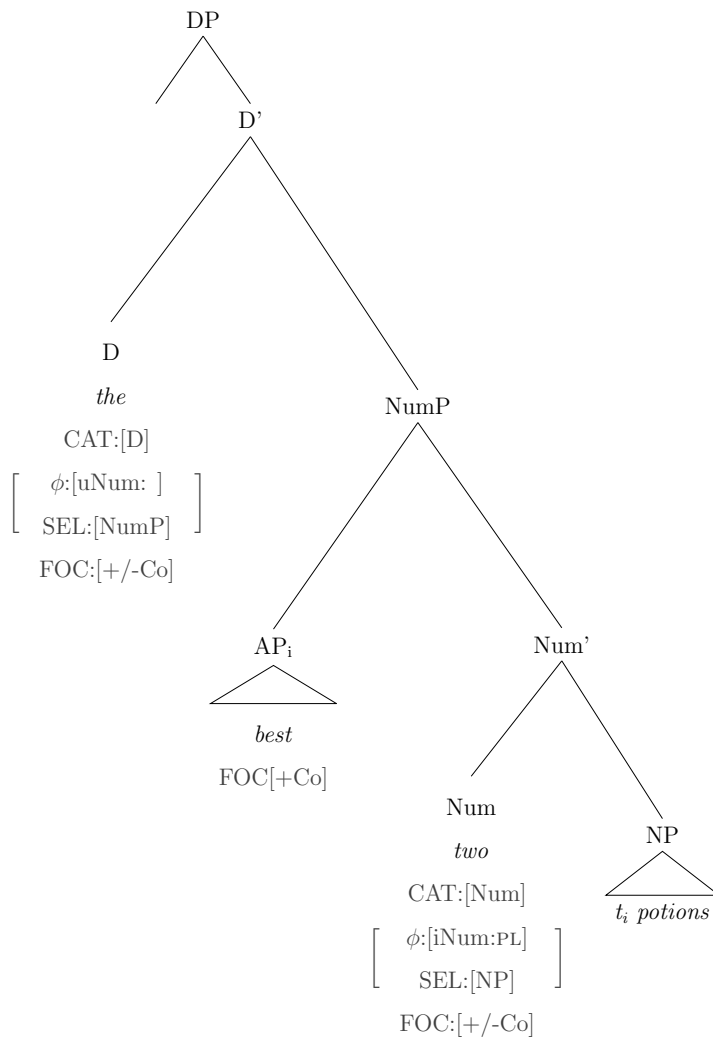
<sup>40</sup>This structure also predicts that other Focus-moved adjectives should be able to license ellipsis (not just superlatives). For example:

- (i) I liked [the three pretty books]. You liked [the **ugly** two ~~books~~].

While constructions like this do not appear to be prevalent, this is quite likely due to the non-parallelism in ordering between the two sets of DP elements (bracketed). The second ellipsis is acceptable on its own, and the contrast in ordering with the first sentence renders it slightly odd. Note that *in-situ*, even with contrastive stress, the ellipsis is not allowed in the second sentence.

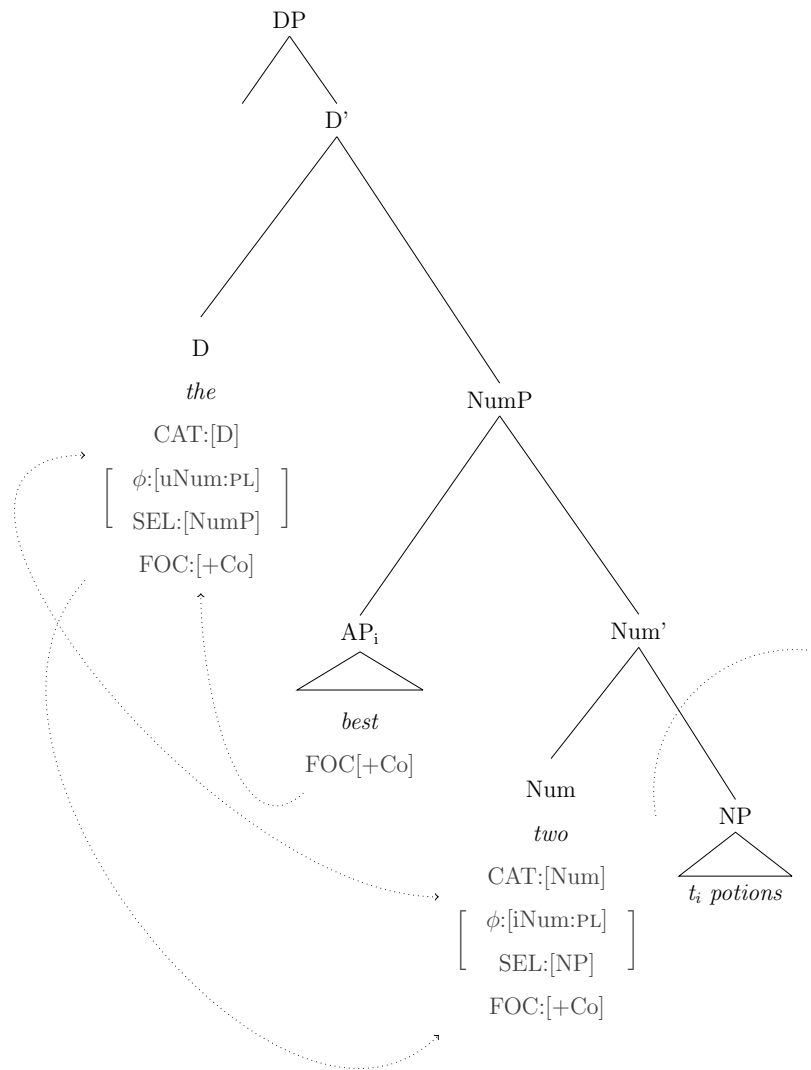
- (ii) \*You liked the two **ugly** ~~books~~.

(85)



In the next step, as shown in (86), the agreement relationships proceed; I assume that all of the following Agree relationships occur at the Merge of the D-head. As with the previous example, the uninterpretable Num feature on D probes for the interpretable Num feature on Num. D also receives a +Co value from the contrastive adjective, and while probing Num transfers this +Co feature to the Num head. Ellipsis may then occur.

(86)



Note that the superlative adjective originates inside the noun phrase, before the head noun, in this construction. This is the canonical position for modifying adjectives in English, as discussed in chapter 1, and I assume that superlative and comparative adjectives follow this pattern for the sake of simplicity (see Bresnan, 1973, for discussion of comparative positioning and Matushansky, 2008, and references therein for discussion of superlative positioning).<sup>41</sup>

<sup>41</sup>I would like to note that the elliptical analysis presented here does not preclude a predicative analysis for superlatives (similar to what is presented in chapter 3). I discuss this point further in section 2.3.4.

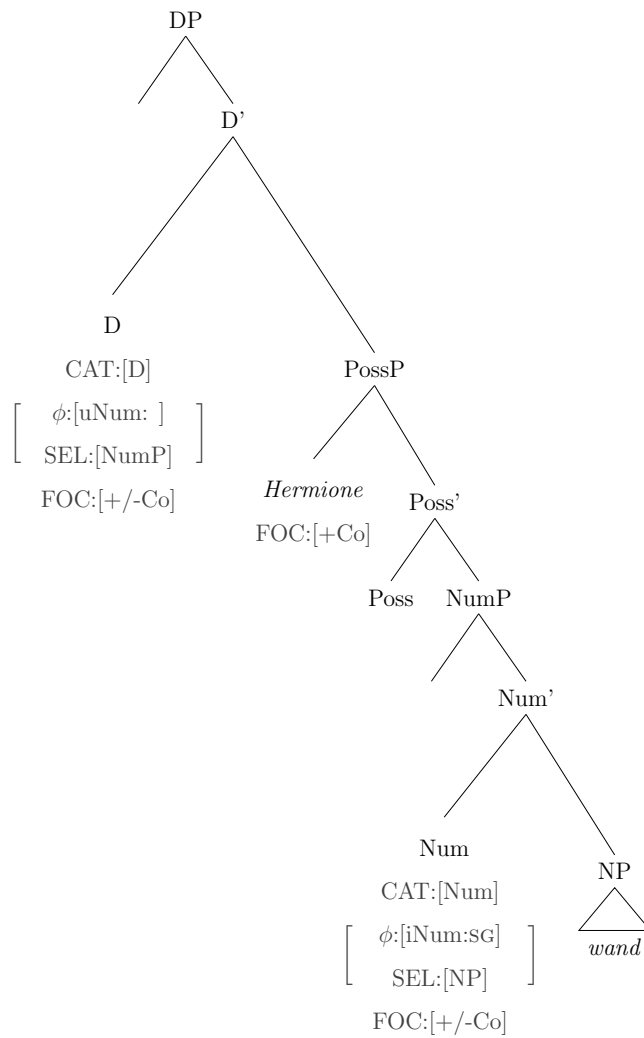
The benefit of the current account is its ability to license higher elements in the functional hierarchy, namely possessives.

Recall from section 2.2.1 that the movement of an element such as a possessor to the Specifier of D can also license ellipsis; in these scenarios, D is the ellipsis head while the moving phrase is the licensing element:

(87) Harry's wand is more valuable than [Hermione's ~~wand~~].

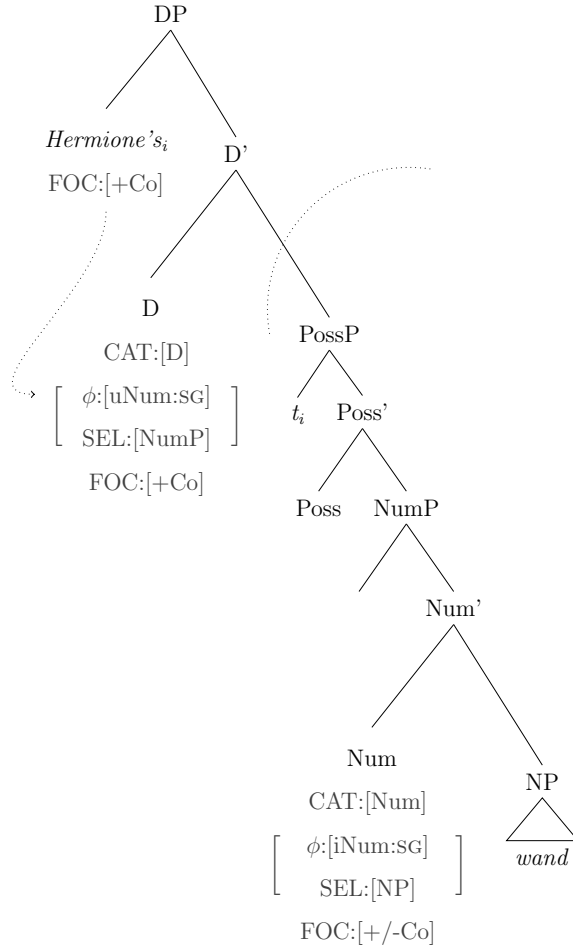
In the first tree in (88), D is marked as an E head, and the possessor is marked as [+Co] prior to its movement to SpecDP. When D Merges, it does not immediately receive a [+Co] value from the possessor and elide its complement because (i) it does not yet have any reason to Agree with the possessor (**that** relationship is established by the possessor) and (ii) the licensing head is not in a proper configuration with D, given it is structurally below it.

(88)



When the possessor moves to SpecDP for genitive Case, an Agree relation between the possessor DP and D is established, [+Co] is shared between the two, and the ellipsis of the complement of D proceeds.

(89)



In this manner, possessor licensing of ellipsis is straightforwardly derived from the proposed Agree relations.<sup>42</sup>

Intervening non-contrastive elements are still licit due to the fact that the possessor marks the D-head as contrastive. This type of construction is shown in (90):

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<sup>42</sup>Though I do not provide a structure for it here, the configuration in (88) also allows for a scenario where D licenses the ellipsis of the complement of Num before the possessor moves to SpecDP to license the ellipsis of the complement of D. This may explain the ambiguous interpretation of examples like the following:

(i) Harry's two wands are better than Hermione's [ ]

a. [ ] = wands

b. [ ] = two wands

(90) Harry's two wands are better than Hermione's two ~~wands~~.

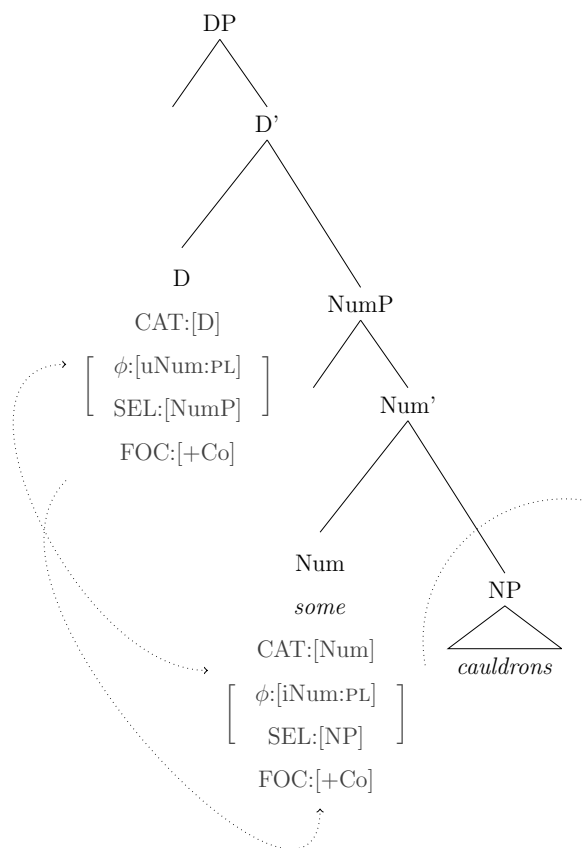
Finally, recall that most quantifiers can license nominal ellipsis as well: *each*, *all*, and weak quantifiers such as *some* and *few*. In this dissertation I do not endeavor to provide a precise syntactic analysis for each type of quantifier; however in the following paragraphs I adopt a generic analysis for weak (low) quantifiers and strong (high) quantifiers, then demonstrate how ellipsis licensing may proceed.

Semantically, quantifiers are split into three categories: (i) quantificational (*e.g. each, all*), (ii) a blend of quantificational and cardinal (*e.g. few, some, many*), and (iii) purely cardinal (*indefinite articles, numerals*) (Milsark, 1977, 1979, as cited in Lyons, 1999: 266). A relatively common treatment in the existing literature is to assume that 'quantificational' quantifiers occur higher in the structure (in DefP, DP, or S(trong)QP) and 'cardinal' quantifiers occur lower (in CardP, NumP, W(eak)QP, or Cl(assifier)P) (Borer, 2005; Gebhardt, 2009; Lyons, 1999; Zamparelli, 2000).

I assume that lower quantifiers occur in NumP or a low QP; the specific position will not affect the analysis here, so I will use NumP for the sake of discussion. An example like (91a) will proceed just as an ellipsis structure involving a numeral, shown in (91b).



(91) I bought some cauldrons yesterday and you bought [some ~~cauldrons~~], too.



I assume that higher quantifiers occur in a projection above NumP, either DP or QP. *Each* and *all* differ from *every* in that they can cooccur with a definite determiner.<sup>43</sup>

- (92) a. All (of) the books are green.  
 b. Each \*(of) the books is green.  
 c. \*Every (of) the books is green.

<sup>43</sup>*All* and *each* also participate in quantifier float, but this is a separate matter since not all analyses of quantifier float involve movement of the quantifier (see, *e.g.* Sportiche, 1988)

Constructions like these are partitive; *all* is singular and *each* is plural (Lobeck, 1995). Arguments for the position of high quantifiers vary; commonly *each*, *every*, and *all* are assumed to occupy a high position in DP, such as the Strong Determiner Position (Zamparelli, 2000; Gebhardt, 2009) or DP itself, and *each* and *every* are subject to movement to a higher position for partitive constructions (Lyons, 1999) or for quantifier float Doetjes (1997); Puskás (2003). I will assume that this general idea is correct: *all*, *each*, and *every* occupy the same functional projection in structure. Following Lyons (1999:284), I also assume that the former two (which allow determiners) occupy a specifier position, while the latter occupies a head position.<sup>44</sup>

(93) PreDetP > DP > > NumP > ...

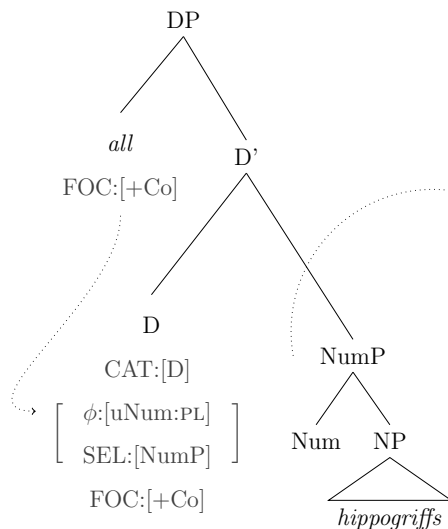
The following sample derivation is for *all*. Being in the specifier of D (by movement or not) allows for the basic Spec-head agreement assumed for demonstrative phrases — this is the Agree relation required for ellipsis licensing. At this point the complement of D may elide.

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<sup>44</sup>The specifier position may be derived by movement; whether or not this is the case will not affect the derivation given below.

- (94) a. We bought some hippogriffs yesterday and all ~~hippogriffs~~ are fat.

b.



The reader should note that an analysis where *all* and *each* occur even higher in structure will also work with Mutual Agree: as long as some form of agreement obtains between the licenser and the ellipsis head, ellipsis may proceed.

In this section I have outlined the essential derivations of the proposed mechanism. I have demonstrated the Mutual Agree plays a crucial role in licensing ellipsis. Specifically, ellipsis can only be licensed when a licensing head probes a (lower) ellipsis head for a feature, simultaneously sharing a contrastive feature. In this manner, only ellipses where (i) an agreement relation between a licensing head and ellipsis head obtains for independent reasons (*i.e.* feature valuation) and (ii) the licensing head bears a contrastive value that is shared with the ellipsis head.

In the next section I address remaining puzzles with respect to nominal ellipsis in English.

### 2.3.3 Identity

As I discussed in section 2.3.1, Aelbrecht adopts a Merchant (2001)-style account of identity, relying on the idea of *e-givenness* (*mutual entailment*). I assume a similar mechanism here, however I would like to make a few distinctions quite explicit.

Since the domain under consideration is nominal rather than verbal, several other factors must be considered with ellipsis and ellipsis identity. Specificity and discourse-recoverability are particularly important when it comes to recovering elided arguments. This fact has been extensively discussed in the existing literature on nominal ellipsis, so I will not belabor the point but instead indicate the clear restrictions on identity that noun phrases require.

Giannakidou and Stavrou (1999) propose that discourse-recoverability appropriately captures the DP-information necessary for nominal ellipsis identity:

- (95) *Recoverability of the Descriptive Content in Nominal Subdeletion*: An elided nominal subconstituent  $\alpha$  must recover its descriptive content by an antecedent  $\gamma$  previously asserted in the discourse. (p. 307)

Giannakidou and Stavrou use a semantics-based definition of identity due to the availability of number (and case) mismatches in deleted NPs. Though they use Greek as the primary language under consideration, this sort of mismatch is possible in both English and French as well:

- (96) a. Hermione bought one wand and Harry bought two ~~wands~~(PL).  
 b. Hermione a acheté une baguette et Harry a acheté deux ~~baguettes~~(PL).

Of interest to the current discussion is the matter of the antecedent being previously asserted in the discourse. This has clear implications for semantic features of DPs, such as specificity. In order to elide an element, it must be rendered specific by the preceding discourse, whether it is definite or not. For example, in (97), we do not necessarily know the identity of the books in question, but we know that a particular (specific) set of the books was chosen:

- (97) I looked at a bunch of books at the bookstore yesterday and I found some ~~books~~ that looked interesting.

On the other hand, it is not possible to construct an example where the elided constituent is non-specific:

(98) #I went to the bookstore yesterday and I found some ~~books~~ that looked interesting.

Therefore, we can postulate that ellipsis identity restricts syntactic output in that a constituent must be [+specific] in order to be recoverable.

For the following analysis, therefore, I assume Merchant's notion of e-givenness with the additional discourse-specific restriction as recognized by Giannakidou and Stravrou on the basis of semantic identity.

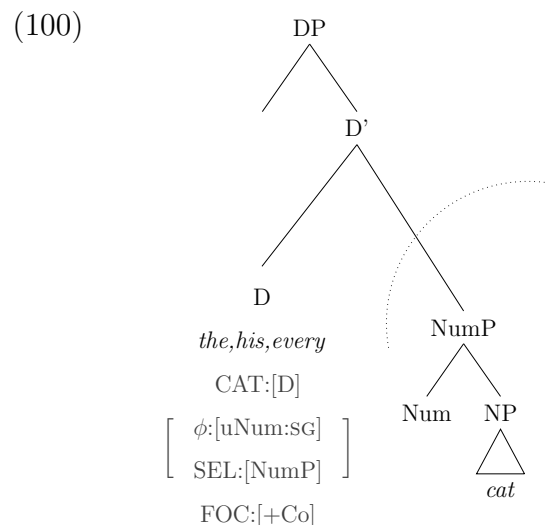
#### 2.3.4 *Restricting licensing*

As I demonstrated in section 2.3.2, the proposed mechanism accounts for all main instances of ellipsis licensing in English, including possessives. The next step is to show how the mechanism rules out illicit ellipses.

Recall from section 2.2.1 that certain elements cannot license ellipsis, specifically: (i) elements behaving as articles originating in D (possessive determiners, definite and indefinite articles, and universal *every*), (ii) singular demonstratives, and (iii) comparative adjectives and descriptive adjectives that are not part of the human construction (*e.g. the rich, the poor*). I argue that D-elements and adjectives are 'weeded out' as ellipsis licensors on the basis of the syntax alone.

First, I start with article-like elements: possessive pronouns, articles, and universal *every*. Unlike other 'high' elements such as possessors, these do not move to the specifier of D and establish an Agree relation, but instead Merge in D. Thus, even if these elements are marked as [+Co], they cannot license the ellipsis of the complement of D since they do not establish an Agree relation with it. The tree in (100) is for the construction in (99), which shows that ellipsis licensing is not possible because the licensing head and ellipsis head overlap.

(99) \*Hermione found a cat and she ultimately loved the ~~eat~~.



In this manner, Agree as an ellipsis licenser provides a simple solution for the issue of ‘other’ D-elements not being able to license ellipsis.<sup>45</sup> That this contrast can be easily derived is something not found in, *e.g.* phase- or domain-based accounts.

Next, adjectives are unable to license ellipsis in English. I argue that this is the result of several factors. First, adjectives themselves do not agree in number (or gender) with the head noun, shown in (101), thus we do not expect any scenario in which an adjective directly licenses nominal ellipsis.<sup>46</sup>

(101) a. I like the green woman.

---

<sup>45</sup>In other languages, such as Spanish, articles may license ellipsis:

- (i) El Perón del 73 no fue el mismo que el ~~Perón~~ del 45.  
 the Perón of.the 73 not was the same that the of.the 45  
 ‘The Perón of 73 was not the same as the ~~Perón~~ of 45.’ (Saab, 2014:21)

For such languages, it is possible that articles occupy a lower position in structure and are licensed by a higher head or they raise to a position above D. I discuss a similar issue in the analysis of French below.

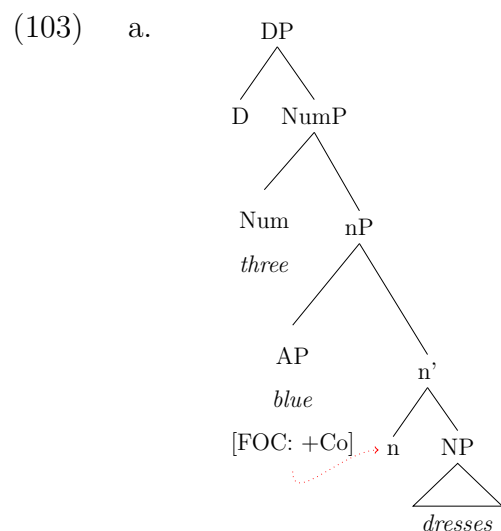
I do not go further into these possibilities, but given the current mechanism crosslinguistic differences in ellipsis domains seem to fall out straightforwardly. I refer the interested reader to Saab (2014).

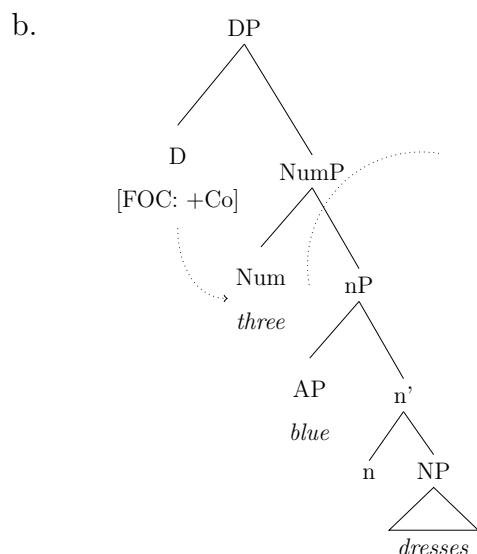
<sup>46</sup>This predicts that adjectives that agree in some manner can license ellipsis, as we will see in the next section.

b. I like the green man.

Second, recall from the discussion in chapter 1 that adjectives such as *green* fall in the nominal ‘area’ (NP; or, more specifically, *n*P assuming our Svenonian analysis is correct). Unless the adjective can license the deletion of the complement of *n* (as opposed to D licensing the deletion of the complement of Num), the adjective will always be included in the ellipsis site. Examples (103a) and (103b) demonstrate. In (103a) the adjective is in an appropriate configuration to license ellipsis, but since no agreement relation obtains between the adjective and *n*, ellipsis does not occur. In (103b), ellipsis is appropriately licensed by D, but the adjective is included in the ellipsis site.

(102) \*I like two green dresses and you like [three blue ~~dresses~~].





A related discussion is the analysis of superlative adjectives versus comparative adjectives, the former of which licenses ellipsis freely:

(104) a. Of all the hippogriffs, these are the meanest ~~hippogriffs~~.

b. \*Ron made a good potion, but Hermione made the/a better ~~potion~~ (than Ron).

As I noted, for the sake of simplicity I assume that both of these begin in the same prenominal position as other adjectives. The question is then what licenses the ellipsis of nouns under superlatives but not comparatives.

I argue that the licensing of superlatives has to do with the obligatory definiteness associated with superlative constructions. That it is the definiteness that plays a role can be seen in languages like French, where superlatives and comparatives only differ in that superlative constructions contain definite articles:

(105) a. une meilleure histoire *Comparative*

a.F.INDEF better.F story.F

‘a better story’ (Matushansky, 2008:38)

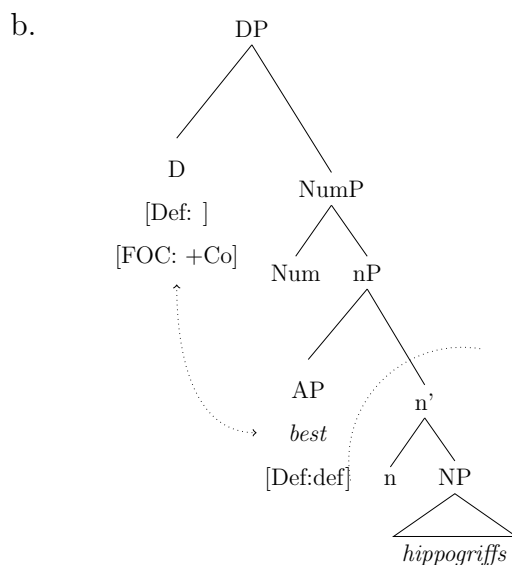


- b. la meilleure histoire *Superlative*  
 the.F.DEF better.F story.F  
 ‘the best story’ (Matushansky, 2008:38)

Heim (1999) notes that superlatives presuppose uniqueness, meaning they must semantically be composed with a definite element. Matushansky (2008) acknowledges this point but demonstrates that the definite article cannot originate in the superlative AP itself, but instead the superlative AP must be part of a definite DP.

I follow Matushansky’s assumption here and take it one step further to propose that the definiteness feature present on D (let’s refer to it as [(i/u)Def: ], where it may be valued as *def(inite)* or *indef(inite)* in the course of the derivation) can be valued by DP-internal elements.<sup>47</sup> Languages with definiteness agreement throughout the DP, such as Scandinavian, suggest that this is in principle possible (Julien, 2005). In the case of superlative constructions, the superlative AP bears some sense of definiteness, which the D may probe for, sharing a +Co feature and licensing the ellipsis of the complement of the superlative AP.

- (106) a. ...these are [the meanest ~~hippogriffs~~].



<sup>47</sup>See Manlove (2015) and references therein for a discussion of the (un)interpretability of definiteness on D.

By contrast, comparative adjectives do not have this inherent definiteness, and, like descriptive adjectives, have no reason to be probed by D. For this reason, comparative adjectives do not license nominal ellipsis.<sup>48</sup>

Finally, singular demonstratives, unlike plural demonstratives, do not seem to be able to license ellipsis (Llombart-Huesca, 2002; Lobeck, 1995; Sleeman, 1993, as cited in Günther, 2013). Constructions where singular demonstratives exist in ellipsis-like environments bear more of a proform interpretation:

(107) I'll buy this (book) and you buy that (book).

As an explanation for this puzzle, I suggest that there may be an overttness constraint for plurality at play, in line with Günther (2013). In brief, PF may filter ellipses in which an overt valuation of number marking is not present but it is required; plural demonstratives overtly express the plural feature, so no issue arises, but singular demonstratives do not and the Num head (bearing number marking) has been elided, leading to unacceptability of PF.<sup>49</sup> That this is on the right track is indicated by the contrast in unacceptability between singular demonstratives with elided complements and, *e.g.*, definite articles with elided complements.

(108) I'll buy this book and you buy that \*(one).

(109) \*I'll buy a/the book and you buy the (one/???).

In the case of *that*, the unacceptability can be rescued by inserting *one*, which appropriately expresses number; in the case of *the*, no such option exists.

In this section I reviewed outlying data from English ellipsis, showing that a combination of the present account and previous arguments and observations can explain the observed patterns. Next, I extend the present account to French.

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<sup>48</sup>However, remember that if there **is** some form of Focus and a proper ellipsis head is present (*two* in the following example), ellipsis may proceed:

(i) I like the old books but you like [the newer **two books**].

<sup>49</sup>Thanks to a reviewer for this suggestion.

## 2.4 *Extending the licensing mechanism: Ellipsis-licensing in French*

In this section I extend the mechanism introduced in section 2.3.2. First, I show that it is compatible with the observed French data. Second, I demonstrate that it accounts for the contrasts between English and French ellipsis licensing.

### 2.4.1 *Mutual Agree in French*

Recall that the licensing environment for French ellipsis is quite similar to that of English; this is shown in (110). Some of the contrasts look misleading in table form: recall that French does not have the Saxon Genitive, thus the first row is irrelevant to the current discussion; remember also that the indefinite article in French is the numeral *un*, which makes it impossible to compare on the same plane to the English indefinite article; finally, recall that *chaque* ‘each’ demonstrates behavior similar to descriptive adjectives in French. Therefore, the main parties of interest here are demonstratives and descriptive adjectives.

## (110) Ellipsis Licensing in English vs. French DP

DP Element	English	French
Saxon Genitive	Yes	–
Possessive Pronoun	No	No
Demonstratives		
Singular	No	No
<b>Plural</b>	<b>Yes</b>	<b>No</b>
Quantifiers		
Universal <i>every</i>	No	–
Universal <i>all/tout</i>	Yes	Yes
Distributive <i>each/chaque</i>	Yes	No
Weak quantifiers	Yes	Yes
Numerals	Yes	Yes
Articles		
Definite	No	No
Indefinite	No	Yes
Adjectives		
<b>Descriptive</b>	<b>No</b>	<b>Yes</b>
Superlative	Yes	Yes
Comparative	No	No

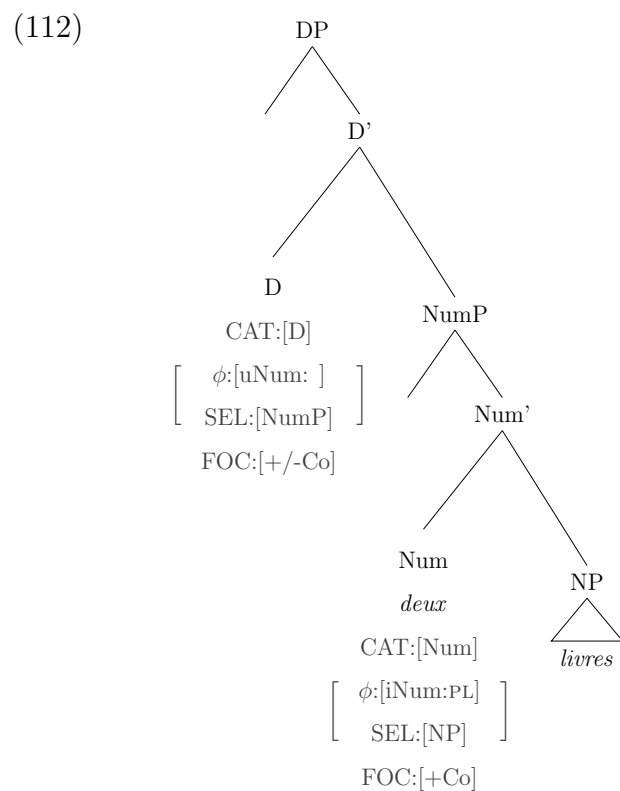
Due to the similarities between the two languages with respect to ellipsis licensing, I will briefly review an example where French behaves similarly to English and then focus on the differences.

The example in (111) shows the ellipsis of a subject NP in a numeral licensing environment:

(111) J'ai acheté trois livres hier, et deux ~~livres~~ sont vraiment intéressants.

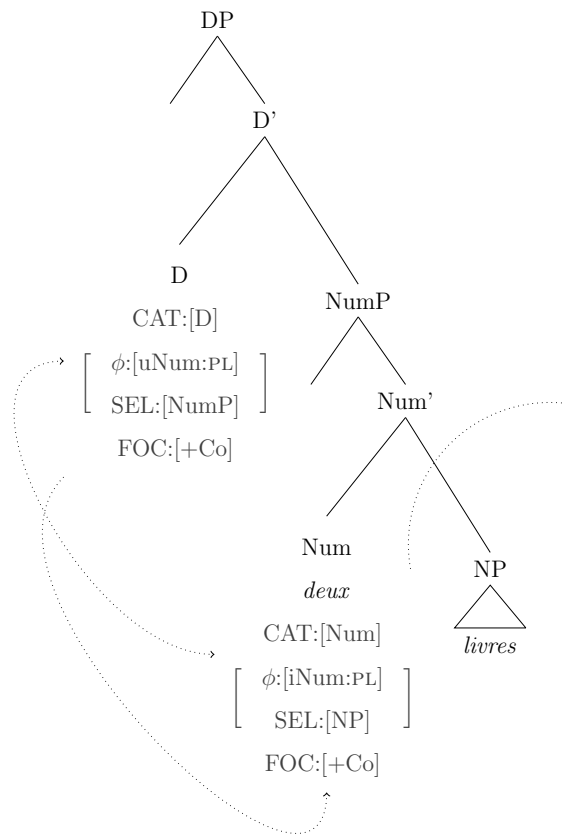
I bought three books yesterday, and two ~~books~~ are truly interesting.

