

Sentence amalgamation

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RIJKSUNIVERSITEIT GRONINGEN

# Sentence amalgamation

## Proefschrift

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*People think of these eureka moments, and my feeling is that they tend to be  
little things, a little realisation and then a little realisation built on that.*

Sir Roger Penrose



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## Glossary

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1/2/3	1st/2nd/3rd person
Ø	null element
ACC	accusative
AFF	affirmative
ART	article
AUX	auxiliary
CG	common gender
COMP	complementizer
CL	clitic
DAT	dative
FEM	feminine
FUT	future tense
IMPERS	impersonal
IMPR	imperative
INF	infinitive
INST	instrumental
NEG	negation
NEUT	neuter
NOM	nominative
PART	participium
PERS	personal
PRS	present tense
PST	past tense
REFL	reflexive
REL	relativizer
SE-self	emphatic reflexive
SG	singular
SUBJ	subjunctive





# CHAPTER 1

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## Introduction

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### 1.1 Lakoff's puzzle

#### A first impression of amalgams

In the mid-seventies, George Lakoff published a brief paper concerning a couple of constructions he called ‘Syntactic Amalgams’. Lakoff observed that amalgams contain ‘*chunks of lexical material that do not correspond to anything in the logical structure of the sentence, ...*’ (Lakoff 1974:321). Examples of such amalgamated structures are (1) and (2), where the unexpected material is put between brackets:

- (1) John invited [you’ll never guess how many people] to his party.
- (2) John is going to, [I think it’s Chicago] on Sunday.

Lakoff named (1) ‘Andrews cases’, and (2) ‘Horn cases’, after Avery Andrews and Larry Horn, who brought them to his attention. Examples (1) and (2) reveal two peculiar properties of these constructions. First, the matrix clauses in these amalgams are missing a constituent: *invited* in (1) does not have an object, and the preposition *to* in (2) has no complement DP. Second, in the positions that correspond to these ‘missing’ constituents, some clause appears. I will call this clause the ‘interrupting clause’ (IC) . In these particular amalgams, the matrix clause is thus an incomplete sentence in the absence of the IC.

Intuitively, there is a connection between *how many people* and *Chicago* and the position in the matrix in which the IC occurs. That is, we interpret the object of *invited* in (1) as ‘a number of people’, and *Chicago* is associated with

the matrix PP *to* in (2). Pre-theoretically, I will call these constituents ‘content kernels’, as they express content related to what is missing in the matrix.

### The puzzle

*Prima facie*, the interrupting material involves all ingredients we normally associate with clauses. After all, it involves a subject, a finite verb, and so forth. However, the predicates they typically involve normally select for CP complements: verbs such as *guess* and *think* are traditional examples of embedding verbs. What surfaces in the relevant position in the IC is however not a CP, but the constituent I named the content kernel. More specifically, the *wh*-content kernel in Andrews-amalgams seems to be the remnant of a kind of ellipsis that was discovered first in Ross (1969), which he named ‘sluicing’. Furthermore, the IC of Horn-amalgams seems to embed a reduced *it*-cleft. These observations lead to the hypothesis that amalgams are related to the sentence pairs in (3) and (4):

- (3) John invited a number of people to his party. You’ll never guess how many people ⟨John invited to his party⟩.
- (4) John is going somewhere. I think it’s Chicago ⟨that John is going to⟩.

In both cases, the material between the angle brackets can be left out: (3) is a common sluicing configuration, and (4) is a regular example of reduction of the clause that normally belongs to the *it*-cleft construction. The idea that amalgams involve ellipsis is central to the analysis pursued in this thesis.

Notably, both types of amalgams involve a particular interpretive effect. Lakoff noted that Andrews-amalgams seem to have an exclamative flavour: the number of people that John invited to his party is understood to be surprisingly small or large based on (1). In turn, the IC in Horn-amalgams adds a level of uncertainty (a *hedge*) to what is said. More specifically, based on (2) we can infer that John is going somewhere on Sunday, and that the speaker *thinks*, but is not sure that the place John is going to is Chicago.

The observation that clause-like material appears in positions where clauses are not selected for, is a puzzle about an apparent discrepancy between the internal structure and the external use of the IC in the matrix. Simply put: although it is built up like a clause, the IC shows up in matrix positions where we do not normally expect a clause. This can be illustrated nicely with Dutch examples. In Dutch, nominal arguments appear in the *Mittelfeld*, whereas sentential arguments appear in the *Nachfeld*:

- (5) a. Ik kan me [DP de film] nog goed herinneren. [Dutch]  
           I can REFL the movie still good remember  
           ‘I can still remember the movie well.’

- b. \*Ik kan me [CP welke film Bea gezien heeft] nog goed  
 I can REFL which movie Bea seen has still good  
 herinneren.  
 remember.
- (6) a. \*Ik kan me nog goed herinneren [DP de film].  
 I can REFL still good remember the movie
- b. Ik kan me nog goed herinneren [CP welke film Bea gezien  
 I can REFL nog goed remember which movie Bea seen  
 heeft].  
 has  
 ‘I can’t remember which movie Bea has seen.’

Based on these sentences, we expect the distribution of the IC to pattern with sentential constituents, and to be positioned in the Nachfeld. This is not the case, considering the contrast between the following Dutch Horn-amalgams (this holds similarly for Andrews-amalgams):

- (7) a. Bob kan zich [ik geloof dat het Bea was] nog erg goed  
 Bob can REFL I believe that it Bea was still very good  
 herinneren.  
 remember  
 ‘Bob can remember I believe it was Bea very well.’
- b. \*Bob kan zich nog erg goed herinneren [ik geloof dat het Bea  
 Bob can REFL still very good remember I believe that it Bea  
 was].  
 was  
 ‘Bob can still remember I believe it was Bea very well.’

Thus, the IC in the cases above appears precisely in the position of the nominal arguments that the matrix clauses lack. In the cases above, the content kernels are DPs, but the English Andrews-amalgams below show that ICs with adjectival content kernels is adjective may appear in predicative and attributive positions in the matrix, patterning with the distribution adjectives in English:

- (8) Bea was [you can imagine how angry] at Bob.
- (9) Bob got a [you’ll never guess how expensive] car.

Even more striking is the Dutch counterpart of the attributive example in (10):

- (10) Bob heeft een [je raadt nooit hoe dur-e] auto gekocht. [Dutch]  
 Bob has a you guess never how expensive-CG.SG car bought  
 ‘Bob bought a you’ll never guess how expensive car.’

That is, the adjectival content kernel obtains the inflection that is required by the noun it is adjacent to. In other words, the IC, despite of all its clausal

ingredients, is distributed as if it is a plain attributive adjective.

The ten examples that illustrate this introductory part put forward the following puzzle:

**Lakoff's puzzle**

*How can we derive the fact that in sentence amalgams the IC has the inner makeup of a clause, while its distribution in the matrix depends on the category of the content kernel, which in turn corresponds to a missing constituent in the matrix?*

The main objective of this thesis is to provide a unified syntactic analysis of amalgams. Clearly, Lakoff's puzzle is a broad formulation of the central problem that this thesis seeks to explain. The puzzle about amalgams will be broken up into several more concrete questions along the way, and the chapters are organized accordingly (see also the overview below).

## Main questions and central claims of this thesis

The first central question concerns the status of the IC with respect to the matrix: is the IC comparable to other kinds of clauses that we find inside of clauses, i.e. what we normally take to be instances of clausal *embedding*? Or does the IC show patterns that are associated with *root* clauses, such as V2 in Germanic languages such as Dutch and German, and independent illocutionary force? Based on various kinds of empirical evidence, I claim that the IC is a root clause, which is not subordinated to (or embedded in) the matrix clause.

The content kernel seems to have an exceptional status within the IC. As is shown in the data above, the position of the IC is tightly connected to the category of its content kernel. But there is more than that. A thorough investigation of structural dependencies between the matrix and the IC reveals that the content kernel behaves as if it is part of the matrix clause, while the rest of the IC is found to be inaccessible for structural relations with elements of the matrix clause.

The tension between the root status of the IC and the behavior of the content kernel is the point of departure of the first part of the analysis presented in this thesis. This part focuses on the internal structure of the IC, in particular on the part of the IC that lies beneath the surface. Under the (empirically well-founded) assumption that what we are dealing with is structurally a complete clause, the next question is what has happened to the material that is not pronounced in the amalgam. Adopting a view in which such unpronounced material is present at the level of syntax (known as the PF-theory of ellipsis), I propose an analysis of amalgams in terms of *sluicing*. Importantly, this extends to Horn-amalgams as well: *it*-cleft reduction in amalgams is an instance of sluicing, albeit at the level of the CP rather than the IP/TP as is conventionally assumed to be the target of sluicing. The main virtue of this unified analysis of amalgams is that the exceptional behavior of the content kernel can

be reduced to well-known reconstruction effects in A'-movement.

The sluicing approach (which is at first merely a hypothesis about amalgams) is further supported by consistent patterns of amalgams with regular sluicing configurations. These are the following: reconstruction effects between the content kernel and the ellipsis site, the absence of island effects, Case matching and patterns with PPs related to whether a given language allows for prepositions to be stranded under movement or not. All of these are well-studied aspects of sluicing configurations. The P-stranding and island facts are studied in more detail in the context of recent scholarship on regular sluicing.

The second part of the proposal concerns the derivation of the relation between the matrix and the IC. After all, the observation that the IC is a root clause is not a solution to the question how clausal material can show up in the position of some missing constituent. For this, I first elaborate on the interpretive aspects of amalgams already noticed in Lakoff's original paper. I show that the IC in both types of amalgams inherently expresses content that is directly related to the speaker. Taken together with the earlier observed opacity for structural relations with respect to the matrix, this is taken as evidence for an analysis in terms of *parentheticals*.

To account for amalgams in these terms, I argue for an analysis of parentheticals that represents them at the level of syntax. This involves a special structure-building operation ('*par-Merge*') that creates a paratactic hierarchy. This allows us to integrate parentheticals in their host while preserving their structural independence. Based on various other kinds of parentheticals, I globally distinguish between *free* and *anchored* parentheticals. I will argue that amalgams belong to the latter, and that as a general class, anchored parentheticals can be analysed as a type of *parallel construal*. Amalgams constitute a special class of these, because the anchor is null. That is, the parenthetical specifies the missing constituent of the matrix clause. This relates back to part of Lakoff's puzzle that still needs to be answered. The proposal for amalgams (in a tiny nutshell) is that the IC is attached at the constituent level of this empty constituent. The whole forms a complex syntactic object that is regularly used in the sentence. It will be made clear via detailed steps how this approach nicely combines with the idea that amalgams are sluicing configurations, and allows us to eventually solve Lakoff's puzzle without further stipulation of a categorial dependency between the position in the matrix and the content kernel.

## 1.2 Theoretical background, empirical scope and terminology

### Theoretical background

This research adopts a generative perspective on language and assumes a modular view on the organization of grammar as presented in the Minimalist Pro-

gram (Chomsky 1995). In this view, the syntactic component derives structures via recursive structure-building operations (*Merge*). The output of the syntactic component is (an in principle infinitely complex) object that serves as the input for the semantic and phonological component, conventionally named the LF and PF interfaces. The structure-building operation *Merge* is a *binary* operation, which combines two syntactic objects into one, as in (11):

$$(11) \quad \textbf{Merge} \\ \text{Merge}(A, B) \rightarrow C$$

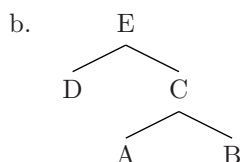
These input objects are usually labeled in relation to their category (such as N for nouns, *et cetera*), and the category of the output is generally taken to be (semi-)predictable from the categories of the input members (for discussion and criticisms, see Collins 2002). That is, the output carries the label of one of its input objects, which is often described in terms of the projection of a *head*. For the purposes of this thesis, I will make use of conventional X'-notations to represent phrase structures. In such representations, phrases are projections of heads that first merge with their complementizer (creating the level X' or XP), and possibly a specifier, as in (12):

$$(12) \quad \begin{array}{ll} \text{a.} & \begin{array}{l} \text{Merge}(X, YP) \rightarrow X' \\ \text{Merge}(X', ZP) \rightarrow XP \end{array} \\ \text{b.} & \begin{array}{c} \text{XP} \\ \swarrow \quad \searrow \\ \text{ZP} \quad \text{X}' \\ \swarrow \quad \searrow \quad \swarrow \quad \searrow \\ \text{specifier} \quad \text{X}^\circ \quad \text{YP} \\ \quad \quad \quad | \quad \quad \swarrow \quad \searrow \\ \quad \quad \quad \text{head} \quad \text{complement} \end{array} \end{array}$$

In what follows below, I abstract away from categories and labels.

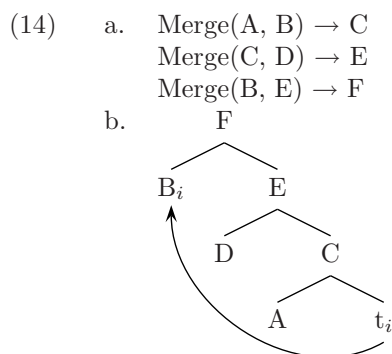
Importantly, when two objects (A and B) are combined, they are included in the output (C). This output may be the input of a new application of *Merge*, i.e. *Merge* is *recursive*. The relation between the output and the input objects is conventionally defined in terms of *dominance*: C dominates A and B and everything that A and B dominate, i.e. dominance is transitive. In addition, the relation between input objects of *Merge* is one of *sisterhood*. The recursive application of *Merge* thus gives rise to a syntactic *hierarchy*, which is often made more insightful by representations in tree-structures such as (13):

$$(13) \quad \begin{array}{ll} \text{a.} & \begin{array}{l} \text{Merge}(A, B) \rightarrow C \\ \text{Merge}(C, D) \rightarrow E \end{array} \end{array}$$



Dominance and sisterhood are fundamental in the understanding of structural dependencies, which are explained in terms of *c-command*. In very basic terms: a node *c-commands* its sister and everything that is dominated by its sister. Throughout this thesis, various *c-command*-based relationships are employed as a diagnostic for the structural relationship between matrix clause and IC. Since I will go into the details of such dependencies in the chapters themselves (in particular chapter 3 and later on in the analysis in chapter 7), I will refrain from any further discussion here.

Throughout the years, various ideas have been proposed for the derivation and representation of *displacement* in natural language: literal *movement* to another position in the structure, which leaves a trace (eg. Chomsky 1973), a procedure of copying and deletion, i.e. the copy theory of movement (Chomsky 1993), which more recently developed into the theory of movement in terms of *remerge* (Starke 2001, Gärtner 2002a, Hornstein et al. 2005), resembling what Chomsky (2001) calls internal Merge. One of the more predominant ideas in current linguistic theorizing is the idea of movement as *remerge*. Importantly, the representation of displaced elements in this theory involves *multidominance*: this is simply the consequence of merging an A that is already part of the root R, with R itself. Under such assumptions, movement is a function of Merge itself. Interestingly, one of the more recent analyses of amalgams (discussed in great detail in chapter 2), involves an implementation of multidominance structures. However, this is the result from remerging material that is *outside* the root. It will be clear that I will *not* defend (a variant) of such an analysis for amalgams, nor that this thesis is committed to any specific assumption about displacement. For that reason, and more importantly for ease of representation, I will represent the displacement of B when it merges with E in (13) by means of a trace as in (14):



This should only be taken as a representational device: it does not reflect any theoretical commitment to trace theory. The broader theoretical issue of the nature of displacement is outside the scope of this work, but for discussion and different ideas, see for instance Lasnik and Saito (1992), Koster (1987, 2009), Moro (2000) and Zwart (2009), in addition to the literature cited above.

## Empirical scope

This thesis mainly focuses on the structural issues that amalgams put forward, as very globally described in the section on ‘Lakoff’s puzzle’ above. In terms of the assumed model of grammar, I will be primarily concerned with the syntactic component, and its interaction with the interfaces (PF and LF). Due to the limitations of mainly time, it is inevitable that some important questions touching upon other domains of grammar, are left open. One of the most obvious questions concerns the fact that Lakoff (1974) inserted comma’s between the matrix clause and the start of the IC of Horn-amalgams, but not Andrews-amalgams:

- (15) John is going to, [I think it’s Chicago] on Sunday.

If anything, the commas suggest the presence of prosodic boundaries in Horn-amalgams that may not be present in the Andrews cases, possibly separating the intonational contour of IC from the matrix clause. However, commas did not show up consistently in the (written) data provided by my informants. Rather, a prosodic break between the matrix and the IC was required for some examples, while others were reported to be perfectly fine without special intonation. Because the prosodic aspects of amalgams were not part of the investigation, I will not use commas to indicate a prosodic boundary in the data unless the informants explicitly indicated it needed to be there.

As discussed above, amalgams have a particular interpretive effect, which Lakoff characterized in terms of ‘exclamative force’ and ‘hedging’. These terms relate to pragmatic and semantic questions that partly lie outside the scope of this work. Put more concretely, chapter 6 of this thesis elaborates on the interpretation of amalgams, but this part of the study is merely descriptive. It serves to sustain a claim about the syntactic analysis pursued later on, and not to provide a semantic or pragmatic theory.

The data discussed in this thesis, and the empirical generalizations derived from them are mainly from Germanic languages, in particular English (both American and British), Dutch, Frisian and German. Data from other languages are used occasionally for theoretical considerations (which will be addressed in greater detail in chapters 4 and 5). These are Czech, Russian, Slovenian, Romanian, Spanish, Brazilian and European Portuguese, Italian and Greek. For the largest part, the data were obtained via personal communication (mostly in the shape of questionnaires) with one or more native speakers of the language in question.



## A note on terminology

Unfortunately, the literature on sentence amalgamation somehow led to a proliferation of terms and names. First, the idea that the IC in Horn-amalgams is a reduced *it*-cleft, led some to call these variants ‘cleft-amalgams’ (Tsubomoto and Whitman 2000, Guimarães 2004). Similarly, the observation that the IC in Andrews-amalgams always contains a *wh*-constituent, gave rise to the name ‘*wh*-amalgams’. To complicate matters, a construction type known as Transparent Free Relatives (TFRs) have been analysed on a par with Horn-amalgams, and the two are respectively identified as ‘*wh*-amalgams’ (TFRs) and non-*wh*-amalgams (Horn-amalgams), without any intended reference to Andrews-amalgams in Van Riemsdijk (2006c). Van Riemsdijk (2000b) indirectly discusses Andrews-amalgams and calls them ‘*wh*-prefixes’. Lastly, the term ‘amalgam’ has been used (mostly in Construction Grammar oriented literature) to describe various kinds of examples that are not directly related to the types of amalgams discussed in this thesis (i.e. Lambrecht 1988, Brenier and Michaelis 2005 *inter alia*). The analysis of amalgams in the present work is not intended to cover the data discussed by these authors.

Obviously, naming constructions after whoever brought them up is neither practical nor descriptively transparent. However, the alternative terms that have been used are not theory-neutral, and this is undesirable for the purposes of this study. So, in order to avoid that this thesis is yet another contribution to the terminological confusion, I will stick with Lakoff’s terms and talk about *Horn*- and *Andrews*-amalgams when discussing examples such as (1) and (2) respectively, and refer to other relevant constructions consistent with the most predominant terms in the literature.

## 1.3 Overview

The thesis is organized as follows. I start out by discussing the analyses of amalgams that have been proposed in previous scholarship in chapter 2. This not only provides us with possible ways in which we can approach amalgams, it also puts forward the question about the relationship between the IC and the matrix clause. That is, the scholarship can be divided into two camps: those that assume the IC to be subordinated (comparable to a relative clause), and those that take the IC to be an independent root. In chapter 3, I show in detail that the IC constitutes an independent root clause. This is based on both root phenomena and the lack of structural dependencies between matrix and the IC. However, the content kernel seems to be an exception to the latter observation. This is taken up in chapter 4, which covers the first part of the analysis of amalgams defended in this thesis: amalgams are sluicing configurations, and the content kernel is the remnant of this type of ellipsis. In this chapter, a considerable amount of attention is paid to the question how *it*-clefts and sluicing in Horn-amalgams are to be approached. The empirical predictions of the sluicing approach are subject to discussion in chapter 5, focusing on A’-movement

related reconstruction effects, the infamous island-insensitivity of sluicing that clearly carries over to amalgams, Case matching effects and patterns related to the distribution of PPs under A'-movement and sluicing. Chapter 6 returns to one of the initial quests of this thesis, and provides empirical evidence for the claim that ICs in amalgams are anchored parentheticals. The evidence is mostly related to the interpretation of amalgams. How these can be represented in syntax is topic to chapter 7, where I show how a theory of anchored parentheticals in terms of parenthetical parallel construal can be combined with the sluicing approach, such that the idiosyncrasies of amalgams are accounted for. Chapter 8 concludes and summarizes the thesis.

## CHAPTER 2

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### Ideas about amalgams

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Although amalgams have gone relatively unnoticed since Lakoff's paper, a few proposals have been made to account for their idiosyncrasies. As it happens, these proposals are mostly outlined in short studies that do not include detailed derivations, with notable exception of Guimarães' recent dissertation. For this reason, this chapter is a presentation of the analyses that have been put forward in the literature, and not a discussion of 'previous scholarship' as such. The focus is thus on the broader idea that underlies them, and the predictions they give rise to regarding the structural relationship that bears between amalgamated clauses. These predictions are then the starting point for chapter 3.

The analyses that have been proposed in the literature on amalgams are as follows: 1. regard the IC as some kind of relative clause that adjoins to an empty element in the matrix clause (§2.2), as has been proposed for Andrews-amalgams in Tsubomoto and Whitman (2000), Grosu (2006) and Grosu (2008), 2. treat the matrix and the IC as independent roots that syntactically share the content kernel (§2.3), which is the core of Van Riemsdijk's idea of 'grafts' and is implemented in an entirely different way in Guimarães (2004), and 3. derive the IC as a complex XP in which XP stands for the category that is selected for by the matrix (§2.4), as has recently been suggested in Zwart (2006, 2009). Some of these ideas overlap: to an extent, Zwart's proposal in terms of layered derivations bears resemblance to the relative clause approach, as in both approaches, the IC functions as a complex category in the matrix. The most important distinction is then between those two proposals and the multidominance approach: only the latter treats the interrupting clause as an independent clause. I start out by an impression of the original idea proposed in Lakoff (1974).

## 2.1 How it all started: Lakoff (1974)

Lakoff (1974) observes that Andrews-amalgams involve a *conversational implicature*<sup>1</sup> That is, according to Lakoff, the amalgam in (1) has the same conversational implicatures ( $\leadsto$ ) as given here for (2):

- (1) John invited [you'll never guess how many people] to his party.
- (2) You'll never guess how many people John invited to his party.  
 $\leadsto$  John invited a lot of people to his party.  
 $\leadsto$  John invited few people to his party.

This implicature is due to the 'exclamative force' that is somehow part of the IC. The presence of exclamative force and the implicature associated with that, create the basis for a transformational rule that allows for the chunk of a sentence (i.e. what I have called IC) to substitute the constituent that is understood as the argument of *invite* in (1). This transformation is thus licensed by pragmatic, rather than syntactic conditions:

(3) **Transformational rule for Andrews-amalgams** (Lakoff 1974:323)

For all contexts C, if:

- i.  $S_1$  is an indirect question with  $S_0$  as its complement S; and
- ii.  $S_2$  is the *i*th phrase marker in a derivation D whose logical structure is conversationally entailed by the logical structure of  $S_1$  in context C; and
- iii.  $NP_1$  is an NP in  $S_2$ , such that  $S_2$  minus  $NP_1$  is identical to  $S_0$ ; and
- iv.  $S_1$  has the force of an exclamation; then
- v. relative to context C,  $S_1$  minus  $S_0$  may occur in the place of  $NP_1$  in the *i*+1th phrase-marker of the derivation D.

Example:

$S_1$  = You'll never guess how many people  
 $S_0$  = John invited to his party  
 $S_2$  = John invited a lot of people to his party  
 $NP_1$  = a lot of people

Note that in this rule, it is understood that  $S_1$  and  $S_0$  belong together: they form an indirect question in which sluicing has taken place. This in itself relies on a rather unusual assumption, because in  $S_1$  *guess* takes a nominal complement, while it selects for a clausal complement ( $S_0$ ): the *wh*-phrase in  $S_1$  is normally associated with this complement clause. The application of Lakoff's rule looks as follows:

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<sup>1</sup>Lakoff (1974) calls this a conversational 'entailment', but this corresponds to what Grice (1975) calls conversational *implicatures*. Also Levinson (1983:164) discusses conversational implicatures in the context of this type of amalgams. To avoid terminological confusion with logical entailments, I will consistently replace 'entailment' with 'implicature' in discussing Lakoff (1974), with the exception of direct citations.

- (4)         $[S_2 \text{ John invited } \langle [NP_1 \text{ a lot of people}] \rangle \text{ to his party.}$   
               $[S_1 \text{ You'll never guess how many people } \langle [S_0 \text{ John invited to his}$   
               $\text{party}] \rangle].$   
               $[S_2 \text{ John invited } [S_1 \text{ you'll never guess how many people}] \text{ to his}$   
               $\text{party}].$

Lakoff also describes an alternative to this rule, which was suggested to him by Bill Cantrall. The alternative is to derive Andrews-amalgams via an intermediate step involving a ‘sluiced parenthetical’:

- (5)        John invited a surprising number of people – [you’ll never guess how many (people)] – to his party.

Instead of substitution, a parenthetical is inserted (i.e. *you’ll never guess how many people*) and subsequently the object NP in the matrix clause (*a surprising number of people*) is deleted.<sup>2</sup> The difference between Lakoff’s rule and this alternative is essential: instead of replacing a regular NP constituent by a sentence chunk, we are now inserting (probably via adjunction) an independent sentence and deleting something that corresponds to that sentence in the matrix clause.

For Horn-amalgams, Lakoff proposes a similar, pragmatically constrained substitution rule. In this case, the pragmatic condition by which substitution is licensed, is the presence of a ‘hedged assertion’. The hedged assertion in his example, repeated for convenience in (6), is related to the embedding verb *think*:

- (6)        John is going to [I think it’s Chicago] on Sunday.

The transformation rule for Horn-amalgams is as follows:

- (7)        **Transformational rule for Horn-amalgams** (Lakoff 1974:325)

For all contexts C, if:

- i.         $S_1$  is a sentence with an embedded cleft-sentence with  $S_0$  as its relative clause; and
- ii.        $S_2$  is the *i*th phrase marker in a derivation D whose logical structure is conversationally entailed by the logical structure of  $S_1$  in context C; and

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<sup>2</sup>Notice that although the factor of *surprise* is associated with exclamatives, it is not necessarily associated with Andrews-amalgams. This depends highly on the embedding predicate: (i) can probably not be derived by the parenthetical plus deletion rule applied to (ii):

- (i)        John invited [you can imagine how many people] to his party.
- (ii)       #John invited a surprising number of people – you can imagine how many people – to his party.

That is, if the addressee of this utterance (*you*) can imagine the number of people, this is not surprising in that discourse, it is only surprising relative to some conventional scale. This is related to rhetorical aspects of Andrews-amalgams that I discuss in chapter 6.

- iii. NP<sub>1</sub> is an NP in S<sub>2</sub>, such that S<sub>2</sub> minus NP<sub>1</sub> is identical to S<sub>0</sub> minus its relative pronoun; and
- iv. S<sub>1</sub> is a hedged assertion of the content of S<sub>2</sub>; then
- v. relative to context C, S<sub>1</sub> minus S<sub>0</sub> may occur in the place of NP<sub>1</sub> in the i+1th phrase-marker of the derivation D.

Example:

S<sub>1</sub> = I think it's Chicago  
 S<sub>0</sub> = that John is going to  
 S<sub>2</sub> = John is going to Chicago on Saturday  
 NP<sub>1</sub> = Chicago

Notice that here, S<sub>1</sub> and S<sub>0</sub> together form a complete sentence (a regular embedded *it*-cleft): Lakoff assumes that the IC involves an elliptical *it*-cleft. The application of (7) is then (8):

- (8)      [S<sub>2</sub> John is going to ([NP<sub>1</sub> Chicago] on Saturday].  
           [S<sub>1</sub> I think it's Chicago ([S<sub>0</sub> that John is going to on Saturday])].  
           [S<sub>2</sub> John is going to [S<sub>0</sub> I think it's Chicago] on Saturday].

Also for these amalgams, Lakoff describes an alternative analysis suggested by Bill Cantrall that involves the insertion of a parenthetical like clause (here an embedded cleft without its relative clause), and the deletion of corresponding material in the matrix clause:

- (9)      John is going to Chicago – [I think it's Chicago] – on Saturday.

Again, this yields the backward deletion of matrix material and constitutes a completely different transformation.

The transformational rules for Andrews-amalgams (3) is contrasted with an alternative analysis in terms of 'S-lifting' (or *slifting*, see Ross 1973). In nowadays terminology, slifting would be the fronting of an IP. Ross (1973) proposed this for sentences such as (9):

- (10)    [[S<sub>2</sub> John left]<sub>i</sub>, [S<sub>1</sub> I believe t<sub>i</sub>]].

The transformation slifting then accounts for the movement of the complement of *believe* such that it precedes its embedding clause. In minimalist terms, this would apply to the IP, as it is impossible to raise an (in English optional) complementizer along with it. Lakoff suggests that the derivation of an Andrews-amalgam (1) via Ross' slifting rule would roughly look as follows (I only label the relevant S here, Lakoff himself does not elaborate on the details of such an approach):

- (11)    a. You'll never guess how many people [S John invited to his party].  
           b. [S John invited to his party] you'll never guess how many people.  
           c. [S John invited *you'll never guess how many people*] to his party].

The reason why this approach is not pursued is twofold. First, (11c) already shows that additional movement (‘by some miracle’, as Lakoff 1974:321 puts it) of *you’ll never guess how many people* is required to get it in the position it surfaces in, namely in the position that is associated with the direct object of *invite*. Second, the slifting approach is inconceivable because of the existence of multiple amalgamations:

- (12) John invited you’ll never guess how many people to you can imagine what kind of party.

In the rules he proposes, NPs can be substituted by chunks of sentences, and there is no limit on the number of NPs in a sentence that undergo this transformation, which is desirable given (12).

The idea that amalgams can be derived via some movement of an IP has, however, been taken up in Guimarães (2002), who derives Andrews-amalgams out of a regular embedded *wh*-question by remnant movement of the IP, which is shown step-by-step in (13) (slightly adapted from Guimarães 2002:67):

- (13) a. [IP John invited 300 people to [DP what kind of a party]]  
 b. [CP [DP what kind of a party]<sub>i</sub> [IP John invited 300 people to t<sub>i</sub>]]  
 c. [CP [IP you can imagine [CP [DP what kind of a party]<sub>i</sub> [IP John invited 300 people to t<sub>i</sub>]]]]  
 d. [CP [IP John invited 300 people to t<sub>i</sub> ]<sub>j</sub> [IP you can imagine [CP [DP what kind of a party]<sub>i</sub> t<sub>j</sub>]]].

This idea was abandoned in Guimarães (2004) for various reasons, amongst which the existence of embedded amalgams and multiple amalgamation (as was observed in Lakoff 1974), and the absence of island effects in Andrews-amalgams. In addition, IP-movement needs to be stipulated in this analysis. The reader is referred to Guimarães (2002, 2004, in particular pp. 120-178) for further discussion of this type of approach.<sup>3</sup>

<sup>3</sup>There are several other reasons why Ross (1973)’s slifting rule is problematic. For the cases that Ross describes with this rule, complementizer deletion is obligatory. In English, such deletion is indeed possible, and thereby convenient for Ross’ purposes. However, (10) cannot possibly be derived by fronting the IP/S in languages that do not allow for complementizer deletion, such as Dutch. In addition, Dutch (and German) have different word orders in main and subordinate clauses, which creates a considerable problem for an approach in which the first is derived from the latter.

- (i) [Dutch]  
 a. Ik geloof [\* (dat) Bob een meisje gekust heeft].  
    I believe that Bob a girl kissed has  
    ‘I believe (that) Bob kissed a girl.’  
 b. \*Bob een meisje gekust heeft, ik geloof.  
    Bob a girl kissed has, I believe

Even apart from the mysterious but obligatory deletion of the complementizer, the lifted clause in (ib) is V-final as a result of slifting, but it needs to be V2, as is illustrated in (ii) (*continued on the next page*):

Obviously, any theory must be viewed in the context of the era in which it was proposed. In the late 1960s, there was a ‘movement’ within Transformational Grammar that was focused on explaining the relation between form and meaning in a straightforward manner: Generative Semantics. In the 1970s, various transformational rules were proposed to capture phenomena that would nowadays not be considered to be syntactic, but rather ‘pragmatic’. This was based on the reasoning that something pragmatic is still part of performance, and therefore needs a place within grammar (see Newmeyer 1980 for more discussion). This soon led to all kinds of proposals concerning ‘transderivational constraints’ that we also see in Lakoff (1974). Pragmatic aspects such as ‘having exclamative force’, or the presence of entailment relations between the sentences part of an amalgam, are not strictly part of the ‘logical’ or syntactic structure of the sentence. The problem of allowing for pragmatic factors constraining syntactic operations, is that the theory loses explanatory force. This is quite clear when considering (3) and (7): although the rule seems descriptively correct for certain (not even all) cases of Andrews- and Horn amalgamation, it has no explanatory force at all. That is, there is no reason why an indirect *wh*-question with exclamative force, or a hedged assertions in the form of embedded *it*-clefts should be allowed to occur in the place of regular constituents of a sentence, but not, say, exclamative copular clauses with demonstrative pronominal subjects. Although this is a randomly picked construction, the point should be clear:

- (14) \*John was dating [that was such a nice girl!] last year.

It will be evident later on, that it is not at all an easy task to develop a proposal that includes amalgams of the type discussed here, but excludes examples like (14). In fact, in chapter 6, I argue that *exclamatory force* is an incorrect characterization of the IC in Andrews-amalgams to begin with. In the light of present-day (minimalist) linguistics, the substitution rules are clearly *ad hoc* and possibly both over- and undergenerate syntactic amalgams. However, the idea that amalgams involve some ‘transderivational’ operation at least resonates in the multidominance account that has been defended in recent scholarship (§2.3).

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- (ii) Bob heeft een meisje gekust, {geloof ik/ \*ik geloof}.  
 Bob has a girl kissed, believe I I believe  
 ‘Bob kissed a girl, I believe.’

This example additionally shows that the order of the subject and the embedding predicate is reversed in these constructions, this has been called V1 or integrated parentheticals in the literature (cf. Reis 1995b, Steinbach 1999, 2007, De Vries 2006a, Van Maastricht 2011 for discussion of constructions related to the phenomenon covered by the term *slifting*). These objections can more generally be raised against any analysis of amalgams that assumes the main clause to originate as a subordinate clause. I return to the word order issue below (§2.3.3) in the context of Guimarães (2004)’s multidominance alternative for sluicing.



## 2.2 The relative clause approach

### 2.2.1 The IC as an empty-headed relative clause

I formulated the main question of this thesis as ‘Lakoff’s puzzle’: how can we account for the missing matrix constituent and the insertion of clause-like material in its position? One way of dealing with the unexpected appearance of a clause is to assume the IC is some kind of relative clause: where (English) relative clauses normally consist of an external head and a (relative) CP, we can take the IC to be a CP with an empty head. This has the advantage that amalgams can be reduced to a familiar syntactic configuration: no theoretical novelties need to be invoked especially to account for amalgams. However, it is clear that such an analysis is in need of an explanation why the IC structurally bears little resemblance to relative clauses. An explicit account of amalgams on a par with relative clauses is Tsubomoto and Whitman (2000). The suggestions made in Grosu (2006, 2008) for Andrews-amalgams are very different, but match ideas presented in Grosu (2003) for free relatives and will therefore be discussed under the denominator ‘relative clause approach’ as well.

### 2.2.2 Tsubomoto and Whitman (2000)

Tsubomoto and Whitman (2000) start out by observing that the adjunction plus deletion approach that is briefly mentioned in Lakoff (1974) for Horn-amalgams, resembles the way internally headed relative clauses (IHRCs) are often derived: the head *Chicago* in the original example is internal to the relative clause that modifies an empty head (cf. Cole 1987).<sup>4</sup> But this is just a superficial parallel: the notional head in Horn-amalgams (in the classic example *Chicago*, see (15) below) can be referring/definite, whereas it is commonly assumed that the heads of IHRCs are indefinite (for discussion and different ways of characterizing the restriction on the heads of IRHCs, see Watanabe 1992, Basilico 1996, Grosu 2002, *inter alia*). More importantly, an analysis in terms of IHRCs would come out of nowhere, seeing that English does not have this type of relative clauses. Tsubomoto and Whitman (2000) instead propose an analysis that is closer to conventional relative clauses, with an empty NP head. Their proposal is based on the standard (adjunction) analysis for relative clauses, in particular the version proposed in Safir (1986). The main puzzle is then how a relation can be established between the empty head in the matrix and the COMP-domain of the relative clause in the following structure (Tsubomoto and Whitman 2000:179, their (8)):

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<sup>4</sup>Tsubomoto and Whitman (2000) gives the impression that the adjunction analysis is Lakoff’s proposal, but as was clear from the discussion in §2.1, Lakoff does not assume adjunction, but substitution. It should be noted that Lakoff (1974) describes Cantrall’s suggestions as very plausible ideas, without making any assumptions about the syntactic derivation that they would imply. Thus, the discussion is based on an interpretation of the rough idea outlined in Lakoff (1974), and not on an explicit analysis proposed by Lakoff himself.