The derivation for (111) proceeds in the same way as (82)/(83) above. The first tree shows the Merge of feature-bundles.



Then, the Agree operations proceed. Specifically, the D-head probes for interpretable number on Num and mutual sharing of the +Co feature occurs, licensing the ellipsis:

(113)



Other constructions whose structure is identical to English and in which ellipsis is licit proceed as demonstrated in the previous section.

#### 2.4.2 Demonstrative non-licensing of ellipsis

French is different from English in that neither the singular nor the plural demonstrative can license the ellipsis of its complement:

(114) *Demonstrative (singular)*

\*J'ai acheté un livre hier, mais [ce ~~livre~~] est plus intéressant.

I bought a book yesterday, but [this ~~book~~] is more interesting.<sup>50</sup> (Lobeck, 1995:130)

(115) *Demonstrative (plural)*

\*J'ai acheté un livre hier, mais [ces ~~livres~~] sont plus intéressants.

I bought a book yesterday, but [these ~~books~~] are more interesting. (Lobeck, 1995:130)

At first this may seem like a bit of a conundrum: presumably the structural configuration for demonstratives is not wildly variable between these two languages. Why then can the demonstrative *ce/ces* not raise to SpecDP and license the ellipsis of D's complement?

The answer comes from Rowlett (2007) and his views on how different types of demonstratives behave syntactically in French. To use his words, "the term demonstrative is misleading" (p. 66), given they behave more like definiteness markers when unaccompanied by additional marking. This is evidenced by the fact that they can introduce new referents to the discourse (116), which is not typical of demonstratives<sup>51</sup>:

## (116) Il y a ce type qui me harcèle.

it there has this bloke who me bothers

'There's a bloke hassling me.' (Rowlett, 2007:66)

However, there does exist a class of deictic demonstratives that are accompanied by a post-nominal deictic marker, *-ci* 'here' or *-là* 'there'. The contrast between non-deictic demonstratives and deictic demonstratives is shown in (117a) and (117b), respectively.

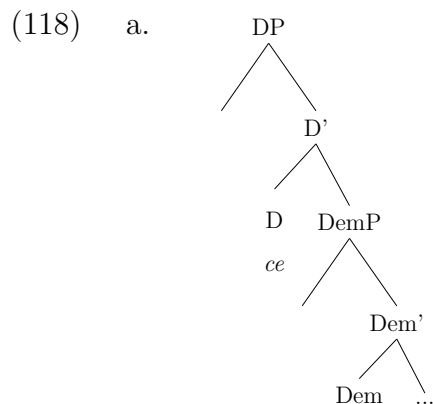
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<sup>50</sup> *N.B.* This is **not** an ellipsis in English.

<sup>51</sup> As shown in the translation line, English allows this as well. However, unlike French, separate forms for deictic and non-deictic demonstratives do not exist.

- (117) a. J'aime **ce** vin.  
 I-like this wine  
 'I like this/the wine.' (Rowlett, 2007:66)
- b. J'aime **ce** vin-**là**  
 I-like this wine-there  
 'I like *that* wine.' (Rowlett, 2007:66)

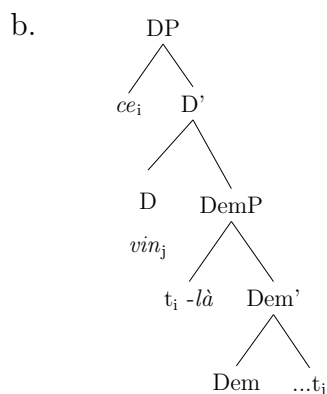
Rowlett argues that these two forms of *ce* are distinguished structurally: the non-deictic demonstrative is Merged in a Def head (for all intents and purposes this is analogous to the D I adopt here), while the deictic one is Merged in the specifier of a DemP along with the deictic marker, then raises to SpecDP. This contrast is shown in (118a) and (118b), respectively (trees are for (117)).<sup>52</sup>




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<sup>52</sup>I assume Rowlett's analysis for simplicity's sake here, but a reviewer has pointed out that there is an undesirable subextraction scenario associated with this structure. To circumvent the issue, we might also assume an analysis where the deictic marker is in fact the head of Dem and the demonstrative is in Spec on its own; I do not believe there are any undesirable consequences of this.





Note that in the latter the noun has raised all the way to the D head. I will discuss this matter more in the next section.

The question that now arises is whether the latter of the two constructions can license ellipses, since a contrastive element can theoretically raise to SpecDP and license the complement of D. In the following example, (119a) shows that ellipsis is **not** licensed, though (119b) shows that a pronominal may replace the demonstrative.<sup>53</sup>

(119) Ce livre-ci pour la lecture et...

This book-here for (the) reading and...

a. \*ce-là pour brûler.

the/this-there for burning

b. celui-là pour brûler.

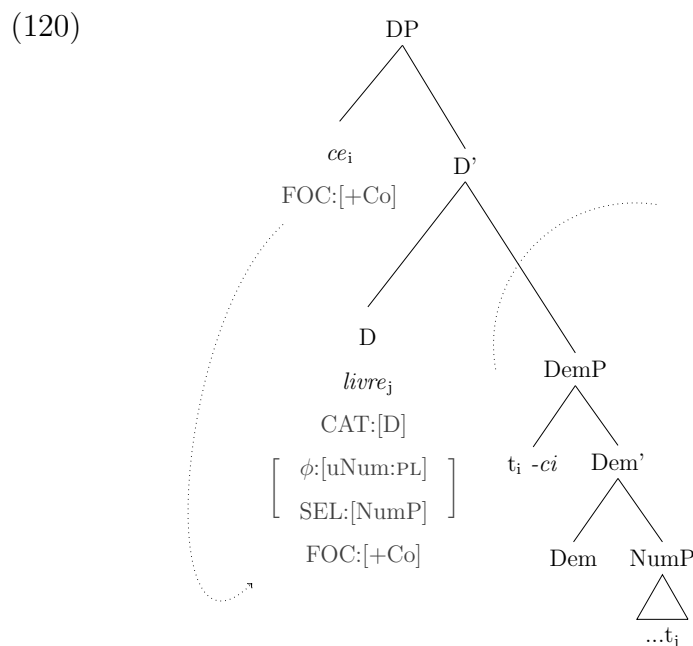
this.one-there for burning.

Note that the head noun in the DP must raise to D (or, minimally, occur between the demonstrative and deictic marker). In the course of the derivation, this would mean that ellipsis would have to be licensed **prior** to the movement of this head noun to D. The derivation in (120) demonstrates. When the contrastive demonstrative raises to SpecDP, the

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<sup>53</sup>Example from consultant.

D head has already Merged, meaning the head noun will have already raised to D. When the demonstrative Agrees with D in order to license ellipsis, there is no head noun in the ellipsis site to elide.



In this manner, ellipsis under a deictic demonstrative is derivationally impossible.

### 2.4.3 Restrictions on adjectival licensing

French and English also differ in that the former allows adjectival licensing of ellipsis. Recall that adjectives that are compatible with partitive PPs or are in some sense specific can license ellipsis, as in (121). In English, on the other hand, ellipsis below adjectives is restricted to *the human construction* type.

(121) De ces robes, je préfère la ~~robe~~ verte foncée.

Of these dresses, I prefer the green deep

'Of these dresses, I prefer the deep green (one).'

In the existing literature on nominal ellipsis in French (Lobeck, 1995; Sleeman, 1993, 1996), a feature of specificity or partitivity is what licenses nominal ellipsis under adjectives. For example, Sleeman (1996) observes that licensing adjectives are frequently compatible with partitive PPs (as shown in (121), however not all are):

(122) Je prends l'autre

'I (will) take the other (one)' (Sleeman, 1996:15)

Thus the intersection of partitivity and specificity is what licenses ellipsis.

The idea that partitives license ellipsis has been met with criticism (Günther, 2013; Saab, 2014). For example, Günther (2013) argues that the idea of 'partitivity', even defined with reference to specificity, is too vague: there is no consensus on what defines a partitive adjective in the literature that adopts such an approach (Lobeck, 1995; Sleeman, 1996). Additionally, partitivity/specificity does not explain why ellipsis of mass nouns is allowed. In the following example from French, the two types of tea referred to are generics<sup>54</sup>:

(123) a. Aimes-tu le thé vert?

Like-you the tea green?

'Do you like green tea?'

b. Non, je préfère le noir.

no, I prefer the black

'No, I prefer black (tea).'

Günther also adds several arguments against partitivity as an ellipsis licenser on the basis of English evidence.<sup>55</sup>

Although Sleeman's generalization is descriptively correct, the ambiguity present in assuming partitive licensing prompts an explanation using a purely syntactic analysis. Under

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<sup>54</sup>Günther notes this for English; my consultant has supplied the French examples here.

<sup>55</sup>See Günther 2013:39 for a summary.

the current approach, we should expect ellipsis to be licensed by adjectives in French as long as an appropriate Agree relation is established and the nominal element falls in the correct domain.

Recall from chapter 1 the expanded internal NP structure that I assume:

(124)  $DP > NumP > nP > NP$

The *n*-head is assumed to be the host of the Gender feature, which was not relevant to the discussion of English. However, it is relevant to French given French adjectives agree with the noun in gender **and** number. What this means is that adjectives will also have to be part of the agreement relations that are established throughout the derivation of DP.

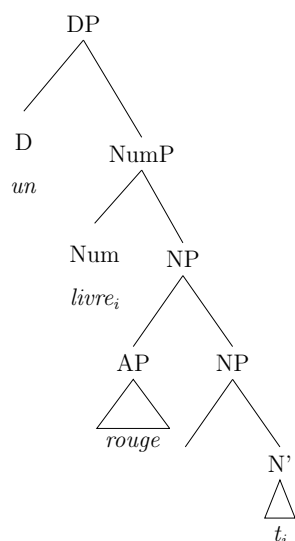
Before I proceed, I must address a few aspects of French that will be pertinent to the proposed derivations. As I noted in the previous section, French is a language with overt N-raising, like Western Romance languages in general (Bernstein, 1993b; Bernstein, 1991; Cinque, 1995; Longobardi, 1994; Picallo, 1991; Valois, 1991). In constructions where adjectival modifiers follow the head noun, the noun has head-raised over the adjective. For (125), for example, a non-ellipsis structure would resemble (126) (*cf.* Bernstein, 1991:116).

(125) un livre rouge

a book red

'a red book'

(126)



N-raising analyses of Romance languages are found in Dobrovie-Sorin (2012) and Longobardi (1994), the latter of whom argues that movement of N to D is necessary for interpretation of the noun as referential. In French, there is some debate on the position to which the N raises. Some argue that N raises to Num for its necessary interpretive features (Bernstein, 1991; Sleeman, 1996); as we saw in the previous section on demonstratives, however, some analyses assume movement targets a higher position (Rowlett, 2007).

Regardless of the precise position of N, the head-raising analysis in general is what derives the pre- and post-nominal order of adjectives. Adjectives positioned below the N landing site (let's assume for the sake of discussion that this position is Num, in line with the most common approach to French) will be postnominal. Thus adjectives of color (which fall in the 'subsecutive' category, as discussed in chapter 1), which are positioned below Num, are postnominal.

(127) a. une robe rouge

a dress red

'a red dress'

b. [DP un [Num robe<sub>i</sub> [nP [AP rouge] [NP t<sub>i</sub>]]]]

With these basic facts in place, I return to the derivation of nominal ellipses licensed by adjectives in French.

The example in (130) (from (121) above) is represented in the structures in (130a) and (130b). There are a few non-substantial differences between the constructions shown here and the English ones. First, the feature bundles now contain *i/uGen*, depending on the head. Recall that I assume that Gender is interpretable on *n*, meaning it will be uninterpretable elsewhere. Second, since the adjective must agree with the noun in Number and Gender, it will probe *n* for its *iGen* feature when it Merges.

In addition to these changes, I also assume that *n* is an ellipsis head which may delete its complement under the appropriate licensing conditions. While this may seem like an sudden addendum to the discussion, I argue that it is expected given the contrast that emerges between English and French. In English, the adjective in the following example **must** be elided, while in French it may or may not:

(128) I like these three red dresses...

- a. \*Do you like those two blue ~~dresses~~?
- b. Do you like those two ~~red-dresses~~?

(129) J'aime ces trois robes rouges...

- a. Aimes-tu ces deux ~~robes~~ bleues?
- b. Aimes-tu ces deux ~~robes-rouges~~?

In section 2.3.4 I argued that adjectival licensing of ellipsis in English is unexpected because adjectives do not undergo any Agree relation in the course of the DP derivation. The assumption that *n* is an ellipsis head falls out from that observation: because the functional head *n* is probed for some agreement feature, it is potentially an ellipsis head.

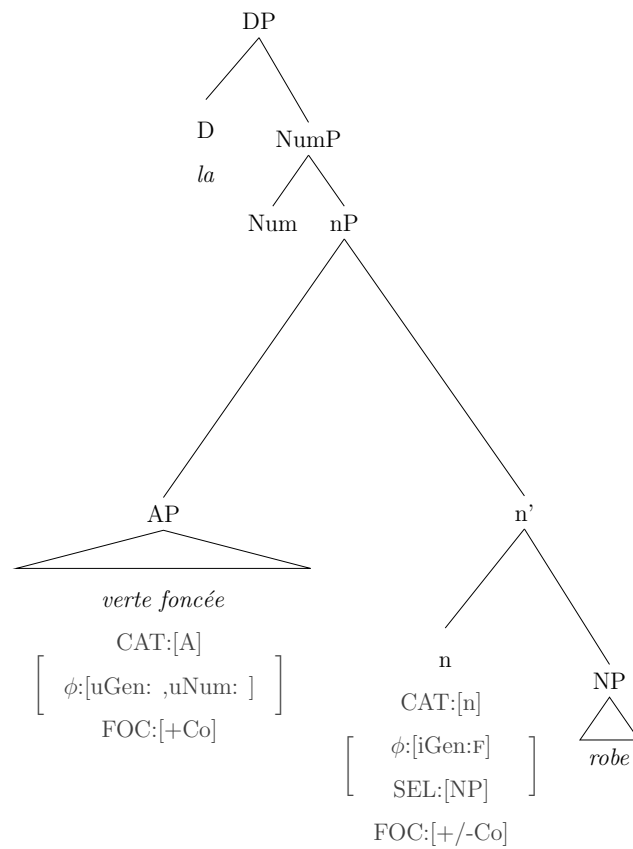
I now present the derivation. In (130a) the *n* head and the adjective phrase Merge with their associated feature-bundles. In (130b), the AP probes for iGen on *n*, which licenses the ellipsis of the complement of *n*, as the AP is marked as contrastive.

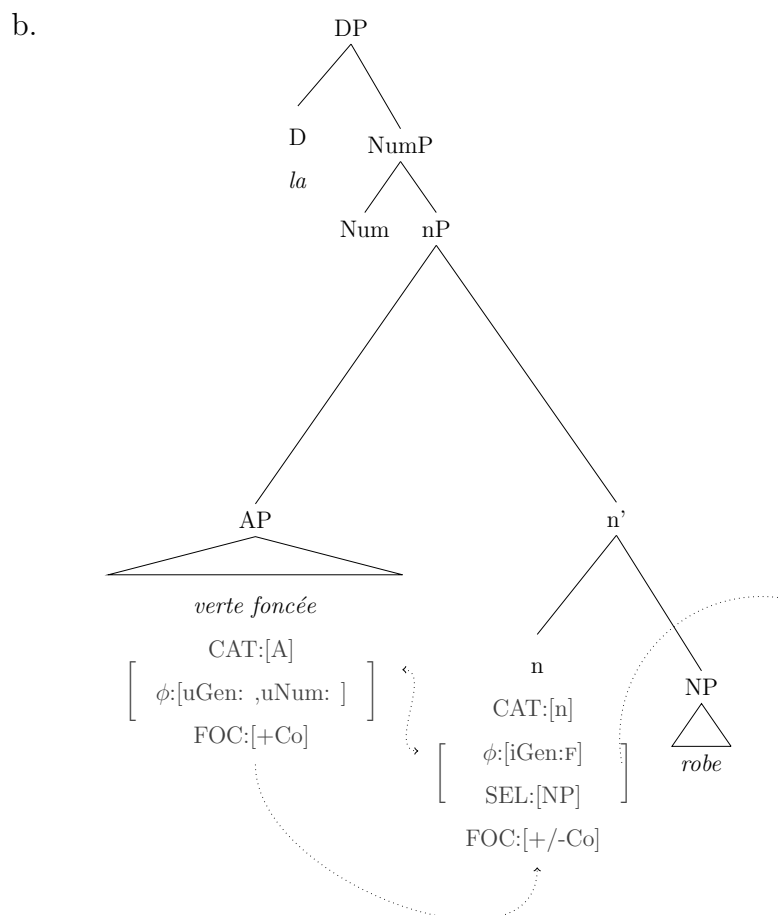
(130) ~~la robe~~ verte foncée

the green deep

‘the deep green (one)’

a.





In this manner, it is possible to syntactically derive nominal ellipses licensed by adjectives in French. Note that this contrasts with the English examples from the previous section in that adjectives in English do not undergo any agreement relations in DP (thus precluding the Mutual Agree mechanism).

For other adjectival positions, we expect similar results (*i.e.* prenominal adjectives will be able to license ellipsis so long as they Agree with a licensing head and N is contained in the ellipsis site).<sup>56</sup>

<sup>56</sup>One discussion brought up by Sleeman (1996) is worth mentioning here; specifically, if a non-partitive, non-specific (*i.e.* non-ellipsis-licensing) adjective intervenes between a licensing adjective and the ellipsis site, ellipsis is blocked ((ii))/(iii)):



## 2.5 Licensing gapping in English and French

I now return to the data on gapping in English and French, demonstrating that a mechanism of Mutual Agree is easily extendable to it.

In section 2.1 I noted that I would be assuming an ellipsis account of nominal gapping in English and French, following evidence from Yoshida (2005) and Yoshida et al. (2012). As Yoshida et al. (2012) notes, based on previous treatments of nominal gapping as the same mechanism as verbal gapping, there is the possibility that the same mechanism that derives verbal gapping may derive nominal gapping (see, *e.g.*, Jackendoff 1971). Most recently, ATB movement has been proposed for verbal gapping by Johnson (1996, 2000, 2006, 2009). For this reason, Yoshida et al. have made a firm case that ATB movement is not an option for English gaps using (i) the data introduced in section 2.2.1 and (ii) four main arguments against an alternative, movement-based account (such as Johnson's ATB-movement). I list the arguments here; for now I do not reproduce them but I will return to them when discussing French<sup>57</sup>:

- 
- (i) \*Malheureusement je n'ai pas entendu l' [ ] intéressante.  
 Unfortunately I NEG have heard NEG the interesting  
 'Unfortunately I have not heard the interesting (one).' (Sleeman, 1996:275)
  - (ii) Je n'ai pas entendu les deux [ ] que tu m'avais conseillé d'aller écouter.  
 I NEG have NEG heard the two that you me had advised of go listen  
 'I have not heard the two that you had advised me to attend.' (Sleeman, 1996:275)
  - (iii) \*Malheureusement je n'ai pas entendu les deux [ ] intéressantes.  
 Unfortunately I NEG have NEG heard the two interesting  
 'Unfortunately I have not heard the two interesting (ones).' (Sleeman, 1996:275)

Sleeman uses this blocking effect in conjunction with a head-government analysis of ellipsis (similar to Lobeck, 1995) to argue that the intervening adjective blocks licensing because it immediately governs the ellipsis site and does not have the appropriate governing feature.

Under the current analysis this might seem odd, given the adjective still agrees with the noun and is still contrastive in some sense. However, I suggest that the unacceptability of the constructions in ((i)) and ((ii)) is tied to the semantics of the ellipsis (the interpretation) rather than the syntactic licensing. For, as Günther (2013) points out, specificity arguably has syntactic effects but relates more to semantic interpretation. Thus, under the syntactic licensing + deletion account I assume here (as opposed to a null proform account), semantics will not necessarily come into play until the derivation has been completed.

<sup>57</sup>An ATB movement account also requires an incredibly complex structure, which I do not replicate here

(131) *Evidence against an ATB-movement account of nominal ellipsis*

- a. Nominal gapping does not obey the Coordinate Structure Constraint; this is not expected under a movement-based analysis.
- b. The movements that are required for an alternative analysis violate other island constraints (such as the constraint on Left Branch Extraction and the Complex NP Constraint).
- c. A movement-based account predicts scope possibilities that do not actually occur.
- d. Cross-conjunct binding is not restricted in DP in the same way it is in VP.

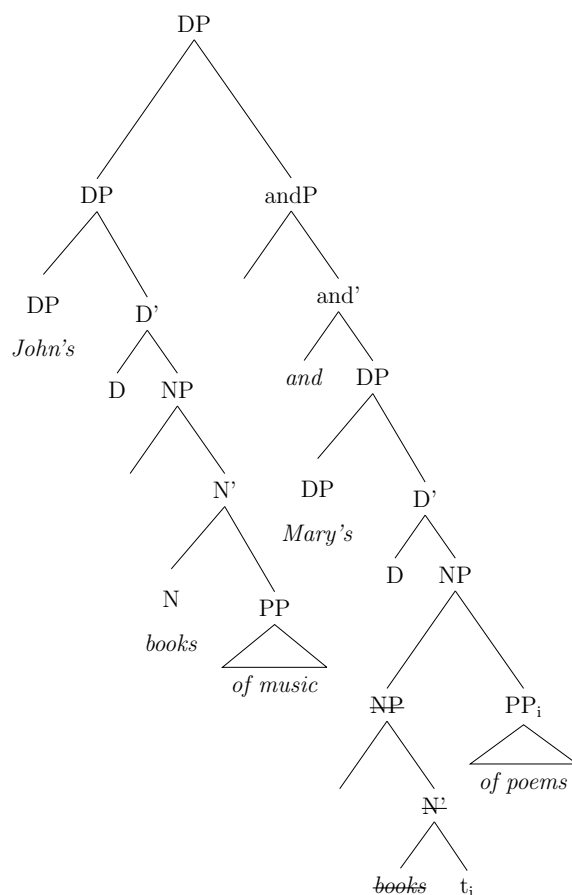
As a result of their rejection of an ATB-style (or non-ellipsis) account of nominal gapping, Yoshida et al. propose a basic mechanism for nominal gapping: remnant movement followed by ellipsis. Specifically, they propose that the complement PP undergoes rightward movement to adjoin to either NP or a higher functional projection; the NP segment out of which movement occurred is then deleted. The example in (133) demonstrates (*cf.* Yoshida et al., 2012:487):

---

(Yoshida et al., 2012:483). While this is not necessarily a reason to reject an ATB analysis it does flout the idea of minimality and overcomplicates the overall structure.

(132) John's books of music and Mary's ~~books~~ of poems.

(133)



Yoshida et al. provide the descriptive analysis and schematic derivation presented in (133), which I adopt as a general basis for English derivations. Further, they make an interesting prediction: languages that have overt N-raising, such as Spanish, Italian, and French, may in fact have ATB-movement-derived nominal gapping (footnote 15, p. 491). This prediction has important implications for the languages under consideration here: since N-raising occurs in French, ATB movement should be possible.

This section is organized as follows. First, I briefly address nominal gapping in English, demonstrating that my account of ellipsis can be extended to these constructions. Second, I discuss French nominal gapping, arguing against Yoshida et al.'s suggestion that it may be ATB movement using their diagnostics. Finally, I present the French gapping

constructions under a Mutual Agree analysis, demonstrating that it not only accounts for all of the allowed gaps, but also explains the puzzle I discovered in section 2.2.2 with respect to the universal quantifier *tout*.

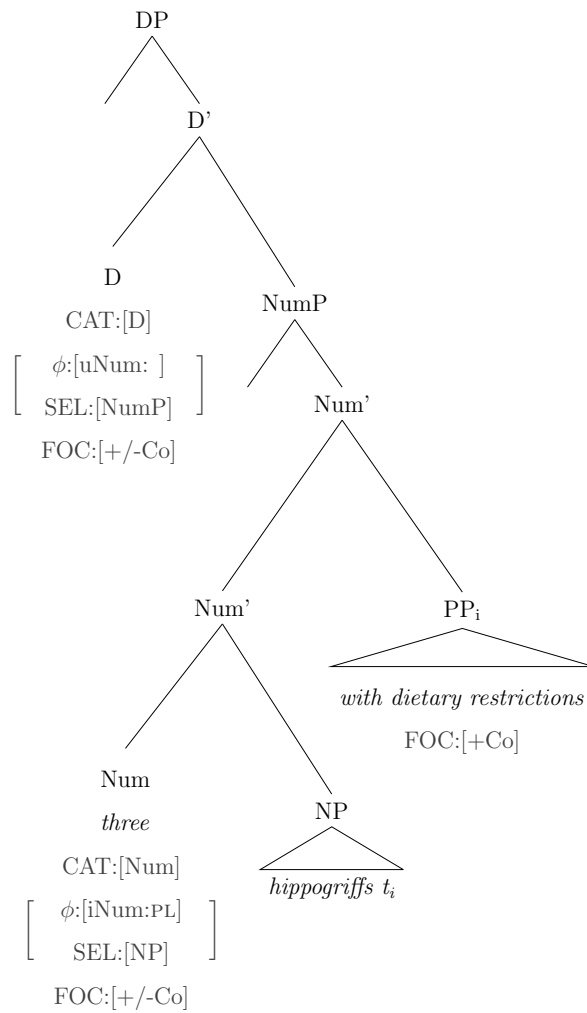
### 2.5.1 Nominal gapping in English

Regardless of where +Co occurs in the derivation, as long as D is in a position to value Num with the +Co feature, ellipsis should be licensed. In the following example, the contrastive element is the PP remnant of a gapping construction:

- (134) Three hippogriffs **with huge appetites** need more food than [three ~~hippogriffs~~ **with dietary restrictions**].

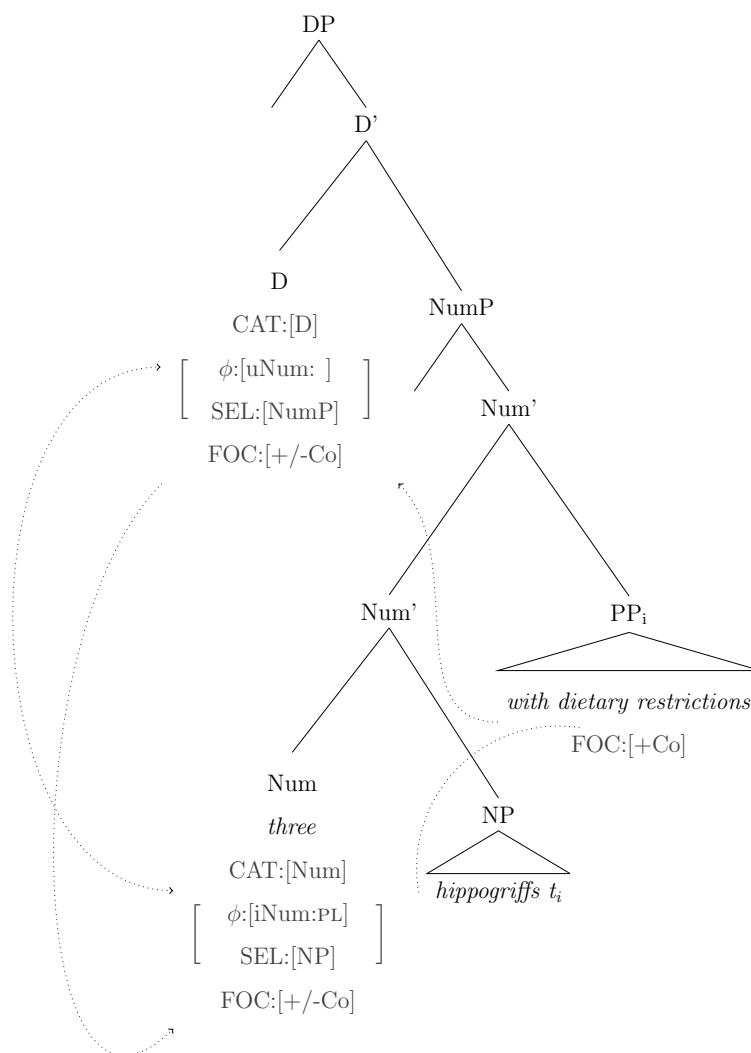
As with the adjectival example, in the tree in (135) I show the movement of the contrastive element out of NP prior to the Agree relations:

(135)



When the D-head Merges, Agree relations may proceed: D receives the +Co feature from *with dietary restrictions* and simultaneously probes for interpretable Num features on Num while transferring +Co to the Num head:

(136)



The construction in (135)/(136) can be extended to all instances of nominal gapping, even when multiple PP remnants occur:

(137) Harry read two books on Quidditch from England and Hermione read three ~~books~~ on Potions from France.

Additional escaping remnants must simply be right-adjoined to additional NumP specifiers or the higher DP specifier.

Generally speaking, the account I present here is the same as Yoshida et al.'s (2012): the PP remnant right-adjoins to a higher functional projection in order to escape ellipsis. What I have provided is a specific licensing mechanism that allows for the escape of these remnants. What I propose that differs from Yoshida et al. is presented in the next section: that French nominal gapping is also nominal ellipsis.

### 2.5.2 *Gapping as ellipsis in French*

Recall that Yoshida et al. (2012) point out that in Romance languages, such as French, an ATB movement analysis **may** be possible given the availability of N-raising (and, consequently, movement of N in a coordination environment). In order to firmly reject this possibility, I go through the diagnostics that Yoshida et al. (2012) use to eliminate the possibility for English, as briefly discussed in the introduction to this section.

In English, violations of the Coordinate Structure Constraint are allowed in DP gapping, which is not anticipated under a movement-based account:

- (138) John's book of music will be published because/if Mary's ~~book~~ of poems is successful.  
(Yoshida et al., 2012:481)

A similar construction to (138) in French demonstrates that the formation is odd, but not inadmissible.<sup>58</sup>

- (139) ?Deux livres de musique par Chomsky seront publiés si trois ~~livres~~ de littérature du même auteur sont intéressants.

Two books of music by Chomsky will.be published if three ~~books~~ of literature by the same author are interesting.

---

<sup>58</sup>As I indicated in the discussion of gapping data presented at the beginning of this chapter, nominal gaps in subject position are acceptable in spoken French but are less so in written French (footnote 16, page 54). This appears to be the source of 'oddness' in (139).

Next, under a movement-based account of the following gap, the construction would violate the Complex NP Constraint:

- (140) John met a man who read Bill's books of music and Sally met a girl who read Mary's ~~books~~ of poems. (Yoshida et al., 2012:482)

That the construction is acceptable points toward non-movement. In French, we end up with a similar result:

- (141) John a rencontré un homme qui a lu deux livres de musique et Sally a rencontré une femme qui en a lu trois ~~livres~~ d'histoire.

Next, there is the matter of scope. In the following example, the numeral *three* does not scope over both conjuncts instead, it is distributed to where each conjunct involves three reasons (for six total reasons):

- (142) Mary's three reasons for anger and her husband's ~~(three) reasons~~ for depression.

Under an ATB movement analysis of nominal gapping, the construction must involve two coordinated NPs. The unavailability of a reading where the numeral can scope over both head nouns indicates that this NP coordination is not actually possible.

Since French does not have the Saxon Genitive, it is not possible to construct an example like (142). In an attempt to create something similar, I present the examples in (143) and (144). The former shows that the use of a numeral in the preceding conjunct does not allow ellipsis in the second conjunct without a numeral present. The second uses the deictic demonstrative as discussed in section 2.4.2: as with English, the interpretation where 'three' scopes over both conjuncts is unavailable. Instead, there must be more than three books (though the total number is unspecified, which differs slightly from the English interpretation).



(143) *Prompt: What color dresses did you buy yesterday?*

Trois robes vertes en coton et \*(deux) ~~robes~~ rouges en soie.

Three dresses green of cotton and \*(two) ~~dresses~~ red of silk.

(144) Ces trois livres-ci de lecture et ceux-là pour brûler.

These three books for reading and those for burning.

Finally, Yoshida et al. argue that cross-conjunct binding in DP is not restricted as it is in VP. In VP constructions, cross-conjunct binding is only possible when the second conjunct is gapped. The example in (145a) shows that the gap must occur while the example in (145b) shows that VPE does not allow the binding either.

(145) a. Not every girl<sub>1</sub> ate a green banana, and her<sub>1</sub> mother (\*ate) a ripe one.

b. \*Not every girl<sub>1</sub> ate a green banana, and her<sub>1</sub> mother did too. (McCawley, 1993, as cited in Yoshida et al., 2012:478)

The same restriction does not apply to DP contexts, as shown here:

(146) Not every doctor<sub>1</sub>'s [knowledge of tax law] or his<sub>1</sub> accountant's [(knowledge) of medicine] is reliable. (Yoshida et al., 2012:485)

Yoshida et al. argue that this apparent cross-conjunct binding is merely an instance of specifier binding effects (Hornstein, 1995; Reinhart, 1987), whereby a quantified DP in the specifier of a DP may bind outside of the DP.

In French, we see similar results.

(147) Ni a connaissance du docteur<sub>i</sub> [en droit fiscal] ni la connaissance de son<sub>i</sub> secrétaire médical [de la médecine] est fiable.

Neither the knowledge of doctor in right fiscal nor the knowledge of his secretary of the medicine is reliable

‘Neither a doctor’s knowledge of tax law nor his secretary’s knowledge of medicine is reliable.’

Thus French seems to behave similarly to English with respect to the diagnostics for an ellipsis account of nominal gapping as opposed to a movement account. This lines up with Yoshida et al.’s argument for English but does not follow their prediction for Romance languages in general. Specifically, this contrasts with the prediction that gapping in Romance may be the result of movement (in line with analyses of verbal gapping) rather than deletion.

### 2.5.3 *Nominal gapping in French*

The data presented in section 2.2.2 demonstrated that, as in English, French gapping constructions behave almost identically to ellipsis constructions with respect to licensing, including the required insertion of *en* in indefinite objects. The exception to this generalization is the fact that the universal quantifier, *tout*, cannot license nominal gapping (in subject **or** object position).

I first give a sample derivation for a typical gapping construction in French and then discuss *tout*.

The construction in (149)/(150) is for (148).<sup>59</sup> As shown, the PP Merges within the NP and then extraposes, escaping ellipsis.

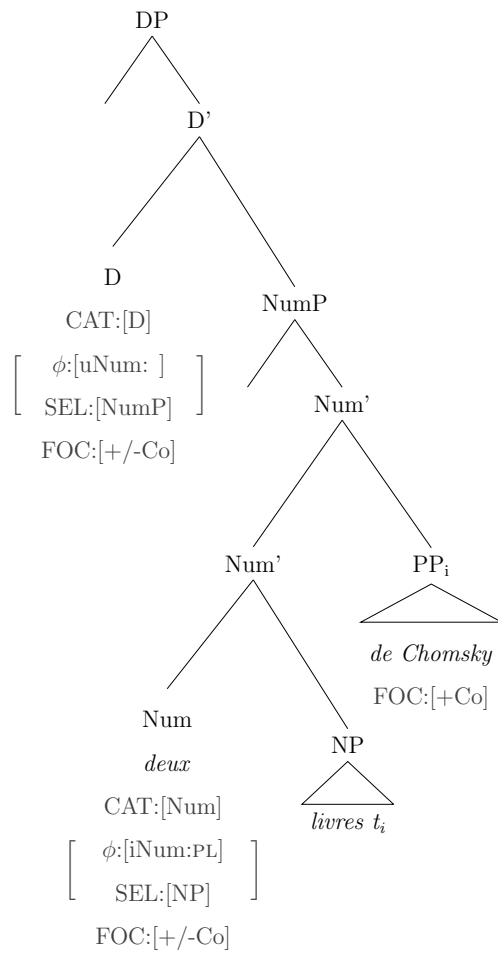
(148) J’ai acheté trois livres hier, et [deux ~~livres~~ de Chomsky] sont vraiment intéressants.

I bought three books yesterday, and [two ~~books~~ by Chomsky] are truly interesting.

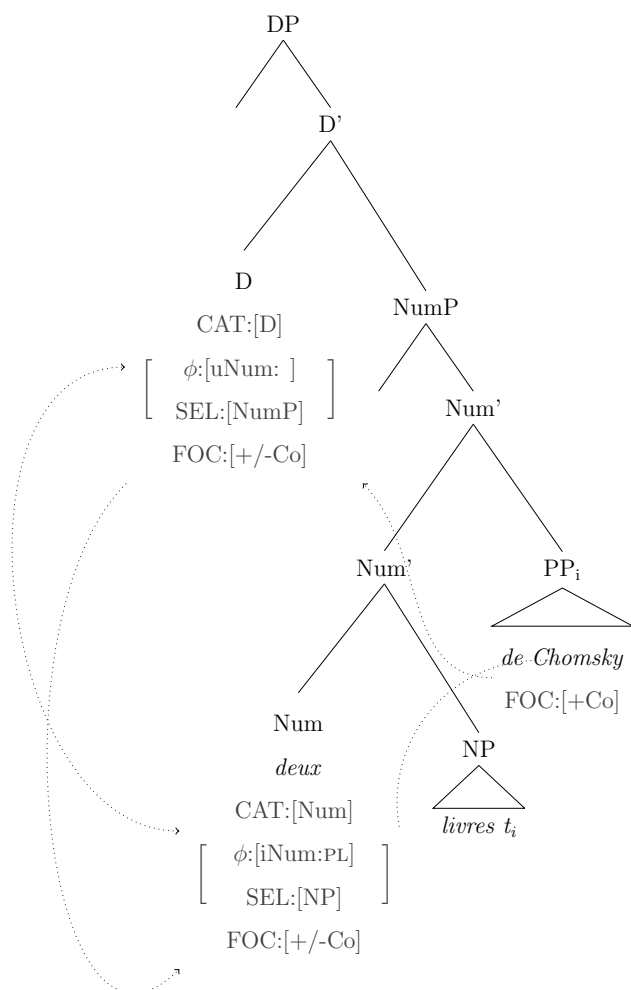
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<sup>59</sup>I do not make any particular claims about the internal structure of the phrase *de Chomsky* ‘by Chomsky,’ but refer the reader to Kayne (1994), Abeillé, Bonami, Godard, and Tseng (2004), Bernstein (2005), and Rowlett (2007) for discussion.

(149)



(150)



In this manner the derivation for French gapping structures is similar to that of English.

One puzzle remains with respect to French gapping constructions: why is it that *tout* may license ellipsis but not nominal gapping? The data in (151) have been repeated here from (21) above:

(151) a. *Ellipsis*

J'ai acheté beaucoup de livres et [tous ~~livres~~] sont intéressants.

I bought a.lot of books and all (the) ~~books~~ are interesting.

b. *Gapping*

\*J'ai acheté beaucoup de livres et [tous ~~livres~~ de Chomsky] sont intéressants.

I bought many books and [all ~~books~~ of Chomsky's] are interesting.

c. *Gapping*

\*J'ai acheté beaucoup de livres de Chomsky et de Polinsky et...

I bought many books of Chomsky's and of Polinsky's and...

...[tous ~~livres~~] de Chomsky sont intéressants.

...[all ~~books~~] of Chomsky's are interesting.

Given the pattern that we have observed for other instances of ellipsis vs. gapping in French, the acceptability contrast is unexpected.

However, the story with respect to *tout* is not as straightforward as other quantifiers. Syntactically, *tout* neither originates in D (as *every* does in English) nor does it start lower than D and raise to SpecDP (as *all* does).

Rowlett (2007) argues that *tout* is a *predeterminer*. Structurally, it occupies a position above what he refers to as Def(inite)P, where the definite article is located.<sup>60</sup> He argues this point for two reasons. First, *tout* cooccurs with both definite determiners (which occupy Def under his analysis) and demonstrative and possessive determiners (which occupy SpecDefP under his analysis). These examples are given in (152a) and (152b), respectively.

## (152) a. toutes les idées

all.F.PL the.PL ideas

'all the ideas' (Rowlett, 2007:71)

## b. toutes ces/mes idées

all.F.PL these/those/my.PL ideas

'all these/those/my ideas' (Rowlett, 2007:71)

---

<sup>60</sup>Recall that I do not adopt DefP here, but for the purpose of discussion consider it analogous to DP.

Second, *wh*-fronting, which is typically impossible in a DP containing a demonstrative or possessive determiner due to the fact that the edge of DP is occupied, is possible with *tout*. Example (153) shows the non-escape of a *wh*-word with the possessive determiner *son* ‘his’ and (154) shows that (*tout*) does not have similar blocking effects.

(153) \*<sub>[CP [De quel roi]<sub>i</sub> as-tu lu [son histoire t<sub>i</sub>]]?</sub> (Rowlett, 2007:71)

(154) l’auteur [<sub>CP</sub> dont<sub>i</sub> j’ai lu [t<sub>i</sub> tous les livres t<sub>i</sub>]]

the-author of.whom I-have read all the books

‘the author all of whose books I read’ (Rowlett, 2007:72)

For these reasons, Rowlett argues that *tout* has the structure in (155).

(155) [<sub>PreDetP</sub> [<sub>PreDet</sub> tout] [<sub>DefP</sub> Def...]]

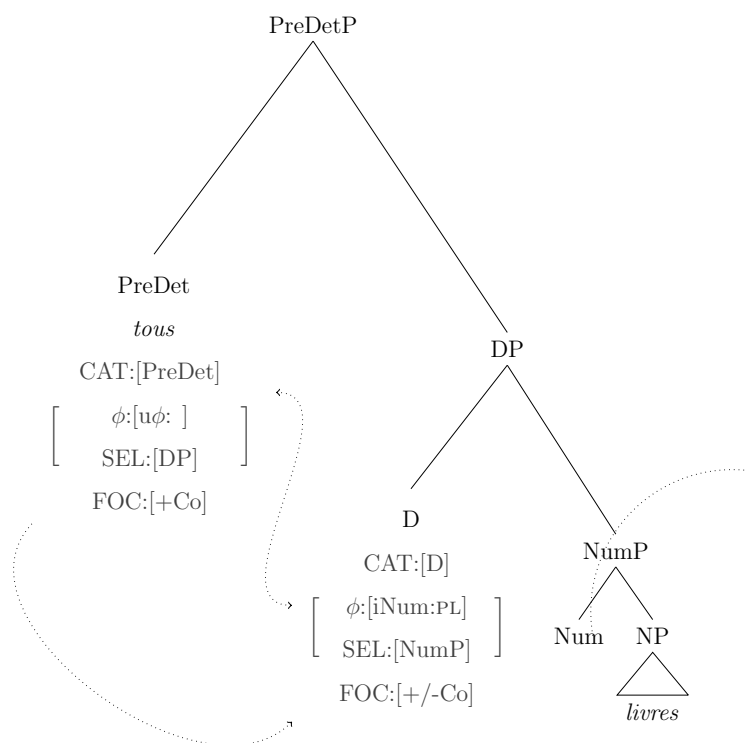
I adopt his general assumption: *tout* occupies a position above SpecDP.

In an ellipsis structure like the one I have presented throughout this chapter, when *tout* enters the derivation, assuming contrastiveness holds, it will probe D for its gender and number features and simultaneously license the ellipsis of D’s complement. I show this for the construction in (156).

(156) J'ai acheté beaucoup de livres et [tous ~~livres~~] sont intéressants.

I bought a.lot of books and all (the) ~~books~~ are interesting.

(157)



When we attempt to derive a gapped construction, however, an issue arises with respect to timing. Because ellipsis is licensed immediately upon the agreement between the licensing head and the ellipsis head, and *tout* does not raise from a position lower in the structure, giving elements a chance to escape, no elements lower than D are expected to survive the ellipsis. In this manner, the proposed mechanism correctly derives the results in *tout*-ellipsis: gapping should not be possible because no other elements should escape ellipsis.

In this section I have demonstrated that Mutual Agree can explain nominal gapping in both English and French.

## 2.6 Concluding thoughts

In this chapter I have presented a unified account of nominal ellipsis under the mechanism Mutual Agree which explains differences in nominal ellipsis licensing between English and French. The mechanism is based on three main conditions:

(158) *Conditions for licensing under Mutual Agree*

- a. Some element in the domain must be marked as +Contrastive.
- b. The licensing head and the ellipsis head must be separate heads; the licensing head must be Merged after the ellipsis head (internally or externally).
- c. The licensing head must probe the ellipsis head *for independent reasons*, such as agreement for DP-internal concord.

These conditions for the most part follow straightforwardly from agreement patterns that already occur in DP.

The greatest benefit of Mutual Agree is that it rules out constructions in which ellipsis should not generally be allowed (such as ellipses under articles in both English and French) as well as constructions under which the elided constituent may not be reconstructable (such as ellipses under English adjectives, which are not inflected for gender and number). On the other side of the coin, Mutual Agree predicts that possessors in the Saxon Genitive construction will be able to license ellipsis. This stands in contrast with previous accounts of nominal ellipsis in English, which run into issues allowing Saxon Genitive licensing but ruling out determiner licensing of ellipsis.

In addition to the theoretical proposal I have presented in this chapter, I have also provided new data for French ellipsis constructions. In particular, I have demonstrated that gapping in French behaves in the same manner as ellipsis with respect to the environments in which it is licensed. This interestingly goes against what has been predicted for Romance languages, due to the assumption that N-raising should allow for an ATB account of nominal



gapping in French (following Yoshida et al., 2012), but once again can be accounted for by the Mutual Agree mechanism that I have proposed.

I will not leave Mutual Agree solely in this chapter, as the next two chapters also require reference to nominal ellipsis. For the remainder of the dissertation, therefore, I assume Mutual Agree as a standard mechanism for nominal ellipses.

## Chapter 3

NOT TOO CLEAR-CUT A DOMAIN: ON DEGREE  
INVERSIONS IN DP**3.1 Introduction**

In the previous chapter I argued for an analysis of DP-internal ellipsis that was dependent upon Agree and movement operations at key points in the derivation. Specifically, I argued that D and Num are both ellipsis heads in English in that their complements may be elided when appropriately licensed by a higher, ellipsis-licensing element. In this manner, it was possible to derive the fact that only a subset of DP elements appear to license ellipsis while still maintaining set ellipsis domains. In this chapter I continue to argue for set DP-domains, this time with respect to a different mechanism: degree inversion<sup>1</sup>.

The purpose of this chapter is to argue that the constructions in (1) through (3) are parallel in that they are derived from the same base structure.

- (1) Voldemort was [too powerful] a wizard.
- (2) Voldemort was [too powerful] a wizard to trust.
- (3) Voldemort was a wizard [too powerful] to trust.

The construction in (1) involves degree inversion. The degree phrase *too powerful* appears to have moved from a prenominal position to a position before the indefinite article *a*. Note that the degree phrase cannot appear between the numeral and noun:

- (4) \*Voldemort was a [too powerful] wizard.

---

<sup>1</sup>a.k.a. *degree fronting* or *degree raising*

The construction in (2) appears to be identical to (1) with the addition of a postnominal element. On the other hand, the construction in (3) stands out from (1) and (2) — the degree phrase occurs postnominally and appears to form a constituent with *to trust* with a reduced relative interpretation.

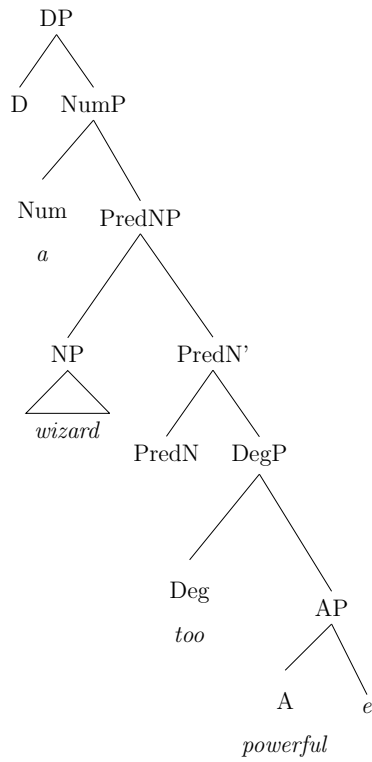
Degree inversion has been treated several ways structurally (Bolinger, 1972; Borroff, 2006; Bresnan, 1973; Emonds, 1976; Matushansky, 2002; Sag, 1980; Troseth, 2009). In general, however, it is understood as the fronting of a *degree word*, typically accompanied by the adjective that the degree word modifies.

In the sections that follow, I raise the following research questions:

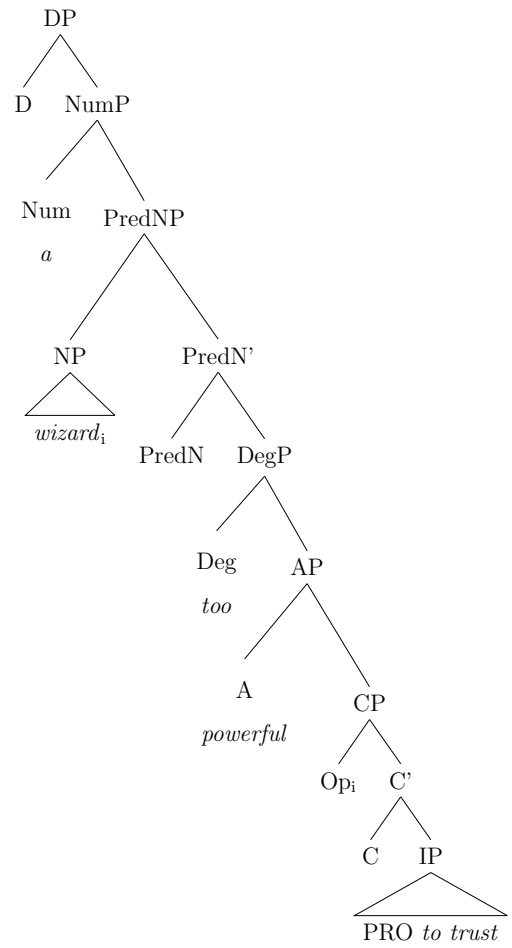
- (5) a. How can we syntactically account for the parallels between examples (1)–(3)?
- b. Is it possible to provide a syntactic analysis that accounts for variation with respect to degree inversion?

First, I propose that (1) and (2) have the same underlying structure, which begins as (3). The tree in (6) shows the two possible options for this base form: the former includes a full complement clause of the AP, while the latter AP has only a null complement — I will describe the differences between these two options in the sections that follow. The degree AP and subject noun begin in a small clause, labeled as PredNP throughout this chapter (analogous to PredP; see early discussions in Bailyn, 1995; Bowers, 1993; Svenonius, 1994). The trees in (7) show the two possible outcomes of the derivation. The example in (1) is represented by the first tree, where the DegP raises with the null *e* or the deleted clause. The example in (2) is represented by the second tree, where the clause may raise to escape ellipsis.

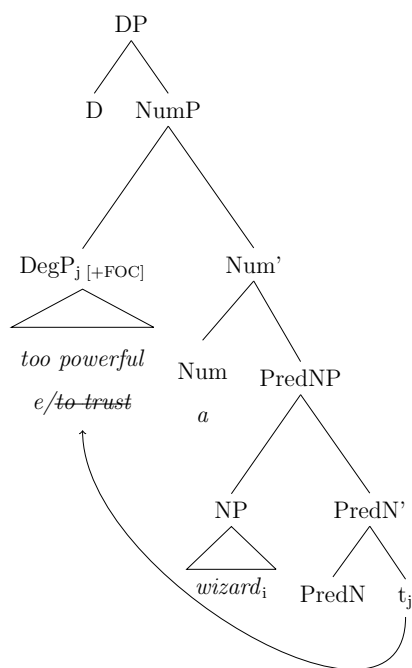
(6)



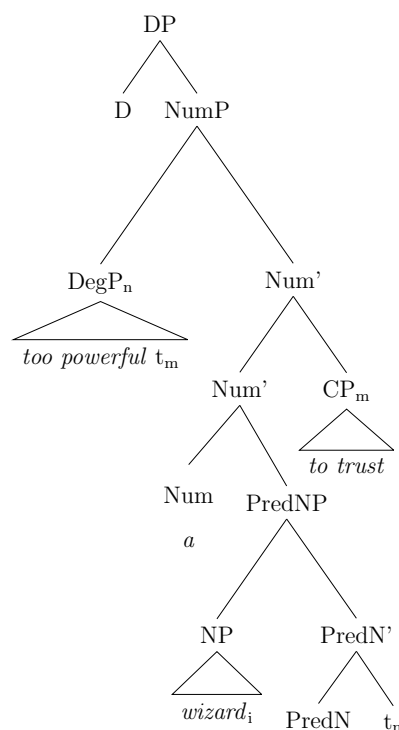
OR



(7)



OR



Second, I argue that a combination of this base structure and a new analysis of several degree words that display differing behavior — specifically *such*, *quite*, and *rather* — accounts for all ordering patterns associated with degree inversion, the details of which I present in section 3.2. Unlike previous accounts, I focus on the syntactic parallelisms between (1), (2), and (3).

This chapter is organized as follows. In section 3.2 I present an overview of degree inversions, covering the range of possible inversion structures and other details observed in previous accounts. In section 3.3 I present my analysis, demonstrating not only that degree inversion constructions parallel *tough*-constructions but also that we can make use of existing accounts of *tough*-constructions to derive all of the degree inversion data. This parallel derives the semantic interpretation that arises. In section 3.4 I address a second issue that has not yet received a syntactic explanation: the fact that degree words and the adjectives they modify exhibit variable ordering patterns. Using the structure I propose, I demonstrate a straightforward manner of accounting for this puzzle. I briefly discuss the

interaction of degree inversion and ellipsis in section 3.5. Finally, I conclude in section 3.6.

### 3.2 *Degree inversions: Facts and previous analyses*

In this section I present a summary of the facts of degree inversions, then discuss the predominating analysis of degree inversion constructions — that of Matushansky (2002), who accounts for the degree inversion facts through the use of semantic typing and movements. At the end of the section I pose several puzzles for this analysis and propose that a fully syntactic account can encompass all of the observed data.

#### 3.2.1 *Summary of facts*

Syntactically speaking, degree inversion exhibits three unique behaviors that must be taken into account when presenting an analysis of the mechanism. These are: (i) variable ordering of degree words with respect to their adjectival complements, (ii) the predicative interpretation of degree-inverted phrases, and (iii) the fact that degree inversion constructions can also involve either overt or implied postnominal arguments.

Matushansky (2002) presents a comprehensive overview of the possible word orderings in degree inversion constructions. She does this by invoking degree operator movement, which I will discuss below; for the time being I present only the possible orders.

First, a degree word may occur in its apparent ‘default’ preadjectival, prenominal position:

- (8) Harry had never met a **more** powerful wizard.

Other words that exhibit this behavior are *enough*, *less*, *least*, and *most* (Matushansky, 2002:33). Note that these are the words typically involved in comparative constructions. Although I will be addressing these words regularly throughout the discussion for the sake of paradigm completeness, I will not make claims as to the underlying structure any more than is minimally necessary. Instead, I refer the reader to the extensive body of literature

on comparative constructions (see Bresnan, 1973; Corver, 1990, 1997; Kennedy, 1997, 2002; Kennedy & Merchant, 2000, among many, many others).

Next, a degree word may appear before its indefinite article:

- (9) Harry is **such** a powerful wizard.

Note that the degree word *such* cannot occur in a prenominal position, like *more* can:

- (10) \*Harry is a **such** powerful wizard.

Other words that exhibit this behavior are *rather* and *quite*; however, *such* is the only non-*wh*-word that mandatorily fronts and cannot pied-pipe an adjective. *Rather/quite* may move with an adjective or not overtly move at all.<sup>2,3</sup>

- (11) a. Harry is rather/quite talented (of) a wizard.  
b. Harry is a rather/quite talented wizard.

Third, a degree word may move before an indefinite article and pied-pipe its associated adjective. In the following example, the degree word *too* moves while pied-piping the adjective *powerful*. Note also that with *too* this type of movement is mandatory (*i.e.* *too* cannot move alone (13) or occur preminally (14)).

- (12) Harry is **too** powerful a wizard.

- (13) \*Harry is **too** a powerful wizard.

---

<sup>2</sup>The *wh*-word *what* also behaves like *such* in that it must front and cannot occur next to an adjective:

(i) What a talented wizard!  
(ii) \*What talented a wizard!

Because it is a *wh*-word and is subject to more constraints than simple degree words, I will not be discussing *what* throughout this chapter, although the analysis I present in section 3.3 can likely be extended to it.

<sup>3</sup>I will discuss the use of *of* more in section 3.3.3; for now, the reader should note that the use of *of* as well as the fronting of *rather/quite* without an adjective is subject to dialectal/speaker variation.

(14) \*Harry is a **too** powerful wizard.

Most other degree words display this characteristic, specifically *so*, *as*, *that*, *this*, and *how*. Additionally, pied-piping is available for all degree words **except** *such* and *what*.<sup>4</sup>

One final point to note is that each degree word has its own apparently idiosyncratic characteristics. For example, while *such* must be fronted, as shown in (9) above, fronting is a non-mandatory option for *more*.

(15) Harry had never met **more** powerful a wizard.

The following table contains a subset of examples from Matushansky (2002:33) that demonstrates how different degree words pattern into the three groups discussed above. Note that some degree words such as *more* exhibit variability, while others such as *such* and *too* do not.

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<sup>4</sup>See previous footnote addressing *what*.



## (16) Characteristics affecting degree word position

Ability to front	Mandatory <i>too, such, so</i>	(i) *Harry is a such good wizard. (ii) Harry is such a good wizard.
	Optional <i>quite, rather</i>	(i) Harry is a quite good wizard. (ii) Harry is quite a good wizard.
	No fronting	(i) Harry is a very good wizard. (ii) *Harry is very good a wizard.
Ability to pied-pipe adjectives	Mandatory <i>too, as, so, most, more/less, (how)</i>	(i) *Harry is too a good wizard. (ii) Harry is too good a wizard.
	Optional <i>quite, rather</i>	(i) Harry is quite a good wizard. (ii) Harry is quite good (of) a wizard.
	No Pied-Piping <i>such, (what)</i>	(i) Harry is such a good wizard. (ii) *Harry is such good a wizard.
Ability to appear post-nominally	Available <i>most operators</i>	(i) Harry is a wizard too good for this world.
	Unavailable <i>such, (what)</i>	(i) *Harry is a wizard such good for Ron.

One important pattern to note from this table is that a large percentage of degree words exhibit behavior that patterns with *too*-phrases; that is, movement and adjective pied-piping are mandatory. For this reason, I use the *too*-phrase as the default example pattern throughout the following discussion. In section 3.4 I return to the other possible ordering options.

The next aspect of degree inversion constructions is the fact that degree-inverted phrases pattern with predicative adjectives rather than prenominal modifiers. This fact is pointed out by Troseth (2009), who presents three pieces of evidence. In the following, examples (17) through (23) are from Troseth (2009:40-41).

First, adjectives that typically occur in predicate position, such as *afraid* or *sure*, appear in degree-inverted constructions. The example in (17a) shows a predicative adjective, while (18b) shows that the adjective cannot occur in a prenominal position.

- (17) a. The practitioner was **sure**.  
 b. \*The **sure** practitioner argued against the previous diagnosis.

As (18) shows, the predicate adjective is allowed in a degree-inverted construction. This supports the idea that the adjectives involved in degree inversions are predicative by nature.

- (18) Mary is [too **sure** a practitioner] to be intimidated by risky cases.

Second, adjectival interpretation can be affected by pre- or post-copular positioning. In (19a), the adjective *poor* allows two interpretations: Bill is without money or Bill is without luck. By contrast, in (19b), Bill can only be without money.

- (19) a. Poor Bill Bradley didn't make it through the primary elections of 2000.  
 b. Bill Bradley is poor.

As with the previous examples, the degree-inverted phrase behaves like the predicative adjective; in (20), the only available interpretation is the one in which Bill is without money.

- (20) Bill Bradley is too poor of a man...

Third, attributive adjectives do not require conjunction to combine, as shown in (21), but predicative adjectives do, as shown in (22).

- (21) a. Mercury is a shiny, dangerous substance.  
 b. Mercury is a shiny and dangerous substance.

- (22) a. \*Mercury is shiny, dangerous.

- b. Mercury is shiny and dangerous.

Degree-inverted phrases once more exhibit the behavior of predicative adjectives.

- (23) a. \*Mercury is too shiny, dangerous of a substance.
- b. Mercury is too shiny and dangerous of a substance.

Thus, any account of degree inversion constructions must account for this predicative interpretation.

Finally, degree inversion constructions like those in (1) are not the ‘whole picture’ when it comes to interpretation. Heim (1985), as discussed by Matushansky (2002), describes degree operators in general as relating a degree to a predicate over degrees. What this means is that one of the arguments in a degree inversion construction has to be the ‘degree’ itself.

Matushansky (2002:22) notes that this degree can take several forms, such as a dependent clause (24a), a prepositional dependent (24b), or contextual inference (24c).

- (24) a. Mt. Everest is **so** tall **that you cannot see the top**.
- b. This is way **too** cool **for me**.
- c. **How** fascinating!

Therefore, we expect degree inversions to have similar structural dependents.

In this subsection I have presented the three behaviors of degree inversion constructions that must be accounted for in an analysis of degree inversions:

- (25) a. Degree words exhibit variable ordering patterns in degree inversion constructions
- b. Degree-inverted phrases receive a predicative interpretation
- c. Degree-inversion constructions involve an ‘argument’ phrase acting as a structural dependent (henceforth *post-degree constituent*)

In the next two subsections I present an analysis of degree inversion constructions that has been proposed to account for all of the aspects of degree inversions: degree word movement, degree word ordering, and the existence of postnominal modifiers. As I demonstrate, this analysis does not fully account for all of the facts presented here.

### 3.2.2 *Operator movement as the source of variable ordering*

Matushansky (2002) argues that degree words are semantically composed with a degree operator in a prenominal position, which is what is responsible for degree-inversion in DP; I will expand on the details of Matushansky's semantic analysis in the next section.<sup>5</sup> Matushansky argues that the nature of the degree operator is what determines variable ordering patterns that surface in degree inversions. According to Matushansky's argument, a degree operator must always move from its initial position for interpretive purposes. A given degree operator has three possible movement patterns. I list them here and illustrate using examples below.

(26) A degree operator may move:

- (i) by itself, covertly;
- (ii) with its degree word, overtly; or
- (iii) with its degree word, overtly, while pied-piping the degree word's associated adjective.

First, a degree operator may move by itself (*covertly*), leaving its associated degree word in prenominal position. Degree words like *more* fall into this category:

(27) Harry had never met a **more** powerful wizard.

Second, a degree operator may move with its degree word (*overtly*). *Such* is one such example:

---

<sup>5</sup>Others who have adopted the prenominal adjective analysis of degree-inverted phrases include: Bowers (1975); Bresnan (1973); Corver (1997).

(28) Harry is **such** a powerful wizard.

Third, a degree operator may move with its degree word (*overtly*) while pied-piping its associated adjective. *Too* falls into this category:

(29) Harry is **too** powerful a wizard.

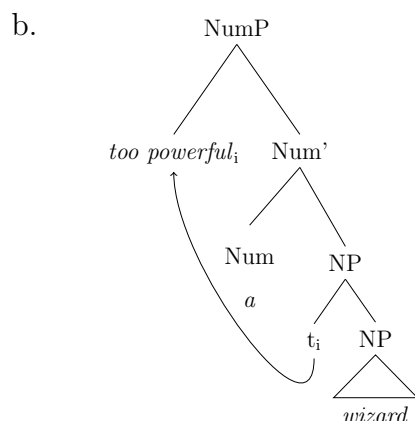
(30) \*Harry is **too** a powerful wizard.

(31) \*Harry is a **too** powerful wizard.

As Matushansky (2002:93-94) states, there is no clear pattern for why movement may be overt or may require/not require pied-piping. Determination of this is left to the unique nature of each lexical item (and its associated operator). By contrast, I will demonstrate in section 3.4 that a straightforward syntactic pattern can derive all possible orders.

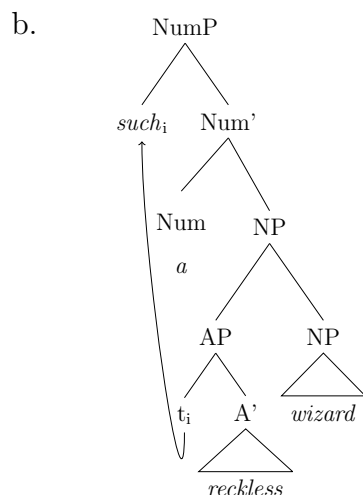
Under Matushansky's structural analysis, degree phrases originate in an AP modifying a noun phrase. For *too*-phrases, a degree operator triggers movement, which causes its degree word to move, pied-piping its adjective. The derivation proceeds as in (32b).

(32) a. Voldemort was [**too** powerful a wizard].



Variable ordering, as with *such*-phrases, is derived in an identical manner except only the degree operator and its associated degree word move, as shown in (33b).

(33) a. Harry is [**such** a reckless wizard]!



The prenominal treatment of degree-inverted adjectives is the traditional analysis and Matushansky's proposal for variable ordering (on the basis of semantic considerations) is a possible way to account for the data. However, it is not clear how such an analysis might account for the fact that degree-inverted phrases receive a predicative interpretation, as was observed by Troseth (2009). This is the first puzzle for Matushansky's analysis; I return to it below.

### 3.2.3 Counter-cyclic Merge as the source of post-DegP constituents

Matushansky (2002) also uses semantic typing to explain the occurrence of post-degree constituents. In this section, I demonstrate that semantic account of degree inversion does not fully explain the examples in (1) through (3); specifically, it is not clear how we might derive the construction in (2), repeated here:

(34) Voldemort was [too powerful] a wizard to trust.

First, I illustrate her semantic analysis. Then, I attempt to derive (34).

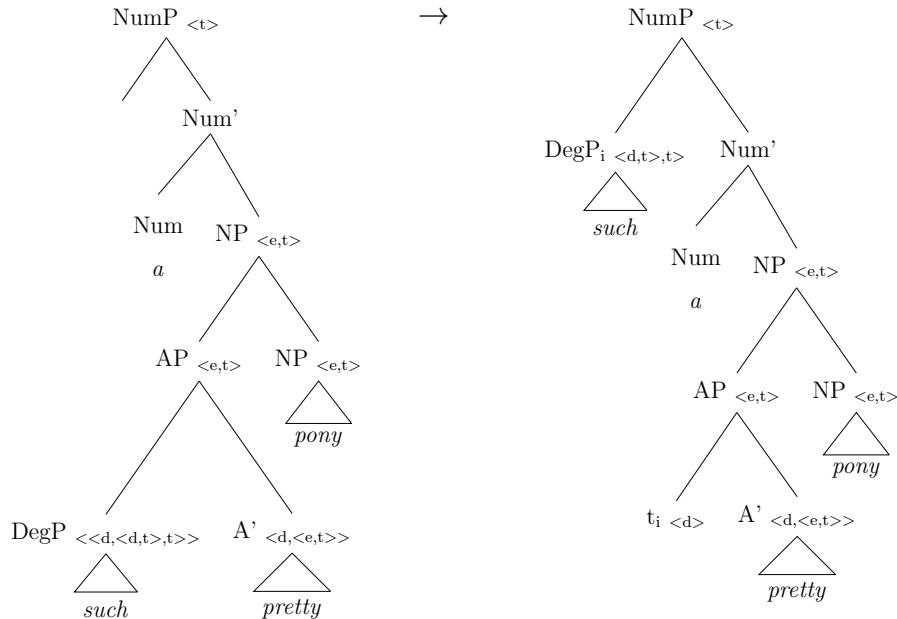
*Semantically-triggered movement*

As I noted in the previous section, Matushansky motivates degree operator movement on the basis of semantic typing.

She adopts Heim's semantic typing; degree phrases are of type  $\langle\langle d, \langle d, t \rangle, t \rangle\rangle$ , meaning they must combine with a projection of a compatible semantic type (in this case,  $\langle t \rangle$ ). According to the structural configuration that Matushansky assumes, where degree words are located in SpecAP, the operator originates in a position where its sister, A', is of type  $\langle d, \langle e, t \rangle \rangle$  and is incompatible. For this reason, the degree operator moves to a projection of type  $\langle t \rangle$ , leaving behind a trace of type  $\langle d \rangle$ . The construction in (36) is similar to that in Matushansky (2002:51).

(35) such a pretty pony

(36)



Matushansky similarly argues that what she refers to as degree-right extraposition, exemplified in (37), is derived by a process of counter-cyclic Merge (Bhatt & Pancheva, 2004). I describe this process in the next subsection and point out where it is unable to fully account for degree movement.

### *Counter-cyclic Merge*

The constructions in (37) represent two sides of the same degree-operator coin for Matushansky. The example in (37a) shows degree fronting, while the one in (37b) shows degree right-extraposition (*cf.* Matushansky, 2002:109).

- (37)    a. [too powerful] a wizard [to trust]  
           b. a wizard [too powerful to trust]

According to Matushansky, postpositioning of the degree operator is made possible by the availability of a rightward scope position for the degree operator. In other words, another position of type  $\langle t \rangle$  is available.<sup>6</sup>

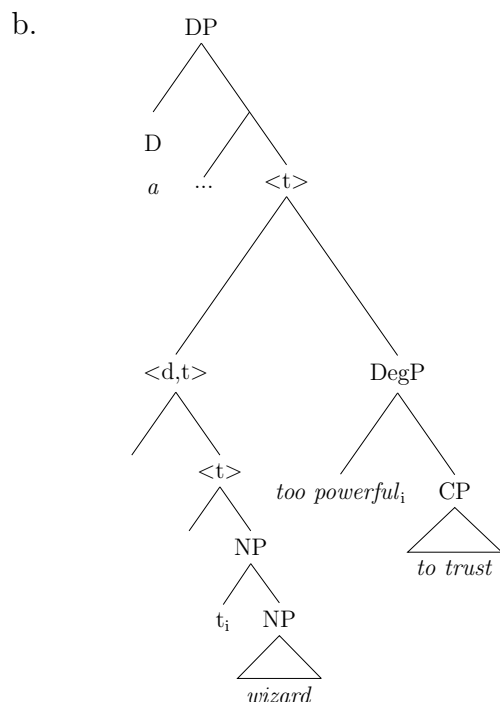
Following Bhatt and Pancheva's (2004) approach to counter-cyclic Merge, Matushansky argues that the degree operator's dependent argument (*to trust*) does not Merge directly with the degree operator: instead, it Merges at its scope position once the degree operator has moved. To show this as a clear example, I give the simplified tree in (38) (see Matushansky, 2002:111 for a more detailed one).