- (15) John is going to  $[[_{NP} e] [_{CP_1} I \text{ think } [_{CP_2} \text{ it is Chicago } [_{CP_3} Op \text{ (John is going to } t_{Op} \text{ on Sunday)}}]]]]$  on Sunday.

This representation requires some explanation. The desired binding relation in their approach is between the empty NP and  $CP_1$  (in my terms, the IC). Clearly, this CP lacks a suitable candidate for this relation. In a regular relative clause, this would be an operator that has moved to the COMP-domain (or, SpecCP) of the relative CP. However,  $CP_1$  does contain a suitable operator, namely in the (presupposed) relative clause that is presumably elided ( $CP_3$ ). Thus, the problem of (15) is that this operator is not in a position where it can be bound by the head (this binding relation needs to be local, see Safir 1986). Tsubomoto and Whitman (2000) suggest that something has to have moved such that the head can bind an element in COMP. Evidence for movement is found in data that show degraded Horn-amalgams in islands (Tsubomoto and Whitman 2000:179, their (9)):

- (16) a. John is going to  $[_{NP} e]$  it's obvious that it's Chicago on Sunday.  
 b. ?\*John is going to  $[_{NP} e]$  that it's Chicago is obvious on Sunday.  
 c. ?\*John is going to  $[_{NP} e]$  I got angry because it was Chicago on Sunday.  
 d. ??John is going to  $[_{NP} e]$  I believe the claim that it is Chicago on Sunday.

They argue that these degraded data must be the consequence of syntactic movement, and propose that what is moved, is the empty presupposition CP of the embedded cleft sentence. This leads them to propose the following derivation of Horn-amalgams:

- (17) John is going to  $[[_{NP} e]_i [_{CP_1} [_{CP_3} Op_i \text{ (John is going to } t_{Op_i} \text{ on Sunday)}}] [ I \text{ think } [_{CP_2} \text{ it is Chicago } t_{CP}]]]]]$ .

Now, a binding relation can be established between the empty NP in the matrix, and the operator (the indexation in the example is mine). This then leads to the rather unusual conclusion that an empty element binds a variable that is base generated in an empty presupposition that has moved. Putting this aside, the main problem of this proposal is that the operator that needs to be bound by the empty NP head, is not available for binding at all. After all, what Tsubomoto and Whitman (2000) regard as 'the empty presupposition' of the cleft sentence, is a restrictive relative clause that modifies the clefted constituent *Chicago*. Thus, this operator is already bound before movement to Spec $CP_1$ , namely by *Chicago* (my example):

- (18) I think  $[_{CP} \text{ it's } [_{NP} [_{NP} \text{ Chicago}_1] [_{CP} Op_1 \text{ John is going to } t_1]]]$ .

Tsubomoto and Whitman (2000) argue that unlike Horn-amalgams, Andrews-amalgams do not exhibit island-sensitivity, which is in line with the data I present in the next chapter. It should be noted that the tested island condi-

tions are different from the island facts presented in Guimarães (2004) and the present work, and that the data below were reported to be rather marginal by my informants (*pace* Tsubomoto and Whitman 2000). Consider (19) (Tsubomoto and Whitman 2000:180, their (11), their reported judgements):

- (19) a. John invited it is obvious how many people to his party.  
 b. John invited how many people is obvious to his party.  
 c. John invited I lost the memo that says how many people to his party.  
 d. John invited Mary got angry when she heard how many people to his party.

Consequently, Tsubomoto and Whitman (2000) argue that movement in Andrews-amalgams is not syntactic. What moves (presumably at LF, since this is not overt movement in the general case), is then the sluiced CP containing the *wh*-expression:

- (20) John invited  $[[_{NP} e]_1 [_{CP} [_{CP} \text{how many people}_1 [_{IP} ] ] [_{CP} \text{you'll never guess } t_1]]]$  to his party.

It is then argued that islands effects are not expected here, because the type of movement here is, supposedly, not syntactic. The binding relation is now established between the empty NP head and the *wh*-phrase, assuming that *wh*-expressions in sluiced sentences correspond to indefinite pronouns (variables). In this context, the LF-based approach towards sluicing in Chung et al. (1995) is adopted: the *wh*-phrase is ‘recycled’ and used as a variable. In this approach, Andrews-amalgams are thus considered to be a type of *in situ* construction: the CP with its sluiced IP remains overtly in its base position (here  $t_1$ , and obviously, the *wh*-element itself does move from the sluiced IP into SpecCP of that CP). Although it is argued Tsubomoto and Whitman (2000:181) that this LF-movement of the sluiced CP is *optional*, it is not clear how it could be that in this case, the bound variable is only optionally adjacent to the head NP (recall that for Horn-amalgams the movement of the presumed empty presupposition was invoked to guarantee adjacency). Although the details of this account are disputable, the general idea is clear and relatively simple: both types of amalgams can be viewed as relative clauses with an empty (NP) head, albeit that the binding of the relative operator is established in a different manner, which in their view accounts for the difference in island-effects. Finally, it should be noted that reducing amalgams to a conventional (restrictive) relative clauses imposes a categorial restriction on their content kernels. That is, in the absence of further assumptions, regular relative clauses are headed by an NP. This seems to concur with Lakoff’s transformational rules, in which it is consequently an NP that is substituted by a partially elided clause (see (3) and (7) above). However, (21) shows that at least Andrews-amalgams are not subject to such a restriction:

- (21) John was [you can imagine how [<sub>AP</sub> tired]] after the party.

In this case the IC occurs in the position of a predicate and the content kernel is an AP. It is not directly clear how (21) should be captured in the analysis of Tsubomoto and Whitman (2000), but it seems we are compelled to assume that in case of amalgams, the empty head can be an AP. The observation that (Andrews-)amalgams allow for various types of content kernels is central to Grosu (2006, 2008) and Van Riemsdijk (1998b, 2006b,c). Although both regard this as a parallel with free relatives (FRs), their respective analyses are fundamentally different, if not in direct opposition.

### 2.2.3 Grosu (2006, 2008)

Before I give an impression of the ideas laid out in Grosu's work, it should be pointed out that Grosu (2006) is a short squib in which there is no concrete analysis of amalgams, and that Grosu (2008) is merely a critical discussion of the multidominance approaches to Transparent Free Relatives (and Horn-amalgams) as advocated in Van Riemsdijk (1998b, 2006b,c), which will be discussed in §2.3. The claim that amalgams should be analysed as relative clauses is *not* explicitly formulated by Grosu; I classify his proposal as such because it is reminiscent of the analysis of Free Relatives in Grosu (2003). Since these are a special class of relatives, his proposal differs greatly from Tsubomoto and Whitman (2000)'s regular relative clause approach. This is important for the chapters to come: when I talk about the 'relative clause' account of amalgams, this concerns the basic idea underlying Tsubomoto and Whitman (2000)'s work. Since I discuss Free Relatives along with amalgams at various points, Grosu's idea that unifies them is indirectly discussed in that manner.

In his brief exposition about amalgams in Grosu (2006) claims that amalgams are '*complex XPs homocategorical with the boldfaced constituent within them, rather than merely 'bare' IPs*' (Grosu 2006:1). This is discussed in more detail in Grosu (2008). These boldfaced constituents are illustrated in (22), (Grosu 2006's (1)):

- (22) John invited [you'll never guess [<sub>DP</sub> **how many people**]] to [you can imagine [<sub>DP</sub> **what kind of party**]] at [it should be obvious [<sub>DP</sub> **which place**]] with [God only knows [<sub>DP</sub> **what purpose in mind**]], although he was [you can guess {[<sub>AP</sub> **how tired**]/[<sub>PP</sub> **under what kind of pressure**]}].

Grosu (2006) refers to these constituents as 'internal heads' (on a par with internal heads in IHRCs), or 'pivots'. To avoid any terminological confusion, I will use the term content kernel as introduced before. Unfortunately, Grosu (2006, 2008) uses fundamentally different criteria than can be inferred from Lakoff (1974) to distinguish Horn- and Andrews-amalgams. The criterion suggested in Grosu (2008) lies in the 'completeness' of the matrix clause: Horn-amalgams involve incomplete matrices and parenthetical inserts, whereas in Andrews-

amalgams, the insert occupies an argument position. This distinction is based on *a priori* assumptions regarding the status of the IC, which I consider undesirable. In what follows, I will stick to the distinctions based on Lakoff (1974).

Grosu (2008:21) claims that Horn-amalgams necessarily express a hedge, consistent with my preliminary observation in the introduction, and the chapters to come. For Grosu (2008) this is reason to assume that Horn-amalgams have no content kernel or pivot, this constituent is only part of some parenthetical insert and the matrix is incomplete.<sup>5</sup> The claim that the IC is in fact a complex, homocategorial XP only applies to the specific cases of Andrews-amalgams that Grosu regards as such. Since Grosu (2008) does not involve a specific proposal regarding the derivation of the parenthetical inserts in Horn-amalgams, the discussion below only applies to Andrews-amalgams.

Like Tsubomoto and Whitman (2000), Grosu (2006) observes a parallel between Andrews-amalgams and IHRCs, i.e. the presence of an internal head. The fact that this internal head is always a *wh*-phrase, is something Andrews-amalgams have in common with (standard) Free Relatives (SFRs) (23), albeit that in the case of Andrews-amalgams, this *wh*-phrase is the remnant of sluicing, which is not the case in SFRs:

- (23) Bob will eat [<sub>FR</sub> what(ever) you put in front of him].

Grosu's proposal is based on three central claims: 1. the IC undergoes ellipsis, which in Grosu (2008) is claimed to be restricted to *pragmatic* licensing (Hankamer and Sag 1976, Hankamer 1979), 2. the ellipsis is obligatory, and 3. Case matching is strict in Andrews-amalgams. Grosu (2006) argues that the IC in Andrews-amalgams is sluiced, because it also allows for a variant of sluicing that Merchant (2002) calls 'swiping' ('sluiced *wh*-word inversion with prepositions in Northern Germanic'):

- (24) a. Bob danced with someone, but I don't know who with.  
b. Bob danced God knows who with.

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<sup>5</sup>Illustrative of what would be an Andrews-amalgam by our present definitions, but a Horn-amalgam in Grosu's sense, are (i) *versus* (ii):

- (i) John works [you will never guess with whom].  
(ii) John works with [you will never guess who].

Alexander Grosu (p.c.) reports that his informants find it easier to construe the insert in (i) as a 'parenthetical', than the one in (ii). Presumably, this is related to the position of the insert: as complement of a P that is part of the matrix (i) or including the the PP as a whole (ii). Only in case of the latter, the 'insert' occupies an argument position, and should therefore be regarded as an Andrews-amalgam. However, notice that in this particular case, the main verb of the matrix verb (*work*) allows for a reading without an internal argument. This may alternatively explain the impression that the insert in (i) can be construed more independently than in (ii): the 'parenthetical insert' then has an effect similar to so-called 'sprouting', a particular form of sluicing I readdress in chapter 4.

However, sluicing (as well as many other instances of ellipsis) must be syntactically controlled, and can't be pragmatically controlled, considering the contrast between (25) and (26) (Hankamer and Sag 1976's (42) and (43)):

- (25) Hankamer: Someone's just been shot.  
Sag: Yeah, I wonder who.
- (26) *Context*: Hankamer produces a gun, points it offstage and fires, whereupon a scream is heard.  
Sag: #Jesus, I wonder who.

However, that sluicing can only be syntactically controlled, is only clear in declarative cases. Hankamer (1978:70) points out that there are instances of ellipsis that allow for pragmatic control, but these are limited to '*illocutionary charged utterances*'. Grosu (2006, 2008) illustrates this by the possibility of exclaiming (27) in the context of finding a murdered relative (for instance):

- (27) My God, who!?

Notice that in this case, that *who* has several potential referents that are contextually possible: the murderer (i.e. *who* *<did this>!?)*, the victim (i.e. *who* *<is it>!?)*, or someone in general (i.e. *who* *<would have ever thought this could happen>!?)*. An example that Grosu considers to be pragmatically controlled sluicing in an Andrews-amalgam is then (28):

- (28) a. \*[You know who *<wants to kill me>*] wants to kill me.  
b. [You know who *<I have in mind>*] wants to kill me.

It is obvious that whatever is reduced in cannot be syntactically controlled (28a), but is rather interpreted as having some antecedent in the discourse of the utterance (28b). The claim that amalgams involve sluicing is one of the cornerstones of the analysis presented in this thesis. However, contrary to Grosu (2008), I will claim that the ellipsis in amalgams is strictly syntactically controlled (see chapter 4). More concretely, the type illustrated in (28b) is a special construction type, which displays fundamentally different properties than Lakoff's original cases. For instance, I show that the IC in neither type of amalgam can be clause-initial, contrary to the case here (see §3.2). Based on various other structural and interpretive differences, I argue *you-know-who* cases to be grammaticized variants of Andrews-amalgams in §6.3.3 (and in Kluck 2010), comparable to phrases such as *what-the-hell*.

Interestingly, Grosu (2008) observes that the *wh*-phrase must be string-final within the insert. The obligatoriness of ellipsis in the IC is argued to be the consequence of this fact. The suggested evidence for this claim is that the non-reduced version of an amalgam such as (29), '*greatly favors a Horn Amalgam construal*' (Grosu 2008:26):

- (29) a. Bob has obtained [I'll never reveal what *<to any of you>*] from

- Mary.
- b. Bob has obtained [I'll never reveal what to any of you] from Mary.

Supposedly, when the elided material is realized overtly, the sentence has a reading in which the content kernel is not part of the matrix at all, and the insert is some independent string (Grosu's interpretation of a Horn-amalgam). It should be noted, however, that regarding those cases as Horn-amalgams does not explain the obligatoriness of reduction in the Andrews cases, as Horn-amalgams arguably undergo obligatory ellipsis as well, namely of the relative clause that is normally associated with *it*-cleft constructions (I discuss this in great detail chapter 4):

- (30) Bea is going to [<sub>IC</sub> I think it's Amsterdam ⟨\*[<sub>CP</sub> that Bea is going to]⟩.

In other words, reducing the obligatory status of ellipsis in Andrews-amalgams to some need of the *wh*-phrase to be insert-final, seems reverse reasoning: the *wh*-phrase is insert-final because of the deletion process that applies to the IP (sluicing). It is doesn't follow from anything why an amalgam that looks like a clear Andrew's case in the sense of Lakoff (1974) should all of a sudden be regarded as a Horn-amalgam if the *wh*-phrase is incidentally not insert-final. Why phonological reduction of the IP is obligatory in Andrews-amalgams, but not in sluicing in general, thus remains an open question in this proposal.

So, what is exactly meant by 'complex homocategorial XPs'? The basic idea is that the *wh*-phrase is derived internally to the insert. The insert as a whole is assigned a null external head, which matches the syntactic and semantic content of the content kernel (cf. Grosu 2008:25). Abstracting away from how matching should be derived, the idea in itself clearly goes beyond the proposal in Tsubomoto and Whitman (2000): if the external head matches the pivot, an Andrews amalgam with an adjectival content kernel presumably has an empty AP head, accounting for both (31a) and (31b):

- (31) a. John invited [you'll never guess [<sub>DP</sub> how many people]] to his party.  
 b. John was [you can imagine [<sub>AP</sub> how tired]] after the party.

As such, Grosu's proposal is reminiscent of how Transparent Free Relatives (TFRs, a special class of FRs) are analysed in Grosu (2003). Interestingly, the parallel between amalgams and (T)FRs is also drawn in Van Riemsdijk (2006b,c), which I discuss in §2.3. TFRs are considered to be multicategorial XPs in Grosu (2003), based on examples such as (32):

- (32) a. He made [what may appear to be [<sub>DP</sub> a radically new proposal]]  
 (but is in fact a notational variant of earlier analyses).  
 b. He made an uninspired and [what I'd describe as [<sub>AP</sub> catastrophic]]  
 decision.

Also these are regarded as involving null external heads, which have the same category as the 'transparent nucleus' in the TFR (the predicate of the small



clause, which I also regard a ‘content kernel’). Grosu (2003) proposes the following structure for TFRs:

- (33) a. He made [DP *e*] [CP *what<sub>i</sub>* [IP [SC *t<sub>i</sub>* may appear to be [DP a radically new proposal]]]].  
 b. He made an uninspired and [AP *e*] [CP *what<sub>i</sub>* [IP I’d describe [SC *t<sub>i</sub>* as [AP catastrophic]]]] decision.

So, TFRs are complex XPs that have the same category as their pivots (content kernels). Extending this to Andrews-amalgams, an analysis of those would roughly be the same:

- (34) John invited [DP *e*] [CP you ’ll never guess [DP how many people]] to his party, although he was [AP *e*] [CP you can guess [AP how tired]].

It should be noted that although it is indeed possible to derive cases with content kernels that cannot usually be used as heads in relative clauses, this fact in itself remains unexplained, as it is not clear why *overt* heads of (restrictive) relative clauses cannot be APs (or any category other than NP).

Finally, Grosu (2003) argues that the content kernel of TFRs is not subject to case matching (pace van Riemsdijk 2000a, 2006a), by contrast the *wh*-phrase *what is*. This contrasts with the strict case matching on the content kernel in Andrews-amalgams that he observes for Romanian. The relevant example is (35), which in addition represents the analysis as outlined in Grosu (2008):

- (35) [Romanian]  
 Ion a reușit datorită [DP *e*<sub>DAT</sub>] [știu tu [DP  
 Ion has succeeded thanks.to know.2SG you.SG  
 cui]] la examenul de ieri.  
 who.DAT at exam-the of yesterday  
 ‘Ion succeeded thanks to you know who at yesterday’s examination.’

Under Grosu’s assumptions, *datorită* assigns dative case to the null head, and the relevant matching effect is derived by some agreement mechanism between the null head and the *wh*-phrase in the IC. The need for a special mechanism to derive strict case matching in Andrews-amalgams is a direct consequence of Grosu’s claim that ellipsis in Andrews-amalgams is pragmatically, and not syntactically constrained, as regular sluicing exhibits similarly strict case matching effects (see Ross 1969, Merchant 2001). I readdress this issue extensively in chapter 4.

The idea that amalgams are a subspecies of relative clauses has thus taken very different shapes in the literature. However, in both types of analysis, the IC is taken to be a *subordinate* clause and as such, the IC is embedded in, and c-commanded by the matrix clause. Consequently, it is expected that ICs pattern with relative clauses with respect to binding effects and other licensing environments that require c-command. For example, it is expected that quan-



tifiers can bind pronouns in the IC. In addition, we expect that the IC does *not* display any root phenomena, such as independent force or V2 in those languages that exhibit V2 in main but not in subordinate clauses. In the chapter to come, I will show that the relative clause approach fails on all accounts, as the evidence that the IC is a root clause is abundant.

## 2.3 The multidominance approach

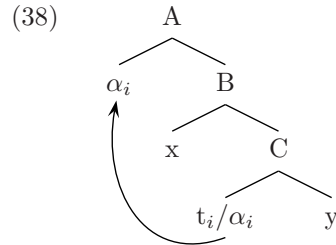
### 2.3.1 Multidominance in minimalist theory

To avoid an empty position in the matrix, and establish a relation between the content kernel and the ‘missing’ matrix clause constituent, it is conceivable that the content kernel syntactically occupies two positions simultaneously. That is, we could think of a configuration in which the IC and the matrix clause *share* this constituent: the content kernel could be merged in the IC and remerged in the matrix (or vice versa). As a result, the content kernel is part of both clauses. Let me first sketch the basic idea in the following bracketed structures:

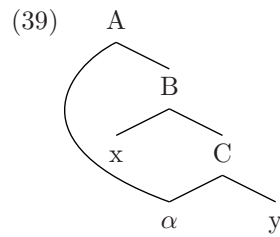
- (36)  $\begin{array}{l} [\text{MC Bob found} \searrow \\ \quad \quad \quad [\text{DP a Stradivarius}]] \\ [\text{IC I think it was} \nearrow \end{array}$
- (37)  $\begin{array}{l} [\text{MC Bill kissed} \searrow \\ \quad \quad \quad [\text{DP how many women}]] \\ [\text{IC you will never guess} \nearrow \end{array}$

Now, the content kernel *a Stradivarius* is the object of *found* in the matrix clause, but it is also the predicate of the copular verb *was* in the IC. In such an approach, it is thus part of two otherwise unrelated, parallel strings. How this would work in Andrews-amalgams is more complicated. After all, the assumption that *wh*-phrase, here the DP *how many women*, is the complement of both *kissed* and *guess* leads to a bit of a riddle, as the matrix clause does not involve anything that selects for a *wh*-phrase (such as a Q-feature), and the verb *guess* normally selects for a CP complement. The literature on (sentence) amalgamation includes two proposals of this kind: Van Riemsdijk (1998b, 2006b,c) for Horn-amalgams, TFRs and other constructions that Van Riemsdijk claims involve structure sharing, and Guimarães (2004) for Andrews-amalgams in particular.

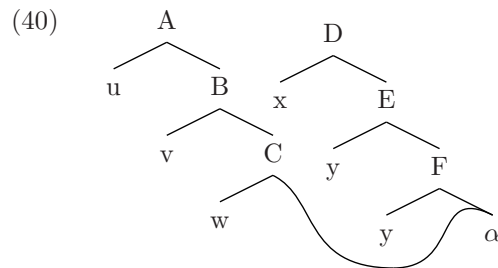
Before I discuss these specific proposals, let me briefly explain the basic rationale that underlies the idea of structure sharing. In current Minimalist theory, it has been proposed to reduce the operation Move to Merge. In more conventional views on movement, some  $\alpha$  is either literally moved from its original position to another position, or a copy of  $\alpha$  is inserted at the desired new position:



It has been argued in Chomsky (2001), Starke (2001), Gärtner (2002a) and Zhang (2004) that displacement can be viewed as a possible consequence of Merge, namely when the objects that are the input of Merge, are such that one is part of the other. This is illustrated in (39), where  $\alpha$  is part of B (its root) with which it merges:



Chomsky (2001:8) calls this internal Merge (i.e.  $\alpha$  is internal to the term with which it is merged), in contrast with external Merge, where the input objects are unrelated. I will use the term *internal remerge* instead consistent with Zhang (2004) and De Vries (2009a), to contrast it with another possible application of Merge, namely when the input consists of an object that is internal to the root, and an object that is external to that root:



In the resulting configuration,  $\alpha$  is part of two roots (here A and D), and the output is, consequently, a multi-rooted representation. That is, in the absence of further assumptions or restrictions on the application of external remerge, it violates the Single Root Condition. Notice that in addition, both internal and external remerge violate the Single Motherhood Condition, i.e. a remerged  $\alpha$  necessarily has more than one mother (A and C in (39) and C and F in (40)).

### 2.3.2 Van Riemsdijk (1998b, 2006b,c)

Van Riemsdijk (2006b,c) argues that if we adopt an unconstrained view on Merge that allows for remerge (i.e. Chomsky's internal Merge), the application of external remerge can only be excluded by stipulation. Since this is undesirable, we expect that cases of external remerge exist in natural language. He calls the resulting structures 'grafts' (pursuing a botanical metaphor): the two roots in (40) are only connected by means of the shared element. Van Riemsdijk (2001) applies this to peculiar data that were first observed in Kajita (1977), that involve bracketing paradoxes, and are (to an extent) reminiscent of the amalgams described in Lakoff (1974). Consider the contrast between (41a) and (41b):

- (41) a. This restaurant is far from the station.  
b. This matter is far from simple.

In (41a), the head *far* is predicated of *restaurant* and *from the station* is the complement of *far*. The situation in (41b) is different: *simple* seems to be the head, that is modified by *far from* (as a kind of 'adverbial modifier', as was originally proposed in Kajita's reanalysis approach). That is, what is expressed by (41b) is that the matter is simple to a minimal degree (the PP does not have the conventional locational meaning), or better: not simple at all. In that sense, this construction is argued to involve *hedging*, as the speaker modifies the use of *simple*.<sup>6</sup> Van Riemsdijk (2001) argues that the constructions above must have different structures, seeing that only (41b) can be used attributively:

- (42) a. \*a far from the station restaurant  
b. a far from simple matter

This is unexpected, because prenominal adjectives have to be adjacent to the noun they modify. This can only be the case if *simple* is analysed as the head. In addition, the Dutch data below show that it is really the second adjective that functions as the head, as it is this adjective that gets the inflection that is associated with prenominal adjectives:

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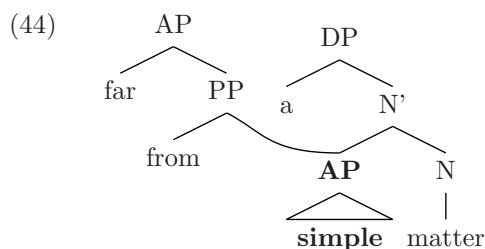
<sup>6</sup>The presumed effect of 'hedging' is perhaps clearer in cases that are discussed in the introduction of Van Riemsdijk (2001), namely (i)

- (i) This argument is close to convincing.

Clearly, (i) does not mean that the argument is convincing, it rather means it is *almost* convincing. However, hedging is usually defined in terms of speaker commitment, or a lack thereof (Palmer 1986). Arguably, this does not really capture the meaning of these cases. Recall that Lakoff (1974) claims 'hedged assertions' as part of the licensing conditions on the transformation rule for Horn-amalgams, due to embedding verbs like *think*, which clearly indicate hesitation on the part of the speaker. I readdress this in chapter 6, in the context of speaker-orientation. Constructions such as *far from/close to AP* could alternatively be described as a way rather a way of (intentionally) being *vague* or *imprecise*, not as putting into doubt that AP is the correct predicate to describe whatever it is predicated of (see also Lasnik 1999).

- (43) a. \*een ver(re) van het station restaurant  
           a far from the station restaurant  
           ‘a far from the station restaurant’  
       b. een ver(re) van eenvoudig-e kwestie  
           a far from simple-SG.CG matter  
           ‘a far from simple matter’

Van Riemsdijk solves this bracketing paradox in a proposal in which the adjective (*simple* and the Dutch equivalent *simpel*) is a term of two independent structures: an AP (*far from simple*) and a DP (*a simple matter*). The DP is the ‘scion’, the AP the ‘stock’, and the shared term is called the ‘callus’ in his metaphorical terminology. In terms of merge and remerge, *simple* is merged in the derivation of the AP, and remerged in the derivation of the DP, yielding the following structure (slightly adapted from Van Riemsdijk 2001):



Van Riemsdijk (1998b) extends this kind of analysis to other constructions he considers to be ‘grafts’: Right Node Raising constructions, (Transparent) Free Relatives, both have also been analysed in terms of multidominance/external remerge in Wilder (1998, 1999), and so-called ‘*wh*-prefixes’, that I return to below. The special status of these constructions, like the complex attributive constructions in (42) was already observed by scholars in the ’70s and ’80s: Nakau (1971), Kajita (1977) and McCawley (1988) discuss complex attributives and TFRs, and the idea that RNR constructions involve multidominance in fact goes back to McCawley (1982, 1987), who calls a similar configuration a discontinuous constituent structure. Although the present work is not primarily concerned with any of these constructions, I will readdress the *far-from* cases below in §2.4 and again in chapter 6 in the context of idioms.

For the present purposes, let me give an outline of Van Riemsdijk’s proposal for TFRs, which he sees fit for Horn-amalgams as well, although he doesn’t discuss the idea of multidominance in any detail. (45) is an example of a TFR construction:

- (45) Bob is [<sub>TFR</sub> what I consider to be a handsome guy].

As was already indicated in §2.2.3, TRFs do not seem to have an external head, contrary to (English) restrictive relative clauses. To link the ‘felt head’ to the matrix (the predicate *a handsome guy* in (45)), Van Riemsdijk (2001) and Van Riemsdijk (2006b,c) suggests it is simultaneously merged in matrix and

TFR. Several people have pointed out that TFRs invariably express a hedge (Van Riemsdijk 2001, 2006b,c), metalinguistic information (McCawley 1988) or involve an intensional operator of some kind Grosu (2003). Unsurprisingly, TFRs were named as such due to their intriguing transparency with respect to the main clause of which they are part. This is illustrated by the following examples, cited from Van Riemsdijk (2006b):<sup>7</sup>

- (46) They didn't make what can reasonably be considered headway.  
 (47) They<sub>i</sub> live in what is often referred to as each other<sub>i</sub>'s backyard.

Apparently, the content kernel is visible to the matrix clause, and c-command based relationships such as the licensing of idiom chunks (46) anaphor binding (47) can be established between matrix and TFR. In addition, it is observed in both Wilder (1998) and Van Riemsdijk (2006b:24) that TFRs can function as 'hedged' APs, comparable to the complex attributive constructions illustrated above:

- (48) a [AP what I described as stupid] decision  
 (49) a. Deze oplossing is eenvoudig-(\*e).  
       this solution is simple-SG.CG  
       'This solution is simple.'  
       b. een wat ik zou noemen eenvoudig-\*(e) oplossing  
       a what I would call simple-SG.CG solution  
       'a what I'd call simple solution'

(49) illustrates that the content kernel *eenvoudig* gets the inflection that is associated with an adjectival, not predicative position in Dutch, similar to the Dutch variant of *a far from simple matter*. The apparent transparency of TFRs and Horn-amalgams is discussed extensively in the chapter to come, in particular §3.4.

These data are taken to be evidence for an analysis in which the content kernel is simultaneously part of two independent structures, the matrix clause and the TFR. This is illustrated in (51) for (50), slightly adapted from Van Riemsdijk (2006b), his (21):<sup>8</sup>

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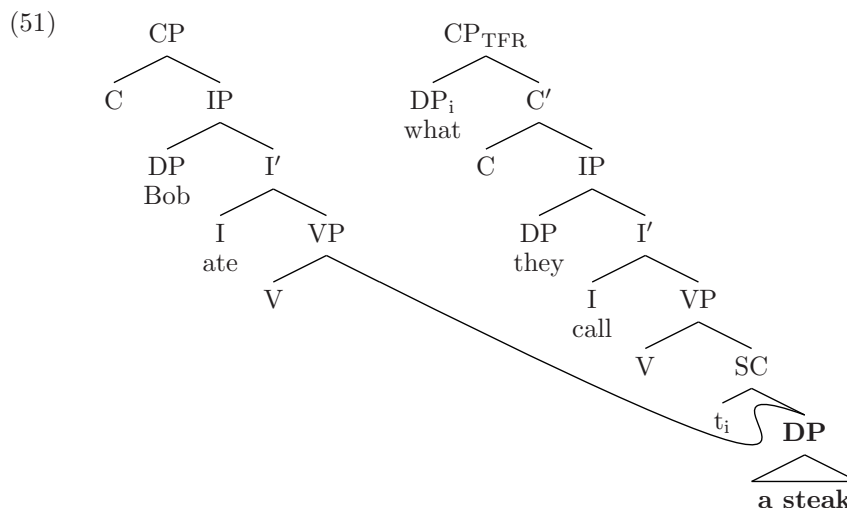
<sup>7</sup>Van Riemsdijk (2001) contrasts these transparency effects with split idioms and anaphora binding in standard free relatives and restrictive relatives:

- (i) a. #Nick lost whatever round objects are called his marbles.  
       b. #Nick lost the round objects that are called his marbles.  
 (ii) a. \*They live in whatever location you used to refer to as each other's backyard.  
       b. \*They live in the place that you used to refer to as each other's backyard.

Importantly, the only available reading (if any) in (i) is non-idiomatic.

<sup>8</sup>To avoid overly bushy trees, I refrain from representing internal remerge by multidominance. Instead, I represent movement of a constituent by means of a conventional trace. This is *purely* for representational reasons, and does not reflect any theoretical assumption on syntactic displacement.

(50) Bob ate what they call a steak.



Importantly, the representation of grafts involves multiple roots in Van Riemsdijk's approach: the TFR is not subordinated with respect to the matrix clause, the two are only connected at the locus of the shared constituent. This supposedly accounts for the differences between TFRs and regular relative clauses. I return to the empirical predictions of such an account below.

In Van Riemsdijk (2006b,c), similar transparency effects are observed in Horn-amalgams. That is, the content kernel in Horn-amalgams appears to be available for relations with the matrix. Consider the following examples, slightly adapted from Van Riemsdijk (2006b:35):

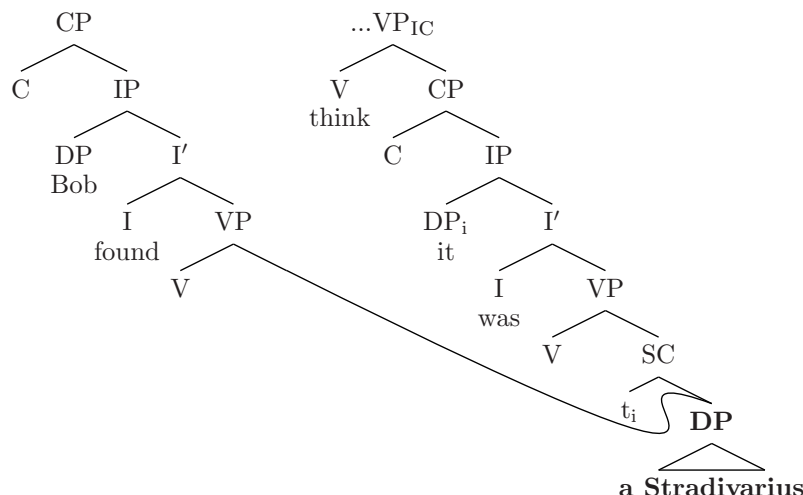
(52) They didn't make a lot of, I think the correct term is headway.

(53) They<sub>i</sub> live in I think you could call it each other<sub>i</sub>'s backyard.

(54) Dit is een, ik denk dat je het zou mogen noemen  
 this is a I think that you it would may call  
 eenvoudig-\*(e) oplossing.  
 simple-SG.CG solution  
 'This is a, I think you might call it simple solution.'

Thus, the content kernel can be an idiom chunk (*headway*) that seems to be licensed by a matrix verb (*make*), or involve an anaphor (*each other*) that has an antecedent in the matrix (*they*). In addition, the acceptability of the Dutch (55) would suggest that the content kernel gets inflection that is associated with an adjectival and not predicative use. Van Riemsdijk takes this as evidence that the content kernel is part of both matrix and IC. In terms of his grafts, this implies a derivation in which the content kernel is remerged, and the matrix and IC are two independent roots, similar to how TFRs are derived:

- (56)



(57) Bob found a Stradivarius [matrix]  
I think it's a Stradivarius [IC]

Also Andrews-amalgams have been approached in terms of constituent sharing. The most explicit proposal is Guimarães (2004), which I turn to below, but both Van Riemsdijk (1998b, 2000b) and Wilder (1998) discuss Andrews-amalgams in relation to multidominance configurations, although Wilder calls them ‘sluice parentheticals’, and Van Riemsdijk (2000b) analyses them on a par with an idiosyncratic construction type in Swiss he dubs ‘*wh*-prefixes’. The latter is illustrated by the specific use of the form *wäisch* (‘you-know’) in

<sup>9</sup>I assume that Van Riemsdijk does not regard the IC as an *it*-cleft, because he makes no reference whatsoever to the internal structure of the IC. Instead, Van Riemsdijk (2006b:34) draws a straightforward parallel between TFRs and Horn-amalgams: ‘... the predicate XP is the semantic nucleus and the rest is a hedge by means of which the speaker distances him-/herself from the choice of the term or directly calls it into doubt.’ The representation in (56) is a direct implementation of the proposal outlined in Van Riemsdijk (2006b,c), although the details are not discussed for Horn-amalgams in his work.

Züritütsch, a dialect spoken in Zürich, and is illustrated in (58), and English constructions of the type in (59):

- (58) Wäisch (du) wän chunt de Hans hüt aabig?  
 know-you you when comes the Hans today evening  
 ‘Do you know when Hans is coming tonight?’

- (59) He has [God knows how many operas] on CD.