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<sup>6</sup>I do not go into the specifics of this scope position here, but acknowledge that it is available and refer the reader to Matushansky, 2002:95*ff.* for more details.



(38) a. a wizard too powerful to trust

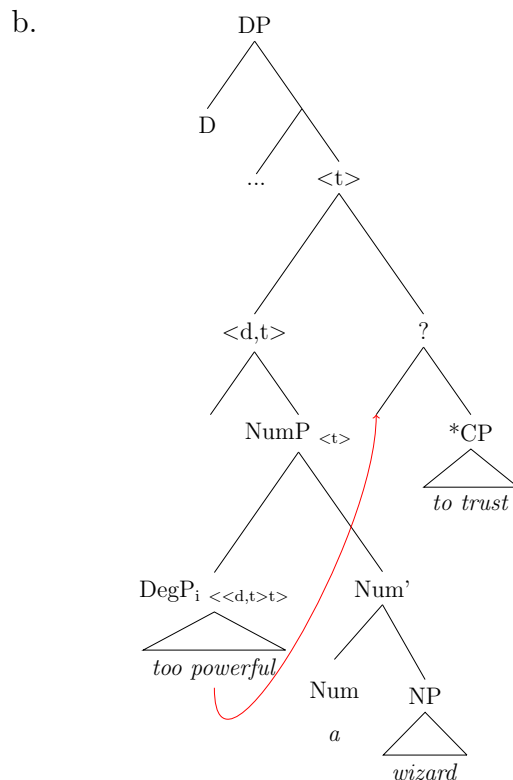


In principle this is effective across the board and allows for both pre- and post-nominal positioning of overt degree words.

A problem arises, however, when we try to apply the same structure to an example like (37a). Note that this construction features a fronted degree operator+phrase but also has a post-degree constituent. The problem with this type of structure is that the degree operator can adjoin to a higher functional projection on the left or the right, but not both.

The tree in (39) illustrates this. If we would like to front the degree phrase *too powerful*, the degree operator will need to move to the <t> position to the left of the head noun. However, this means that it will not be able to right adjoin to the <t> position on the right, meaning **there is no position for *to trust* to counter-cyclically Merge**.

(39) a. a wizard too powerful to trust



Even if we could motivate the second movement of the degree operator to the rightward position, we would be hard-pressed to explain why the degree word+adjective only moved with the degree operator the first time. The puzzle then of how to derive the derivation in (34) still stands.

In the previous subsections, I have presented the basic facts about degree inversion constructions: degree words exhibit variable ordering patterns, degree-inverted phrases receive a predicative interpretation, and degree-inversion constructions involve an ‘argument’ phrase acting as a structural dependent. I have shown that the predominating analysis for inversions offers a semantic interpretation for variable ordering (albeit one that relies on idiosyncrasies in operators). However, it does not straightforwardly explain the predicative interpretation of degree-inverted phrases nor is it clear how we might analyze degree-inverted phrases with a post-degree constituent.

In the next section I argue that the apparent semantic requirement that degree-inverted constructions have a post-degree constituent is parallel to the syntactic requirement for a post-adjectival dependent constituent in *tough*-constructions. I use this parallel, coupled with a proposal by Troseth (2009) that degree-inverted phrases begin as the predicates of small clauses, to demonstrate that a syntactic analysis of degree inversions more thoroughly accounts for the observed facts.

Later, in section 3.4, I further argue that variable ordering of degree operators can receive a purely syntactic account, as opposed to Matushansky's degree operator analysis.

### **3.3 A not-so-small clause analysis of degree inversions**

We saw in the previous section that the link between examples (1) through (3) does not yet have a unified analysis. In this section, I argue that the semantic requirement of degree-inverted phrases — specifically, that degree-inverted phrases require an overt or implied 'dependent' — finds a syntactic parallel in *tough*-constructions. Further, by combining a *tough*-like analysis of degree phrases with a small-clause analysis of degree inversion, we can derive both the semantic requirements as well as the predicative interpretation of degree-inverted phrases.

This section is organized as follows. First, I argue that the degree phrases in degree inversions exhibit behavior parallel to that of adjective phrases in *tough*-constructions. This prompts me to argue for an analysis of degree phrases where the adjectival head requires a complement phrase (overt or pragmatically provided). I then consider Troseth's (2009) predicate-inversion analysis of degree phrases as a basis for adapting the *tough*-construction to degree phrases. Finally, I demonstrate that the combined power of these two structures can account for the parallels among examples (1) through (3).

#### *3.3.1 Tough-constructions and degree inversions*

Dubinsky (1997, 1998) demonstrates clear parallels that emerge between *tough*-constructions and postnominal infinitival relatives. In this section, I briefly review his arguments to

demonstrate that *tough*-constructions and degree inversions featuring postnominal infinitival relatives are distributionally parallel. Specifically, I discuss three main parallels between postnominal infinitival relatives and *tough*-constructions, tying in new data specific to degree-inverted phrases.

Parallel one is the fact that *tough*-constructions and infinitival relatives are formed with approximately the same adjectives (40), and infinitival relatives can use adjectives typically restricted to *tough*-constructions (41). For each example in (41), (i) is the infinitival relative as presented by Dubinsky and (ii) is the degree-inverted version that I have supplied.

(40) a. *Tensed relative*

Robin is a good/tall person with whom you will go skiing. (Dubinsky 1997:86)

b. *Infinitival relative*

Robin is a good/??tall person to go skiing with. (Dubinsky 1997:86)

c. *Tough-construction*

Robin is good/\*tall to go skiing with. (Dubinsky 1997:86)

(41) a. *Tensed relative*

(i) ??Robin is an easy person with whom you will go skiing. (Dubinsky 1997:86)

(ii) \*Robin is too good/tall a person with whom you will go skiing.

b. *Infinitival relative*

(i) Robin is an easy person to go skiing with. (Dubinsky 1997:86)

(ii) Robin is too good/tall a person to go skiing with.

c. *Tough-construction*

(i) Robin is easy to go skiing with. (Dubinsky 1997:86)

(ii) Robin is too good/tall to go skiing with.

Parallel two is the fact that *tough*-constructions and infinitival relatives exhibit the same entailments. This is reproduced in parallel with degree inversions. In (42), (i) examples are from Dubinsky (1997:86) and (ii) are my degree-inverted additions. Note that the entailments of the degree-inverted phrases are not the same as the non-inverted phrases (expected under an analysis where degree-inverted phrases move). Importantly, though, the entailments for degree-inverted phrases (ii) are identical in (42b) and (42c) but not (42a).

(42) a. *Tensed relative*

- (i) This is a good book which you can sit on.

*Entails 'This is a good book.'*

- (ii) ??This is too good a book which you can sit on.

*Entails 'You can sit on this book' (?) ; goodness of book is a given*

b. *Infinitival relative*

- (i) This is a good book to sit on.

*Does not entail 'This is a good book.'*

- (ii) This is too good a book to sit on.

*Entails 'You cannot sit on this book.'*

c. *Tough-construction*

- (i) This book is good to sit on.

*Does not entail 'This is a good book.'*

- (ii) This book is too good to sit on.

*Entails 'You cannot sit on this book'*

Finally, the third parallel is that *tough*-constructions and infinitival relatives both prohibit long-distance extraction. The example in (46) shows similar results for degree inversions involving an infinitival relative structure.

(43) *Tensed relative* (Dubinsky, 1997:87-88)

- a. Sam is a difficult person I have bought cars from.
- b. Sam is a difficult person I believe her to have bought cars from  $t_i$ .

(44) *Infinitival relative* (Dubinsky, 1997:87-88)

- a. Robin is a difficult person to buy cars from.
- b. \*Robin is a difficult person to believe her to have bought cars from  $t_i$ .

(45) *Tough-construction* (Dubinsky, 1997:87-88)

- a. This person is difficult to buy cars from.
- b. \*This person is difficult to believe her to have bought cars from  $t_i$ .

(46) *Infinitival relative - degree inversion*

- a. Robin is too difficult a person to buy cars from.
- b. \*Robin is too difficult a person to believe her to have bought cars from  $t_i$ .

Like Dubinsky, I take these three parallels as evidence for the default understanding that degree inversions and *tough*-constructions are inherently parallel. In the next section I take advantage of this fact and present a syntactic analysis of all degree inversion types.<sup>7</sup>

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<sup>7</sup>Matushansky (2002) argues against a reduced relative analysis of degree-inverted constructions; as *tough*-constructions are quite similar to RRCs (particularly with respect to the structure I adopt in the next section), this is an important point to address. Her main argument comes from the two available interpretations of the following phrase:

- (i) a man taller than my mother (p.102)
  - a. = a man who is taller than my mother [Reduced Relative]
  - b. = #a taller man than my mother (my mother is a man) [QR structure - degree operator has moved above *man*]

Matushansky argues that the salient interpretation (a) is a typical reduced relative structure, while the deviant interpretation (b) is derived by the QR of the degree operator to the right periphery.

### 3.3.2 Degree inversions as movement and (sometimes) ellipsis

In the previous section, I looked specifically at degree constructions that involve postnominal infinitival arguments, like (2) above, repeated here:

(47) Voldemort was [too powerful a wizard to trust].

We might take advantage of the apparent reduced-relative nature of the structure and adopt a Kayne-style (1994) analysis, as Dubinsky (1997) does. The example in (48) shows the traditional Kayne-style analysis, where D takes a CP complement in a reduced relative construction (*cf.* Dubinsky, 1997:84):

- (48) a. [<sub>DP</sub> a [<sub>CP</sub> C [you might wash the grill [<sub>PP</sub> with which good beer]]]]  
 b. [<sub>DP</sub> a [<sub>CP</sub> [<sub>PP</sub> good beer<sub>i</sub> [with which e<sub>i</sub>]]<sub>j</sub> C [you might wash the grill e<sub>j</sub>]]]

Dubinsky adapts the structure to account for the dependency relation that obtains between the adjective and the postnominal modifier, assuming that instead of CP, D takes an AP complement (*cf.* Dubinsky, 1997:85):

- (49) a. [<sub>DP</sub> a [<sub>AP</sub> good [<sub>CP</sub> C [PRO to wash the grill [<sub>PP</sub> with which beer]]]]]  
 b. [<sub>DP</sub> a [<sub>AP</sub> good [<sub>CP</sub> [<sub>PP</sub> beer<sub>i</sub> [with which e<sub>i</sub>]]<sub>j</sub> C [PRO to wash the grill e<sub>j</sub>]]]]]

Unfortunately, we cannot directly adopt this analysis for two reasons. First, we would still have an analysis where the adjective originates in a prenominal position, and would be left with no way to derive the predicative status of the degree-inverted phrases. Second, this analysis would only be compatible with degree-inversions that feature a *clausal* or *infinitival* postnominal argument; we would have no way to derive constructions like (50).

---

The account that I present in the next section provides an alternative for this split. Specifically, both interpretations begin as a *tough*-construction/RRC-like construction: for the (a) interpretation, the clause does not undergo movement, for the (b) interpretation, the clause undergoes movement to the right. I will return to this point once I have presented the general structures; see footnote 15 on page 178.

(50) Harry was [too kind a wizard [PP for this world]].

With these restrictions in mind, I argue that Matushansky's semantic interpretations and the parallels to *tough*-constructions can be given a not-so-small clause analysis.

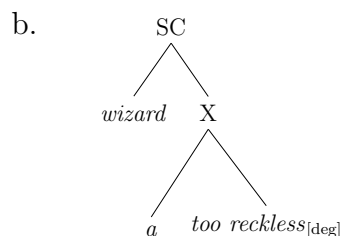
*Degree phrases as the predicates of small clauses*

Troseth (2009) builds on the predicate-inversion analysis of Bennis, Corver, and Den Dikken (1998), Den Dikken (2006), and others, proposing that degree inversion is the result of the movement of the degree phrase from the predicate position of a small clause (see also Corver, 2000, for a similar argument for Dutch and Romance). This proposal is based on the evidence presented in section 3.2.1 that degree-inverted phrases behave like predicates.

Following a Den Dikken (2006)-style analysis for predicate inversion, Troseth (2009) proposes that degree inversion begins as a structure where the degree phrase is the predicate of a small clause. The movement itself is triggered by an unchecked degree [deg] feature on the D-head, which probes for an available [deg] feature on the degree phrase.

In the example in (51b), the phrase *too reckless a wizard* begins as the small clause *wizard a too reckless*, where the indefinite article *a* acts as a relator head (in Den Dikken's discussion of predicate inversion).<sup>8</sup> In brief, the relator head is an abstract functional head that mediates subject-predicate relationships (which are asymmetric and non-directional). The particular category of a relator head depends upon the domain in question.

(51) a. too reckless a wizard



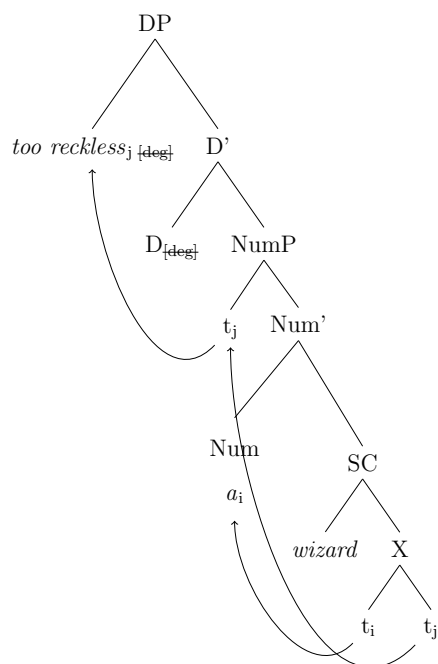

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<sup>8</sup>Troseth (2009:52) assumes that *a* is the relator head due to the fact that it is obligatorily inserted in inversion constructions (this is contrasted with obligatory *of*-insertion in *N-of-an-N* constructions; see Bennis et al., 1998; Kennedy & Merchant, 2000).



Next, the indefinite article *a* raises in a domain-extending movement to Num, while an unchecked [deg] feature on the D-head attracts the degree phrase *too reckless*.

(52)



In this manner, Troseth's proposal provides us with a general basis for deriving the predicative interpretation of degree-inverted phrases. Where it does not provide an alternative to Matushansky's semantic-typing analysis is in the presence of required post-DegP constituents (overt or otherwise). As I argued in the last section, these can be syntactically related to the dependent arguments in *tough*-constructions. Therefore, in the next section I re-adapt the small clause analysis to account for this important semantic aspect.

### *Bigger on the inside: Accounting for semantic interpretation*

In order to derive the construction in (1) above, repeated here as (53), I argue that we must first derive a larger construction like (54).

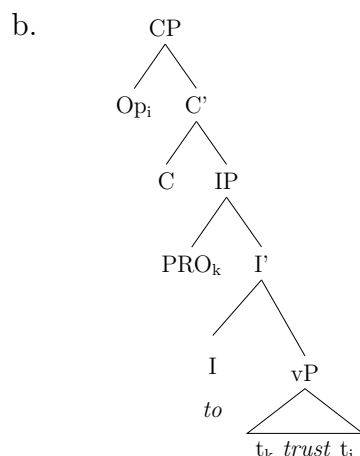
(53) Voldemort was [too powerful a wizard].

(54) Voldemort was [too powerful a wizard to trust].

In other words, even apparently simple degree inversions involve some sort of post-degree complement; the difference between (53) and (54) is that the former involves an ellipsis mechanism.

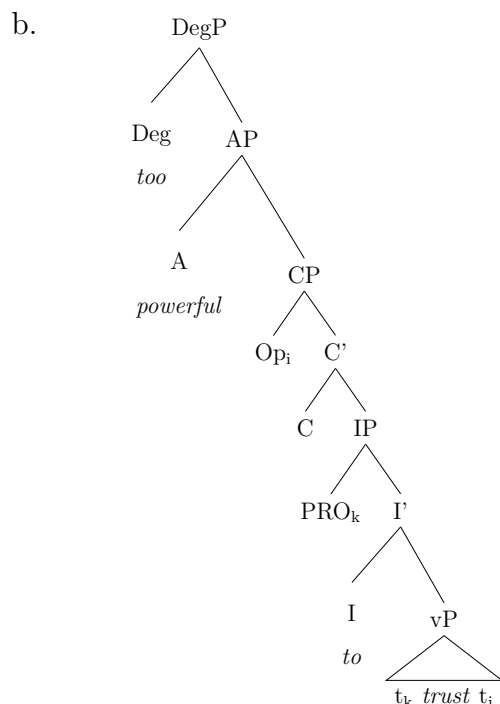
I begin with the embedded infinitival *to trust*. Drawing from the literature on *tough*-constructions (see, most specifically, Hicks, 2009 and references therein), the infinitival constituent is formed as a clause containing a relative operator *Op* and a PRO clausal subject. In the course of the derivation, the *Op* raises to SpecCP.

(55) a. [DP a wizard [DegP too powerful [CP **to trust**]]]



Next, A (with a maximal projection DegP) takes the infinitival CP as its complement. This establishes the relationship between the AP and postnominal argument.

(56) a. [DP a wizard [DegP **too powerful** [CP to trust]]]



Note that this structure lines up with example (3) from above, repeated here:

(57) Voldemort was a wizard [too powerful to trust].

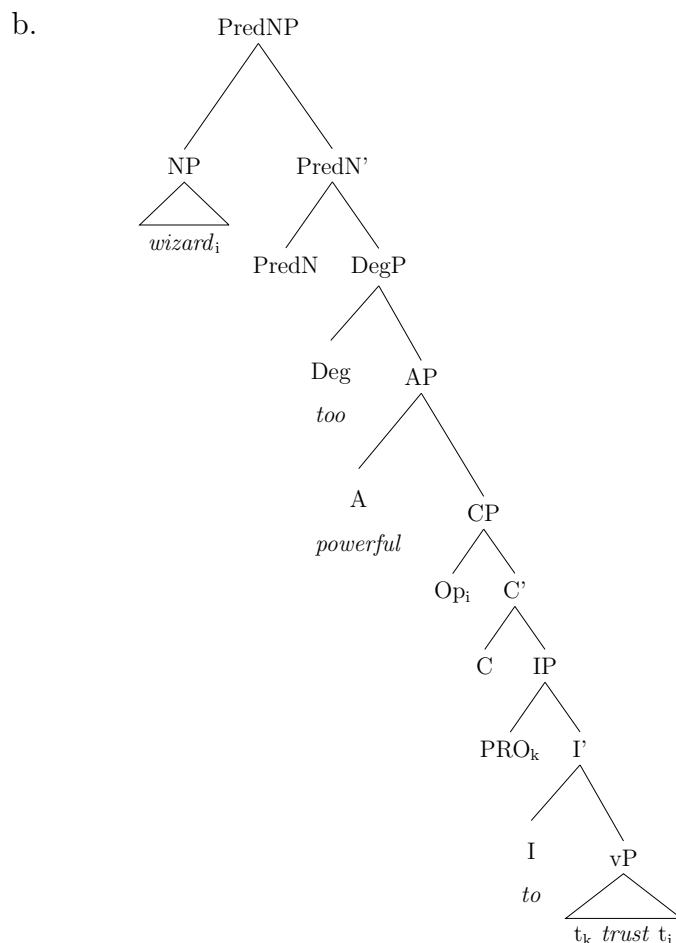
In this manner, we have established the first syntactic link between (53) and (57).

The entire DegP then combines with the NP as the complement of a small clause; the relationship between the NP and the post-degree constituent is achieved through coindexation with the relative Op (Chomsky 1977; Jackendoff 1977, and others following them).<sup>9</sup> At this point the ‘inversion part’ of the structure parallels the small-clause configuration, though I propose several key functional distinctions. I describe these distinctions as they become relevant.

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<sup>9</sup>The reader should note that this configuration also provides a straightforward explanation for why it is possible to interpret the sentence as *Voldemort was a wizard **who was** too powerful to trust* (i.e. a relative clause).

(58) a. [DP a [NP **wizard** [DegP **too powerful** [CP **to trust**]]]]



As a first distinction from the existing argument, there is the question of the label assigned to the small clause configuration. The SC label proposed by Trosseth is structurally sufficient but, given the importance of selectional assignments in the Mutual Agree mechanism as I proposed in chapter 2, we need a specific functional head. I propose PredNP as a variant of Bowers' (1993) PredP, which was proposed for the verbal domain (see also Svenonius, 1994 and Bailyn, 1995, among others). This is primarily to capture Bowers' argument that the functional head above the small clause serves an 'inflectional' purpose (for PredP, this is IP); recall that in chapter 2 I argue for Num to be the most clearly inflectional head

in the nominal domain.<sup>10,11</sup>

Returning to the structure in (58): at this point, we could complete the DP with no movement, which would give us the full derivation in (57). The result would be a DP with relatively few restrictions (barring semantic oddity) on the type of determiner allowed, as shown in (59).

- (59) a. a wizard too powerful to trust  
       b. one wizard too powerful to trust  
       c. the wizard too powerful to trust

However, the derivation can also be completed in two additional ways. First, we can derive the degree inversion cases like (53), where the post-degree constituent is not overt.

There are two ways in which the constituent can be non-overt, which I demonstrate using the following contexts. There is first the possibility that an overt clause occurs in the derivation but is deleted in a proper licensing environment (*i.e.* contextual recoverability); this context is shown in (60).

(60) Person A: Harry can perform a Patronus charm!

Person B: And Harry never loses a duel!

Person A: Do you think we could trust Harry to save us from evil forces?

Person B: I think Harry is too powerful a wizard (to trust).

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<sup>10</sup>Bowers' (1993) PredP is not the most recent functional proposal for small clauses: Adger and Ramchand (2003) and Citko (2008) have argued for the functional  $\pi$ P as a reflection of the functional completeness of the phrase (feature- and event-wise). I do not assume this for two reasons: (i) the small clause in degree inversions is decidedly functionally incomplete and (ii) there is no clear reason for Num to select  $\pi$ P, *especially* if it is functionally complete.

<sup>11</sup>A related question lies with the selectional properties of NumP/ $n$ P and the categorial status of the subject-NP, predicate DegP small clause. This matter falls outside of the main concern of the discussion presented here, so I set it to the side for the time being. I allude to the treatment of gerundive constructions, which occur in several different environments, as a potential source of discussion (see Abney, 1987, and others since).

Alternatively, the missing constituent could just be filled in by pragmatic inference. The example in (61) is a context in which we are simply complaining about Harry, with no precise comparison in mind except the relation of Harry to other wizards:

(61) Person A: Harry *never* loses a duel!!!

Person B: Harry is too powerful a wizard! Ugh!

In either context the DegP receives a focused interpretation and must raise to SpecDP.<sup>12</sup>

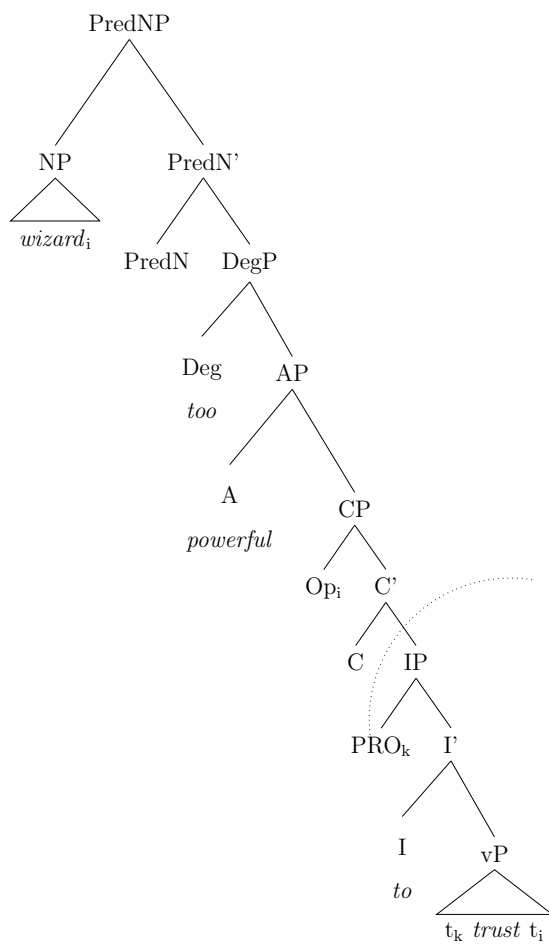
The derivation in (62) shows this movement (I show the ellipsis version, then explain how the pragmatic one differs). First, the IP is elided (62b), then the DegP, now bearing a +FOC feature (see chapter 2), raises to a functional projection (FP) above NP (62c); I address the status of this FP in the paragraphs below. The end result is shown in (63).

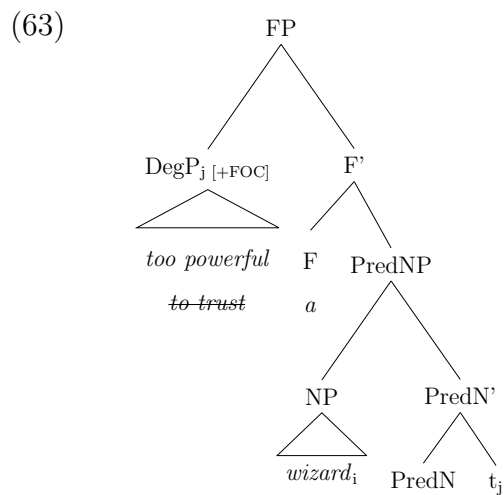
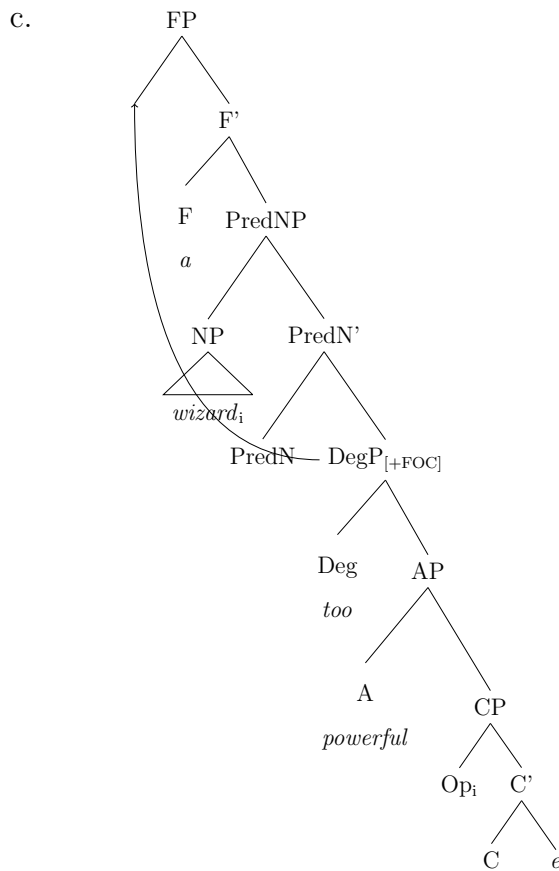
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<sup>12</sup>There are some scenarios where the DegP may remain in place, as pointed out by Matushansky (2002); these are typically accompanied by emphasis.

(62) a. *too powerful a wizard*

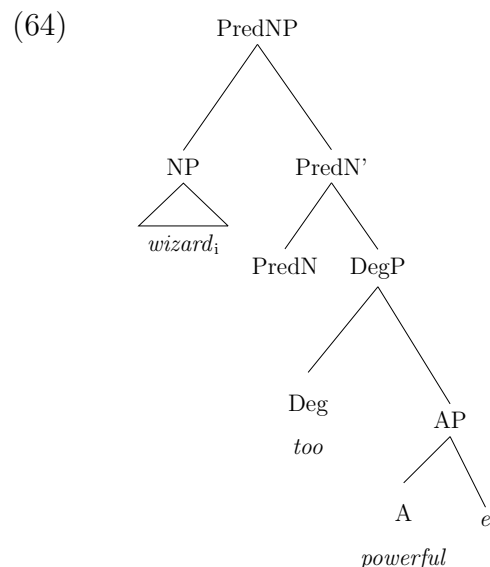
b.





Alternatively, if there is no overt post-degree constituent like *to trust*, we can assume that the complement of the degree AP is nothing more than a null element *e*, whose interpretation is related to the pragmatic context. Structurally, it appears as follows:





The rest of the inversion proceeds as in (63).

Under a phase-based analysis (or some other analysis that posits all movement proceeds directly to the edge of a given domain), we would at this point be required to assume that the FP in the preceding derivations is DP, given it is the ‘edge’ of the nominal domain. However, the current data does not provide much evidence for the degree phrase moving this high in the domain right away; in fact, certain facts indicate that this initial inversion movement targets the specifier of a lower functional projection, NumP.

The position of the indefinite article provides the first piece of evidence for NumP being the target of the initial inversion movement. In contrast to a Trosseth-style analysis, which assumes that the indefinite article *a* acts as a relator in the small clause and then raises, I assume that the indefinite article is inserted directly into Num, following the standard assumption. There are several reasons to make this change.

By assuming that the ‘relator’ head of the small clause is necessarily a spurious indefinite article as Trosseth does, we rule out any constructions where the article might not be present. In degree-inversion constructions, the number of possibilities is limited to one construction type: plural inversions. These are not frequent, but are still possible:

(65) Harry and Ron are [too good \*(of) wizards (to trust)].

Note that the use of *of* is required. Plural inversions are discussed briefly in Matushansky (2002); I do not discuss them further than to note that they pose an issue for an analysis where an overt relator *a* is required.<sup>13</sup>

An additional reason to reject the indefinite-article-as-relator analysis relates to the manner in which indefinite articles are generally analyzed. Beginning with Lyons (1999) the indefinite article has been analyzed more along the lines of a *cardinality marker* than an *indefiniteness marker*. Lyons (1999:33ff.) analyzes *a* as closely related to *one*. This fact becomes clear when we consider a language like French, in which the singular indefinite article *un/une* ‘a’ is the same as the numeral *un/une* ‘one’. Moreover, cooccurrence restrictions demonstrate that *a* cannot occur with *one*, while the definite article may:

- (66) a. \*[A one book] that I am interested in.  
 b. [The one book] that I like.

These facts have led to analyses where the indefinite article minimally originates in the same position as *one* (e.g. Matushansky, 2002 and Wood, 2007).

By assuming the standard position of an indefinite article in degree inversions, we are given a straightforward reason to assume that inverted DegPs (initially) target NumP. Previous analyses of degree inversion have specifically argued for SpecNumP as the landing site of the inverted degree phrase on the basis of the insertion of *a*. Matushansky (2002) assumes that the insertion of the indefinite article is a direct result of the degree phrase (which is indefinite and non-specific, as discussed above) targeting SpecNumP. Those who assume that degree inversion is predicate-style inversion argue that the degree phrase targets SpecNumP as part of the domain-extending movement process (Trosseth, 2009; see also Bennis et al., 1998).

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<sup>13</sup>There is of course the possibility that *of* is the relator instead. This is ruled out for a similar reason to the indefinite article *a* — *of* is not required in many inversion constructions, as we have seen throughout the discussion so far. This is not necessarily a decisive ruling (perhaps *of* is a relator that is optionally overt), but whether or not *of* is a relator should not affect the configuration as a whole (more important here is the status of *a*).

Apart from the pattern that emerges in previous analyses, there are independent reasons to assume the degree phrase targets SpecNumP. First, the entire DP in a degree inversion construction is obligatorily indefinite and non-specific, as the function of the inversion is to place the noun on a scale of general attributes (Bolinger, 1972; Bresnan, 1973). This means our choice of determiner in the first place is already limited to *a*, *one*, or *some*. *One* and *some* are both ruled out, as they express more information than the minimal indefinite/non-specificity; specifically, both encode more information about the quantity expressed: *one* must apply to count-only elements, while *some* can apply to elements with a value of more than one. Thus, only *a*, which appears on Num, provides the information required. It intuitively follows that the element being expressed as indefinite and non-specific like its article is found at the same level in the functional structure.

Second, there is the matter of non-occurrence of any elements preceding the degree-inverted phrase. The fact that nothing else in the DP may precede a degree-inverted phrase, as shown in (67), might at first be taken as evidence for the degree phrase to raise immediately to SpecDP:

(67) \*Hogwarts'/this/that too powerful (a) wizard...

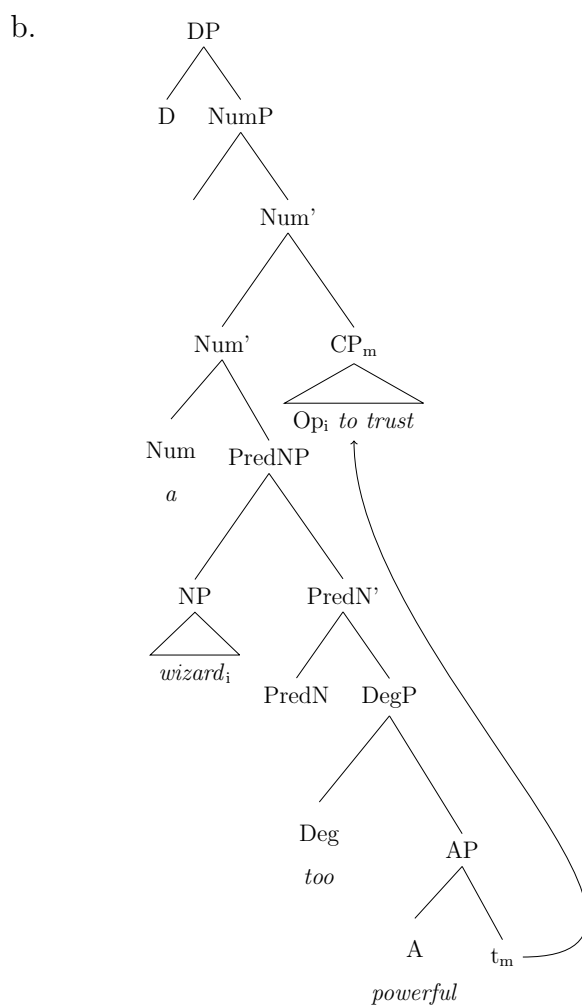
However, these non-occurrences are independently ruled out by the reasons discussed in the previous paragraph: the non-specific indefinite interpretation is rendered unavailable.

Based on this evidence I adopt the assumption that in degree-inversion constructions the initial movement of the degree phrase is to SpecNumP. I will discuss further movement possibilities in section 3.3.3 of this chapter.

Returning to the construction in (54), the second possible way to complete the derivation involves the 'escape' of the postnominal argument. Briefly, the CP right-adjoins to a higher functional head, such as NumP (see chapter 2 for a discussion of this type of adjunction in DP). The structures in (68) demonstrate this. In (68b), the CP right-adjoins to Num,

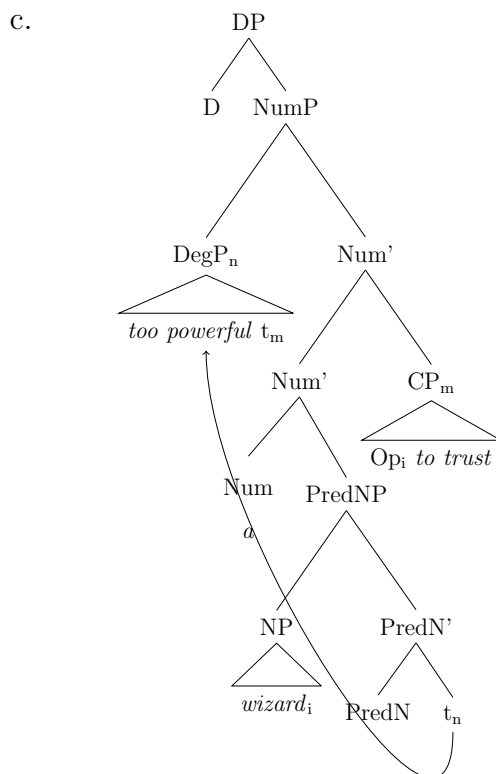
and in (68c) the DegP may focus-move to a functional projection above NP.<sup>14</sup>

(68) a. *too powerful a wizard to trust*



<sup>14</sup>Again, the DegP does not necessarily **have** to move (see previous footnote). The intermediary structure in (68b) is possible as an end result, evidenced by the fact that we can focus-stress the degree phrase *in-situ*:

(i) a wizard **TOO POWERFUL** to trust



Throughout this section, I have demonstrated that the constructions in (1) through (3), as presented at the beginning of the chapter, can be syntactically derived from a structural representation that accurately represents their relationship to one another. Moreover, this structure captures the fact that degree-inverted phrases are interpreted predicatively.<sup>15</sup>

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<sup>15</sup>I now return to the issue presented in footnote 7. Recall that the reduced relative-like structure in the following example has two possible interpretations:

(i) a man taller than my mother

a. = a man who is taller than my mother [Reduced Relative]

b. = #a taller man than my mother (my mother is a man) [QR structure - degree operator has moved above *man*]

Matushansky (2002) argues that a reduced relative structure cannot derive the deviant interpretation in (b) and proposes that the interpretation is the result of the degree operator QR-ing to the right periphery. I propose instead that deviant interpretations can be derived by full rightward movement of the degree-phrase-

A few questions remain with respect to this structure. I raise and answer these in the next section.

### 3.3.3 *Loose ends*

A few questions immediately come up with respect to the structure presented in the preceding section.

- (69)
- a. How does *of* enter the derivation in structures like *too good of a wizard*?
  - b. Why is it not possible to derive a structure where the DegP moves with its overt complement, as in *\*too good to trust a wizard*?
  - c. What do derivations involving PP postnominal arguments look like, as in *too powerful for Hogwarts*?
  - d. How can variable ordering be explained?

Questions (69a) and (69b) can be answered by referencing existing literature on degree inversions, with a few minor modifications adapted to the current structure. I answer these first. Then, I present the derivation for a PP-argument structure (69c). Variable ordering is a larger matter, so I save the discussion of variable ordering patterns for section 4.

### *Of-insertion*

The insertion of *of* in degree inversion constructions has received its own share of attention in the literature due to apparent patterns that arise in its occurrence. These patterns were

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*cum*-postnominal argument. In the following example, the comparative *taller than my mother* undergoes extraposition (not unlike the CP movement we saw in this section) to a position higher than the head noun.

- (ii)
  - a. [NumP a [NP man [DegP taller than my mother]]]
  - b. [NumP a [NP man t1] [DegP taller than my mother]1]

In this manner, not only are we able to derive the deviant interpretation where the degree operator scopes over the noun phrase, but it is done in an almost identical manner to that of Matushansky: the primary difference is the origin of the degree phrase.

first noted in Bolinger (1972:126-136), in which he demonstrated a point that most others assume: insertion of *of* in degree inversions is for the most part non-mandatory and freely available. Kennedy and Merchant (2000:124) demonstrate:

- (70) a. Bob didn't write [as detailed (of) a proposal] as Sheila did.  
 b. He took [so big (of) a piece of cake] that he couldn't finish it. (Kennedy & Merchant, 2000:124)

Moreover, some dialects of English allow *of*-insertion with degree inversions that most speakers would not typically allow:

- (71) He is such **of** a fool. (Bolinger, 1972:136)

There are several options for handling *of*-insertion in the structure I present here, two of which are compatible with the current derivation. Both, however, raise the issue of the final location of the degree phrase.

The classic assumption about the position of *of* in small clause inversion is that *of* originates in the small clause structure and raises to its surface position. This type of construction is used by Bennis et al. (1998) and Den Dikken (2006). In Den Dikken, for example, *of* in constructions like (72) acts as the relator (the head of the R(elator) P(hrase)) of the small clause, around which inversion is based.

- (72) a. an idiot of a doctor  
 b. [RP [NP doctor] [R' [R(of)] [an idiot]]]]]

Assuming this type of structure, however, raises two issues.

First, the functional status of the head on which *of* is inserted is unknown (recall that it must be determined by the domain in question); proposing one would likely be an *ad hoc* assumption. The small clause I argue for here is composed of a distinct NP and DegP, neither of which has any immediately apparent reason to host *of*. Second, by assuming the

inversion structure by default contains a pivot, we are forced into a small clause analysis where inversion is mandatory: DegP must raise in a phase-extending movement. The issue with this mandatory inversion mechanism is that we have evidence for structures where no inversion occurs at all (*i.e.* structures involving postnominal degree phrases).

The second two options propose that *of* occupies its own functional head. First, Troseth (2009) argues that *of* is optionally inserted into D as a lexical filler under an analysis where the final landing site of a degree-inverted phrase is SpecDP; in cases where *of* does not appear, the indefinite article *a* has raised from Num to D. Second, Borroff (2006) assumes that *of* occupied a distinct functional head and its pronunciation or non-pronunciation is merely a matter of dialectal variation. In the current structure, this would be some functional head FP that occurs between the degree-inverted phrase and Num.

Note that both of these analyses meet a problem when it comes to the derivation as it stands: the degree phrase has raised to SpecNumP, but not out of the position, making it difficult to insert an additional functional element between DegP and *a*.

At this point I would like to return to the idea of the degree phrase raising to D. For ease of discussion, I assume that *of* occupies some distinct FP<sup>16</sup>:

(73) DP > FP > NumP > NP

The interpretation of degree-inverted constructions suggests that the presence of *of* may be a reflex of movement to SpecDP. Degree phrases first and foremost place an adjective into a specific place on some ‘scale’ (Kennedy, 1997; Matushansky, 2002). For example, when we say something like *too tall of a wizard*, the degree word places the adjective *tall* above the line of ‘acceptable height.’ Then, as a unit, this phrase quantifies over *wizard* to place *wizard* into the group of things that are above acceptable height.

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<sup>16</sup>Borroff assumes that this FP is actually the maximal projection of DP, as in:

(73) FP > DP > NP

However, she does this to restrict the derivation to the insertion of the indefinite article. I have already addressed this with my proposed structure, therefore I do not follow her hierarchical ordering.



This use of *of* is reminiscent of possession or the elusive concept of partitivity (belonging to some set):

(74) I like the green one (of all these dresses).

Thus, I propose that degree phrases do in fact move to a higher, DP-peripheral position, but that the movement is not the result of the +Foc feature that triggered raising out of NP. Instead, this movement is for interpretive purposes. I do not make any claims about the specific status of the intermediary FP, though I propose that it may be some sort of QP or PossP, given its function in the structure and necessity in degree-raising constructions involving plurals:

- (75) a. \*How big fools are they?  
 b. How big **of** fools are they? (Bolinger, 1972:128)

With this in mind, there is still the question of why *of* only appears in inversion constructions — what prevents it from showing up in a non-inversion DP? That is to say, why don't we see examples like the following?

(76) \*Hermione's of books

I believe that the interpretation of degree inversions is the main reason behind this restriction — in (76) there is no predicative modification. Instead, we have a possessive relationship (already mediated by the Saxon Genitive construction); insertion of seemingly spurious *of* is contradictory.

In this subsection I have proposed a second movement that takes place in the course of a degree inversion derivation, making the procession of the DegP from SpecNumP to SpecDP.

*Modifier movement (or lack thereof)*

The issue of (non-)movement of postnominal arguments is a widely discussed phenomenon, particularly in the literature on comparatives (see Bresnan, 1973, among others). Two possible explanations exist as to why postnominal arguments, like the one in (77a), cannot raise with the degree phrase, as in (77b), but must instead remain postnominal.<sup>17</sup>

- (77) a. Voldemort was a wizard[ too powerful to trust].  
 b. \*Voldemort was [too powerful to trust] a wizard.

The first possible explanation is the commonly assumed heaviness constraint that is applied to adjectival modifiers. In languages like English there is a restriction on heavy APs preceding the head noun of a noun phrase. Arguably this is due to some form of constraint resembling the Consistency Principle, which restricts internal right-recursion in adjectival modifiers (Giorgi & Longobardi, 1991).<sup>18</sup>

One other possibility is that the nature of the DegP that raises (*i.e.* the fact that it is [+FOC]) automatically forces an ellipsis, meaning that the modifier only has two options: elide or right-adjoin to a higher projection.

Given that the first explanation has proven satisfactory in degree inversion and other instances of modified adjectives, I maintain it here.

*PP postnominal modifiers*

The last of the remaining questions that I address in this section is the syntactic treatment of degree inversions with PP postnominal arguments, like (78).

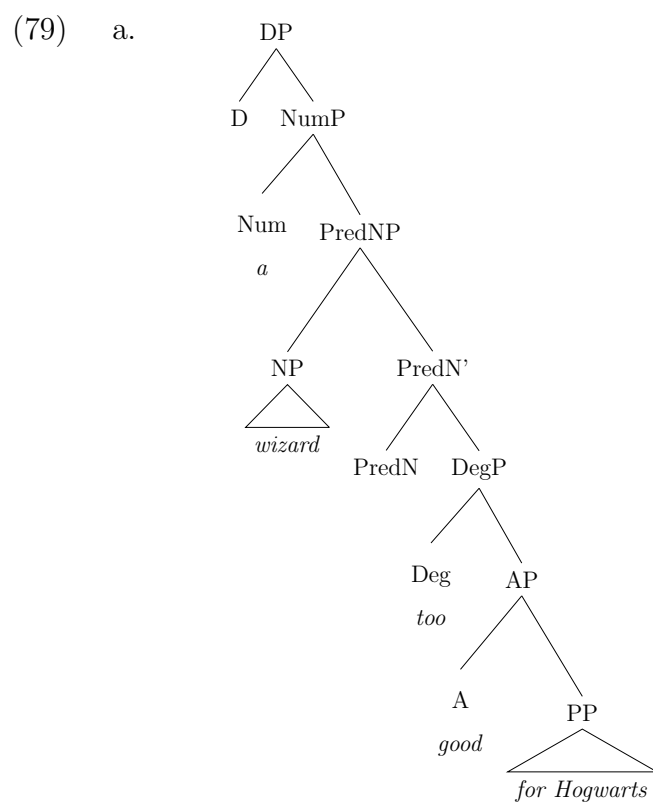
- (78) Harry is too good a wizard for Hogwarts.

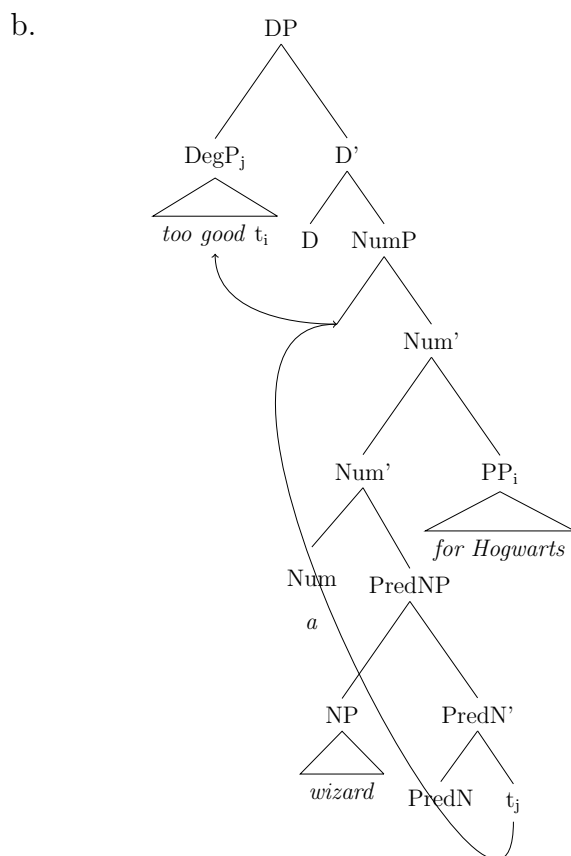
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<sup>17</sup>Recall from section 3.3.2 that the modifier does not remain *in-situ* but instead right-adjoins to a higher functional projection in order to escape ellipsis.

<sup>18</sup>The Consistency Principle states that ‘An XP immediately expanding a lexical category on the non-recursive side is directionally consistent in every projection’ (Giorgi and Longobardi, 1991:98).

The current analysis allows for the degree AP to take any compatible phrase as its complement, to include PP, which is what I assume here. Essentially, the derivation will proceed as with the CP complement structures above, with the minor difference that there is no embedded CP but instead a PP complement of A (+Deg). The tree in (79a) is the original construction, while the tree in (79b) shows the construction after movement operations have taken place.





In this manner the derivations for degree inversions involving post-degree constituents all proceed in the same way once the argument itself has been constructed.

In the preceding subsections I have addressed remaining issues with respect to the syntactic derivation of degree inversions in general.

Before I move on to address the variable ordering patterns, I first briefly discuss the issue of semantic interpretation of degree phrases. As I have stated a few times throughout this chapter, I propose that the overt movement that occurs in degree inversion constructions can be syntactically motivated, taking away the burden of overt movement from degree operators.

Having said this, I would also like to point out that the structures and movements I propose here do **not** preclude semantic operator movement of degree phrases. All functional positions are still available, both pre- and post-nominally, and scope interpretations are similarly attainable.<sup>19</sup>

### 3.4 *Variable ordering patterns*

Recall from the discussion in section 3.2.1 that degree words/phrases allow variable ordering patterns. I have repeated the table from (16) above here for convenience.

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<sup>19</sup>One key difference between the semantics I assume here and Matushansky's (2002) relates to semantic typing. Recall that I assume a different DegP structure: instead of DegP acting as a specifier to the AP, I assume it is the maximal projection of an AP. The semantics of this will therefore be different. Put simply, the degree word is semantically compatible with its complement, and therefore has no reason to move **by itself** out of the phrase. Again, this does not preclude movement for semantic scope: we will simply have LF movement of the phrase as a whole.

The basic semantics that I assume for the degree phrase follow Kennedy and McNally (2002). As in Matushansky (2002), I follow the Heim-ian typing of gradable adjectives:  $\langle d, \langle e, t \rangle \rangle$  (Kennedy & McNally, 2002:23). The difference is in the status of DegP, which is of type  $\langle \langle d, \langle e, t \rangle, \langle e, t \rangle \rangle$  (Kennedy & McNally, 2002:23). Briefly, degree words 'denote functions from (gradable) adjective meanings to properties of individuals' (p. 44). When combined with gradable adjectives, they saturate the degree argument, leaving us with an adjectival predicate of type  $\langle e, t \rangle$ .

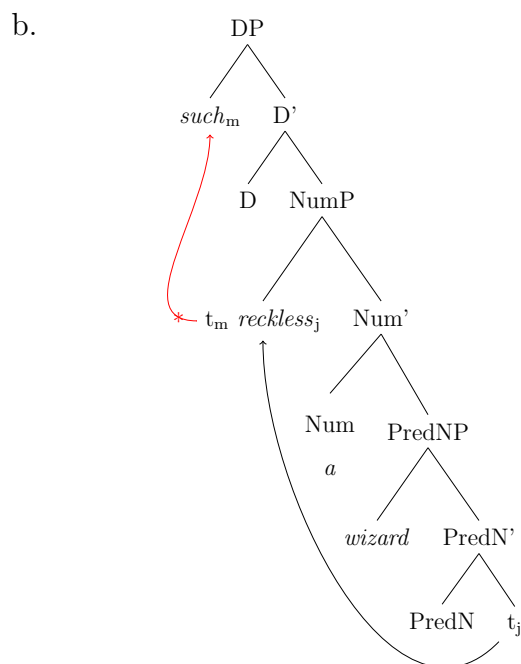
## (80) Characteristics affecting degree word position

Ability to front	Mandatory <i>too, such, so</i>	(i) *Harry is a such good wizard. (ii) Harry is such a good wizard.
	Optional <i>quite, rather</i>	(i) Harry is a quite good wizard. (ii) Harry is quite a good wizard.
	No fronting	(i) Harry is a very good wizard. (ii) *Harry is very good a wizard.
Ability to pied-pipe adjectives	Mandatory <i>too, as, so, most, more/less, (how)</i>	(i) *Harry is too a good wizard. (ii) Harry is too good a wizard.
	Optional <i>quite, rather</i>	(i) Harry is quite a good wizard. (ii) Harry is quite good (of) a wizard.
	No Pied-Piping <i>such, (what)</i>	(i) Harry is such a good wizard. (ii) *Harry is such good a wizard.
Ability to appear post-nominally	Available <i>most operators</i>	(i) Harry is a wizard too good for this world.
	Unavailable <i>such, (what)</i>	(i) *Harry is a wizard such good for Ron.

The inversion configuration and mechanism that I proposed in section 3 used the degree word *too*, which must front and must pied-pipe its adjective, as a basis, given that it is the most prevalent pattern. This analysis also accounted for the ability of degree operators to appear postnominally. Three different pattern types remain: (i) degree words that do not have to front but must pied-pipe their adjectives (*e.g. more*), (ii) degree words that have to front but can never pied-pipe their adjectives (*such*), and (iii) degree words that do not have any mandatory behavior but may front/appear preminally and pied-pipe/move alone (*quite, rather*).

The analysis of degree inversion as it stands will not be sufficient to account for all ordering patterns. The specific example that serves as the main focus of the following discussion is the derivation of *such*-inversions. In order to derive movement of *such* without an adjectival complement, we would need to assume that the whole degree phrase moves to an intermediate position and then the degree word strands its adjective phrase and continues to raise. This stranding is in apparent violation of the freezing effects that arise with already-moved constituents.<sup>20</sup>

(81) a. Harry is **such** a reckless wizard!



<sup>20</sup>See discussions of this in the literature on subject extraction, *e.g.* Gallego and Uriagereka (2007), as well as literature on the *Specifier Condition* Ormazabal, Uriagereka, and Uribe-Extebarria (1994) and the *Uniformity Condition* Chomsky (1995).

This type of inversion will be the main concern of this section.<sup>21</sup> First, I briefly discuss non-inverted prenominal degree phrases, then I propose a new analysis of *such*-inversions that can arguably be extended to other instances of degree-word-only movement; finally, I give a full overview of all structural options for degree-inverted phrases.

### 3.4.1 Prenominal degree phrases

The first question I address is how the contrast between (82a) and (82b) can be derived.

- (82) a. Harry had never met a **more** powerful wizard.  
 b. Harry had never met **more** powerful a wizard.

In this subsection, I propose a simple solution to this that has some implications for other structures.

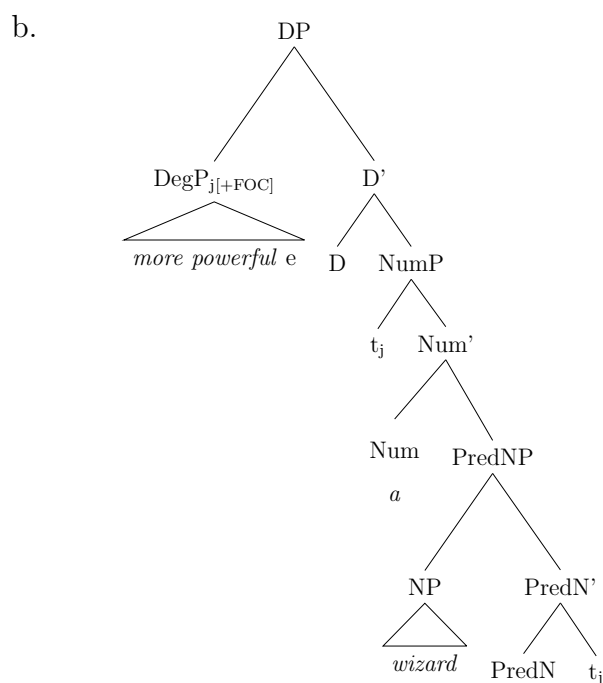
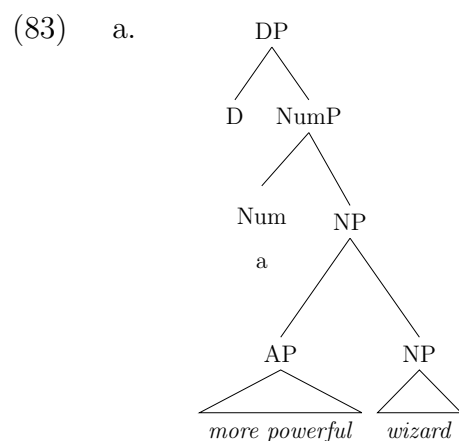
The analysis I presented in section 3 makes a straightforward prediction about degree phrases that occur between the indefinite article and head noun, as in (82a). Due to the facts that (i) degree phrases that undergo inversion are assumed to originate postnominally and (ii) they are not assumed to move through any functional projection between Num and N, degree phrases in inversion structures are not expected to occur between the indefinite article and head noun.

The final structures for (82a) versus (82b) are contrasted in (83a) and (83b), respectively.

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<sup>21</sup>We might account for *such*-movement by adopting a copy-and-partial-deletion account of movement (see Hinterhölzl, 2000, 2002 and Faneslow & Cavar, 2002, as cited in Bentzen, 2008). However, it would still remain unclear how to syntactically account for the unique behavior of *such* in comparison to other degree words.





As shown in (83a), the non-inversion structure does not differ from a typical attributive adjective structure (as I assume them to appear in this dissertation).<sup>22</sup>

What this claim means is that any adjective that **does** occur in this position must be a modifier that does not receive a degree analysis (*i.e.* it is not interpreted as *scalar*). This prediction appears to be borne out:

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<sup>22</sup>I do want to point out that in cases of comparative structures, this configuration may be quite different; importantly I am not making any claims about comparative constructions, as that is a separate issue.

(84) Harry met too friendly a wizard.

(85) Harry met a not-too-friendly wizard.

This fact is also noted in Matushansky (2002), who argues that non-scalar degree words are nothing more than types of intensifiers, such as *hideously ugly* or *very good*.

In a similar vein, this allows us to briefly address the issue of words such as *very*. Matushansky points out that these words are not degree ‘operators’ in the sense that they do not “define a relation between two degrees” (p. 30), meaning that words such as *very* intensify the adjective but do not place it on a scale of comparison. Accordingly, *very*-phrases are expected to occur in the same position as other attributive adjectives.<sup>23</sup>

In this manner we can account for degree words that appear in attributive position: they originate as prenominal adjectival modifiers and do not undergo degree movement.

### 3.4.2 *Such-inversions*

A simple degree-inversion analysis has difficulty explaining the inversion of phrases like *such*, as shown in the introduction to this section. In order to derive *such*-inversions, the partial movement and then stranding of an adjective would be necessary.

I propose that *such*-inversions have two unique qualities. First, I argue that *such*-inversions begin as degree phrases in predicate position (like other degree inversions), but **the adjective that *such* appears to modify is not part of the degree phrase**. Instead, these adjectives adjoin to NP to form a constituent with the subject noun. Second, I argue

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<sup>23</sup>I would be remiss to not mention the abundant body of literature on *very*-inversion under the scope of negation, where *very* **can** appear before the indefinite article, but only when a negative element is present:

- (i) a. \*Harry is very good (of) a wizard.
- b. Harry is **not** very good (of) a wizard.

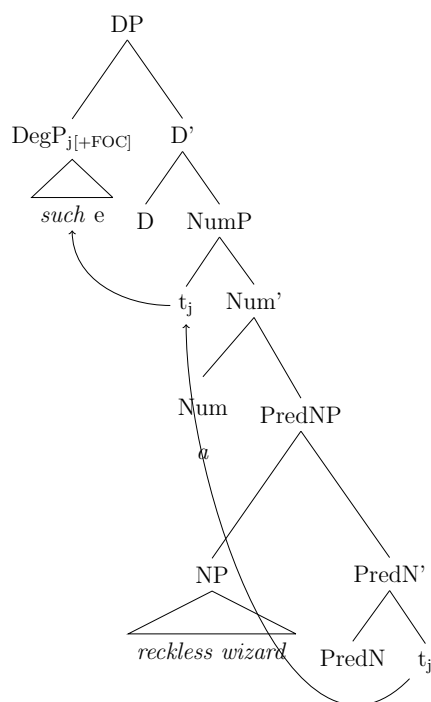
I refer the reader to Borroff (2006), Troseth (2009), and references therein for a discussion of these phenomena. Troseth (2009) argues for a small-clause analysis on the basis of a [neg] feature posited in DP, while Borroff (2006) argues that *very*-phrases are a subtype of NPI.

that *such* does not have an overt adjectival complement. Instead, this position is occupied by a null *e*.

The tree I propose is in example (86). I will expand upon the status of the adjective and null *e* in the sections that follow. The derivational mechanism is otherwise similar to that of the constructions proposed in the preceding sections.

(86) a. Harry is [such a reckless wizard].

b.



### *Attributive adjectives*

The first point I argue for is that any adjectives that appear to be part of *such*-inversions are actually prenominal attributive adjectives. I present two main arguments. First, *such*-phrases cannot modify predicative adjectives (as observed by Matushansky, 2002).

(87) \*He is [such foolish]!

*cf.* He is [so foolish]! (Matushansky, 2002:49)

(88) \*Harry was such an afraid wizard.

*cf.* Harry was so afraid.

Note that in (88), even the separation of *such* from the predicative adjective does not ameliorate the structure.

Second, the adjectives in *such*-inversions do not behave like predicative adjectives. I use Troseth's three diagnostics for predicative adjectives, as presented in section 3.2.1, to demonstrate the opposite point that she makes.

To begin, it is possible for obligatorily non-predicative adjectives to appear in *such*-inversion constructions, as shown in the examples in (89) and (90).

(89) Monday is [such an utter bastard] that it's killed Tuesday and now it's wearing its skin.<sup>24</sup>

*cf.* \*The bastard is utter.

(90) Such a future leader!<sup>25</sup> (*i.e.* 'He is such a future leader!')

*cf.* \*The leader is future.

Next, *such*-inversion does not restrict adjective readings, unlike predicative adjectives. In the example in (91) Bill can be without money or without luck (*i.e.* both possible readings are available).

(91) Bill Bradley is such a poor man!

The availability of the luck reading contrasts with the restriction demonstrated for predicative adjectives, as in (20) above, repeated here.

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<sup>24</sup><https://twitter.com/chrishe Witt/status/458504407655940096>

<sup>25</sup><https://twitter.com/jdonith/status/654094332333543424>

(92) Bill Bradley is too poor of a man...

Finally, adjectives in *such*-inverted phrases do not require conjunction to combine. Recall that this is a characteristic of attributive — but not predicative — adjectives. As (93a) shows, the adjectives in *such*-inversions pattern with attributive adjectives.

- (93) a. Syntax is such a cool, interesting subject.  
 b. Syntax is such a cool and interesting subject.

Based on this evidence, I conclude that the adjectives involved in *such*-inversion constructions are attributive rather than predicative.

A possible concern that may arise at this point is the contrast that we now have between *such*-inversions and other degree inversions: when adjectives are involved in the former they are attributive, but in the latter they are predicative. This might hint that we have two distinct structures. For example, we might still be able to adopt a Matushansky-style analysis for *such*-phrases, where the degree word and its adjective both begin in a prenominal attributive position.<sup>26</sup>

I argue against this type of split structural analysis for several reasons.<sup>27</sup> First, we have the fact that *such*-inversions can occur without any sort of adjective whatsoever.

(94) Hilda is [such a scholar]. (Bresnan, 1973:303)

In (94), the construction is still interpreted in the same scalar manner as other degree inversions. As Bresnan notes, the scalar interpretation is as follows:

(95) Hilda is such/so much of a scholar (that all of her work is impeccable). (Bresnan, 1973:303)

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<sup>26</sup>Thanks to Edith Aldridge for raising this question.

<sup>27</sup>While I **do** adopt a split analysis for purely attributive adjectives versus inversion constructions, the split I am referring to here is the one where some **inversions** are predicative and some are attributive: this is **not** expected, as I describe in this paragraph.

The fact that we can obtain similar scalar interpretations provides us with one indication that *such*-inversions occur in the same structural relations as other inversions.<sup>28</sup>

Next, as I will discuss in detail in the next section on the status of the null *e*, there is a very clear relationship between *so* and *such*. Specifically, as originally argued by Bresnan (1973), *such* is an alternate form of *so*. Therefore, as Matushansky notes, assuming that *such* has a different structure would mean that *so* and *such* would be assigned very different syntax. We would therefore expect them to behave differently in different environments, which is not the case, as I demonstrate in the next section.

Finally, Matushansky (2002:56) argues against the base-generation of *such* in a higher position due to the complexities that arise with respect to operator movement. In order for the constructions to be interpreted as appropriately scalar, the degree operator will need to be in a scope position aligning with this interpretation. By assuming a different structural analysis, a range of issues arise with respect to the status of the operator associated with *such* and where it raises to in order to obtain the correct scope results.

In this subsection I have argued that the adjectives that appear in *such*-inversions do not belong to the *such*-phrase itself but instead are prenominal attributive adjectives that precede the head noun. In the next section I address the status of *such*'s complement.

### *The null e*

Early treatment of *such*-phrases is found in Bresnan (1973), who argues that *such* is derived from *so*. Specifically, *such* is a proform of the degree word *so* (*much*) (*so* with an underlying *much*). She gives two main arguments for this underlying form based on the complementary distribution of *such* and *so*.

---

<sup>28</sup>Bresnan also points out that another reading is available here - a kind-reading - as in:

(i) Hilda is *such*/the kind of a scholar (as you were speaking of just now). (Bresnan, 1973:303)

This is an important point that bears on discussion of *such* in general (for it has other, more quantifier-like functions), however it is not directly relevant to the point I am making here. Instead, the availability of two completely different kinds of readings indicates that there is most likely a different position available for *such*, **but** this position is for the kind-reading **not** the scalar one.

The pairs in (96) show that *so* and *such* are in complementary distribution in that only one of the two forms is available for a given DP.

- (96)
- |                        |  |
|------------------------|--|
| <i>so</i> tall a man   | * <i>such</i> tall a man               |
| * <i>so</i> a tall man | <i>such</i> a tall man                 |
| * <i>so</i> tall men   | <i>such</i> tall men                   |
| * <i>so</i> a man      | <i>such</i> a man                      |
| * <i>so</i> men        | <i>such</i> men                        |
| <i>so</i> tall         | * <i>such</i> tall                     |
| <i>so</i> much         | * <i>such</i> much (Bresnan, 1973:300) |

Next, in negative environments *as* can alternate with *so*, as shown in (97b); this contrasts with the non-negative environment shown in (97a).

- (97)
- a. It was *as*/\**so* awful a picture as it first seemed.
  - b. It wasn't *as*/*so* awful a picture as it first seemed. (Bresnan, 1973:300)

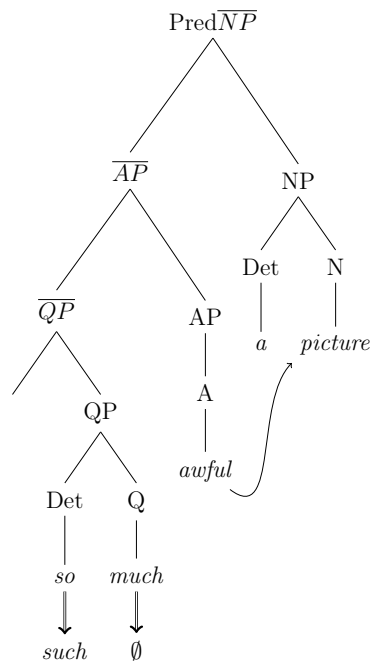
The example in (98) demonstrates that *such* has this same distribution.

- (98)
- a. \*It was *such* an awful picture as it first seemed.
  - b. It wasn't *such* an awful picture as it first seemed. (Bresnan, 1973:300)

The distributional restrictions and similarities between *such* and *so* lead Bresnan to conclude that the two are different surface forms of the same underlying form.

For expository purposes, I briefly outline her analysis here, but point out that I do not directly adopt her structural assumptions; specifically, I do not assume the movement rules that she describes. Bresnan represents the underlying form of *such* as the construction in (99). The degree words *so/such* are the determiners of a Q(uantifier)P(hrase) modifying an adjective. By a series of transformational rules, Bresnan argues that *such* cannot overtly immediately precede an adjective. Therefore, the adjective undergoes what she refers to as AP Shift (see Bresnan, 1973:301 for construction).

(99)



For the particular nuances that compose Bresnan's AP Shift, I refer the reader to Bresnan (1973:305-311).

Although I do not assume the same structural transformations as Bresnan, her discussion regarding the complementary distribution of *so* and *such* remain valid as does her interpretation of their underlying form.

Recall the internal structure I assume for degree phrases (see chapter 1), following Corver (1997).

(100)  $\text{DegP} > \text{QP} > \text{AP}$

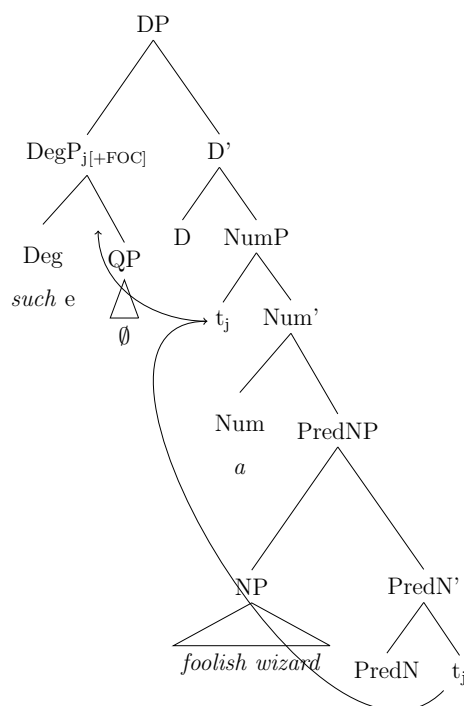
By applying Bresnan's assumptions about the underlying form of *such*, we end up with the following representation:

(101)  $[_{\text{DegP}} \text{ such } [_{\text{QP}} \emptyset ]]$

(102)  $[_{\text{DP}} [_{\text{DegP}} \text{ such } [_{\text{QP}} \emptyset ]]] [_{\text{NumP}} a [_{\text{NP}} \text{ foolish wizard} ] ]]$



(103)



Therefore, the null complement of *such* is no different than what has been previously argued for with respect to *such*-phrases.

A range of benefits result from treating *such*-inversions in the manner that I have proposed here. First, *such*-type phrases are no longer ‘special’ in their behavior, as they invert in a manner identical to other degree-inverted phrases. Second, it is no longer a mystery as to why *such* does not pied-pipe its adjective; it **does** pied-pipe its complement, but the complement is unpronounced. Finally, we have a clear way to parallel the interpretation of *such* to the other degree phrases discussed throughout this chapter:

(104) Harry is a foolish wizard [such *e* that he gets into trouble often].