Although the latter example is clearly an Andrews-amalgam, Van Riemsdijk (2000b) does not elaborate on this construction, nor does he relate it to Lakoff (1974)’s paper. Interestingly, the supposedly embedded clause (introduced by the word *wän*) seems to be a form of embedded V2, which is unexpected since German embedded questions generally disallow V2 (see for example Vikner 1995), i.e. embedded questions do not belong to the known exceptions to the ban on V2 in embedded clauses. Van Riemsdijk (2000b) describes some interesting restrictions on the use of this form, such as being restricted to the verb *wüsse*, a 2<sup>nd</sup> person subject and more. I take these restrictions as a sign that this particular construction is an idiomatic (frozen) form, comparable to the English use of *you-know-who* (see §6.3.3), and argue that these are not exactly the same as Andrews-amalgams. Van Riemsdijk (1998b, 2000b) only suggests an analysis of these *wh*-prefixes in terms of grafts, without elaborating on questions whether such a prefix is to be seen as a sentence or not. It is therefore difficult to see if the intended analysis would be similar to the one for TFRs and Horn-amalgams.<sup>10</sup>

### 2.3.3 Guimarães (2004)

Relative to the other ideas discussed in this chapter, the discussion of this approach is somewhat elaborate. This is mostly due to the fact that the idea involves a couple of non-mainstream assumptions that would render a brief

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<sup>10</sup>On a side note, Wilder (1998) suggests that Andrews-amalgams are a case of backward deletion or constituent sharing of the NP in a sluiced parenthetical, i.e. ‘*sluice parentheticals involve constituent sharing at the right edge of the parenthesis – the noun of the wh-phrase is simultaneously the (bare indefinite mass or plural DP) object of the matrix clause*’. He illustrates this taking the deletion approach, but we could easily imagine the elided constituent as being remerged, similar to what was illustrated above for Horn-amalgams:

- (i) John invited [you’ll never guesss what kind of ⟨people⟩] **people** to his party.

However, Wilder (1998) is merely a suggestion, and it is not clear how this can be applied to cases in which the Andrews-amalgam involves a bare *wh*-phrase, as, presumably, the sluiced IC does not involve an elided NP:

- (ii) John invited [you’ll never guess who] ? to his party.

That is, unless we make specific assumptions about the internal structure of bare *wh*-phrases such as *who* and *what*, an issue that is ignored in Wilder (1998), the matrix clause involves an empty constituent, which is exactly what could theoretically be circumvented in a multidominance approach.



summary incomprehensible. It should be additionally noted that Guimarães' work is the only detailed study that is presently available on the topic of sentence amalgamation, and worthy of closer scrutiny.

The proposal in Guimarães (2004) makes maximal use of the possibility of remerge/sharing in the derivation of Andrews-amalgams. That is, it is not only the content kernel that is shared (the complete *wh*-phrase in the Andrews-cases), in addition also the sluiced IP (TP) is remerged. Let me start out by giving an impression of the theoretical framework in which amalgams are analysed as multidominance structures. In line with Phillips (2003), Guimarães (2004) adopts a top-down, left-to-right approach to syntactic derivations. For this, he crucially makes use of multiple, overlapping/intersecting numerations. Interestingly, the reason to assume a configuration involving *independent* structures that involve multidominated constituent(s) is not based on 'transparency' effects related to the content kernel (as in van Riemsdijk 2006b,c), but rather on the paratactic nature of the IC. That is, Guimarães (2004) observes that the IC does not pattern with subordinated clauses in many ways. For the present purposes, I discuss an example that applies to English Andrews-amalgams, I return to his other (Romance) data in chapter 3. It is widely known that R-expressions cannot be c-commanded by coreferent expressions (condition C). This rules out a reading of (60) in which *Bill* (in the embedded complement clause) and the matrix pronoun corefer:

- (60)  $\text{He}_{*i/j}$  didn't remember how many women  $\text{Bill}_i$  kissed.

However, the IC in Andrews-amalgams seems to be insensitive to condition C effects, as (61) is grammatical:

- (61)  $\text{He}_{i/j}$  kissed  $\text{Bill}_i$  didn't remember how many women.

Data like these form the foundation for a derivation of amalgams that involves multiple roots. For this, Guimarães assumes a framework that makes use of multiple numerations. Crucially, these numerations overlap in the case of amalgamation, and the intersection allows the respective (sub)computations to interact, which results in structure sharing comparable to Van Riemsdijk's grafting technique. However, since Guimarães (2004) proposes a top-down and left-to-right derivation, the mechanics involved and the rationale behind them are in fact quite different. The most striking difference is that the multirooted representation in a bottom-up view on Merge is the direct consequence of external remerge, whereas in the system of Guimarães, remerge between independent structures is the consequence of the numerations related to those structures sharing one or more tokens. In addition, the proposed top-down approach involves a 'generalized tucking-in' fashion of structure building, heavily inspired by Richards (2004) and Phillips (2003).

In order to grasp the eventual application of such a mechanism to amalgams, it is useful to have a look at the differences between conventional structure building using Merge in a bottom-up fashion, versus top-down tucking-in.

Suppose we have a numeration as in (62):

$$(62) \quad \{a, b, c, d\}$$

In mainstream Minimalism, Merge applies recursively to root nodes, yielding (63) (I here adopt the bracketing convention from Guimarães 2004):

$$(63) \quad \begin{array}{l} [{}_Z c d] \\ [{}_Y b [{}_Z c d]] \\ [{}_X a [{}_Y b [{}_Z c d]]]. \end{array}$$

The requirement that Merge only applies to root nodes, also known as the Extension Condition (Chomsky 1993, 1995), guarantees preservation of the derived structure. That is, subsequent applications of Merge do not alter a previously derived constituent, which is visible in the steps in (63). By contrast, a tucking-in building operation applies to non-root nodes, as is illustrated below:

$$(64) \quad \begin{array}{l} [{}_X a b] \\ [{}_X a [{}_Y b c]] \\ [{}_X a [{}_Y b [{}_Z c d]]]. \end{array}$$

Here, each step creates a new constituent, and destroys what was built in the previous step of the derivation. That is, when merging *c*, it becomes the new sister of *b*, which used to be the sister of *a*. Constituency in such a view is therefore *dynamic*. This view is defended in Phillips (2003), based on data that are problematic in a framework in which constituency is preserved, such as Right Node Raising constructions.

In line with the current developments in Minimalism, as outlined in the beginning of this section, Guimarães (2004) derives movement via remerge. In the top-down framework that he assumes, this requires that  $\alpha$  must c-command its target position for remerge. C-command is defined as follows:

$$(65) \quad \begin{array}{ll} \textbf{C-command} & \text{(Guimarães 2004:270)} \\ \alpha \text{ c-commands } \beta \text{ if and only if (i), (ii) and (iii) hold:} & \\ \text{(i) } \alpha \neq \beta; & \\ \text{(ii) } \alpha \text{ does not dominate } \beta; & \\ \text{(iii) every category that dominates } \alpha \text{ also dominates } \beta. & \end{array}$$

In this approach, the multirooted structure is what *allows* remerge beyond chains (what Guimarães calls ‘remerge without movement’). This contrasts with the bottom-up approach taken in Van Riemsdijk’s grafts, in which external remerge *creates* multirooted representations. In the system proposed in Guimarães (2004), multiple roots are the consequence of overlapping numerations (this will be evident later on). Importantly, the top-down structure-building process is assumed to involve an incremental linearization mechanism. That is, the system can satisfy the LCA (the version adopted is close to the familiar Kaynian LCA) by applying spellout whenever necessary, an idea that

goes back to Uriagereka (1999). This is for example illustrated when we derive a complex subject in what will become an IP in a sentence such as (66), where the phonological (‘ $\pi$ ’) particles are put between # (his notation):<sup>11</sup>

(66) The man sleeps.

(67)  $[_{XP} [_X \text{ the}]]$   
#the#

(68)  $[_{XP} [_X [_{DP} \text{ the } [_{NP} \text{ man}]]]]]$   
#the#<sup>∩</sup>#man# Spellout →  
 $[_{XP} [_X [_{DP} \text{ the } [_{NP} \text{ man}]]]]]$

This string (that is, its ‘ $\pi$ -particles’) needs to be spelled out at this point, to avoid a lack of correspondence between precedence and c-command (Guimarães 2004:236). This is argued to be necessary because *the* and *man* do not respectively participate in c-command relations with the inflectional head I (*sleeps*). Because they do precede *sleeps* linearly, intermediate spellout is needed to avoid a violation of the LCA. How this is determined is not made explicit, but it can only be on empirical grounds. In conventional terms, we would think of *the man* as a constituent, but since this approach essentially hinges on the idea that constituency is dynamic, this cannot in itself be a reason for intermediate spellout.

Abstracting away from these considerations, the LCA is vacuously satisfied after intermediate spellout of *the man*, because there is no phonologically active material in the derivational workspace (which I represented as gray), and we proceed as follows:

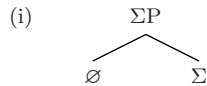
(69)  $[_{XP} [_X [_{DP} \text{ the } [_{NP} \text{ man}]] [_I \text{ I sleeps}]]]$   
#sleeps#

Let me now illustrate the derivation of an Andrews-amalgam in Guimarães (2004)’s framework. I will use an example close to the one that illustrates the ‘simple case’ in Guimarães (2004), chapter V:

(70) Bob will give you can imagine what to Bea.

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<sup>11</sup>In fact, the input of Merge in Guimarães (2004) is defined such that it includes a branching host phrase. For this, Guimarães (2004) postulates a starting axiom ( $\Sigma P$ ), which he takes to be an ‘assertion terminal’:



First Merge in this system then applies to  $\{\Sigma, \{\emptyset, \Sigma\}\}$  and  $x$ , yielding  $\{\Sigma, \{\emptyset, \{\Sigma, x\}\}\}$ , and in subsequent steps tucking in other elements of the numeration, *et cetera*. I will leave out this phrase for reasons of space, and because it seems irrelevant for the present purposes. This perspective on top-down derivations is crucially different from the one presented in Zwart (2009), which is discussed in §2.4.

(71) {C  $\leftarrow \Delta$   
D, Bill, will, give, wh-, -at, to, Bea}  $\leftarrow \Delta \& \Psi$   
{C, D, you, can, imagine  $\leftarrow \Psi$

(72)

CP

├── C

└── D

CP

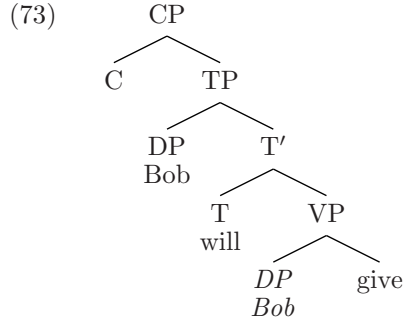
├── C

└── DP

├── D

└── Bob

<sup>12</sup>Interestingly, Guimarães (2004:277) relates this to the notion ‘behindance’ as introduced in De Vries (2003). However, in the latter work, behindance is the result of a special kind of Merge that renders the merged objects invisible with respect to their mother node (‘*par-Merge*’). I discuss this in relation to amalgams in chapter 7. It should be pointed out that the parallel Guimarães draws, does not include this kind of assumption: he only adopts the idea that information layers can be ordered in a way reminiscent of behindance.



At this point, this (first) derivational round is terminated, because ‘... *the wh*-phrase *will not be able to be later merged in the lower spec/CP of the subservient clause, since it will fail to c-command that [+wh] complementizer.*’ (Guimarães 2004:323). That is, the moment the *wh*-phrase would be remerged, it is dominated by projections of *will* and *give*, which are both visible for the calculation of c-command relations in  $\Psi$ . So, this would immediately violate the c-command condition on merge formulated by Guimarães (cited in (65) above): neither of those dominates *imagine*, and as a result *what* cannot c-command *imagine* (its target position). Apparently, the system that calculates the c-command relations can miraculously anticipate on such violations: *what* nor *imagine* is part of the derivation at this point. The termination in turn necessitates spellout of the string that is built so far:<sup>13</sup>

(74) 
$$[\text{CP} [\text{C} [\text{DP Bob}] [\text{TP will} [\text{VP give}]]]]$$
  

$$\# \text{Bob} \# \cap \# \text{will} \# \cap \# \text{give} \#$$

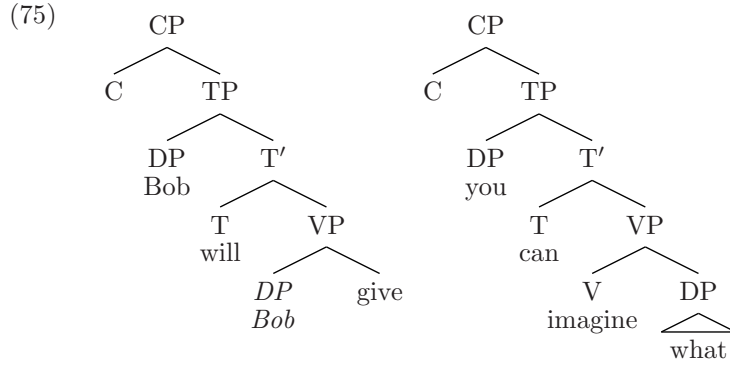
Notice that the decision to terminate the derivation at this point, requires that we can look (far) ahead: that the c-command condition on (re)merge is going to be violated is something we only know when we start deriving the other clause based on numeration  $\Psi$ . Crucially, the material left in  $\Delta$  is also part of  $\Psi$ , and this is what allows the system to leave  $\Delta$  with unfinished business. The subservient clause is now derived in a similar fashion, including the insertion of the *wh*-phrase that was left by the previous round. After *what* is tucked in, we arrive at the following representation:

<sup>13</sup>As a matter of fact, what I represent as a string, is defined as a *superstring* in Guimarães (2004), discussed in more detail in Guimarães (1999), i.e. a string containing strings made on the c-command relations amongst overt terminals:

(i) 
$$[\text{CP} [\text{C} [\text{DP Bob}] [\text{TP will} [\text{VP give}]]]]$$
  

$$[\# \text{Bob} \#] \cap [\# \text{will} \#] \cap \# \text{give} \#$$

For simplicity’s sake, I will ignore a further discussion of superstrings. What is relevant for the present purposes, is that parts of the structure are spelled out during the derivation.



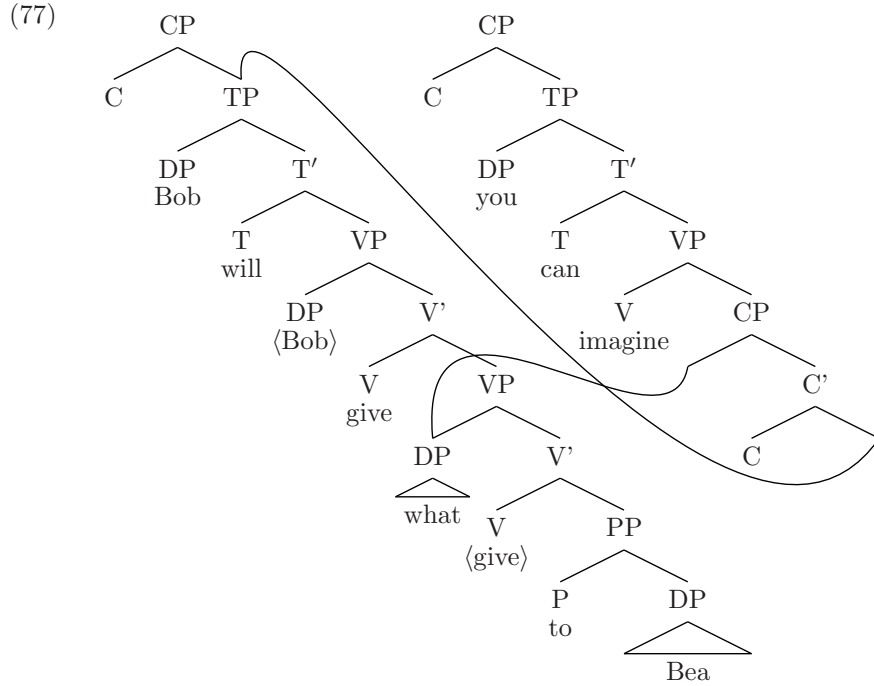
Arguably, the next step, in which the *wh*-DP becomes the complex specifier of the embedded CP (the complement of *imagine*), would again lead to a fatal violation of the LCA. This is so because in this system, the token of that *wh*-DP in the numeration consists of two elements, *wh*- and *-at* (corresponding intuitively to *wh*-thing). Spellout of *wh-at* to form *what* is thus necessary for similar reasons as in the simple case with a complex subject in (66). The system spells out intermediately, and the ‘total’ output for Phonology is now:

(76) #Bob#<sup>∧</sup>#will#<sup>∧</sup>#give#<sup>∧</sup>#you#<sup>∧</sup>#can#<sup>∧</sup>#imagine#<sup>∧</sup>#what#

We proceed and build the CP, by merging the complex *wh*-DP with C from  $\Psi$ . The conceptual beauty of the system is the next step, where the complement of C in the second (subservient) tree is derived. For this, we simply remerge the TP that was derived in the previous derivational round, i.e. the TP that now constitutes *Bob will give*. In other words, instead of assuming that the IC involves sluicing (ellipsis of the TP), Guimarães submits that the relevant TP is shared with the matrix clause. Rmerge is possible because TP ‘vacuously’ c-commands its target, C. That is, the nodes that dominate the TP in the derivation so far, are not visible in this derivational round: they are not projections of tokens of the *current* numeration that we are using ( $\Psi$ ). More specifically, the c-command condition (65) is met, in spite of the fact that there are nodes (based on my representations only CP, in his system also  $\Sigma'$  and  $\Sigma$ ) that dominate TP but not the target position of TP (as the sister of C that is made to derive the embedded clause associated with *imagine*).

We can now take up what we left in this TP, and remerge *what* as the sister of *give*, and finish building the VP in the usual fashion. The result is represented below:<sup>14</sup>

<sup>14</sup>The representation here is based on the basic idea presented in Guimarães (2004), but for expository reasons I represent regular movement in the conventional manner, and the representation of incremental spellout is ignored. In addition, M. Guimarães (p.c.) notes that the representations in Guimarães (2004:340, (03x) and onwards) involve a misleading typographic error that caused the multidominance branch that should connect SpecCP in the subservient tree with the *wh*-DP to connect to the VP containing the *wh*-DP in the master clause.



The output to PF is then the complete string in (78):

- (78)  $\# \text{Bob} \# \cap \# \text{will} \# \cap \# \text{give} \# \cap \# \text{you} \# \cap \# \text{can} \# \cap \# \text{imagine} \# \cap \# \text{what} \# \cap \# \text{to} \# \cap \# \text{Bea} \#$

Based on this representation and the short explanation here, it may seem that we are freely shifting back and forth between the derivations of the respective subtrees, but this is not the case: the master clause is finished by tucking in the remaining bits of  $\Psi$ , which are also part of  $\Delta$ . Notice that the multirooted representation is not considered a problem for linearization in this approach, because Spellout has applied during the derivation, i.e. the representation in (77) is not the output for PF as is commonly assumed in mainstream (bottom-up) minimalist approaches. The derivation of a simple Andrews-amalgam involves two instances of structure sharing between matrix and IC: the matrix TP is remerged and subsequently the *wh*-phrase in the IC is remerged when the VP in that TP is finished. This way, we not only avoid an empty position in the matrix, but also the presence of redundant (i.e. to be elided) material internal to the IC.