### 3.4.3 A remaining puzzle: *quite* and *rather*

The remaining puzzle is the optionality available to *quite* and *rather* (for some speakers of English). Note that the two words can remain *in-situ* (105a), move and pied-pipe (105b),

**and** move but not pied-pipe (105c). The last option is the one I focus on.

- (105) a. Harry is **a** rather/quite unusual wizard.  
 b. Harry is rather/quite unusual **a** wizard.  
 c. Harry is rather/quite **an** unusual wizard.

The non-pied-piping option is available to only *such*, *quite* and *rather*. As I discussed extensively above, *such* is expected to have a null complement based on early arguments for its underlying forms. *Rather* and *quite*, however, are not necessarily expected to have this pattern given they do not have a similar history.

A few possibilities exist as to the origin of the pattern in (105c). On the one hand, we might assume, as we did with *such*, that these degree words also have a null QP complement, giving them the following structure:

- (106) [DP [DegP *quite/rather* [QP  $\emptyset$ ]] [NumP *an* [NP *unusual wizard*] ] ]

On the other hand, we could argue that *quite/rather* constructions of this type follow the same construction as *such* constructions that involve kind-readings (see footnote 28 on page 195), making them **not** part of an inversion structure. This possibility is simultaneously appealing and challenging to prove, given that the scalar reading is easy enough for a native speaker of English to intuit. This having been said, describing the scalar reading is a different matter.

- (107) Harry is quite a foolish wizard.  $\rightarrow$

- a. Harry is quite a foolish wizard ???(that he jumped into the lake). [Scalar]  
 b. Harry is quite a foolish wizard (as any teenage wizard is like to be). [Kind]

I suggest that the more likely of these two options is the former — that *rather* and *quite* have received the same structural analysis as *such* in inversion scenarios without adjectival-pied-piping.

That this is on the right track is supported historically. According to OED records of the entries *such*, *quite*, and *rather*, there is a large time gap between the first appearance of *such* in the type of construction featured in (105c) and the latter two. Entries for *such a* + ADJ N are found as far back as 1529:

- (108) Suche a madde bedleme For to rewle this reame, It is a wonders case. (J. Skelton *Why come ye nat to Courte*; found in OED).

Contrastively, we see entries for *rather* only as early as 1772 and *quite* in 1657, as shown in the following two examples<sup>29</sup>:

- (109) Their flesh is black, and has rather a perfumed taste. (*The Annual Register* 1771; found in OED)

- (110) Trees, quite of another kind. (P. Gassendi, *Mirror of Nobility*; found in OED)

This fact does not appear to have been previously discussed, and is of great interest to the current discussion: my proposal is that *quite* and *rather* were eventually adopted into constructions of the *such*-type based on the similarity in form and function among the three degree words.

What this idea implies is that there are two possible locations for *quite/rather*: they may appear in a prenominal position modifying an attributive adjective (105a) or they may be in a predicative position (105b) and (105c). When in a predicative position, two possibilities are available: the first, (105b), patterns with *too*-type phrases, where the degree word has an overt predicative adjective complement; the second, (105c), patterns with *such*-type phrases, where the degree word takes a null QP complement.

In order to test this theory, we can apply the diagnostics used in the previous section to the adjectives of *quite* and *rather* inversions. For the remainder of the section, I do

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<sup>29</sup>Note also the use of *of*, here (without the indefinite article, though this absence may be due to the use of *another*).

this with both fronting types: adjectival pied-piping (*quite unusual a wizard*) and non-pied-piping (*quite an unusual wizard*). An important note here is that the *quite*- and *rather*-type constructions are subject to cross-speaker acceptability: some prefer fronting **with** the adjective (the predicative analysis of the adjective) while others prefer fronting **without** the adjective (the attributive analysis of the adjective).<sup>30</sup>

First, let us consider constructions that follow the typical predicate-inversion pattern:

- (111) a. Harry is quite unusual **a** wizard.  
       b. Harry is rather unusual **a** wizard.

The first diagnostic is compatability with predicative adjectives. As seen in (112b) and (112c), both *quite* and *rather* allow inversion with *sure* (contexts are adjusted slightly for each to establish a reasonable scenario of utterance).

- (112) a. The practitioner was **sure**.  
       *cf.* \*The **sure** practitioner argued against the previous diagnosis.  
       b. Mary is [quite **sure** (of) a practitioner] in stressful cases such as these.  
       c. Mary is [rather **sure** (of) a practitioner] — I wish she were my doctor.

The second diagnostic is interpretation. Recall that predicative positioning only allows one interpretation of *poor* in the following example (the interpretation where Bill Bradley does not have money). Again, *quite* and *rather*-inversion pattern with the predicative interpretation.

- (113) a. Bill Bradley is poor.  
       *cf.* Poor Bill Bradley didn't make it through the primary elections of 2000.  
       b. Bill Bradley is **quite** poor (of) a man...

---

<sup>30</sup>This is potentially a dialectal distinction, but a larger sample of speakers than was casually surveyed for this discussion is required to determine as much.

- c. Bill Bradley is **rather** poor (of) a man...

Finally, recall that predicative adjectives require conjunction to combine. The adjectives in *quite* and *rather*-inversions do as well.

- (114) a. \*Mercury is **quite** shiny, dangerous (of) a substance.  
           Mercury is **quite** shiny and dangerous (of) a substance.  
       b. \*Mercury is **rather** shiny, dangerous (of) a substance.  
           Mercury is **rather** shiny and dangerous (of) a substance.

Therefore, using the diagnostics for predicative adjectives as discussed in Troseth (2009), we can see that *quite* and *rather* - when inverted **with** adjectives - behave as predicative degree APs.

The question then is whether the adjectives in non-pied-piped *quite/rather*-inversions behave the same way as those in *such*-inversions.

- (115) a. Harry is quite **an** unusual wizard.  
       b. Harry is rather **an** unusual wizard.

First, both degree words may appear with obligatorily attributive adjectives.

- (116) a. He is **such** an utter bastard/ \*The bastard is utter.  
       b. He is **quite** an utter bastard.  
       c. He is **rather** an utter bastard, isn't he?

Next, it is possible to interpret *poor* in two ways in the following constructions (Bill is without money or he is not great at being a man), following attributive behavior.

- (117) a. Bill Bradley is **quite** a poor man.

- b. Bill Bradley is **rather** a poor man.

Finally, the adjectives in *quite*- and *rather*-inverted phrases do not require conjunction to combine.

- (118) a. Syntax is **quite** a cool, interesting subject.  
 b. Syntax is **rather** a cool, interesting subject.

As we can see, when *quite* and *rather* are not adjacent to the adjectives they appear to modify, these adjectives behave attributively, like those in *such*-inversions (*i.e.* the degree word and adjective do not form a constituent).

Based on the evidence supplied by these tests, I tentatively conclude that *quite* and *rather* have the option of having a null *e* complement, like *such*.

#### 3.4.4 Structural options for inverted and non-inverted degree phrases

The final question that remains to be addressed is what determines whether or not a structure is possible. I argue that the answer is relatively straightforward: when a DegP can occur as a predicate, inversion is possible; when it cannot, the only available option is for the DegP to be prenominal and attributive.

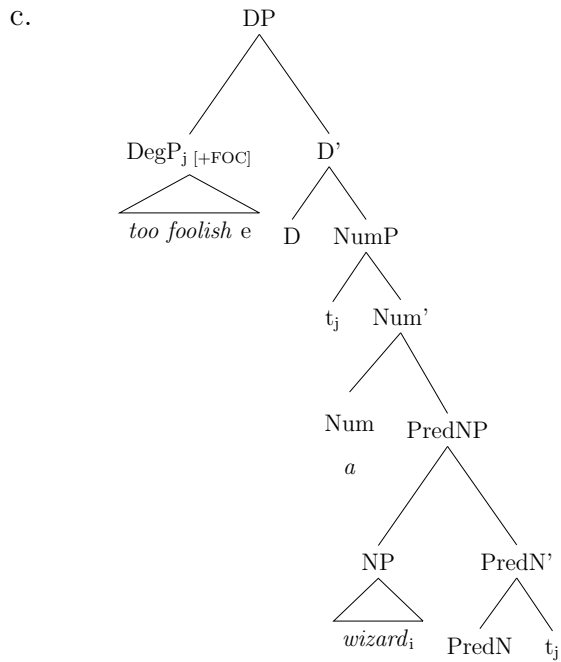
Rather than providing a full derivation for each possibility of each degree word, I present three general structures and note which degree words fit into the description. For ‘mandatory’ versus ‘optional’ choices, the structure is identical *for a given construction type*; for example, in (119), the derivation for *too* and *quite* are the same.

(119) *Fronting + pied-piping*

a. Harry is too foolish a wizard. / Harry is quite foolish a wizard.

b. (i) Mandatory: *too, as, so, how*

(ii) Optional: *quite, rather, more, less*

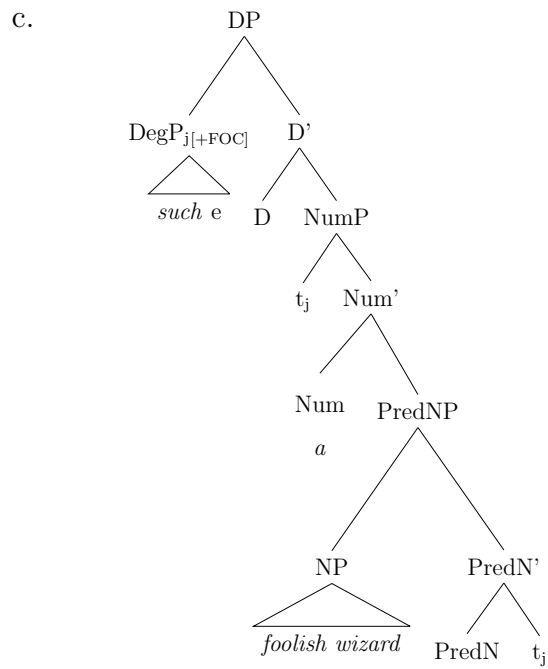


(120) *Fronting + no pied-piping*

a. Harry is such a foolish wizard. / Harry is quite a foolish wizard.

b. (i) Mandatory: *such*

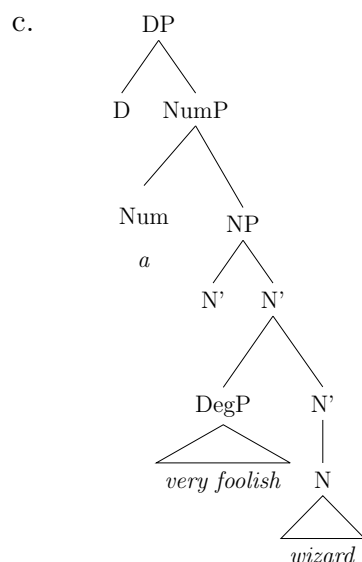
(ii) Optional: *quite, rather*





(121) *No fronting*

- a. Harry is a very foolish wizard. / Harry is a quite foolish wizard.
- b. (i) Mandatory: All non-degree operators (intensifiers), such as *very*  
 (ii) Optional: *more, less, quite rather*



Note that the constructions in (121) are simple attributive modifiers that do not undergo movement for degree. The ‘optional’ words are labeled as such given they *can* be part of degree-inversion constructions.

In this manner, it is possible to derive all variable word orders in degree inversion constructions by appealing only to syntactic position.

### 3.5 Degree inversion and ellipsis

Finally, I would like to briefly address the application of the ellipsis mechanism proposed in the previous chapter to the degree inversion data presented here. Arguably, since DegP is a focused element in degree inversions, nominal ellipsis should be possible in the course of the derivation.

The ellipsis mechanism I proposed in chapter 2 requires that an agreement relation take place between a probe and a goal, and the probe has to be marked as contrastive in order to license the ellipsis of the goal's complement. With possessive constructions, we saw that it was possible for an element in the specifier of a given functional projection (DP in the case of possessives) to license an ellipsis head (D) to delete its complement. Since the degree-inverted phrase is moving through specifiers in these constructions, the same licensing relationship should be possible.

Since the degree phrase first moves to SpecNumP, we might first look for ellipsis there. If we assume that some form of Spec-head agreement obtains between heads and elements in their specifiers, we can argue that some sort of relationship is established between DegP and Num. Note, however, that ellipsis is not licensed below Num despite the presence of a contrastive element:

(122) \*Ron was too weak (of) a wizard and Harry was too strong (of) a ~~wizard~~.

In chapter 2 the fact that articles do not license ellipsis was explained by the fact that heads cannot themselves license the ellipsis of their complements (an agreement relationship needs to take place). However, here the violation is more likely due to conflicting contrastive values. The degree phrase is decidedly focused and contrastive, while the indefinite article is decidedly not.

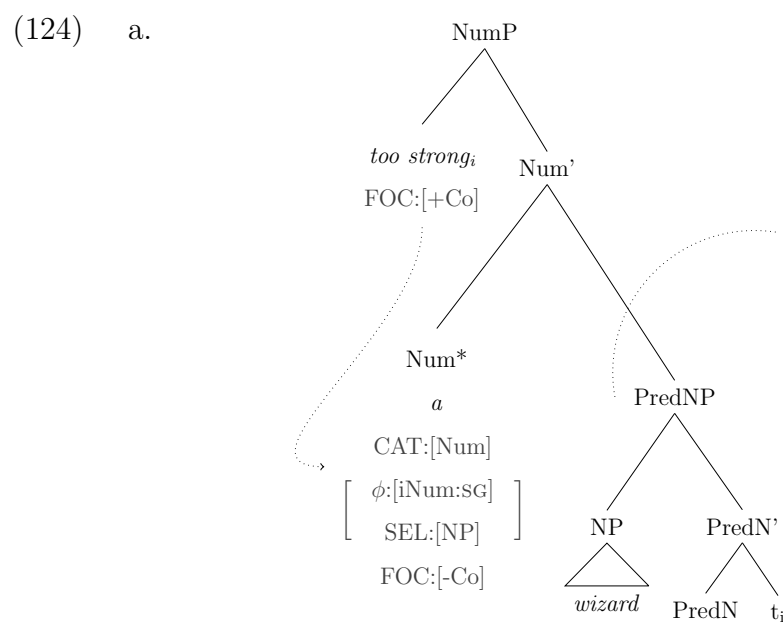
Since under the analysis I assume here ellipsis is immediate upon the Merge of the licensing head (in this case, movement of the degree phrase to SpecNumP), we expect a second ellipsis of a larger domain to show some effect of this first failed ellipse. I argue that this is precisely what we see with examples like the following:

(123) Ron was too weak (of) a wizard and Harry was too strong ~~a wizard~~.

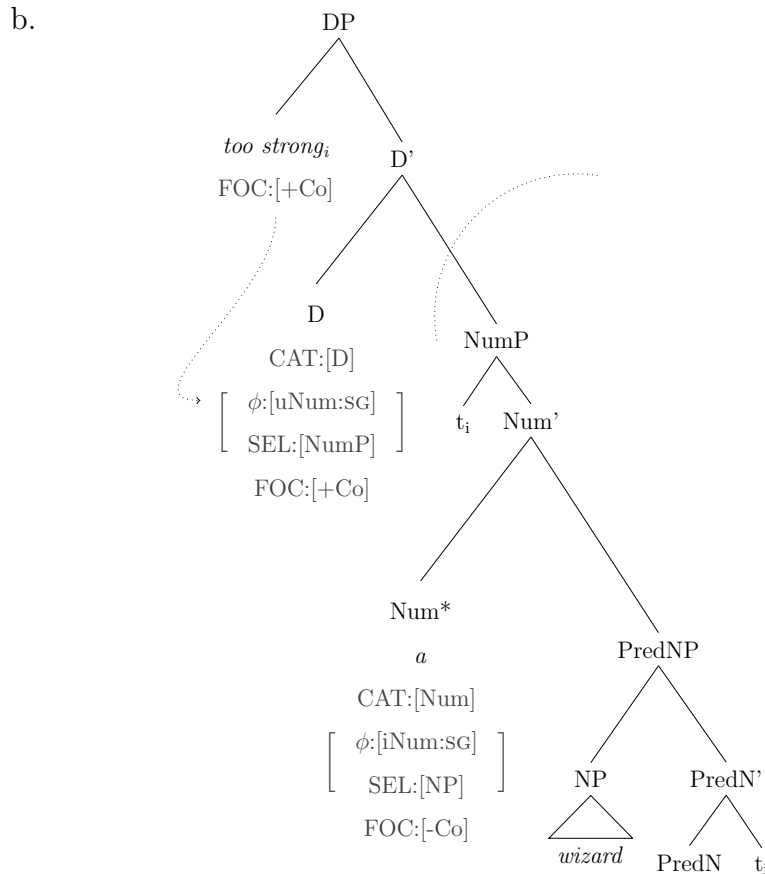
The construction is no longer unacceptable. **However**, the interpretation is not quite what we expect. In (123), it is possible to interpret *too strong* as modifying *wizard* in the same

way other degree inversions have so far, but a second possible interpretation is one in which Harry is too strong in general.<sup>31</sup>

The following tree shows the process of this full derivation. The first movement of DegP to SpecNumP licenses the ellipsis of the complement of Num, resulting in an unacceptable structure (marked with a \*); however the second movement to SpecDP also licenses ellipsis, deleting the violating structure:



<sup>31</sup>A casual survey reveals that some speakers prefer one interpretation to the other (in either direction), but both are available to all speakers.



The fact that deleting the violating structure does something to ameliorate a violation in interpretation is an interesting consequence of NumP ellipsis. Recall from the introduction to this dissertation that the third topic I consider (in chapter 4) is that of island repair under nominal ellipsis. Since this consequence bears more on the discussion of violation amelioration, I will save further consideration of this topic for chapter 4.

### 3.6 Conclusion

At the beginning of this chapter, I set out to argue that the three bracketed DPs in (125) through (127) derive from the same base structure.

(125) Voldemort was [too powerful a wizard].

(126) Voldemort was [too powerful a wizard to trust].

(127) Voldemort was [a wizard too powerful to trust].

As I demonstrated, the structure in (127) is the base structure for the other derivations.

By adopting a larger structure for the degree phrases in inversions in general, we can now explain the relationship between (125) through (127) without having to stipulate vastly different structures.

I further argued for a new way to account for degree word ordering variability, using *too*-inversions as a base example and others as the variants. In brief, we expect the degree word to always move with its adjective: whether there is always an overt adjective present is a different matter.

With respect to this dissertation as a whole, this chapter has contributed additional evidence for the location of contrastive movement, as the feature responsible for moving degree phrases from a postnominal position is the same feature responsible for licensing ellipsis/moving elements from ellipsis domains. I also argued that degree inversion targets SpecNumP on the basis of its interpretation (indefinite, non-specific) as well as the obligatory insertion of an indefinite article. I posited that further movement to SpecDP is triggered independently of the inversion mechanism; evidence for this second movement comes from insertion of *of* in degree inversions in some dialects of English as well as the possible ellipsis of D's complement.

In the next chapter I turn to a discussion of DP-internal islands and what attempted repair by nominal ellipsis reveals about the purpose of certain functional projections. I also briefly return to the final concern of this chapter — that the combination of degree inversion and NumP ellipsis produces structures with ambiguous interpretations — as it arguably receives a straightforward explanation under the analysis of repair that I propose.

## Chapter 4

# NO MAN IS AN ISLAND UNLESS HE STANDS ALONE: AMBIGUOUS NOMINAL SOURCES AS THE ILLUSION OF ISLAND REPAIR

### 4.1 *Introduction*

The past two chapters have discussed various aspects of movement and ellipsis in the nominal domain. In this chapter, I again look at the available locations of movement, but now with particular attention to the **non**-escape of constituents. In particular, I consider the phenomenon of island constraints specific to DP and whether violations of island constraints are reparable via nominal ellipsis.

I pose two primary research questions:

#### (1) Research Questions

- a. Is it possible to repair DP-internal island violations under nominal ellipsis?
- b. Can current accounts of island repair in the clausal domain be extended to island repair in the nominal domain?

The answers to these questions are straightforward. I argue that island repair under NPE **appears** to be possible in certain scenarios. However, this repair is only an illusion, as I demonstrate that island repair under NPE is only possible when an acceptable ‘island evasion’ strategy is employed. Thus, ‘island repair’ is not actually repair (Barros, Elliot, & Thoms, 2014; Barros, 2014; Barros, Elliot, & Thoms, 2015; Van Craenenbroeck, 2012; Erteschik-Shir, 1977; Merchant, 2001; Ott & de Vries, 2014).

Empirically speaking, I present two new sets of data. First, I show that, contrary to expectation, it is in fact possible to extract from nominal ellipses. Second, I show that island

repair seems to be possible in some scenarios. Theoretically speaking, I argue that island repair is nothing more than an illusion, and that any instance of apparent repair by NPE is the by-product of the ellipsis site containing an *ambiguous nominal source*. In the following example, the bolded constituent *on fascism* is compatible both with the verb *stomped* and the noun *books*, depending on whether the former is present:

- (2) a. I read three books (that stomped) on fascism.
- b. I read three [NP books [CP that stomped **on fascism**]].
- c. I read three [NP books **on fascism**].

The fact that the two constructions have different meanings is irrelevant, as I discuss in what follows. What matters is that *on fascism* may attach at two different places in the structure.

This chapter is organized as follows. In section 4.2 I briefly introduce island repair by ellipsis in the clausal domain, then present new data that shows that apparent repair of violations of the Complex NP Constraint by nominal ellipsis is, in fact possible. In the course of this discussion, I also demonstrate that it is possible to extract from nominal ellipses, which is not expected under many treatments of nominal ellipsis (specifically those that argue that nominal ellipses are null proforms, such as Lobeck, 1995). In section 4.3 I fully address the extraction issue, as it bears on the discussion of peripheries that is the central focus of this dissertation. In section 4.4 I argue that what appears to be repair is in fact nothing more than an illusion, and propose a new island evasion strategy that I deem an *ambiguous nominal source*. Finally, I conclude in section 4.5.

## 4.2 *Island violations in the nominal domain: the Complex NP Constraint*

In this section I present new data that shows that apparent island repair by nominal ellipsis is possible. I begin by briefly discussing island repair in general (for the clausal domain). Then, I set up examples of violations of the Complex NP Constraint (CNPC) under which island repair by nominal ellipsis should be possible. Finally, I show that for a particular subset of examples nominal ellipses seem to repair these violations.

#### 4.2.1 Island repair by ellipsis in the clausal domain

Discussions of island domains and island repair go back to Ross (1967), who observed that certain domains do not allow extraction. When an element is extracted from one of these domains, it results in an island violation, as demonstrated in the following examples. The example in (3b) shows a violation of the CNPC: the *wh*-phrase *who* has been extracted from the relative clause *who is jealous of Maxime*. In (4) the *wh*-phrase *which Balkan language* has been extracted from the relative clause *who speaks X*.

- (3) a. Phineas knows a girl who is jealous of Maxime.  
 b. \*Who<sub>i</sub> does Phineas know a girl who is jealous of t<sub>i</sub>? (Ross, 1967:124)
- (4) \*They hired someone who speaks a Balkan language, but I don't know [which Balkan language]<sub>i</sub> [they hired someone who speaks t<sub>i</sub>]. (Merchant, 2001:4, from Lasnik, 2001)

The following example shows that it is possible to repair islands in the clausal domain (Baker & Brame, 1972; Chomsky, 1972; Chung, Ladusaw, & McCloskey, 1995; Lakoff, 1972; Lasnik, 2001; Merchant, 2001; Ross, 1969, among many others). In (5), the deletion of the clause containing the island violation appears to 'repair' violation effects.

- (5) a. \*They hired someone who speaks a Balkan language, but I don't know [which Balkan language]<sub>i</sub> [they hired someone who speaks t<sub>i</sub>].  
 b. They hired someone who speaks a Balkan language, but I don't know [which Balkan language]<sub>i</sub> [~~they hired someone who speaks t<sub>i</sub>~~]. (Merchant, 2001)

Contrastively, verbal ellipsis (VPE) does not cause the same amelioration effects as sluicing (Chung et al., 1995; Fox & Lasnik, 2003; Lasnik, 2001; Merchant, 2001). In (6), even though the island violation itself has been deleted, the construction is still unacceptable:

- (6) a. \*They hired someone who speaks a Balkan language, but I don't know [which Balkan language]<sub>i</sub> [they hired someone who speaks t<sub>i</sub>].



- b. \*They hired someone who speaks a Balkan language, but I don't know [which Balkan language]<sub>i</sub> they did [~~hire someone who speaks t<sub>i</sub>~~].

I save the discussion of the arguments for why the contrast between sluicing and VPE occurs for section 4.4.

As opposed to sluicing and VPE, the behavior of islands under nominal ellipsis has been little discussed. In fact, references on the matter are mostly simple allusions to parallels between different ellipsis domains, such as Fox and Lasnik (2003) and Müller (2011); even then, nominal ellipsis is not necessarily referred to by name. For the most part, discussions of nominal ellipsis and island repair pertain to violations of the Left Branch Condition, as in Merchant (2001) and Barros et al. (2014, 2015).

Moreover, it does not appear that it has been directly demonstrated that island repair under NPE is (im)possible. In the next subsection, I demonstrate that this gap in the literature is likely due to the complexity of establishing an appropriate extraction-and-ellipsis scenario in the nominal domain. At first glance, it does not seem possible to even set up the appropriate context.

#### 4.2.2 *Conditions for repair*

In order to perform an attempted repair of the CNPC via nominal ellipsis, we must first demonstrate that this is theoretically possible. To do so, three conditions must be met:

##### (7) Conditions to test island repair

- a. We must be able to *elide* the NP in complex noun phrases.
- b. We must be able to *extract* from noun phrases in *non-island* contexts.
- c. We must be able to *extract* from *elided* noun phrases in *non-island contexts*.

In this section I address each of these conditions in turn.

First, we must be able to elide the NP in complex noun phrases. Complex NPs come in two types - relative clause structures and clausal complement structures. The following examples demonstrate that nominal ellipses involving the deletion of relative clauses and clausal complements, respectively, are possible given an appropriate ellipsis context.<sup>1</sup>

(8) Relative clause

- a. I know five Jedis that watch gory movies and you know six Jedis that watch gory movies.
- b. I know five Jedis that watch gory movies and you know [<sub>DP</sub> six Jedis ~~that watch gory movies~~].

(9) Clausal complement

- a. I heard three rumors that a Wookiee bit Yoda and you heard two rumors that a Wookiee fell on Yoda.
- b. I heard three rumors that a Wookiee bit Yoda and you heard [<sub>DP</sub> two rumors ~~that a Wookiee fell on Yoda~~].

Thus, we can meet the first condition for testing island repair.

Second, we must be able to extract from noun phrases in non-island contexts. That this is possible using several strategies is shown by the examples in (10).<sup>2</sup>

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<sup>1</sup>If we try to set up examples where the ellipsis antecedent is internal to the DP, ellipsis is not possible. This may be ruled out independently due to a parallelism requirement for coordinate structures.

- (i) \*I know [<sub>DP</sub> five Jedis that watch gory movies and six Jedis ~~that watch gory movies~~].
- (ii) \*I heard [<sub>DP</sub> three rumors that a Wookiee bit Yoda and two rumors ~~that a Wookiee fell on Yoda~~].

<sup>2</sup>Note that contrastive movement (10c)/(10d) is slightly degraded, but this is only because it sounds redundant, not because of any issue with the extraction. If we elide the redundant noun, the construction becomes fully acceptable:

- (i) About Obi-Wan, I heard two rumors.
- (ii) Obi-Wan, I heard two rumors about.

(10) I heard three rumors that a Wookiee bit Yoda...

- a. Who<sub>i</sub> did you hear two rumors about t<sub>i</sub>? (*Wh*-movement)
- b. [Which Jedi]<sub>i</sub> did you hear two rumors about t<sub>i</sub>? (*Wh*-movement, d-linked)
- c. ?[About Obi-Wan]<sub>i</sub>, I heard two rumors t<sub>i</sub>. (Contrastive movement)
- d. ?Obi-Wan<sub>i</sub>, I heard two rumors about t<sub>i</sub>. (Contrastive movement)

We have now met the second condition for testing island repair.

The final condition to meet is to be able to extract from elided noun phrases in non-island contexts. This condition presents an issue: it is arguably impossible to extract a *wh*-phrase from an elided NP, even if there are no islands present and extraction is otherwise possible. The relevant contrast is presented in (11)/(12). In (11), we see that non-ellipsis *wh*-movement is allowed, but (12) shows that the same movement is not possible with NPE.<sup>3</sup>

- (11)
- a. I heard two lectures about Chomsky.
  - b. Who<sub>i</sub> did you hear two lectures about t<sub>i</sub>?
  - c. About who(m)<sub>i</sub> did you hear two lectures t<sub>i</sub>?

(12) I heard two lectures about Chomsky...

- a. You heard two ~~lectures~~ about Pinker.
- b. \*Who<sub>i</sub> did you hear two ~~lectures~~ about t<sub>i</sub>?
- c. \*/\*?About who(m)<sub>i</sub> did you hear two ~~lectures~~ t<sub>i</sub>?

However, this fact only seems to be attested for *wh*-movement. Even then, no direct sources of this appear to be available (from what I have been able to uncover). The generalization seems to follow from the idea that NPE sites are simply null anaphors (*e*) and are not expected to have structure to extract from (see, *e.g.* Lobeck, 1995).

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<sup>3</sup>Even though (12b) looks like nominal gapping, it should receive the same analysis given the argument I presented in chapter 2 for an ellipsis analysis of nominal gapping.

In the following paragraphs, I present two types of movement that **do** allow extraction from ellipsis sites: contrastive movement and d-linked *wh*-movement.

As opposed to the examples involving *wh*-extraction from an elided NP, as shown in (12) above, there appear to be no issues with contrastive extraction from an elided NP:

(13) I read three books on tyranny.

a. [On fascism]<sub>i</sub>, I read two books *t<sub>i</sub>*.

b. [On fascism]<sub>i</sub>, I read two ~~books~~ *t<sub>i</sub>*.

(14) I heard three rumors about Yoda.

a. [About Obi-Wan]<sub>i</sub>, I heard two rumors *t<sub>i</sub>*.

b. [About Obi-Wan]<sub>i</sub>, I heard two ~~rumors~~ *t<sub>i</sub>*.

The ellipses in (13) and (14) may be possible because *on fascism* and *about Obi-Wan* are base-generated on the edge of the clause (Chung et al., 1995; Culicover & Jackendoff, 2005; Ginzburg & Sag, 2000; Sag & Nykiel, 2011, as cited in Barros et al., 2014). What this would mean is that the prepositional constituents are generated *in-situ*:

(15) [<sub>CP</sub> On fascism [<sub>TP</sub> I [<sub>VP</sub> read [<sub>DP</sub> two ~~books~~]]]]

That this is not the case is demonstrated in section 4.2.3 below. To briefly preview the argument: the same constituents that can be extracted in examples like (13)/(14) also give rise to island violations when occurring with a complex NP (rather than a non-island-containing one).

One more brief issue to address with respect to these contrastively-moved phrases is determining the type of movement they undergo - Topic or Focus. While the precise type of movement does not necessarily have an effect on the constituent's ability to circumvent islands, for the purpose of extending the paradigm we should have a clear understanding of

the type of movement. I argue that this contrastive movement in particular is Topicalization, using diagnostics presented in Erteschik-Shir (2007).<sup>4</sup>

The first diagnostic is the ‘Aboutness’ test, as originally presented by Reinhart (1981), which constains the response to being about the Topic. This is most apparent with pronouns:

(16) A: Tell me **about John**.

B: **He’s** very nice.

The examples in (13) and (14) behave similarly, as the prompt sentence (*I read three books on tyranny./I heard three rumors about Yoda.*) forces the next sentence to contrast subject of the book/rumor (*i.e.* what each one is about).

Next, previous mention or Givenness is a traditional method for identifying Topics, as can be seen in (16). Not all Topics require previous mention, as Erteschik-Shir notes, because as long as the contrastive statement occurs in a ‘discourse-available’ scenario, Topicalization may occur. This is demonstrated in the following example from Dutch, where *et museum* ‘a museum’ and *en kirke* ‘a church’ have been left-dislocated to a topic position:

(17) **Et museum** besøgte jeg allerede i går, **en kirke** ser jeg først i morgen.

a museum visited I already yesterday, a church see I only tomorrow

‘I visited already a museum yesterday, I will see a church only tomorrow.’ (Erteschik-Shir, 2007:9)

The examples in (13) and (14) have a similar structure. In (13), for example, the discourse-available scenario is one in which I am reading books on political systems, thus the contrastive Topic will be the system that I have selected to read about.

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<sup>4</sup>I use two diagnostics here, as they are relatively straightfoward and help us conclude that the intuition that these constituents are Topics is accurate. A third type of diagnostic exists which I do not employ: DPs with no reference lead to a truth value gap when topicalized:

(i) **The King of France** is bald. (Truth value gap, therefore Topic)

(ii) The exhibition was visited by **the King of France**. (Falsifiable, therefore not a Topic)

Focus-moved elements do not meet these diagnostics. Based on the fact that the constituents I am concerned with here fall under Topic-like behavior, I assume for the purpose of discussion that they are Topics.

I now move on to discuss the other type of movement that appears to allow extraction — d-linked *wh*-movement (Cinque, 1990; Szabolcsi & den Dikken, 1999, as cited in Matushansky, 2002). Consider the following two examples, in which I have bracketed the d-linked *wh*-phrases<sup>5</sup>:

(18) I sent several letters about many ministers...

I don't remember [about which minister]<sub>i</sub> I sent three ~~letters~~ <sub>t<sub>i</sub></sub>.

(19) I wrote many articles on several wars...

I don't remember [on which war]<sub>i</sub> I wrote three ~~articles~~ <sub>t<sub>i</sub></sub>.

As with the Topic-moved constituents, there does not appear to be any degradation in form, even though there appears to have been movement from an elided NP. Note that the replacement of the d-linked phrase with a *wh*-proform degrades the structure:

(20) ??/\*...I don't remember about who(m) I sent three.

Of particular interest with d-linked *wh*-phrases as opposed to non-d-linked ones is the fact that d-linked *wh*-phrases behave quite similarly to contrastively-moved phrases: they are similar to Topics in the sense that d-linked items are selected from a pre-existing or previously mentioned set. This observation has been made previously by Rizzi (2001, 2004). While I do not make any decisive claim that Topics and d-linked phrases are the same (as this would open a new argument), I note that from this perspective the facts that allow Topic movement in ellipsis contexts are likely the same that allow d-linked movement.

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<sup>5</sup>Similar examples are found in Saab (2014) for Hungarian.

The argument I presented in chapter 2 for nominal gapping to receive a nominal ellipsis analysis makes a straightforward prediction for the data under consideration here. That is, if extraction from regular nominal ellipses is disallowed with regular *wh*-movement but allowed with Topic and d-linked movement, we should see the same restrictions with nominal gaps. The following two paradigms demonstrate that this prediction is mostly borne out. The examples in (21) show the possible gaps, while the examples in (22) show the extraction of the first remnant.

(21) I read two books on charms from England.

- a. Harry read three books on potions from France.
- b. Harry read three ~~books~~ on potions from France.
- c. Harry read three ~~books on potions~~ from France.

(22) I read two books on charms from England.

- a. \*On what<sub>i</sub> did you read three ~~books~~  $t_i$  from France?
- b. ?On potions<sub>i</sub>, I read three ~~books~~  $t_i$  from France.
- c. ?On which subject<sub>i</sub> did you read three ~~books~~  $t_i$  from France?

The examples in (22b) and (22c) are slightly degraded. However, the constructions are vastly improved over the unacceptable *wh*-movement in (22a).

In this section I have established the conditions required to attempt island repair by NPE. First, I demonstrated that we can elide the NP in complex NPs. Second, I showed that it is possible to extract from noun phrases in non-island contexts. Finally, I argued that we can extract from elided noun phrases (in non-island contexts) when we perform contrastive or d-linked movement, rather than typical *wh*-movement. With these conditions in mind, I now move on to set up violations of the Complex NP Constraint to attempt island repair by NPE.

### 4.2.3 *Attempted island repair*

I begin by presenting a paradigm of complex NPs out of which I extract Topic-moved constituents. I focus primarily on Topic movement for the reasons alluded to in the previous section (that Topic movement and d-linked movement may be allowed for the same reason).

The following ten constructions show that a contrastive constituent cannot be extracted from a complex NP.<sup>6</sup> Most of these structures involve a relative clause, though I have included (27) and (32) to demonstrate that structures involving a clausal complement derive similar results.

(23) I read [three books [that stomped on fascism]].

\*[On tyranny]<sub>i</sub>, I read [two books [that stomped t<sub>i</sub>]].

(24) I wrote several articles [that talked about lengthy wars].

\*[About short wars]<sub>i</sub>, I wrote [two articles [that talked t<sub>i</sub>]].

(25) I heard [two rumors [that we spread about the cookies]].

\*[About the candy]<sub>i</sub>, I heard [three rumors [that we spread t<sub>i</sub>]].

(26) I like [three paintings [that hang on the north wall]].

\*[On the south wall]<sub>i</sub>, I like [two paintings [that hang t<sub>i</sub>]].

(27) I heard [three rumors [that Ron talked about Hermione]].

\*[About Harry]<sub>i</sub>, I heard [three rumors [that Ron talked t<sub>i</sub>]].

(28) I like [three men [who argue about politics]].

\*[About football]<sub>i</sub>, I like [four men [who argue t<sub>i</sub>]].

---

<sup>6</sup>Ten may seem like a high number. The reason I include ten examples is because the data splits into two separate paradigms of five each.



(29) I knew [two spelunkers [that ventured into the cave]].

\*[Into the tunnel]<sub>i</sub>, I knew [three spelunkers [that ventured t<sub>i</sub>]].

(30) I know [three Jedis [that put their light sabers in their pockets]].

\*[On their belts]<sub>i</sub>, I know [four Jedis [that put their light sabers t<sub>i</sub>]].

(31) I know [three Jedis [that depend on their masters]].

\*[On their mothers]<sub>i</sub>, I know [four Jedis [that depend t<sub>i</sub>]].

(32) I heard [two rumors [that the cookies are for us]].

\*[For them]<sub>i</sub>, I heard [three rumors [that the cookies are t<sub>i</sub>]].

As is expected by the Complex NP Constraint, all of the extractions in the previous examples lead to ungrammatical results.

The next two sets of examples demonstrate what happens when we attempt to repair the island violations by way of NPE. I have split the results into two lists because the constructions from (23) through (27) above appear to allow repair, while the constructions from (28) through (32) above do not. For each set, (a) examples are the non-elided versions and (b) examples are the NP-elided versions.

The following five examples seem to undergo repair under NPE.

(33) I read three books that stomped on fascism.

a. \*[On tyranny]<sub>i</sub>, I read [two books [that stomped t<sub>i</sub>]].

b. [On tyranny]<sub>i</sub>, I read [two ~~books that stomped~~ t<sub>i</sub>].

(34) I wrote several articles that talked about lengthy wars.

a. \*[About short wars]<sub>i</sub>, I wrote [two articles [that talked t<sub>i</sub>]].

b. [About short wars]<sub>i</sub>, I wrote [two ~~articles that talked~~  $t_i$ ].

(35) I heard two rumors that we spread about the cookies.

a. \*[About the candy]<sub>i</sub>, I heard [three rumors [that we spread  $t_i$ ]].

b. [About the candy]<sub>i</sub>, I heard [three ~~rumors that we spread~~  $t_i$ ].

(36) I like three paintings that hang on the north wall.

a. \*[On the south wall]<sub>i</sub>, I like [two paintings [that hang  $t_i$ ]].

b. [On the south wall]<sub>i</sub>, I like [two ~~paintings that hang~~  $t_i$ ].

(37) I heard three rumors that Ron talked about Hermione.

a. \*[About Harry]<sub>i</sub>, I heard [three rumors [that Ron talked  $t_i$ ]].

b. [About Harry]<sub>i</sub>, I heard [three ~~rumors that Ron talked~~  $t_i$ ].

On the other hand, the next five do not seem to repair island violations:

(38) I like three men who argue about politics.

a. \*[About football]<sub>i</sub>, I like [four men [who argue  $t_i$ ]].

b. \*[About football]<sub>i</sub>, I like [four ~~men who argue~~  $t_i$ ].

(39) I knew two spelunkers that ventured into the cave.

a. \*[Into the tunnel]<sub>i</sub>, I knew [three spelunkers [that ventured  $t_i$ ]].

b. \*[Into the tunnel]<sub>i</sub>, I knew [three ~~spelunkers that ventured~~  $t_i$ ].

(40) I know three Jedis that put their lightsabers in their pockets.

- a. \*[On their belts]<sub>i</sub>, I know [four [Jedis that put their light sabers t<sub>i</sub>]].
- b. \*[On their belts]<sub>i</sub>, I know [four ~~Jedis that put their light sabers~~ t<sub>i</sub>].

(41) I know three Jedis that depend on their masters.

- a. \*[On their mothers]<sub>i</sub>, I know [four Jedis [ that depend t<sub>i</sub>]].
- b. \*[On their mothers]<sub>i</sub>, I know [four ~~Jedis that depend~~ t<sub>i</sub>].

(42) I heard two rumors that the cookies are for us.

- a. \*[For them]<sub>i</sub>, I heard [three rumors [that the cookies are t<sub>i</sub>]].
- b. \*[For them]<sub>i</sub>, I heard [three ~~rumors that the cookies are~~ t<sub>i</sub>].

These two groups of examples give us an interesting result. Specifically, NPE seems to repair violations of the CNPC **only in certain constructions**. At first glance, this contrast is not expected.

I argue that the answer is simple: apparent repair is only possible when the Topic-moved phrase can ambiguously ‘belong’ to the noun **or** the verb (*i.e.* it is either an argument of the noun or the verb). To demonstrate, I give the following two sets of data. In (43), the ellipsis site may contain the full complex NP, in which case the prepositional phrase *on tyranny* is part of the elided clause, or it may only contain a noun, in which case the PP is selected by N.

(43) I read three books that stomped on fascism.

- a. On tyranny<sub>i</sub>, I read two ~~books that stomped~~ t<sub>i</sub>.
- b. On tyranny<sub>i</sub>, I read two ~~books~~ t<sub>i</sub>.

On the other hand, in (44), it is not possible for the prepositional phrase *about football* to be part of the NP.

(44) I like three men that argue about politics.

- a. \*About football<sub>i</sub>, I like four ~~men who argue~~  $t_i$ .
- b. \*About football<sub>i</sub>, I like four ~~men~~  $t_i$ .

In section 4.4.3, I return to this discussion and argue that this contrast is what makes ‘repair’ possible. Instead of the deletion actually ‘fixing’ some problem with the structure, the availability of an alternative reading renders the construction acceptable, given the illusion of acceptability.<sup>7</sup>

Before launching into the details of this issue, however, I first briefly consider d-linked phrases and gapped NPs with respect to repair.

The results for d-linked *wh*-phrases show that ellipsis does not render the construction fully acceptable. Despite the incomplete amelioration, however, there is a vast improvement between the non-elided and elided versions:

(45) I sent several letters that found their way to many ministers...

- a. \*I don’t remember [to which minister]<sub>i</sub> I sent three letters that found their way  $t_i$ .
- b. ?I don’t remember [to which minister]<sub>i</sub> I sent three ~~letters the found their way~~  $t_i$ .

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<sup>7</sup>As an anonymous reviewer pointed out, it looks like eliminating only the CP, such as *that stomped* in the following example, also repairs the island violation:

- (i) I read three books that stomped on fascism.
  - a. On tyranny, I read two ~~books that stomped~~.
  - b. On tyranny, I read two books ~~that stomped~~.

I would like to note that I do not assume anything along these lines. While the ambiguous structural analysis assumes that one of the two underlying ellipses does **not** contain an embedded CP, its absence is not due to clausal ellipsis (CPE).

CP-ellipsis, in the sense shown in the example, is not attested in English the same way that it is in other languages such as Japanese (Merchant, 2001). We have no reason to expect that a CP can independently elide below an NP, meaning the structure in (b) with an underlying missing CP probably does not exist. Note that this does not preclude an analysis where NPE involves the deletion of its embedded CP (see chapter 2).

Therefore, the repair illusion seems possible with d-linked examples as well.

Finally, I look at possible repair with gapped examples. The best available option is to stack two relative clauses. This results in a sentence that is very slightly degraded.<sup>8</sup>

- (46) ?I read three books that talked about fascism that should be burned.

I argue that ‘questionable’ is at least acceptable enough to demonstrate a contrast.

Extraction from the first relative clause is bad, as expected, which is shown in (47a). Interestingly, the ellipsis seems to restore acceptability to the original level of ‘questionable’.

- (47) I read [three books [that talked about fascism] [that should be burned]].
- a. \*[About democracy]<sub>i</sub>, I read [two books [that talked t<sub>i</sub>] [that should be memorialized]].
- b. ?[About democracy]<sub>i</sub>, I read [two books ~~that talked t<sub>i</sub>~~] [that should be memorialized]].

For nominal gaps as well, repair appears possible under NPE.

In this section I have demonstrated that island violations caused by Topic-movement out of a complex NP **seem** to be reparable in certain scenarios. In the course of this discussion, two questions have presented themselves. First: why can Topic-moved phrases escape ellipsis but not *wh*-moved ones? Second: what causes apparent repair when it occurs?

In the next section I answer the former question; I return to the latter question in section 4.4.

### 4.3 *Contrastive movement as licit extraction from NPE*

As I discussed in section 4.2.2, Topic-movement but not *wh*-movement seems to be possible with elided NPs. Importantly, if we try to explain the non-acceptability of *wh*-movement

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<sup>8</sup>See De Vries (2002) for a discussion of RC stacking.

using the fact that the NPE site is a null proform with no internal structure, we are at a loss as to why Topic-movement is acceptable. This note bears directly on the debate of whether NPE sites are proforms, which I briefly discussed in chapter 2.

If we can no longer use the proform argument to explain extraction restrictions, there must be another, structural way to account for the observed data. I believe the answer to this question comes from the manner in which we treat nominal ellipses and contrastive remnants.

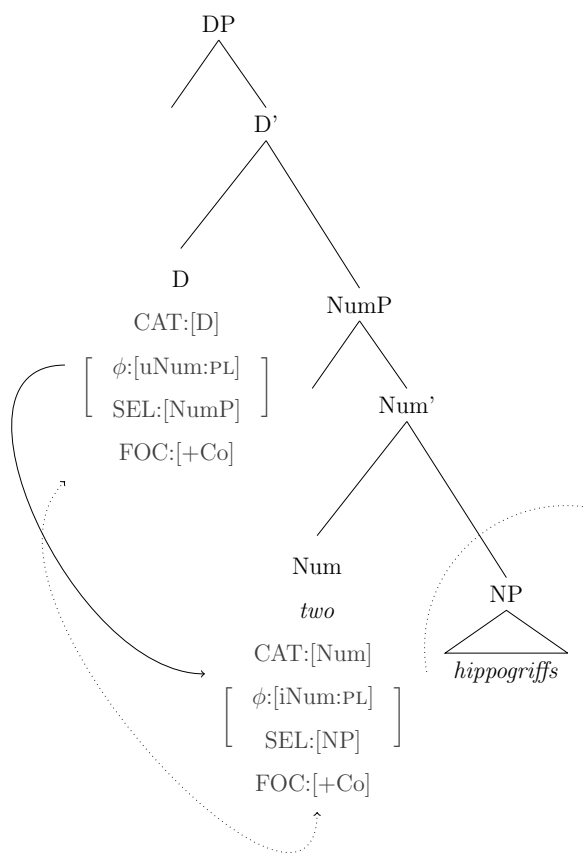
This section is organized as follows. First, I return to the concept of Mutual Agree as presented in chapter 2, briefly discussing the predictions it makes for the analysis here. Then I present two possible explanations for the contrast between contrastive- and *wh*-movement. The first, which I ultimately reject, appeals to restrictions on rightward movement in DP. The second, which I adopt, appeals to the availability of landing sites.

#### *4.3.1 Extraction from ellipses under Mutual Agree*

In chapter 2 I argued for an account of nominal ellipsis where spell-out occurs immediately at the insertion of a licensing head. This mechanism relies on the operation Mutual Agree, in which a contrastive Focus feature is shared between the licensing head and the ellipsis head. A basic example is repeated here:

(48) Three hippogriffs need more food than [two ~~hippogriffs~~].

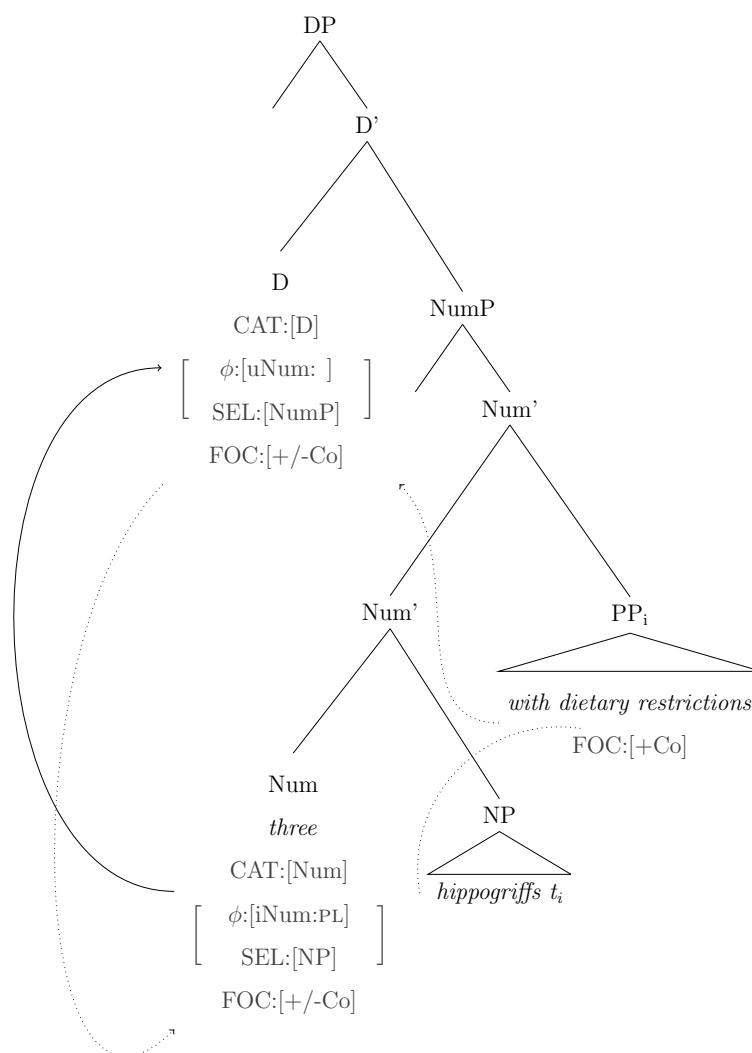
(49)



In order for elements to escape ellipsis, they must move from their position to either left- or right-adjoin to a higher projection inside DP. For example, in the following gapped noun phrase, the PP *with dietary restrictions* has raised to right-adjoin to Num:

(50) Three hippogriffs with huge appetites need more food than [three ~~hippogriffs~~ with dietary restrictions].

(51)



One of the essential aspects of the proposal is that spell-out is immediate upon agreement between the licensing head and the ellipsis head. Evidence for immediate spell-out came from (i) the fact that some elements can escape ellipsis by raising or extraposing and (ii) the fact that elements like *wh*-phrases end up trapped in the ellipsis site. The latter



piece of evidence is relevant to the current discussion.

The ungrammaticality of (12), repeated here, is not reducible to the simple fact that one cannot extract from ellipsis sites. If this were the case, the contrastive movement constructions discussed in the previous section would not be allowed.

(52) I heard two lectures about Chomsky...

- a. You heard two ~~lectures~~ about Pinker.
- b. \*Who<sub>i</sub> did you hear two ~~lectures~~ about t<sub>i</sub>?
- c. \*About who(m)<sub>i</sub> did you hear two ~~lectures~~ t<sub>i</sub>?

We therefore have to reduce the restriction to the ellipsis derivation itself. There are two logical possibilities:

(53) *Restriction on wh-movement*

- a. *Option 1:* The *wh*-phrase rightward moves to escape ellipsis (as in gapping), but is unable to reorder to the left to move to the edge of the phase.
- b. *Option 2:* The *wh*-phrase does not move for independent reasons and ends up trapped in the ellipsis-site.

In the next section I explore these two options, demonstrating that Option 1 does not account for all of the data, while Option 2 does.

#### 4.3.2 *Why contrastive movement?*

In this subsection I review the two options for why *wh*-phrases are unable to escape nominal ellipses. I begin with Option 1 from (53) - that reordering after rightward movement is disallowed. I then reject this option and move to argue for Option 2 - that the *wh*-phrase does not move before ellipsis and ends up trapped in the ellipsis site.

*Rightward movement*

As argued by Wexler and Culicover (1980; see also Johnson, 1986), rightward-moved phrases are subject to Freezing Effects. That is, they are rendered opaque after movement and are no longer domains for extraction. The following examples from Corver (2014:10-11) demonstrate this point. In both examples, it is shown that a *wh*-phrase cannot be moved from an already rightward-moved constituent.

- (54) a. I gave  $t_i$  to John [a book about linguistics] $_i$ .  
 b. \*What $_j$  did you give  $t_i$  to John [a book about  $t_j$ ] $_i$ ?
- (55) a. I saw [a book  $t_i$ ] yesterday [about lazy pronouns] $_i$ .  
 b. \*[What kind of pronouns] $_j$  did you read [a book  $t_i$ ] yesterday [about  $t_j$ ] $_i$ ?

To these examples I add the following, which involves the *on*-phrase I have been using as the base example for this chapter.

- (56) a. You gave  $t_i$  to Sabbagh [two books on fascism] $_i$ .  
 b. ?\*[What] $_k$  did you give  $t_i$  to Sabbagh [three books on  $t_k$ ] $_i$ ?  
 c. \*[On what] $_k$  did you give  $t_i$  to Sabbagh [three books  $t_k$ ] $_i$ ?

In order for this to be an independent constraint on *wh*-movement, we would expect contrastively-moved phrases to be able to move out of the extraposed element. This appears to be better (assuming we move the preposition), but is still not fully grammatical.<sup>9</sup>

- (57) a. You gave  $t_i$  to Sabbagh [two books on fascism] $_i$ .  
 b. \*[Tyranny] $_k$ , you gave  $t_i$  to Sabbagh [three books on  $t_k$ ] $_i$ .

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<sup>9</sup>The question has been raised as to why this contrast occurs (*i.e.* why the extraction seems to improve with contrastive-movement). I do not have a direct answer for this question, given I do not pursue this path for the reasons that I discuss in the next few paragraphs. A possible explanation is that Freezing Effects only create weak islands for contrastive-based movement.

- c. ??[On tyranny]<sub>k</sub> you gave t<sub>i</sub> to Sabbagh [three books t<sub>k</sub>]<sub>i</sub>.

Even though some contrast exists between *wh*- and contrastive-movement out of rightward-moved phrases, the examples in (56) and (57) are not precisely what we are looking at in this chapter. Suppose that Freezing Effects **do** apply to rightward-moved elements and we are unable to extract from them - this does not actually tell us anything about re-moving the **entire** constituent.

An additional concern relates to the idea of rightward-moving a *wh*-phrase in English. The following example demonstrates that the rightward-movement of a *wh*-phrase, while possible, results in an echo question where contrastive focus is being applied.

- (58) a. You gave t<sub>i</sub> to Sabbagh [two books on fascism]<sub>i</sub>.  
 b. You gave t<sub>i</sub> to Sabbagh [*what*]<sub>i</sub>?

That rightward-moved *wh*-phrases require contrast raises the question of whether they may be able to rightward-move in the first place to escape ellipsis (in order to be subject to the constraint on re-movement).

Due to the fact that a rightward-movement plus disallowed re-movement analysis of *wh*-phrase extraction restrictions does not offer any syntactic distinction between *wh*-movement and contrastive movement, I move on to Option 2 from (53).

### *Trapped in NP*

The second option to explore is the idea that nothing rightward moves to escape ellipsis in the cases we are looking at here. Instead, topicalized elements can leftward move prior to ellipsis and *wh*-elements cannot:

- (59) On fascism<sub>i</sub>, I read two ~~books~~ t<sub>i</sub>.

- (60) You read two ~~books on~~ what?

Under the current analysis of ellipsis, this means that we would need an intermediate landing site for our topicalized element that the *wh*-phrase cannot move to. This position must occur before the Merge of the ellipsis-licensing head (D, in this case). Based on the general structure I have adopted, our best option is SpecNumP:

- (61) On fascism<sub>i</sub>, I read [<sub>DP</sub> t<sub>i</sub> [<sub>NumP</sub> t<sub>i</sub> two [<sub>NP</sub> books t<sub>i</sub>]]].

In order to use this position as an intermediate landing site, we first need evidence that contrastively-moved elements can occur here at all.

Recall from chapter 2 that superlative adjectives can license nominal ellipsis, and that they may precede a numeral with a focused interpretation, as shown in (62). The available position for them to move to (without positing additional functional projections) is SpecNumP.

- (62) I was watching the players in the Hunger Games last night.

a. The **best** two ~~players~~ survived.

b. [<sub>DP</sub> the [<sub>NumP</sub> best<sub>i</sub> [<sub>Num</sub> two [<sub>NP</sub> t<sub>i</sub> players]]]]

Thus SpecNumP is a potential landing site for contrastive movement to escape ellipsis.

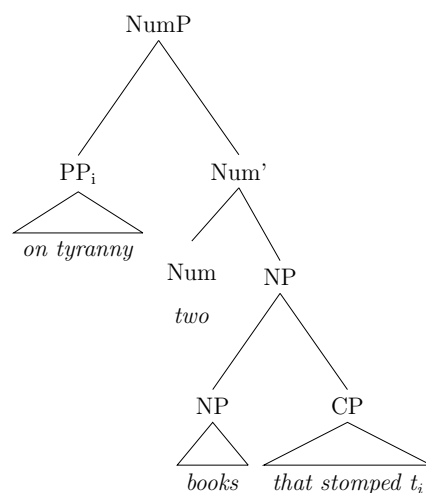
Based on the preceding discussion, I argue that SpecNumP is an available position for movement to escape ellipsis, but **only** for contrastively-marked elements. For this reason, *wh*-phrases are not expected to escape ellipsis.

The explanation for the contrast between *wh*- and contrastively-moved elements that I have presented here falls neatly under the mechanism of ellipsis presented in chapter 2. Ellipsis of the NP proceeds in both the topic and *wh*-movement derivations at the point where D Merges into the construction and licenses the ellipsis of Num's complement. As shown in (64a), the topicalized (contrastive) element moves to SpecNumP prior to the Merge of D. When D is Merged, ellipsis is licensed (64b)

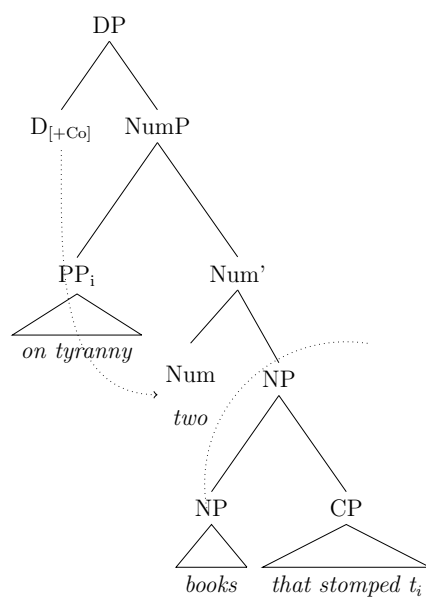
(63) I read three books that stomped on fascism.

On tyranny<sub>i</sub>, I read two books that stomped ~~t<sub>i</sub>~~.

(64) a.



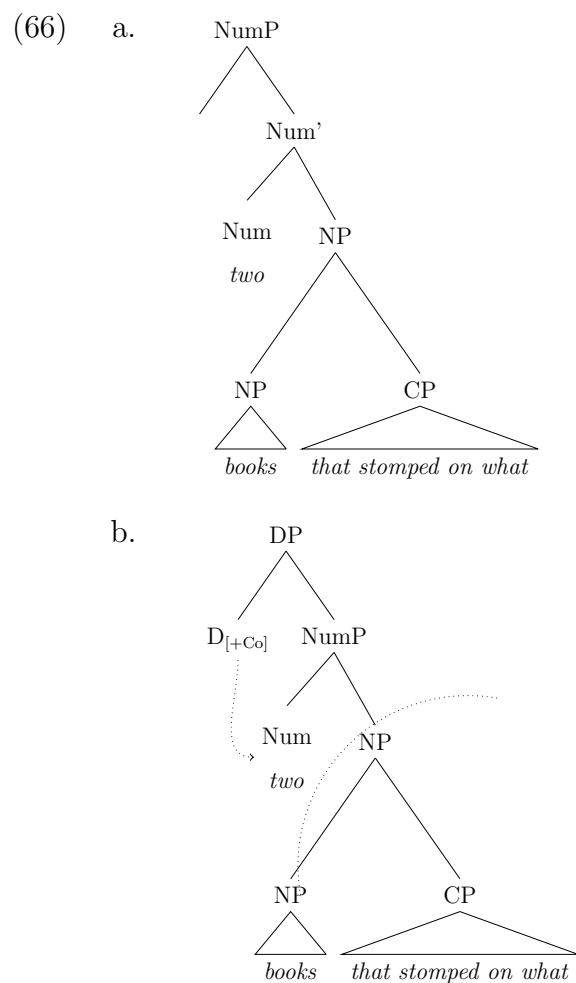
b.



As shown in (66), the *wh*-element does not move through SpecNumP (it only moves out of DP through SpecDP), as its only motivation for movement is to satisfy a *wh*-feature, meaning it will only target the edge of the domain (SpecDP). Ellipsis proceeds before this movement can happen, trapping the *wh*-phrase, as shown in (64b).

(65) I read three books that stomped on fascism.

\*On what<sub>i</sub> did you read two books that stomped t<sub>i</sub>?



The essential part of this discussion is that SpecNumP may act as a landing site for some types of elements, but not others, on the basis of what may occur there in a derivation where movement stops at SpecNumP. Recall that for this dissertation I do not assume by default that Num and/or D are phase heads, which would predict that NumP as a landing site is an all-or-nothing situation: either everything that moves out of DP moves through it (as it is a phase) or nothing does (as it is not a phase).

The idea that contrastive elements move through SpecNumP also brings us back to the structures presented in chapter 3 for degree-inverted phrases. Degree-inverted phrases were motivated to move by a contrastive feature that triggered raising to SpecNumP, followed by further movement to SpecDP. According to the argument that I have presented in this section, we now have an additional reason to expect the degree-inverted phrase to land in SpecNumP prior to movement to the edge of DP. As this is a digression from the topic of the current chapter, I revisit this idea in chapter 5.

One final issue to discuss is that of degree-inverted phrases that contain a *wh*-word, such as the following:

(67) Q: I saw a big hippogriff yesterday.

A: [How big]<sub>i</sub> a hippogriff t<sub>i</sub> was it?

Assuming, as we have, that degree-inverted phrases move through SpecNumP, then the movement of this *wh*-phrase **appears** to be a contradiction to the argument that *wh*-phrases cannot move through SpecNumP. I argue that while this inversion does indeed involve *wh*-movement, it is also contrastive. As it stands, it is possible for the contrastive inversion to occur prior to movement for *wh*-features, meaning this construction does not violate any of the claims that I have made so far.

Note also that the relation of d-linking to contrast becomes more important and more salient here: even though d-linked phrases are *wh*-phrases by nature, they have the essential factor of being contrasted to a set, aligning them, at least partially, with topics.

In this section I have argued that contrastive movement may escape nominal ellipsis, but *wh*-movement may not, because an intermediate landing site is available for contrastively-moved phrases but not *wh*-phrases.

#### 4.4 *Accounting for apparent repair*

At this point we must tease apart the differences that arise between repair scenarios and non-repair scenarios. I repeat one example of each type for Topic-movement from the examples

in section 4.2.3. In (68) ellipsis seems to repair the island violation, while in (69) no repair seems to occur.

(68) I read [three books [that stomped on fascism]].

a. \*On tyranny<sub>i</sub>, I read [two books [that stomped t<sub>i</sub>]].

b. On tyranny<sub>i</sub>, I read [two ~~books that stomped~~ t<sub>i</sub>].

(69) I knew [two spelunkers [that ventured into the cave]].

a. \*Into the tunnel<sub>i</sub>, I knew [three spelunkers [that ventured t<sub>i</sub>]].

b. \*Into the tunnel<sub>i</sub>, I knew [three ~~spelunkers that ventured~~ t<sub>i</sub>].

Two main explanations of island repair are prevalent in the current literature. First, accounts of island **repair** argue that amelioration occurs when island-violating structure is deleted (Fox & Lasnik, 2003; Griffiths & Lipták, 2014; Merchant, 2008; Müller, 2011). Alternatively, accounts of island **evasion** argue that in repair scenarios the ellipsis site does not contain an island violation at all, but instead an acceptable paraphrase (Abels, 2011; Barros et al., 2014, 2015; Fukaya, 2007; Merchant, 2001).

In section 4.2 we observed the following facts that an island repair account must explain:

- (70)
- a. Extraction from nominal ellipses is possible with contrastively-moved constituents.
  - b. Nominal ellipsis seems to repair island violations in cases where the extracted element can either be a part of the NP or the VP that falls inside the ellipsis site.
  - c. Nominal ellipsis does not seem to repair island violations in cases where the extracted element can only belong to the VP that falls inside the ellipsis site.

In section 4.3 I offered a solution to the problem of teasing apart *wh*-movement from contrastive-movement with respect to landing sites. Since the intermediate landing site for



contrastive elements falls outside of the ellipsis domain, we expect this to be consistent across all accounts of island ‘repair’. Therefore, only the latter two facts require an explanation.

This section is organized as follows. First, I take a brief look at repair accounts that argue that deletion of a full, island-containing structure is what causes repair effects. I then reject this account as it cannot explain the contrast observed in (70b/c). Next, I review existing island evasion accounts, which argue that island repair is nothing more than an illusion caused by the ellipsis site containing a non-island-violating paraphrase. I propose that these are on the right track, but that the existing literature does not contain an appropriate evasion strategy. I then propose a new strategy for island evasion – the use of an *ambiguous nominal source*, which is able to account for the contrast observed in (70b/c).

#### 4.4.1 *Full structure deletion leads to failed contrast*

There are several types of accounts that assume that island repair is the deletion of full (non-paraphrased) structure. The primary type of account assumes that deletion removes illicit traces or ‘hides’ violations; arguments for this type of account are found in Fox and Lasnik (2003), Merchant (2008), and Griffiths and Lipták (2014). Other types of accounts assume variations of this basic idea. For example, Müller (2011) argues that deletion is timed in such a way that extraction occurs before spell-out, circumventing island constraints.

In this section, I argue that regardless of the reason behind repair, full structure accounts do not work for the data presented in section 4.2.3. This conclusion is reducible to the fact that repair and non-repair scenarios originate as **identical syntactic structures** — at least when it comes to the island violations.<sup>10</sup>

To mediate the discussion, I use Merchant’s (2008) account, as the general idea should be extendable to other types of full-structure deletion accounts. In brief, Merchant argues that island-violating extractions leave behind illicit traces; this results in an immediate derivation crash in the case where the traces are not deleted. Each trace of the moved element

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<sup>10</sup>There are some variations internal to the embedded clause structure, however these are not expected to have any effect on the repair issue, given it is the clause **edge** that is an island boundary.

is marked with a \* (representing *illicit*). For this reason, deletion of the largest constituent possible is required. In (71b), the underlined portion represents undeleted structure that contains intermediate landing sites for illicit traces (*cf.* Merchant, 2008:136,138).

- (71) a. They want to hire someone who speaks a Balkan language, but I don't know which Balkan language<sub>i</sub> ~~they want to hire someone who speaks t<sub>i</sub>~~. *Sluicing = enough is deleted*
- b. They want to hire someone who speaks a Balkan language, but I don't know which Balkan language<sub>i</sub> they do ~~want to hire someone who speaks t<sub>i</sub>~~. *VPE = not enough is deleted*

In this manner, the observed acceptability contrast between sluiced islands and VP-elided islands can be derived.

The prediction of this type of account is that as long as illicit traces are deleted, ellipsis will be able to rescue the construction. However, if illicit traces remain, the construction should remain acceptable. To test this prediction, I use the repeated example from (68) above.

- (72) I read [three books [that stomped on fascism]].
- a. \*On tyranny<sub>i</sub>, I read [two books [that stomped t<sub>i</sub>]].
- b. On tyranny<sub>i</sub>, I read [two ~~books that stomped t<sub>i</sub>~~].

In order to test this theory, we have to make claims about the extraction points. I use the minimal points here: SpecCP in the embedded relative, SpecDP for the nominal domain, and SpecvP in the matrix clause.

- (73) \*On tyranny<sub>i</sub>, I \*t<sub>i</sub> read [\*t<sub>i</sub> two books [\*t<sub>i</sub> that stomped t<sub>i</sub>]].

When we perform NPE, at least one illicit trace will remain (here, the trace in SpecvP and the trace in SpecDP).

(74) On tyranny<sub>i</sub>, I \*t<sub>i</sub> read [~~\*t<sub>i</sub> two books~~ ~~\*t<sub>i</sub> that stomped t<sub>i</sub>~~].

Thus, under a full-structure account, the prediction is that repair is not possible since illicit traces remain. As can see from the example, this prediction is not correct.

However, another option for trace locations is available. Let us assume for a moment that the only phase is CP, in which case there are no illicit intermediate traces after nominal ellipsis:

(75) On tyranny<sub>i</sub>, I read [~~two books~~ ~~\*t<sub>i</sub> that stomped t<sub>i</sub>~~].

In this case, we would expect repair to be possible.

At this point, a second problem arises: not all constructions exhibit repair effects, as seen in (69), repeated here.

(76) I knew [two spelunkers [that ventured into the cave]].

a. \*Into the tunnel<sub>i</sub>, I knew [three spelunkers [that ventured t<sub>i</sub>]].

b. \*Into the tunnel<sub>i</sub>, I knew [~~three spelunkers that ventured t<sub>i</sub>~~].