Guimarães (2004) claims that a couple of properties of Andrews-amalgams follow straightforwardly from this account, in particular their island-insensitivity, that was also observed by Tsubomoto and Whitman (2000). Let us consider one of his examples (Guimarães 2004:72, his (41), bracketing and indices are mine):

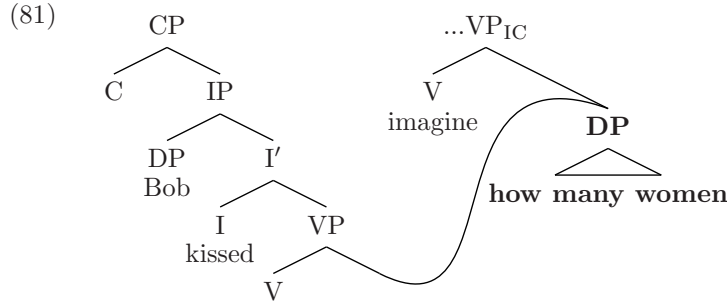
- (79)
- a. John invited a woman he met [<sub>IC</sub> you'll never guess where] to his party.
  - b. John invited [<sub>DP</sub> a woman [<sub>CP</sub> he met at the church]] to his party.
  - c. \*You'll never guess [<sub>DP</sub> where]<sub>i</sub> John invited [<sub>DP</sub> a woman [<sub>CP</sub> he met t<sub>i</sub>]] to his party.

In Guimarães' proposal, the relevant *wh*-element is remerged when computing the derivation of the subservient clause, and the island is only visible in the matrix clause. The subcomputation only 'sees' the TP (via remerge) that is part of the relative CP, and not that relative CP itself. That is, the relative clause is only an island relative to the master clause, not to the IC. Whether a particular domain functions as an island for a given element to be remerged thus depends on which subcomputation is active at that moment. In other words, it is related to the possibility of using multiple numerations, creating multirooted representations, and *not* to the top-down direction of structure building that is assumed (see Guimarães 2004:361). A careful reader could object here that it is unclear how the invisibility of the CP that explains the island insensitivity can be reconciled with the fact that the TP that it contains is accessible for remerge in that same subcomputation. How this should be defended, is an issue beyond the purposes of this section. For further discussion, the reader is referred to Guimarães (2004), in particular §V.3. The observation that amalgams are insensitive to islands in the manner illustrated in (79) is discussed and explained in chapter 4.

Unfortunately, the reduction of sluicing to TP sharing (which is arguably the most attractive aspects of this proposal) yields wrong predictions regarding the data that were argued to show the paratactic nature of amalgams. That is, if the TP is shared between matrix and IC, we expect Andrews-amalgams to be sensitive for condition C effects. (61) show that this is precisely *not* the case: the IC can contain an R-expression that is coreferent with a matrix clause pronoun. It is not easy to circumvent this problem in a system where structure building interacts directly with linearization. That is, it is hard to imagine how sluicing can be approached in a more conventional manner in this approach. However, abstracting away from top-down derivation, it is easy to imagine a multidominance approach in which only the *wh*-DP is remerged. This would then be a structure similar to (56) discussed above, but additionally involve elided structure in the IC (i.e. the shared *wh*-DP is moved out of a TP in the IC that is subsequently deleted), i.e. resembling what Van Riemsdijk proposes for TFRs and Horn-amalgams:

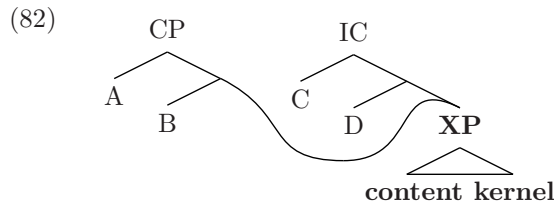
- (80) Bob kissed [you can imagine how many women].





However, it should be pointed out that contrary to Horn-amalgams, the content kernel is [+wh]. As a consequence, such an approach needs to stipulate a rule to interpret *wh-in-situ* in the matrix clause, as only the CP in the IC selects for a [+wh] complement. To my knowledge, the issue of how the [+wh] content kernel is actually interpreted in the matrix clause is ignored in Guimarães (2004).

Let me close this section by an attempt to generalize over the respective analyses. Both Van Riemsdijk and Guimarães propose an analysis of amalgams in which 1. the content kernel is simultaneously part of the matrix clause and interrupting clause, and 2. the two clauses are not subordinated with respect to each other. Abstracting away from the derivational direction, let me take the following global structure to represent the multidominance approach to amalgamation, where XP is the content kernel:



In the absence of the specific assumption that the IC also shares the TP with the matrix (in Andrews-amalgams), we expect no c-command based relations to hold between matrix clause and IC, with the exception of the content kernel (here  $\alpha$ ). More specifically, an NPI in the IC can only be licensed if it is part of the shared structure (i.e. part of the content kernel) assuming the analyses of Van Riemsdijk and Guimarães: material elsewhere does not bear any relationship whatsoever towards the matrix, at least not from a representational point of view. In addition, we expect root clause phenomena to apply to both matrix and IC, since neither of them is assumed to be subordinated to the other. For instance, the IC is expected to display V2 in languages that have V2 in main clauses (such as Dutch and German), contrary to what would be expected if the IC is analysed on a par with relative (subordinate) clauses.

## 2.4 Amalgams as layered derivations: Zwart (2006, 2009)

The fact that the ‘IC’ appears in the position where something else than a clause is expected, can also be taken as a sign that the IC is not a clause, but a complexly derived XP, where XP stands for the category that is selected for in the position where the IC appears, such as in (83) and (84):

- (83) Bob found [<sub>DP</sub> I think it was a Stradivarius].  
 (84) a. Bea kissed [<sub>DP</sub> you’ll never guess how many professors].  
 b. Bea was [<sub>AP</sub> you can imagine how angry] at me.

In this type of analysis, *I think it was a Stradivarius* is a complex DP, trivially accounting for its external identity in the matrix clause, and setting aside its internal clause-like make-up. More specifically, the complex XP can be seen as ‘reanalysed’ as the DP or AP that we understand in (83)-(84). This line of reasoning is pursued in Zwart (2006, 2009), and goes back to insights in Kajita (1977). Zwart argues that the construction types Van Riemsdijk analyses as ‘grafts’ (see 2.3) should be regarded as ‘layered derivations’: the XP that I described as the IC in amalgams, is the output of a previous derivation, and used as the input in another derivation, in which it can be reanalysed as another category (here DP and AP).

The basic idea underlying Zwart’s proposal is that the operation Merge creates ordered pairs out of an unordered set of elements, and that this need not be restricted to members with the same phrase structure status, in line with the discussion in Ackema and Neeleman (2004). That is, merge can take as its input a complex category such as *sit around and do nothing* (presumably a complex VP), and combine this with the bound morpheme *-ish* in (85), and the result is a complex adjective (this example is originally from Bauer 1983):

- (85) [sit around and do nothing]-ish

Crucially, if the numeration contains such an output of a previous derivation, this output (the complex category) is opaque, i.e. an element of this output (that was a member of another numeration) cannot interact with members of the numeration the output is part of. Zwart (2006) calls this the General Integrity Principle (my translation), in Zwart (2009) this is more implicitly related to atomicity of the output:

- (86) **General Integrity Principle** (Zwart 2006)  
 A part of a numeration A of which the output is a part of a numeration B cannot have relations with parts of B.

This accounts for some facts that can be observed in what Zwart (2006, 2009) regards as the prototypical example of a layered derivation, namely *idioms*. Consider for example the idiomatic expression *jack of all trades*:

- (87) Bob is a [jack of all trades].

It is widely known that parts of idiomatic expressions such as this cannot be moved:

- (88) #All trades, he is a jack of.

This is expected if *jack of all trades* is an atomic expression. The ideas presented in Zwart (2009) involve a top-down derivation. It is argued that the simplest form of Merge is not the conventional operation that combines *two* objects, but ‘split Merge’ which takes one object out of the numeration, yielding an ordered pair consisting of the element that is split off, say  $x$ , and the remainder of the  $N$  ( $N-x$ ), i.e.  $\langle x, (N-x) \rangle$ . The adoption of a top-down framework in Zwart (2009) is motivated by simplicity, economy and more general theoretical (Minimalist) considerations that I will not discuss here, and not by amalgamated constructions in particular. Although the outline of Zwart’s proposal below includes some examples of top-down derivations, it should be noted that the output of these derivations could also be the result of the application of a more conventional notion of Merge that takes two input objects (from a numeration, if desired).<sup>15</sup> The relevant claim is that amalgams are a prototypical example of ‘layered derivations’, and involve the merger of an (atomic) output of a previous derivation.

Zwart (2009) describes two general criteria for determining that some element is the output of a previous derivation: configurational and interpretive criteria. The second include interface effects that are relevant for the present purposes, namely *conventionalization of meaning* (i.e. idioms, compounds), categorization (with possible reanalysis that is illustrated below) and *atomization* (which creates opacity). Let us first reconsider Van Riemsdijk’s core example, which goes back to Kajita (1977):

- (89) een verre van eenvoudige kwestie  
a far from simple-SG.CG matter  
‘a far from simple matter’

In this case, the phrase *verre van eenvoudig* is used as a complex adjective and thereby acquiring the inflectional affix *-e* in this Dutch example. Notice also that *verre van* (‘far from’) does not have a locational meaning, it only describes a degree. In the context of layered derivations and numerations that can involve outputs of previous derivations, a case such as *verre van eenvoudig* is regarded the output of a previous derivation. Adopting Zwart’s split Merge for a moment, the derivation of this as in (90):

- (90) a. {verre, van, eenvoudig}  
b. merge *verre* yields  $\langle \text{verre}, \{\text{van}, \text{eenvoudig} \} \rangle$

---

<sup>15</sup>Notice that the conventional notion of Merge does not necessarily rely on the assumption of a numerations. By contrast, Zwart’s split Merge crucially involves a numeration, as the remainder of the numeration is a member of the ordered pair that is the result of split Merge. The reader is referred to Zwart (2009, 2011) for insightful and detailed discussion.

- c. merge *van* yields  $\langle \text{verre}, \langle \text{van}, \{\text{eenvoudig}\} \rangle \rangle$
- d. merge *eenvoudig* yields  $\langle \text{verre}, \langle \text{van}, \langle \text{eenvoudig} \rangle \rangle \rangle$

As was explained above, each step of split Merge takes one element of the numeration and combines it with the remainder of that numeration. The output of this derivation yields the  $n$ -tuple in (91), and can be used as a member of the numeration that is the input for another derivation, as in (92):

- (91)  $\langle \text{verre}, \text{van}, \text{eenvoudig} \rangle$
- (92)
  - a.  $\{\text{een}, [\text{verre van eenvoudig}], -e, \text{kwestie}\}$
  - b. merge *een* yields  $\langle \text{een}, \{[\text{verre van eenvoudig}], -e, \text{kwestie}\} \rangle$
  - c. merge *verre van eenvoudig* yields  $\langle \text{een}, \langle [\text{verre van eenvoudig}], \{-e, \text{kwestie}\} \rangle \rangle$
  - d. merge *-e* yields  $\langle \text{een}, \langle [\text{verre van eenvoudig}], \langle -e, \{\text{kwestie}\} \rangle \rangle \rangle$
  - e. merge *kwestie* yields  $\langle \text{een}, \langle [\text{verre van eenvoudig}], \langle -e, \langle \text{kwestie} \rangle \rangle \rangle \rangle$
- (93)  $\langle \text{een}, [\text{verre van eenvoudig}], -e, \text{kwestie} \rangle$

This way, the complex *verre van eenvoudig* is simply an atomic output that is used as an adjective, no sharing or remerge is involved to account for the affixation. Zwart (2006) approaches what look like Horn-amalgams in a similar fashion. I proceed with caution here, because the key example is not exactly a Horn-amalgam, as the examples of Horn-amalgams discussed here and elsewhere in the literature always involve a copular construction of the form (*I think*) *it is* *X*. Consider his example:

- (94)
  - Hij is naar ik meen Boedapest vertrokken.
  - he is to I think Budapest left
  - ‘He left for I think Budapest.’

It is argued that constructions like the Dutch *ik meen (dat) X* (‘I think (that) X’) are non-elliptical chunks. That is, *ik meen X* is not a sentence, but a modal modification of *X*, that Zwart calls ‘interpolations’. In these interpolations, the most embedded element is the primary element (the so-called ‘percolation-effect’ of interpolations). This is based on the observation that saying the answer in (95) basically comes down to saying the answer in (96):


- (95)
  - Q: Where is Bob going to?
  - A: I think Budapest.
- (96)
  - Q: Where is Bob going to?
  - A: Budapest.

Zwart (2006) extends the discussion to Horn-amalgams (which he refrains from calling that way), and while observing some interesting differences, the analysis is argued to be the same: constructions involving *I think (that (it is)) X* involve the merger of the output of a previous derivation. I will argue in this thesis that Horn-amalgams involve reduced *it*-clefts. Therefore, they are fundamentally

different from integrated *I think* constructions (for discussion of those, the reader is referred to Reis 1995a,b, 1997, 2002, Steinbach 1999, 2007).<sup>16</sup> This previous derivation had as a numeration {I, think, Budapest}, and applying merge (or split Merge), yields the following order, that can be represented in a basic binary tree:

(97) ⟨I, think, Budapest⟩

(98)

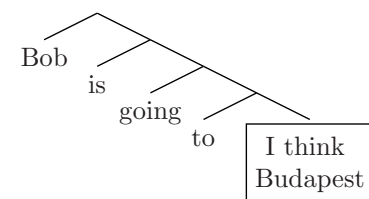


Similarly to the case discussed above, this output can serve as the input for a new derivation, in which it is a (atomic) member of another numeration:

(99) {Bob, is, going, to, [I think Budapest]}

Applying (split) Merge to this numeration yields the structure in (100):

(100)



Notice that in the multidominance proposal in van Riemsdijk (2006b,c) *Budapest* is merged as the complement of both *to* and *think*. Nothing in principle forbids that the constituent kernel be moved in the multidominance approach of Van Riemsdijk, but the result is completely ungrammatical:

(101) \*Where is Bob going to [I think (it's) \_]?

By contrast, Zwart (2006) straightforwardly precludes any movement out of the complex *I think X* by the integrity principle cited above, which renders all outputs of previous derivations opaque. Importantly, the construction *I think X* (and its variants) are restricted:

(102) \*Hij is naar {ik noem / ik ken / ik hou van} Boedapest vertrokken.  
 He is to I call I know I love Budapest left  
 'He left for I call / I know / I love Budapest.'

That is, whatever is added to *Budapest* must have a 'modal effect'. Notice that this relates to Lakoff's observation that Horn-amalgams involve hedging,

<sup>16</sup>Interestingly, the parallel between these constructions and TFRs is also observed in Zwart (2006), but the discussion of the latter is very limited. Unsurprisingly, it is suggested that TFRs are outputs of previous derivations, that are in turn used as nominals in another numeration as well.

discussed in §2.1. Arguably, this does not follow from anything in the grafting approach defended in van Riemsdijk (2006b,c). However, it is also not made explicit how such a restriction would follow from the layered derivation approach either. Zwart (2006) submits that the desired modal meaning of the complex *I think Budapest* comes into being when it is used as a nominal in another numeration, but it is not clear *prima facie* how it can be prevented that outputs such as (102) are generated.

This approach gives rise to a couple of interesting predictions. First, contrary to the other ideas presented in this chapter, this approach does not treat the IC as a clause. Instead, whatever precedes the content kernel can be seen as some modal modification of that element. The IC is then no more than a complex XP (where X is the category of the embedded constituent, comparable to my content kernel). Consequently, the ‘IC’ does not involve any type of ellipsis. The layered derivation approach yields another prediction regarding the relation between matrix and IC. Crucially, the IC is an atomic part of the numeration from which the matrix is derived. The general integrity principle rules out any interaction between elements in the IC: it is completely opaque for operations of Merge. From this, we expect that nothing can move out of the IC. However, data such as (103) suggest that interfaces must have access to the structure of the layers that are part of its derivation:

(103) The boys<sub>i</sub> heard [each other<sub>i</sub>’s parents] yell.

That is, the binding relation cannot be established between *the boys* and the reciprocal if the relevant interface cannot access the constituent in which it is contained. In other words, the opacity of the IC under these assumptions only holds for operations of Merge (i.e. at the level of syntax) and not for what is assumed to be post-syntactic, presumably agreement and binding.

## 2.5 Summary

This chapter discussed three basic syntactic approaches to amalgams after a brief discussion of Lakoff’s 1974 paper. In the relative clause approach, defended in fundamentally different ways by Tsubomoto and Whitman (2000) and Grosu (2006, 2008), the IC is analysed on a par with relative clauses. In Tsubomoto and Whitman’s analysis, the IC is generalized to be a conventional (restrictive) relative clause, whereas Grosu’s account shows striking parallels with what he proposes for Free Relatives in Grosu (2003). In both, the presence of an empty external head is assumed, which is related to the content kernel. The main empirical prediction of the idea that the IC is a type of relative clause, is that it is a *subordinate* clause. This not only implies that the matrix c-commands into the IC, but also that the IC cannot have the properties that are exclusively associated with root clauses.

This is in opposition with the multidominance approach to amalgams, as proposed more or less independently by Van Riemsdijk (1998b, 2006b,c) and

Guimarães (2004). The implicit parallel between TFRs and Horn-amalgams that underlies Grosu's proposal is drawn explicitly by Van Riemsdijk. In his account, both TFRs and Horn-amalgams consist of two independent roots which syntactically share the content kernel. Sharing is established via external re-merge of this constituent. Under these assumptions, the IC is expected to display root phenomena. In addition, the multidominance approach predicts that the matrix clause does not c-command into the IC, with the exception of the shared constituent. This yields the rather interesting prediction that the content kernel, but no other elements in the IC can entertain c-command based relationships with the matrix.

Finally, Zwart (2006) claims that Horn-amalgams and similar constructions should be regarded as outputs of previous derivations. Under such assumptions, the IC of an amalgam is derived at a previous stage, and is part of the numeration from which the matrix is built. In this approach, the IC is not a clause to begin with. Due to the general integrity of the output of previous derivations, the IC is syntactically opaque. This at least yields that IC material cannot move into the matrix.

This outline of the current literature on sentence amalgamation reflects, although not exhaustively, a couple of main themes that will recur in the remainder of this thesis: subordination versus non-subordination of the IC, the IC as a clause or complex modifier, the role of ellipsis in the IC, and the special status of the content kernel.