Regardless of the choice we make with respect to extraction points (either only SpecCP or SpecCP as well as SpecDP and SpecvP), there is no reason to expect them to change *from example to example*. Whatever determines these extraction points (*e.g.* phases) does not change simply because nominal or verbal structure is slightly different.<sup>11</sup>

Therefore, there is no reason to expect a contrast in acceptability under a full-structure account. This can be clearly demonstrated by the examples in (77) and (78). Assuming minimal extraction points (SpecCP only), repair should be possible with (77b), but it isn't. Assuming non-minimal extraction points (SpecCP, SpecvP, SpecDP), repair shouldn't be possible with (78a), but it is.

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<sup>11</sup>This is not the case for all vPs, as argued by Legate (2003), but that is not what we are observing in these constructions.

- (77) a. On tyranny<sub>i</sub>, I read two ~~books \*t<sub>i</sub> that stomped \*t<sub>i</sub>~~.  
 b. \*About football<sub>i</sub>, I like four ~~men \*t<sub>i</sub> who argue \*t<sub>i</sub>~~.
- (78) a. On tyranny<sub>i</sub>, I \*t<sub>i</sub> read \*t<sub>i</sub> two ~~books \*t<sub>i</sub> that stomped t<sub>i</sub>~~.  
 b. \*About football<sub>i</sub>, I \*t<sub>i</sub> like \*t<sub>i</sub> four ~~men \*t<sub>i</sub> who argue \*t<sub>i</sub>~~.

Due to the fact that there is no straightforward way for a full-structure account to derive the contrast in repair observed in section 4.2.3, I reject a full-structure account of apparent island repair effects. In the next section, I present a different type of account that proposes that island evasion tactics are employed to derive island repair effects.

#### 4.4.2 *Evasion in a nutshell*

Evasion accounts argue that in all structures where apparent repair has taken place, the elided constituent is simply an acceptable paraphrase of the island construction. The examples in (79) and (80) demonstrate two strategies of evasion, *short-sources* and *cleft-sources*, respectively.

- (79) They hired someone who speaks a Balkan language, but I don't know which Balkan language<sub>i</sub> ~~s/he speaks t<sub>i</sub>~~.

(*S/he* = the person they hired) (Barros et al., 2014:1)

- (80) They hired someone who speaks a Balkan language<sub>i</sub> - guess which ~~it was t<sub>i</sub>~~! (Barros et al., 2014:1)

Merchant (2001) argues for an account of ellipsis based on E-givenness, which allows for non-isomorphic ellipses assuming identity is upheld.<sup>12</sup> With apparent repair scenarios, Barros et al. (2014, 2015) show that short-sources have essentially the same meaning as the

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<sup>12</sup>See chapter 2 for more discussion on E-givenness.

island-containing construction. What this means is that, for the purpose of interpretation, the two ellipses are identical.

(81) They hired someone who speaks a Balkan language - guess which!

a. which ~~he speaks!~~

b. which ~~they hired someone who speaks!~~ (Barros et al., 2015:4).

Further evidence for the availability of short sources comes from constructions where the elided constituent is unambiguously a smaller, non-isomorphic part of the antecedent. In other words, it does not contain an island.

(82) John seems to me to be lying about something, but I don't know what ~~he is lying about.~~

( $\neq$  what ~~he seems to me to be lying about~~) (Barros et al., 2015:4)

A third type of island evasion strategy is the use of a *predicational source*, in which the ellipsis site contains a predicational copular sentence and the remnant is the pivot:

(83) a. She bought a big car, but I don't know how big ~~the car she bought/it was.~~

b. \*She bought a big car, but I don't know how big she bought a car. (Barros et al., 2015:7)

Finally, a fourth strategy is what Barros et al. (2015) refer to as *double-clausal ellipsis (DCE)*, which is used to explain the availability of fragment answers, as shown in (84).

(84) A: Did they leave because you offended Mary?

B: ?No, *Sarah*.

DCE gets its name from the two ellipsis mechanisms that occur in the course of the derivation. The first elision occurs in the clausal island and the second occurs in the matrix clause. The

example in (85) demonstrates. The original clause is shown in (85a); (85b)/(85c) show movement of *Sarah* to the edge of CP2 and the subsequent ellipsis of the clause; finally, (85d)/(85e) show movement of the entire CP2 (including the original ellipsis) and subsequent ellipsis of CP1. Only the edge of CP1 remains.

- (85) a. They left because you offended Sarah.  
 b.  $[_{CP1} \text{ They left } [_{CP2} \text{ Sarah}_i \text{ } [_{C'} \text{ because you offended } t_i]]]$ .  
 c.  $[_{CP1} \text{ They left } [_{CP2} \text{ Sarah}_i \text{ } [_{C'} \text{ ~~because you offended } t_i~~]]]$ .  
 d.  $[_{CP1} [_{CP2} \text{ Sarah}_i \text{ } [_{C'} \text{ ~~because you offended } t_i~~]]_k \text{ they left } t_k]$ .  
 e.  $[_{CP1} [_{CP2} \text{ Sarah}_i \text{ } [_{C'} \text{ ~~because you offended } t_i~~]]_k \text{ ~~they left } t_k~~]$ .

In this section I have presented four existing strategies for island evasion, summarized in the following list:

(86) *Existing strategies for island evasion*

- a. Short sources (Barros et al., 2014, 2015; Merchant, 2001) — *Examples (79) and (81)*
- b. Cleft sources (Barros et al. 2014; Barros 2014; Van Craenenbroeck, 2012; Erteschik-Shir 1977; Merchant 2001) — *Example (80)*
- c. Predicational sources (Barros et al., 2014; Merchant, 2001; Ott & de Vries, 2014) — *Example (83)*
- d. Double-Clausal Ellipsis (Barros et al., 2015) — *Examples (84) and (85)*

In the next section, I argue that an evasion strategy can account for the data presented in section 4.2.3. However, none of the existing strategies can be employed in the domain under consideration. There are two reasons existing strategies will not work here. First, in order to employ any of them, we would need a clausal paraphrase; the combination of an NP

plus a relative clause makes this impossible. Second, as I have mentioned, the repair seems to be the result of *ambiguity* rather than direct paraphrase. For this reason, I propose a new evasion strategy — *ambiguous nominal sources*.

#### 4.4.3 *Ambiguous ellipses in DP*

In this section I define a new strategy for island evasion that is specific to DP, referred to as an *ambiguous nominal source*. Simply put, apparent repair occurs when the remnant is ambiguous as to whether it is part of the elided NP or the relative clause VP.

The evasion is simple. In the structures where apparent repair occurs, NPE is **potentially** nothing more than the ellipsis of a single nominal with no island-containing relative clause following it.<sup>13</sup>

(87) I read [three books [that stomped on fascism]].

a. #[On tyranny]<sub>i</sub>, I read [two books t<sub>i</sub>].<sup>14</sup>

b. [On tyranny]<sub>i</sub>, I read [two books ~~t<sub>i</sub>~~].

However, the nominal ellipses here are unlike the clausal ones discussed in the previous section in that the interpretation where the island is present in the ellipsis site is still available:

(88) I read three books that stomped on fascism.

a. \*[On tyranny]<sub>i</sub>, I read [two books [that stomped t<sub>i</sub>]].

b. [On tyranny]<sub>i</sub>, I read [two books ~~that stomped t<sub>i</sub>~~].

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<sup>13</sup>This follows neatly from the idea that ellipsis sites can easily contain nothing more than a pronoun, *e.g.* Lobeck's (1995) null *e*, which allows for some level of mismatch.

<sup>14</sup>This sentence is not necessarily bad, but the second occurrence of books is redundant and would be excluded in natural speech.

Apparent repair is the result of these two possible underlying structures. Because a non-island-violating structure is **possible** in the site, regardless of the difference in interpretation, speakers accept the construction with either interpretation. The possibility of both underlying structures is an essential fact of the *ambiguous nominal source* analysis, as the structure in (87) cannot reconstruct the interpretation found in (88).

I now turn to examples where there is no apparent repair under NPE. In the construction in (89), the contrastively-moved PP *into the tunnel* can only belong to the VP (an interpretation where it is part of NP is unavailable).

(89) I knew two spelunkers that ventured into the cave.

- a. \*[Into the tunnel]<sub>i</sub>, I knew three spelunkers that ventured t<sub>i</sub>.
- b. \*[Into the tunnel]<sub>i</sub>, I knew three ~~spelunkers that ventured~~ t<sub>i</sub>.

The unavailability of the alternative source is shown in (90).

(90) I knew two spelunkers that ventured into the cave.

- a. \*[Into the tunnel]<sub>i</sub>, I knew three spelunkers t<sub>i</sub>.
- b. \*[Into the tunnel]<sub>i</sub>, I knew three ~~spelunkers~~ t<sub>i</sub>.

In examples like (89) where there is no *ambiguous nominal source* apparent repair is not expected, as we have seen.

The ambiguous nominal source account of island evasion under NPE also predicts that other cases of acceptable extraction — specifically d-linked *wh*-phrases — should show repair effects if the ambiguity requirement is met. The constructions in (91) and (92) show that repair is possible with an underlying ambiguity:

(91) I sent several letters that found their way to many ministers...



- a. ??I don't remember [to which minister]<sub>i</sub> I sent three letters that found their way t<sub>i</sub>.
- b. ?I don't remember [to which minister]<sub>i</sub> I sent three ~~letters that found their way~~ t<sub>i</sub>.

(92) ?I don't remember [to which minister]<sub>i</sub> I sent three ~~letters~~ t<sub>i</sub>.

As expected, unambiguous structures show opposite results.

(93) I like three men who argue about sports.

- a. \*I don't remember [about which sport]<sub>i</sub> I like four men who argue t<sub>i</sub>.
- b. \*I don't remember [about which sport]<sub>i</sub> I like four ~~men who argue~~ t<sub>i</sub>.

Finally, I look at gapping. In an ambiguous structure, repair is expected, which is indeed what is borne out, as shown in (94) and (95).

(94) I read [three articles [that talked about fascism] [that should be burned]].

- a. \*[About democracy]<sub>i</sub>, I read [two articles [that talked t<sub>i</sub>] [that should be memorialized]].
- b. ?[About democracy]<sub>i</sub>, I read [two ~~articles that talked t<sub>i</sub>~~ [that should be memorialized]].

(95) [About democracy]<sub>i</sub>, I read [two ~~articles~~ t<sub>i</sub> [that should be memorialized]].

In non-ambiguous structures, apparent repair is not expected, as observed. The example in (97) shows that the interpretation where the PP *on their mothers* is part of NP is not possible.<sup>15</sup>

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<sup>15</sup>Unless we get inventive with the interpretation.

- (96) ?I know three Jedis that depend on their masters that should be independent.
- a. \*[On their mothers]<sub>i</sub>, I know four Jedis that depend t<sub>i</sub> that should be married.
- b. \*[On their mothers]<sub>i</sub>, I know four ~~Jedis that depend~~ t<sub>i</sub> that should be married.
- (97) \*[On their mothers]<sub>i</sub>, I know four ~~Jedis~~ t<sub>i</sub> that should be married.

In this section, I have demonstrated that an *ambiguous nominal source* account of apparent island repair under NPE can fully explain the data presented in section 4.2.3. Moreover, I have also demonstrated that an alternative type of account based on the deletion of full, island-containing structure, is unable to explain why some islands can be repaired under NPE and not others.

#### 4.4.4 Retuning to degree inversion: Repair?

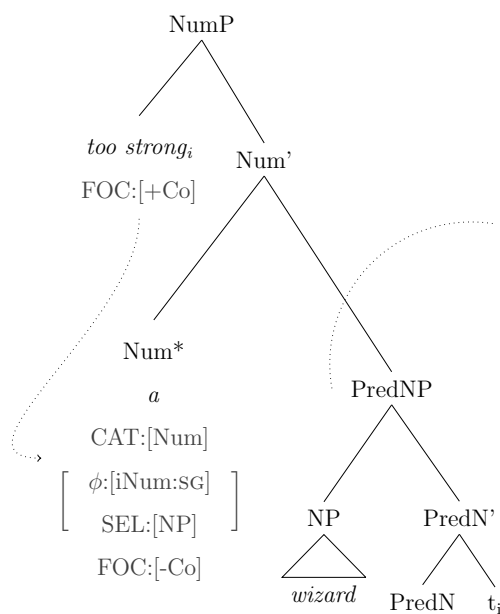
Recall from the discussion in section 3.5 (chapter 3) that ellipsis below a degree-inverted phrase is acceptable as long as it occurs immediately below D:

- (98) Ron was too weak (of) a wizard and Harry was [<sub>DP</sub> too strong [<sub>NumP</sub> ~~a wizard~~].

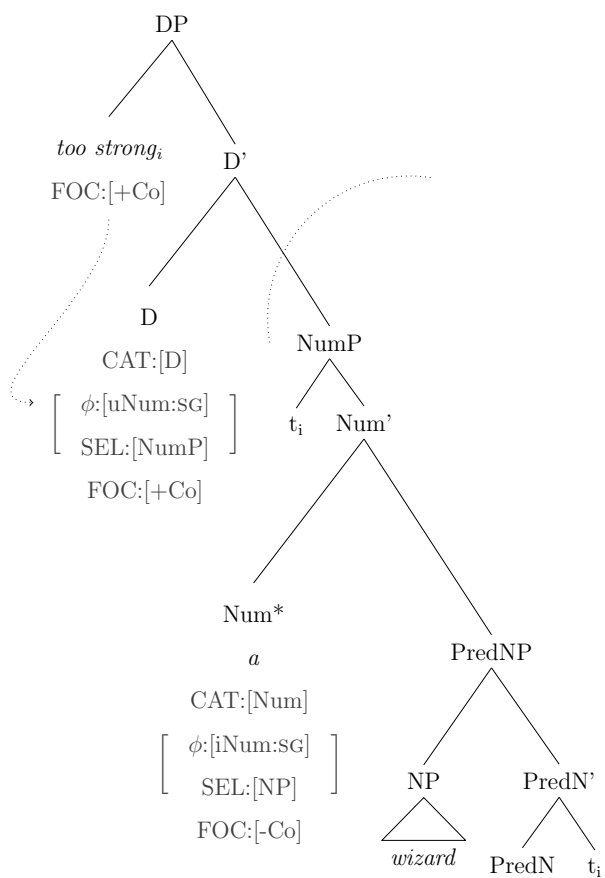
What is interesting about this construction is that two interpretations are possible: (i) *too strong* as modifies *wizard* in the same way as other degree inversions or (ii) Harry is too strong in general (and his wizard-ness is irrelevant).

I argued that this ambiguity was the result of a ‘hidden violation’ in the ellipsis site. The ellipsis of the complement of NumP proceeds when DegP contrastively moves to SpecNumP, resulting in an unacceptable structure (\*); however, the subsequent movement of DegP to SpecDP and consequent ellipsis of the violation-containing structure rendered the construction acceptable. These steps are shown in the following derivation, repeated from chapter 3:

(99) a.



b.



At the time that I presented this derivation, it was a mystery as to why we might end up with such a result. Here, I argue that the reason island repair is allowed in certain constructions is the same reason that the degree phrase with NumP ellipsis has an ambiguous interpretation. Specifically, the failed ellipsis in step (99a), resulting in a violation, has been concealed in the larger ellipsis structure. In this case, however, there is no available alternative paraphrase, but instead a complete absence of structure. Thus our two possible structures are as follows:

(100) Ron was too weak a wizard...

- a. Harry was too strong ~~a wizard~~.
- b. Harry was too strong.

In the latter interpretation, *too strong* in *Harry was too strong* is nothing more than a copular predicate. As such, it does not contain a violation.

This discussion suggests that ‘island evasion’ might just be a general principle of ‘violation evasion’. However, I believe this is a topic that requires a more detailed discussion and attention to examples involving a range of violation types, so I leave the matter to future consideration.

## 4.5 Conclusion

At the beginning of this chapter I presented two research questions:

(101) *Research Questions*

- a. Is it possible to repair DP-internal island violations under nominal ellipsis?
- b. Can current accounts of island repair in the clausal domain be extended to island repair in the nominal domain?

In section 4.2 I answered the first research question affirmatively. First, I demonstrated that it is in fact possible to extract from nominal ellipsis, a point that has not previously been made for English (as far as I have been able to determine). Using the type of movements that are allowed (specifically, contrastive topic-movement), I demonstrated that in certain constructions island repair does seem to happen.

In section 4.4 I answered the second research question somewhat affirmatively. I confirmed that a type of island ‘repair’ account (specifically, island evasion) can be extended to the data presented in section 4.2; however, no specific evasion account existed in the current literature that could be applied to NPE. Therefore, I proposed a new type of evasion account, *ambiguous nominal sources*, demonstrating that in cases where a non-island containing source is available for noun phrases, island amelioration effects occur. The *ambiguous nominal sources* account differs from existing evasion accounts slightly in that I do not assume that all repair scenarios contain an acceptable paraphrase, but instead that the possibility of an acceptable alternative allows for a repair illusion.

In the process of setting up the data in section 4.2, I demonstrated that it is possible to extract contrastive constituents, but not simple *wh*-phrases, from nominal ellipses. While the availability of this movement opened the possibility of island repair, it raised the question of **why** contrastive constituents differ from *wh*-phrases with respect to extraction from NPE sites. In section 3 I addressed this question by appealing to the account of nominal ellipsis I argued for in chapter 2 - Mutual Agree. I concluded that the contrast in acceptability of extraction is due to the availability of an intermediate landing site for contrastive constituents but not *wh* ones.

This final point has several implications for the discussion at hand in my dissertation so far. Specifically, it appeals to the contrastive movement scenarios that I have discussed in the previous chapters. In chapter 3, I argued that degree inversion is triggered by a contrastive feature which causes the movement of a degree phrase to the edge of the DP domain. In the course of the argument, I noted that there was no particular reason to expect the contrastively-moved constituent to stop at some intermediate landing site before

SpecDP. However, given the discussion in section 4.3, this possibility is now back on the table.

In the next chapter I return to the major arguments that I have presented in this dissertation, returning to the questions I raised in chapter 1.

## Chapter 5

### CONCLUSION: DIFFERENT PUZZLES, SAME PERIPHERY

#### 5.1 *Review of discoveries*

In this chapter I review the research questions and discoveries presented in the previous three chapters, demonstrating that not only have the research questions been answered with the analyses that I have presented, but that a pattern emerges with respect to movement patterns and landing sites. In the next section I summarize the patterns that have emerged. In section 5.3, I argue for what I call a ‘collapsed’ DP periphery, demonstrating that it stands in contrast to existing proposals for DP-peripheral composition. Finally, I wrap up the dissertation in section 5.4.

In the preceding chapters I have investigated the following puzzles:

#### (1) *Chapter 2 Research Questions*

- a. Can nominal ellipsis be given a unified account that explains discrepancies between English and French?
  - Can we derive the Saxon Genitive licensing of ellipsis in English without positing an *ad-hoc* solution?
  - Can we derive French adjectival ellipsis licensing as well as the pattern of non-licensing of demonstratives?
- b. Is the ellipsis mechanism proposed extendable to English and French gapping?

(2) *Chapter 3 Research Questions*

- a. How can we account for the parallels that emerge between (i) simple degree inversions, (ii) degree inversion with postnominal arguments, and (iii) non-inverted postnominal degree phrases?
- b. Is it possible to provide a syntactic analysis that accounts for variation with respect to degree inversion?

(3) *Chapter 4 Research Questions*

- a. Is it possible to repair DP-internal island violations under nominal ellipsis?
- b. Can current accounts of island repair in the clausal domain be extended to island repair in the nominal domain?

I review each of these in turn.

In **chapter 2** I proposed a unified account of nominal ellipsis and nominal gapping in English and French that explains the discrepancies that emerge between the two languages. Specifically, I proposed the mechanism of Mutual Agree, where ellipsis licensing is dependent upon a probe-goal relationship between a licensing head and ellipsis head. Typically, the agreement relationship was triggered by some aspect of DP concord (agreement in number or gender), though the Saxon Genitive was an instance of case licensing. Mutual Agree became relevant to the discussion in both chapters 3 and 4, as a discussion of ellipsis was pertinent to both.

A key aspect of Mutual Agree that set it apart from recent discussions of nominal ellipsis is that it **restricts** licensing by only being possible when three conditions are met:

- (4) Some element in the domain must be marked as contrastive.
- (5) The licensing head and the ellipsis head must be separate; the licensing head must be above the ellipsis head.



- (6) The licensing head must probe the ellipsis head for *independent reasons* (such as agreement for concord), **not** for the sake of licensing ellipsis.

In this manner, nominal ellipsis follows from traditional agreement patterns, which predicts that languages with **more** agreement will allow more ellipsis licensing. For example, in French, adjectives are potential ellipsis licensors because they agree in person and number with the head noun, while in English they are not because they do not agree. Thus, when French adjectives are in an appropriate configuration for ellipsis licensing, ellipsis may proceed.

The Mutual Agree conditions also appropriately restrict the licensing of higher D elements in English, which has been an issue in previous accounts. The Saxon Genitive may license ellipsis because it Merges in the specifier of DP — above the ellipsis head — where it receives genitive case from D — the ellipsis head. The reflex of this agreement is that ellipsis of D's complement may proceed. By contrast, the definite determiner *the* may not license ellipsis because it Merges in D and does not Agree with anything.

Finally, the mechanism is perfectly tailored to allow nominal gapping. Since ellipsis is immediate upon **agreement** rather than upon the Merge of the ellipsis head, some elements can 'escape' the ellipsis site. For English, this pattern follows the proposal of Yoshida et al. (2012). For French, the mechanism explains the new data that I have presented, especially with respect to the universal quantifier *tout* whose licensing of nominal ellipsis but non-licensing of nominal gapping would be puzzling without the mechanism proposed. Further, the data I have presented suggests that French nominal gapping patterns with English nominal gapping in that it is a construction formed by ellipsis, rather than movement. This stands in contrast with the possibility that French nominal gapping is movement-based, given the N-raising status of the language.

In **chapter 3** I proposed that all degree-inversion constructions begin as the same structure that parallels *tough*-constructions. I argued that all surface forms are derived from a combination of movement and ellipsis. This provided an answer to the question in (2a):

since all of the structures are derived from the same base form, there is a clear explanation for their apparent association with one another.

The analysis I proposed is based on Focus-movement of a degree phrase and its associated adjective initially to SpecNumP, following the ellipsis or movement of the complement clause of the adjective phrase. In this manner, the small-clause-like configuration of (i) from (2a) is captured without us having to rely on a particular configuration to account for movement.

In response to the second question, (2b), I argued that ordering restrictions are explained in three ways. First, adjectives that precede the indefinite article (degree inversions) and postnominal adjectives are predicative adjectives of the same type, as originally proposed by Troseth (2009). For these adjectives, the pre-indefinite article ones begin as postnominal adjectives. For all postnominal degree words that raise, they raise with their associated adjective (phrasal movement). Second, prenominal (but post-article) adjectives are simply attributive adjectives: these do not undergo degree inversion. Finally, the apparent movement of a predicative adjective without its complement is actually the movement of a predicative adjective with a null complement. This final point explains the unique behavior of *such*, which never appears directly in front of an adjective.

Finally, in **chapter 4** I demonstrated that in certain scenarios it is possible to repair island violations under nominal ellipsis. Arriving at this conclusion was a multi-step process.

First, I demonstrated that topicalized, contrastive constituents can be extracted from nominal ellipsis, while *wh*-moved phrases cannot. I proposed that this asymmetry is the result of a landing site being available for the former but not the latter. On the basis of the ellipsis mechanism I proposed in chapter 2, contrastive constituents survive because they move to a higher projection **before** the Merge of an ellipsis licensing head. I argued that this escape position was SpecNumP, which I propose is an available landing site only to contrastive constituents. On the other hand, *wh*-constituents cannot escape the ellipsis site because ellipsis is licensed before they position they move through (SpecDP) Merges.

Next, I demonstrated the island repair is possible under nominal ellipsis, but only if the escaped constituent is ambiguously attached inside the ellipsis site. This led me to argue that one type of island repair account **can** explain the results: an evasion-based account, under which the ellipsis site does not contain an island violation at all. For nominal ellipses, in the ambiguous cases there is always one option that is non-island-containing. I argued that the presence of this non-island-containing option is what makes the illusion of island repair possible: I deemed these *ambiguous nominal sources*.

In this section I have briefly reviewed the key aspects of the chapters that have comprised this dissertation thus far. In the next section, I contrast these accounts in order to argue for centralized locations of movement.

## 5.2 *Accumulation of phenomena: Landing sites for movement*

I begin this section by presenting a summary of how each head has functioned in the derivations I have presented.

### (7) *Ellipsis licensing heads*

Any head may license ellipsis as long as it occurs above the ellipsis head and Agrees with it. [Ch. 2]

### (8) *Ellipsis heads*

- a. D [Ch. 2: English, French]
- b. Num [Ch. 2: English, French]
- c. n [Ch. 2: French]

### (9) *Ellipsis domains*

- a. Complement of D [Ch. 2: English, French]
- b. Complement of Num [Ch. 2: English, French]

- c. Complement of  $n$  [Ch. 2: French]

(10) *Landing sites for movement*

- a. SpecDP [Ch. 1: Possessors, Demonstratives; Ch. 3: *wh*-phrases]
- b. SpecNumP [Ch. 2: Superlatives; Ch. 4: Contrastive phrases]
- c. Right adjunction sites higher than NP [Ch. 2, Ch. 3]

In the first subsection I briefly discuss this dissertation's contributions to discussions on ellipsis. In the second I begin a more detailed discussion of the landing sites for movement that the previous chapters have revealed.

5.2.1 *Ellipsis heads and domains*

In all of the chapters comprising this dissertation, the ellipsis domains have remained consistent along with the ellipsis mechanism I have proposed, despite the differences between each phenomenon. For both degree inversion and island repair, I was able to adopt the ellipsis-licensing mechanism proposed in chapter 2 without stipulation.

Not only does Mutual Agree provide a straightforward, feature-based way of accounting for nominal ellipses in English and French, but the ellipsis mechanism provided an account of several puzzles related to degree inversion and island repair in English. For island repair, I demonstrated that the timing of the ellipsis mechanism is such that NPE prevents the escape of any element (such as a *wh*-element) that moves directly to the edge of DP. For degree inversion, I demonstrated that ellipses are possible below degree-inverted phrases but the result is ambiguous. This result interestingly lines up with the 'illusion' of repair of island violations under nominal ellipsis: an acceptable non-violation-containing paraphrase is available, thus the construction is acceptable, albeit ambiguous.

With respect to the existing literature on nominal ellipses, the discussion in chapter 2 independently demonstrated that the available ellipsis domains are (i) the complement of D, (ii), the complement of Num, and (iii) the complement of  $n$ . Unsurprisingly, these line

up with the DP-internal ellipsis domains proposed in recent theories (see, for example, Saab, 2014, and references therein), as well as their historical analogues (*nP* as a substitute for *NP*, for example).

Although the ellipsis domains themselves are the same for my account and others, Mutual Agree places the burden of the ellipsis mechanism on two heads agreeing with one another, rather than a single head determining the spell out of itself or its complement. In this manner, we have a clear way of accounting for cross-linguistic differences in ellipsis licensing: the more agreement there is in a language, the more possible ellipses there are. As I stated in chapter 2, this does not necessarily preclude ellipsis heads being phases; however evidence from movement, as I begin discussing in the next section, hints that there is likely not a one-to-one correspondence.

### 5.2.2 *Landing sites for movement*

As I summarized at the beginning of this section, three general landing sites are available for DP-internal movement: SpecNumP, SpecDP, and right-adjunction sites (presumably Num' and D'). In this section I focus specifically on the former two, as it is possible to tease apart details about which elements land in which projection.<sup>1</sup>

SpecDP hosts raised elements such as possessors and demonstratives, which must raise to and Agree with D in order to be fully valued (see discussion in chapter 1), as well as *wh*-constituents. With respect to the latter, I am referring particularly to those *wh*-elements that target a position outside of DP:

- (11) Who<sub>i</sub> did you hear two lectures about t<sub>i</sub>?

SpecDP may also host elements that raise for interpretive reasons, such as degree-inverted phrases; I argued for this on the basis of *of*-insertion in degree inversion constructions:

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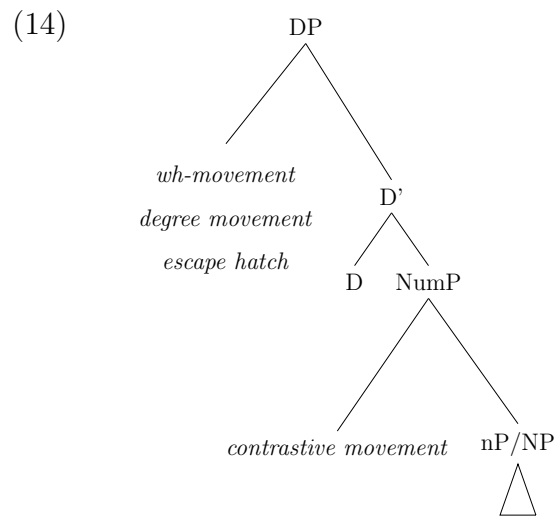
<sup>1</sup>I do not discuss right-adjunction sites for two reasons: (i) the data presented on these positions was limited in that it is challenging to argue for specific positions in which right-moved elements land and (ii) the movements of more interest to this discussion are those that prompt movement **out of** DP, through the left-peripheral DP.

(12) Harry is [too good<sub>i</sub> **of** a wizard t<sub>i</sub>]

SpecNumP is a target for focused elements such as superlative adjectives and degree-inverted phrases as well as for topicalized constituents, such as the topics that escaped from islands in chapter 4:

(13) I read three books on tyranny. On fascism<sub>i</sub>, I read t<sub>i</sub> two ~~books~~-t<sub>i</sub>.

At this point I would like to note some distinctive features about these two landing sites. Specifically, SpecNumP appears to be a host for elements marked in some way as *contrastive*, while SpecDP is a position for *wh*-moved elements, among others. I present the structure in (14) to help with visualization of this split:



In the next section, I argue that the pattern presented here is indicative of a small peripheral structure that is composed of the functional projections already present in DP.

### 5.3 A collapsed periphery: A future pursuit

In this section I propose that the discussions presented in this dissertation suggest the existence of an articulated (albeit small) DP structure. To put it simply: the DP periphery is

two ‘regions’ in functional structure - the D-region and the Num-region. The D-region is the target of movement related to agreement (possessive, demonstrative) and extraction, while the Num-region is the target of contrastive movement.

Where this suggestion stands apart from existing proposals of an articulated DP periphery is that I do not assume any functional projections with equivalent CP analogues (*e.g.* TopicP, FocusP). Instead, I argue that the functional projections already present in D provide the required functional structure.

The periphery I suggest is actually not any more complicated than the structure presented in (14). In chapter 1 I discussed several existing accounts arguing for nominal peripheries, including that of Giusti (1996). Recall from Giusti’s evidence that topicalized and focalized constituents, depending on the language in question, all seem to occupy the same general area below D. I argue that SpecNumP is this position and that the only feature relevant to occupying this position is *contrast*.

I propose this ‘bundled’ region for Topicalized and Focused constituents for two reasons. First, the evidence we have seen in English, much as with Giusti, suggests that topicalized and focalized elements in DP occupy the same general position at some point in time. Second, especially with respect to English, until the DP Merges with the clausal structure, ‘Topic’ and ‘Focus’ mean relatively little, especially with respect to constituents that move out of DP. For example, the Topicalized *on*-phrase in (15) is most certainly a Topic in the clause itself, but we do not have a lot of information on its status prior to this point in structure:

(15) I read three books on tyranny. On fascism<sub>i</sub>, I read t<sub>i</sub> two books t<sub>i</sub>.

Therefore it is possible that the only feature relevant to the NumP landing site is *contrast*, rather than some information-structure-specific identity.

DP, on the other hand, attracts two different types of behavior — case assignment/agreement and a landing site for *wh*-movement and other elements escaping DP.

There is little more to say on this latter suggestion other than to allude to ‘parallels’

— SpecDP does seem to behave along the lines of ForceP (to address CP/DP parallelism) and a phase head (to address phase theory). I only note these similarities to place DP in a familiar context. Since the functional structure here does not really look like or assume either, it is ultimately irrelevant to the discussion.

An additional question arises from the discussion presented here: is there anything unique about the projections **between** Num and D? I am referring specifically to PossP and DemP, which I have adopted for use in this dissertation.

I do not argue for either of these positions as available landing sites for movement, as there is little evidence from the preceding discussions to support this claim. However, I do suggest that these projections ‘group’ with the two periphery heads that I assume. That is, PossP is part of the collapsed area around D, while DemP is part of the collapsed area around Num. For the latter, Dem and Num are similar in that they exist for the expression of cardinality and deixis, which are essential features to interpretation but not necessarily part of information structure. To use Aboh’s (2004) argument: these phrases are most involved with the ‘inflectional’ features of the nominal domain.<sup>2</sup>

#### 5.4 *Concluding thoughts*

I leave the discussion of the DP-internal nominal periphery here with the proposal that the nominal domain does in fact contain functional projections on which peripheral behavior is targeted. As I have observed, certain types of movement tend to group on functional heads argued to exist for independent reasons: NumP hosts contrastive movement while DP hosts movement out of the DP domain as well as movement for agreement. The functional structure I have proposed therefore does not assume any new functional projections as analogs to the clausal domain, given they are not necessary for what we have observed.

This peripheral structure does open new avenues of consideration. First, the cross-linguistic implications of what I propose make a clear prediction: we should see contrastive

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<sup>2</sup>Recall also my adaptation of Aelbrecht’s (2009) feature bundling, where Infl was replaced with the inflectional features found throughout DP, the most pertinent of which were Num and Gen.



movement targeting a lower region in DP, and other types of movement targeting a higher region. Whether or not these regions are split into more fine-grained projections is an important question to ask as well as a matter for future research.

Again, as I have repeated throughout the discussions in this chapter, I have not aimed to propose parallels to clausal structure or proposed DP-internal phases. However, some of what I have discussed here can potentially be used for either argument. For example, the DP-peripheral functional structure, while hierarchically quite different from Rizzi's expanded left-periphery, could be taken as evidence for parallels between certain points in the periphery.

For phase theory the argument is less straightforward. We have seen undeniably the SpecDP is a necessary target for movement and extraction, but we have not seen a similar argument for SpecNumP: recall that contrastive elements may land here but *wh*-marked elements may not.<sup>3</sup> This evidence could be taken in two directions — either NumP is a weak phase or it is not a phase at all — and is a matter that I also leave to further consideration.

Aside from the proposal for a collapsed periphery that I have presented in this section, this dissertation as a whole has given a new perspective on several DP-internal phenomena. Specifically, by presenting Mutual Agree as a basis for ellipsis operations that occur throughout the DP, I established a common perspective for nominal ellipses, degree inversions, and island repair under nominal ellipsis. The former two (nominal ellipses and nominal degree inversions) have not been considered on the same plane and under an identical featural analysis. Additionally, island repair under nominal ellipsis has not been considered in detail at all prior the presentation given here. The unification of these three different areas of theoretical study have provided a unique perspective of the inner-workings of the DP, as well as a new puzzle to investigate — the idea of a collapsed DP periphery.

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<sup>3</sup>As long as the *wh*-marked elements are not contrastive themselves, as we saw with the d-linked *wh*-phrases in chapter 4.

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