## CHAPTER 3

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### The non-subordinate behavior of amalgams

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The review of different ideas about sentence amalgamation puts forward a couple of empirical questions about the syntactic properties of amalgams. In turn, different assumptions regarding the status of amalgamated clauses yield different predictions. This chapter is a study of the structural properties of sentence amalgams. I focus in particular on Horn- and Andrews-amalgams, but for expository reasons, the relevant data are compared with TFRs as well. The main empirical question concerns the relation between the matrix and the IC: is the IC embedded in the matrix or is it structurally independent? Put differently, is the IC subordinated or not? If so, we expect ICs to pattern with other types of subordinated clauses, such as relative or adverbial clauses, with respect to c-command based dependencies. If not, we expect root properties such as illocutionary force and V2 in the IC. Because various scholars have drawn a parallel between amalgams and TFRs (in particular in Van Riemsdijk 2006b,c), I will address these in addition to amalgams. It is however shown that TFRs behave fundamentally different than amalgams in many ways, which is why the present work will not pursue a unified analysis.

I start out with a study of root phenomena in amalgams in §3.1. Root phenomena, such as V2 in some languages and the licensing of illocutionary adverbs, are only expected in theories that assume the matrix and the IC in amalgams to be independent sentences (as in the multidominance approach, §2.3). For these purposes, I examine patterns of V2 in Germanic amalgams, and particular restrictions on *pro*-drop in Romance languages. In addition, particular phenomena in the COMP-domain of the interrupting clauses are discussed, such as the possibility of higher adverbs and illocutionary force. The

data I present constitute stark evidence that amalgams involve two independent roots. However, as I will show in §3.2, distribution of the IC depends on the category of the content kernel and the position of the ‘missing’ constituent in the matrix, which is in fact central to Grosu’s idea. In addition to sustaining his generalization, I discuss the IC in the context of HNPS in English and extraposition in Dutch, and I reformulate Guimarães (2004)’s observation (*pace* Grosu 2006, 2008) that sentences cannot be introduced by an IC. The data in the first part of this chapter put forward a tension between the external and internal identity of the IC: it displays root phenomena, but it is distributed as its content kernel. To close off the empirical part of the chapter, §3.4 investigates the structural relationship between the two clauses. §3.3 is an overview of the predictions entailed by the respective analyses discussed in chapter 2. The discussion of the structural relationship between matrix and IC is based on a number of tests that are commonly used to detect c-command. Diagnostics will be the possibility of movement out of the IC into the matrix clause (*wh*-movement and topicalization), variable binding (anaphors and quantifiers), condition B and C effects, and the independence of sentential Force and Mood of the matrix and IC respectively. The data presented here are found to be surprisingly consistent with the multidominance analysis. However, this in itself should not be (mis)taken as *evidence* for such an analysis. This chapter provides the empirical foundation of a novel analysis of amalgams that I will present in the remainder of this thesis.

### 3.1 Root phenomena in amalgams

#### 3.1.1 V2 patterns in Germanic amalgams

It is a widely known fact that Germanic declarative main clauses display Verb Second (V2), with the notable exception of modern English. That is, the finite verb in main clauses is positioned in the second position of the sentence, regardless of what precedes it. I illustrate this here for Dutch:

- (1) [Dutch]
- a. Bill kuste Bea.  
Bill kissed Bea  
‘Bill kissed Bea.’
  - b. Eigenlijk kuste Bea Bill.  
actually kissed Bea Bill  
‘Actually, Bea kissed Bill.’
  - c. \*Eigenlijk Bea kuste Bill.  
actually Bea kissed Bill

The examples show that the fronting of the adverb *eigenlijk* (‘actually’) gives rise to inversion of subject and verb: the finite verb must stay in second position. By contrast, subordinate clauses are V-final in Dutch, as is illustrated by a

complement clause (2) and a relative clause (3). For expository reasons, the examples involve adverbs:

- (2) Ik geloof dat Bob zojuist zei dat Bill waarschijnlijk Bea kuste.  
 I believe that Bob just said that Bill probably Bea kissed  
 ‘I believe that Bob just said that Bill probably kissed Bea.’
- (3) Bob heeft waarschijnlijk een vriendin die eigenlijk niet van kussen  
 Bob has probably a girlfriend REL actually not of kiss  
 houdt.  
 holds  
 ‘Bob probably has a girlfriend who actually doesn’t like to kiss.’

V2 languages are standardly assumed to involve movement of  $V_{fin}$  to  $C^\circ$ , which goes back to the work of Koster (1975) and Den Besten (1977, 1989) (but see Zwart 1993, Koster 2000b *inter alia* for discussion). This movement is blocked by the presence of a complementizer in embedded clauses. This then accounts for the fact that embedded clauses normally do not display V2. Dutch is strict or ‘well-behaved’ in this regard. That is, V2 order can be taken as a typical root phenomenon, as embedded clauses do not display V2.<sup>1</sup> The dichotomy between the word orders in main (V2) and embedded clauses (V-final) illustrated here, globally holds for German as well. However, unlike Dutch, German does allow for so-called ‘embedded V2’ (EV2). The most well-known context of EV2 is in complement clauses of particular verbs, which Vikner (1995) classifies as ‘bridge verbs’ (for a more careful characterization, see Biberauer 2002). Importantly, EV2 in these cases is blocked when there is an overt complementizer (in German *dass*), i.e. V2 in these embedded contexts goes hand in hand with complementizer deletion. In Dutch, leaving out the complementizer in sentential complements is forbidden altogether, which under standard assumptions is taken to be the reason why Dutch does not exhibit embedded V2 altogether. I cite the relevant example from Vikner (1995:66):

- (4) [German]
- a. Er sagt das die Kinder diesen Film gesehen haben.  
 he says that the children this movie seen have  
 ‘He says that the children have seen this movie.’

---

<sup>1</sup>Within the Germanic languages, (West) Frisian, Faroese and Mainland Scandinavian languages are known to display ‘limited EV2’: V2 that occurs in the presence of an overt complementizer in the context of a restricted set of embedding verbs. By contrast, Yiddish and Icelandic have general EV2. For discussion, see De Haan and Weerman (1986), Iatridou and Kroch (1992), Reis (1997), Biberauer (2002), *inter alia*. Interestingly, De Haan (2001) argues that West Frisian embedded EV2 should be analysed in the context of paratactic (i.e. coordinative) construals, preserving the idea that V2 is essentially a root phenomenon in this language as well. This is in a similar vein as what has been argued for V2-relatives in Gärtner (2001, 2002b), Zwart (2005), that are discussed below.

- b. Er sagt, (\*das) die Kinder haben diesen Film gesehen.  
 He says, that the children have this movie seen  
 ‘He says the children have seen this film.’

Due to the obligatory absence of the complementizer, German still constitutes a strict or ‘well-behaved’ V2 language, and as such, V2 can in principle be regarded as a root phenomenon in both Dutch and German.

Another instance of EV2 in German has been observed in the context of *relative* clauses, and is discussed extensively in Gärtner (2001, 2002b). An example is (5) (example cited from Gärtner 2001:98, his (1a)):

- (5) Das Blatt hat eine Seite, die ist ganz schwarz.  
 the sheet has a side that is completely black  
 ‘The sheet has a side that is completely black.’

Gärtner calls this ‘integrated’ V2. I will not discuss the ‘embedded’ or ‘relative’ status of these special occurrences of V2 at this point. I address some interesting properties of these so-called V2-relatives (in German, but also in Dutch based on Zwart 2005) in §3.4, observing some striking parallels between these constructions and amalgams that will be revisited in chapter 7.

The contrast between word order in main and subordinate clauses in Dutch and German, and the notable exceptions to this, enables us to examine the status of the IC in amalgams. After all, the various ideas outlined in chapter 2 give rise to different expectations. Roughly put, if the IC is a subordinate clause, as is claimed in the relative clause approach in Tsubomoto and Whitman (2000) and Grosu (2006, 2008), we expect the IC to be V-final in Dutch and German. On the other hand, analyses that treat the IC as an independent clause (Van Riemsdijk 1998b, 2006b,c, Guimarães 2004) predict that the IC has V2, consistent with main clauses in these languages. Taking into account that German allows for embedded V2 in certain embedded contexts, the observed word order patterns in German amalgams are discussed in the perspective of those contexts.

Starting out with Horn-amalgams, it can directly be observed that the word order in the IC patterns with those of main clauses:

- (6) [Dutch]
- a. Bill heeft het was waarschijnlijk Bea gekust.  
 Bill has it was probably Bea kissed  
 ‘Bill kissed it was probably Bea.’
  - b. Bill heeft waarschijnlijk was het Bea gekust.  
 Bill has probably was it Bea kissed  
 ‘Bill kissed it was probably Bea.’
  - c. \*Bill heeft het waarschijnlijk Bea was gekust.  
 Bill has it probably Bea was kissed

- (7) a. Bill heeft eigenlijk dacht ik dat het Bea was gekust.  
       Bill has actually thought I that it Bea was kissed  
       ‘Bill kissed actually I thought it was Bea.’  
       b. \*Bill heeft ik eigenlijk dacht dat het Bea was gekust.  
       Bill has I actually thought that it Bea was kissed

For clarity’s sake, the word order in the amalgams in (6) and (7) should be considered on a par with the order in a complement clause that is similarly modified by a sentential adverb, as in (2) above. Clearly, the IC in Dutch amalgams cannot have the V-final structure associated with subordinate clauses. In addition, (6b) and (7) show that modifying the IC with a (fronted) adverb triggers subject-verb inversion that is associated with V2 in Dutch main clauses. This pattern may seem rather unsurprising since the IC does not involve an overt complementizer or relativizer that blocks V2 (assuming the traditional analysis of V2). That is, one could argue that the IC is a special kind of relative clause in which the relativizer is left out, and that the finite verb in the relative clause can subsequently move to the vacant position in  $C^\circ$ . This is however hard to maintain, as Dutch does not allow for relativizers to be left out (8), contrary to English (9):

- (8) de man \*(die) ik gezien heb  
       the man REL I seen have  
       ‘the man I have seen’  
       (9) the man (that) I have seen

Thus, the Dutch data support the idea that Horn-amalgams involve two root clauses, rather than a subordinated IC.

German Horn-amalgams involve a V2 pattern similar to Dutch, as is illustrated below (D. Hessler, p.c.):

- (10) [German]  
       a. Bea schlug, ich glaube dass es dieser Junge war.  
       Bea hit I believe that it this boy was  
       ‘Bea hit I believe it was this boy.’  
       b. Bea schlug, wahrscheinlich war es dieser Junge.  
       Bea schlug probably was it this boy  
       ‘Bea hit it was probably this boy.’

However, *glauben* is one of the exceptional verbs that allow for V2 in embedded clauses (see also Vikner 1995:71 for an overview of these verbs). As a result, German Horn-amalgams can involve ICs that have V2 order in both the IC and in the clause it embeds, as is illustrated below:

- (11) a. Bea schlug, ich glaube es war dieser Junge.  
       Bea hit I believe it was this boy  
       ‘Bea hit I believe it was this boy.’

- b. Bea schlug, eigentlich glaube ich es war dieser Junge.  
 Bea hit actually believe I it was this boy  
 ‘Bea hit actually I believe it was this boy.’

Since German allows for EV2 in this context, the patterns in (10)-(11) cannot directly be taken as evidence that the IC is a root clause. However, the IC cannot easily be reduced to either of the special cases of EV2 described above. First, since there is no verb that selects a sentential complement in the matrix clause, the Horn-amalgams in German are not likely a subspecies of the cases illustrated in (4). Second, Horn-amalgams do not obey the restrictions on relative clauses with V2 that are observed in Gärtner (2001, 2002b), at least not as far as their distribution in the sentence is concerned. Consider the contrast between the V2 relatives and the IC in Horn-amalgams in (12) (cited from Gärtner 2001:100, his (4a-b)) and (13):

- (12) a. Ich höre, dass jemand der Königin vorgestellt wurde,  
 I hear that someone (to-) the queen introduced became,  
 [der heisst Wolf-Jürgen].  
 that is-called Wolf-Jürgen  
 ‘I hear that someone was introduced to the queen who is called Wolf-Jürgen.’  
 b. \*Ich höre, dass [jemand, der heisst Wolf-Jürgen]], der  
 I hear that someone that is-called Wolf-Jürgen (to-) the  
 Königin vorgestellt wurde.  
 queen introduced became
- (13) Bea hat [ich glaube dass es dieser Junge war] ins Gesicht  
 Bea has I believe that it this boy was in.the face  
 geschlagen.  
 hit  
 ‘Bea has hit I believe it was this boy in the face.’

(12) shows that the V2 relative clause can only be in clause-final position. In this case it is not adjacent to the DP it modifies; it is *obligatorily* extraposed. As will be discussed in much more detail below, the position of the IC depends on the position of the ‘missing’ matrix constituent, here the object of *geschlagen* (‘hit’). So, unlike the V2 relatives in German, the IC in Horn-amalgams is not restricted to the clause-final position. Worse still, as will be shown in §3.2, ICs cannot be extraposed to begin with, i.e. they are only clause-final if their content kernel is coincidentally in that position.

Let us then turn to Andrews-amalgams. The following simple example of a Dutch Andrews-amalgam shows that the V-final order associated with subordinate clauses is disallowed:

- (14) a. Bob heeft [je raadt nooit hoeveel koekjes] gestolen.  
 Bob has you guess never how.many cookies stolen  
 ‘Bob has stolen you’ll never guess how many cookies.’  
 b. \*Bob heeft [je nooit hoeveel koekjes raadt] gestolen.  
 Bob has you never how.many cookies guess stolen

German Andrews-cases behave similarly, which is shown in the data below, along with the relevant order that is expected in an embedded clause in (16) (D. Hessler, p.c.):

- (15) [German]  
 a. Bob hat, eigentlich kann sich niemand vorstellen wieviel  
 Bob has actually can REFL no.one imagine how.many  
 Kekse gestohlen.  
 cookies stolen  
 ‘Bob stole actually no one can imagine how many cookies.’  
 b. \*Bob hat, niemand sich eigentlich vorstellen kann wieviel  
 Bob has no.one REFL actually imagine can how.many  
 Kekse gestohlen.  
 cookies stolen
- (16) Bea denkt dass niemand sich eigentlich vorstellen kann wieviel  
 Bea thinks that no.one REFL actually imagine can how.many  
 Kekse Bob gestohlen hat.  
 cookies Bob stolen has  
 ‘Bea thinks that no one can actually imagine how many cookies Bob stole.’

Also these German V2 patterns cannot easily be reduced to embedded V2, basically for the same reasons as stated in the above: the matrix clauses do not involve embedding verbs, i.e. the IC is probably not some kind of complement clause, and (15) clearly shows that the IC need not be clause-final, which is a restriction on Gärtner’s V2 relative clauses (see (12) above).

The observed pattern does *not* hold for TFRs, considering the contrast between the following Dutch and German sentences:

- (17) [Dutch]  
 a. Bill verbrandde wat hij als zijn meesterwerk beschouwde.  
 Bill burned what he as his masterpiece considered  
 ‘Bill burned what he considered to be his masterpiece.’  
 b. \*Bill verbrandde wat beschouwde hij als zijn meesterwerk.  
 Bill burned what considered he as his masterpiece

(18) [German]

- a. Bob ist was man nett nennt.  
Bob is what people nice call  
'Bob is what people call nice.'
- b. \*Bob ist, was nennt man nett  
Bob is what call people nice

That is, the pairs in (17)-(18) suggests that Dutch TFRs must have V-final order, which is not surprising considering the fact that this is the regular order of relative clauses in these languages.

Apart from the position of  $V_{fin}$ , it has been observed (Van Riemsdijk 1998b, Den Dikken 2005, Van Riemsdijk 2000a, 2006b) that TFRs do allow for an exceptional order, that is otherwise banned in regular relative clauses. This is shown by a TFR (19) and a regular restrictive relative clause (20):

(19) [Dutch]

- a. Bob is wat je leuk noemt.  
Bob is REL you nice call  
'Bob is what you call nice.'
- b. Bob is wat je noemt leuk.  
Bob is REL you call nice  
'Bob is what you call nice.'

- (20) a. Bob is iemand die ik leuk vind.  
Bob is someone REL I nice consider  
'Bob is someone that I consider to be nice.'
- b. \*Bob is iemand die ik noem leuk.  
Bob is someone REL I call nice

Somehow, Dutch TFRs allow for optional extraposition of the (predicative) content kernel. Apparently, the fact that the content kernel is an AP does not play a role, although APs are not commonly candidates for extraposition in Dutch. Van Riemsdijk relates this to data that involve attributively used TFRs (see also §3.2), arguing that in these cases, extraposition of the AP is obligatory to meet the adjacency requirement on prenominal adjectives. In this case the adjective can obtain inflection associated with the features of the noun:

- (21) a. Bob is een wat ik noem leuk-e jongen.  
Bob is a what I call nice-CG.SG boy:CG.SG  
'Bob is a what I'd call nice boy.'
- b. \*Bob is een wat ik leuk-(e) noem jongen.  
Bob is a what I nice-CG.SG call boy:CG.SG

How this explains the *optional* extraposition of nominal predicates in TFRs is not clear. That is, the explanation suggested for (20) does not apply to (22):



- (22) a. Bob is wat je een rokkenjager noemt.  
 Bob is what you a skirt.chaser call  
 ‘Bob is what you call a womanizer.’  
 b. Bob is wat je noemt een rokkenjager.  
 Bob is what you call a skirt.chaser  
 ‘Bob is what you call a womanizer.’

The possibility to extrapose the content kernel seems to be an idiosyncratic property of TFRs; but it does not reflect a root property, as extraposition of the regular categories in Dutch (relative CPs and PPs) is possible in both root and embedded contexts. By contrast, German TFRs in which the content kernel (here, a predicate AP) has been extraposed, are reported to be more degraded than their (regular) V-final counterparts, which confirms the contrast between Dutch and German TFRs observed in Van Riemsdijk (1998b, 2000a) (data from D. Hessler, p.c.):

- (23) [German]  
 a. Bob ist was man nett nennt.  
 Bob is what people nice call  
 ‘Bob is what people call nice.’  
 b. ?\*Bob ist was man nennt nett.  
 Bob is what people call nice

The exceptional extraposition possibility can thus be taken as an idiosyncrasy of Dutch TFRs, and it does not *prima facie* relate to the (non-)subordinate status of TFRs. I readdress the issue in §3.2.2.

Summing up, the word order patterns in Dutch and German show that the IC in amalgams patterns with main clauses: they are V2 and the V-final order is ungrammatical. This holds for both Horn- and Andrews-amalgams, but not for TFRs. In addition, I have shown that V2 in German amalgams cannot be reduced to the well-known instances of EV2 in this language. The clear V2 patterns in amalgams can therefore be taken as evidence that the IC is a root clause.

### 3.1.2 Null subjects in Romance amalgams

Although the present work is aimed at amalgams in Germanic languages primarily, this section briefly discusses some observations in Romance Andrews-amalgams, and expands on the data discussed in Guimarães (2004).

The availability of null subjects (*‘pro-drop’*) is a well-known property of Romance languages (with the notable exception of French). That is, pronominal subjects are only expressed when they have a special meaning, but are preferably left out (Chomsky 1981’s Avoid Pronoun Principle). Traditionally, this has been related to rich inflectional paradigms of the verb in the language: the null subject is licensed when it can be recovered by the inflection on the verb (see Chomsky 1981, Rizzi 1986, Jaeggli and Safir 1989, *inter alia*). The al-

lowance of null subjects has been argued to be licensed only when its antecedent has topic discourse status, but is not restricted to subordinate contexts (see in particular the seminal work in Cardinaletti and Starke 1999). This explains the preference for a null subject in Italian (example cited from Grimshaw and Samek-Lodovici 1998, their (12)):

- (24) [Italian]
- a. Questa mattina, Gianni ha visitato la mostra.  
this morning, Gianni has visited the exhibition  
'This morning, Gianni visited the exhibition.'
  - b. Più tardi, { $e_i$ / ?egli/ ??lui} ha visitato l'università.  
more late,  $\emptyset$ / he/ he has visited the.university  
'Later on, he visited the university.'

The strong preference for null subjects in this pair of subsequent sentences (i.e. a type of paratactic context), suggests that pronominal subjects, granted that they co-refer with an antecedent that has discourse topic status, can also be dropped in amalgams. This turns out to be the case indeed in the following Italian Andrews-amalgams. The contrast was reported in terms of a *preference* (G. Fiorin, C. Melloni and D. Delfitto, p.c.) that I mark (here and henceforth) with '✓':

- (25)
- a. ?Maria<sub>i</sub> ha baciato lei<sub>i</sub> non si ricorda quanti uomini  
Maria has kissed she not REFL remember how.many men  
alla festa.  
at.the party  
'Maria has kissed she doesn't remember how many men at the party.'
  - b. ✓ Maria<sub>i</sub> ha baciato  $e_i$  non si ricorda quanti uomini  
Maria has kissed  $\emptyset$  not REFL remember how.many men  
alla festa.  
at.the party  
'Maria kissed she didn't remember how many men at the party.'

Similar patterns are reported for Galician and Spanish in Guimarães (2004). So far, the licensing of null subjects does not tell us anything in particular about the root or subordinate status of the IC in amalgams: null subjects are possible (even preferred) in both paratactic and embedded configurations. However, keeping the Italian data in mind, it is particularly interesting to have a closer look at paratactic construals and amalgams in Brazilian Portuguese, which has undergone a loss of verbal morphology. It has been argued in the literature (see for example Rodrigues 2002, Ferreira 2004, Guesser 2008, and references cited therein) that as a consequence, Brazilian Portuguese has become much more restricted with respect to null subjects. In particular, third singular null subjects with a referential and specific reading are disallowed (Rodrigues 2002:162-3, her (2d) and (4)):

- (26) [Brazilian Portuguese]
- a. \**e* não comeu nada ontem.  
 $\emptyset$  not eat anything yesterday  
*int.* ‘He didn’t eat anything yesterday.’
  - b. *e* não usa mais saia.  
 $\emptyset$  not wear any.more skirts  
 ‘Skirts are not worn anymore.’

By contrast, in European Portuguese, (26b) has a specific reading, i.e. it means ‘he/she does not wear skirts any more’.<sup>2</sup> However, certain contexts *do* allow for empty categories, namely in embedded contexts (these data are from Guimarães 2004:101, his (105)):

- (27)
- a. Maria<sub>i</sub> não se lembra quantos homens ela<sub>i/j</sub> beijou  
 Maria not REFL remember how.many men she kissed  
 na festa.  
 at.the party  
 ‘Maria doesn’t remember how many men she kissed at the party.’
  - b. Maria<sub>i</sub> não se lembra quantos homens e<sub>i/\*j</sub> beijou  
 Maria not REFL remember how.many men  $\emptyset$  kissed  
 na festa.  
 at.the party  
 ‘Maria doesn’t remember how many men she kissed at the party.’

Importantly, the subordinate null subject in (27b) can only be coreferential with *Maria* (see Rodrigues 2002 for discussion and analysis of the empty position in Brazilian Portuguese). Contrary to other Romance languages, there is no preference for the interpretation of the overt pronoun, its reference may either be joint or disjoint in (27a). Third person null subjects are prohibited in main clauses, as is illustrated by the following sentences, again adopted from Guimarães (2004:102, his (106)):

- (28)
- a. Maria<sub>i</sub> beijou muitos homens na festa. Ela<sub>i</sub> nem se  
 Maria kissed many men at.the party. She not.even REFL  
 lembra quantos.  
 remember how.many  
 ‘Maria kissed many men at the party. She doesn’t even remember how many.’
  - b. \*Maria<sub>i</sub> beijou muitos homens na festa. e<sub>i</sub> nem se  
 Maria kissed many men at.the party.  $\emptyset$  not.even REFL  
 lembra quantos.  
 remember how.many

<sup>2</sup>In fact, Rodrigues (2002) argues that (26b) is ambiguous in European Portuguese for the specific and the generic reading, but A. Cardoso (p.c.) notes that the latter is expressed by an impersonal construction.

Guimarães (2004) uses the contrast between embedded and main clauses in Brazilian with respect to the licensing of an null subject as a test-case for amalgams in this language. After all, only the first allow for a null subject, and ungrammaticality of null subjects in the IC of an amalgam can then be seen as an indication that the IC is a root clause. He observes that Andrews-amalgams indeed pattern with main clauses, considering the ungrammaticality of (29b):

- (29) a. Maria<sub>i</sub> beijou ela<sub>i</sub> nem se lembra quantos homens  
 Maria kissed she not.even REFL remember how.many men  
 na festa.  
 at.the party  
 ‘Maria kissed she doesn’t even remember how many men at the party.’  
 b. \*Maria<sub>i</sub> beijou e<sub>i</sub> nem se lembra quantos homens  
 Maria kissed Ø not.even REFL remember how.many men  
 na festa.  
 at.the party

The ungrammaticality of (29b) contrasts sharply with the preference for the null subject in Italian (26). Thus, where genuine *pro*-drop languages such as Italian can leave out pronominal, 3<sup>rd</sup> person coreferent subjects in the IC of amalgams, the Brazilian Portuguese amalgams disallow *pro*-drop, as is consistent with the ban on *pro*-drop of these elements in main clauses. This can be taken as evidence that the IC is not subordinate to the matrix clause, and nicely complements the V2 patterns observed in Germanic.

### 3.1.3 Speaker-oriented adverbs and illocutionary force

In this section, I use so-called speaker-oriented adverbs (such as *frankly*) and independent illocutionary force as diagnostics for the root status of the IC. Let me start out by explaining what I take to be ‘illocutionary force’ in relation to the notions ‘clause type’, as these concepts are often assimilated in the literature. I argue that this is wrongly so. This provides a foundation for our present purposes, but it also paves the way for claims about the layers of the CP in relation to sluicing in chapter 4, and the role of speaker-orientation in amalgams in chapter 6.

#### Setting the stage: illocutionary force *versus* clause type

Traditionally, the meaning of a sentence has been divided into its propositional content and its illocutionary force (Austin 1961, Searle 1969, 1979). The latter is best described as how the sentence is intended. A non-exhaustive list of illocutionary forces is: an assertion, a question, an order, a declaration, *et cetera* (see in particular Searle 1979 for an overview, albeit in different terms). Often, the type of illocutionary force occurs with a particular clause type, i.e. an assertion often comes in the shape of a declarative sentence, a question

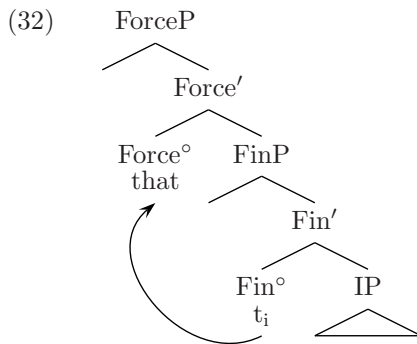
as an interrogative, and an order as an imperative. In current linguistic theorizing, there is a predominant trend to represent force at the level of syntax via so-called ‘force-indicating’ elements (the notion itself goes back to Searle and Vanderveken 1985:2, and is explicitly formulated as a *syntactical* feature responsible for particular word order or mood). In current generative theories, these are often taken to be features (or operators) on  $C^\circ$ , such as [+WH] or [+Q] for interrogatives (Cheng 1991), [+IMP] for imperatives (Han 1998, Rooryck 1992).

In Rizzi (1997)’s influential work on the inner architecture of the CP, force-indicating elements have their own functional layer ‘ForceP’. Central to his idea (Rizzi 1997:283) is that the COMP (or, C) domain is ‘*the interface between a propositional content (expressed by IP) and the superordinate structure (a higher clause or, possibly, the articulation of discourse, if we consider a root clause)*’. The ‘split CP’ involves the following layers:

- (30) Force > (Top) > (Foc) > Fin  $\triangleright$  IP

Thus,  $\text{Force}^\circ$  hosts the clause-typing operators and  $\text{Fin}^\circ$  expresses finiteness (i.e. mood and tense distinctions).  $\text{Top}^\circ$  and  $\text{Foc}^\circ$  (topic and focus) are optional and possibly inactivated. Relevant for the present discussion, but also for the discussion in chapter 6, is that ForceP is assumed to be projected in both root and embedded contexts (this is in fact made explicit in the citation above). In fact, in a complement clause as in (41) the English finite complementizer *that* is assumed to move to  $\text{Force}^\circ$  as in (40):<sup>3</sup>

- (31) Bea believes that Bill is blond.

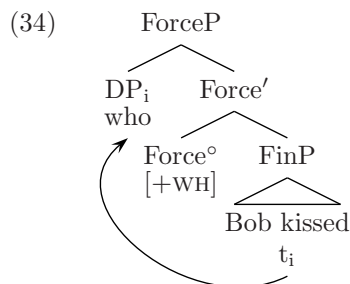


Rizzi’s approach then entails that (41) involves two ForcePs, one associated with the matrix clause, and one with the complement clause. In a system that intends to represent clause types in syntax, (41) then consists of two declarative sentences. However, under such assumptions, a *wh*-complement clause such as

<sup>3</sup>Several scholars (e.g. Platzack 1994, Branigan 1996, *inter alia*) have implemented this idea to account for V2 in Germanic languages, suggesting that  $\text{Force}^\circ$  is the position that attracts the finite verb in these languages. In case the complementizer occupies this position, the finite verb remains in the IP.

(33) involves a ForceP as well:

(33) Bea wondered who Bob kissed.



Due to the presence of a *wh*-operator in ForceP, the clause type of the complement clause is interrogative, whereas the matrix clause that embeds it, is declarative (i.e. [-*wh*]). Consequently, we are compelled to believe that the sentence as a whole expresses two types of illocutionary force. This is intuitively incorrect: (33) is an assertion, and not a question. In other words, whereas embedded clauses have clause types, illocutionary force cannot be embedded. This issue has recently been revived in for instance Price (1994) and Green (2000), but it goes back to a longstanding philosophical debate centered around speech acts (in particular assertion) in embedded contexts (eg. Geach 1960, 1965). Green (2000) formulates this thesis as follows:

- (35) **Embedded Force Exclusion** [Green (2000:440)]  
 If  $\phi$  is either a part of speech or a sentence, and  $\phi$  contains some indicator of  $f$  of illocutionary force, then  $\phi$  does not embed.

In what follows here and in chapter 6, I will adhere to this claim. Consequently, I assume that *if* illocutionary force is to be represented in syntax, this is restricted to root clauses.

Within generative linguistics, the implication of Rizzi's cartographic approach to the CP has been criticized in particular by McCloskey (2006) and Haegeman (2002, 2006). McCloskey distinguishes between interrogatives that are a speech act and those that are not (i.e. embedded interrogatives, he uses the term 'interrogative sentence radicals'). In a similar vein, Haegeman (2002, 2006) argues for an amendment of the split CP that incorporates both subordination and speaker-orientation. Haegeman (2002), in line with insights in Bhatt and Yoon (1991), proposes an additional head 'Sub' that serves to subordinate the clause. Haegeman (2006), Rizzi's 'Force' is replaced by the notion 'speaker deixis' (SD) (related to observations in McCloskey 2006). Importantly, root clauses lack Sub but inherently contain SD. This appeals to the intuition that a speech act necessarily involves the speaker. Under such assumptions, we can postulate the reverse to hold for complement clauses of the types in (41) and (33): they always involve Sub (not necessarily realized overtly) but not SD. Extending such an idea to relative clauses, I propose the following heads (at

least) to be part of root and embedded clauses:

- (36) a. **Embedded clause**  
           Sub > Fin ▷ IP  
       b. **Root clause**  
           SD > Fin ▷ IP

It should be noted that in Haegeman (2006), the presence or absence of the SD layer is the distinguishing factor between two types of adverbial clauses, one of which shows root phenomena (her ‘peripheral’ adverbial clauses). Importantly, she takes  $\text{Top}^\circ$  and  $\text{Foc}^\circ$  to be dependent on the presence of SD, and both types of adverbial clauses under discussion involve Sub. This accounts for the fact that peripheral adverbial clauses allow for topicalization (Haegeman 2006:1657), which is commonly taken to be an operation restricted to root contexts (see also the discussion in §3.4.1 below for topicalization in the IC). I abstracted away from the possibility of a co-occurrence of Sub and SD, as this is not relevant for the discussion of amalgams. How clause-typing needs to be implemented precisely in a layered CP is an issue I leave open here.

Based on these considerations, I adopt a (narrow) definition of the term illocutionary force that is directly related to a speech act. In line with McCloskey (2006), I distinguish between assertion (ASSERT), question (QUEST), order (ORDER) and exclamation (EXCL) as types of illocutionary force. Given the considerations above, this is to be seen apart from the clause type of the sentence. Obviously, there is a strong connection between the two: assertions mostly come in the shape of a declarative sentence, and asking a question is mostly done by using an interrogative, ordering with imperatives, *et cetera*. However, as is discussed at length in Gunlogson (2001), declaratives can be used as questions when they have they are uttered with the rising intonation associated with (polar) questions. This then creates a ‘declarative question’:

- (37) a. Is it raining?  
           [QUESTION – INTERROGATIVE]  
       b. It’s raining?  
           [QUESTION – DECLARATIVE]

On similar grounds, Zanuttini and Portner (2003) argue that there is no such thing as an ‘exclamative clause type’. I address their account in §6.3, in the context of Andrews-amalgams.

Much related to the structure of the left periphery is the well-known behavior of certain sentential adverbs. In particular, the appearance of English adverbs such as *frankly*, *confidentially speaking*, *honestly*, and *(un)fortunately* is associated with root clauses as they modify the relation between speaker and utterance (i.e. ‘speaker-oriented’ or ‘illocutionary’ adverbs, see Jackendoff 1972, Hooper and Thompson 1973, Bellert 1977, Potts 2005, Haumann 2007). Since Cinque (1999)’s seminal work concerning the ordering of adverbs, sentential adverbs like these are commonly taken to be the in SpecForceP (Rizzi

1997 in the sense of). In the context of the considerations laid out here, we could alternatively claim that require speaker-anchoring in the shape of the presence of an ‘SD layer’ in the CP (Haegeman 2006).

### Speaker-oriented adverbs in the IC

To start out with adverbs, the following English examples show how speaker-oriented adverbs can be used to detect the root status of a given clause (the data and judgments in (39) are adapted from Haumann 2007):

- (38) Frankly, I think Bill is quite handsome.  
 (39) a. \*I know a woman whose brother frankly is quite handsome.  
       b. \*I think that frankly, Bill is quite handsome.

However, it has been pointed out by me (J. Hoeksema, p.c.) that the use of *frankly* in embedded contexts that are clearly part of a speaker-oriented context, such as (39a) are quite acceptable. In this case, such a context is created by the assimilation of subject and speaker in the matrix sentence. This contrasts with the use of *frankly* in a case such as (40):

- (40) \*Bob thinks that frankly, Bill is quite handsome.

In addition, it seems that variants of (39b) can be found easily on internet, such as (41):<sup>4</sup>

- (41) Look, I think that, frankly, she does not understand issues concerning Hispanics and Latin America.

However, in cases such as these, *frankly* is used as a parenthetical (as is suggested by the use of commas). As such, it could be argued that it takes scope over the entire proposition including the embedded sentence, and not just the embedded sentence. I leave these considerations about the status of illocutionary adverbs as root diagnostic open here.

In line with the literature cited above, as well as Haegeman (2002), I assume that *frankly* is a *bona fide* speech act modifying adverb and cannot modify embedded CPs. In Haegeman’s terms, this would be because these CPs lack the functional layer *frankly* is associated with (her SD). Notice that (39a) would also follow from Rizzi (1997)’s assumption that relative operators are in SpecForceP. The ungrammaticality of (39) is in particular relevant for the hypothesis that the IC in amalgams is a kind of relative clause. More specifically, the hypothesis that the IC is a *restrictive* relative clause, as appositive (i.e. non-restrictive) relative clauses (ARCs) *can* be modified by speaker-oriented adverbs, an observation that goes back to for instance Emonds (1979:239, his (64a)):

- (42) The boys, who have frankly lost their case, should give up.

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<sup>4</sup>Example from <http://topics.dallasnews.com/quote/02H19ZigJ46I3?q=Sarah+Palin>



This exceptional root-like behavior, amongst other properties of appositive relative clauses, has led to various proposals of non-restrictive relative clauses as a non-subordinate, paratactic construal (i.e. in terms of parenthetical and/or coordination) since Emonds (1979), for discussion, see for instance McCawley (1982), Bianchi (1999) and De Vries (2006b). By contrast, if we consider the IC to be a *regular* subordinate, non-root clause, we expect it to disallow modification by this class of adverbs (here, I use *frankly*, *seriously* and *honestly*). This is not the case, as the English Horn-amalgam below shows:

- (43) Bill stole [{frankly/seriously/honestly}, I thought it was just a dollar] from his grandma.

Modifying Andrews-amalgams in a similar fashion faces a possible confound, as the examples used so far consistently involve a 2<sup>nd</sup> person pronoun as the subject of an attitude predicate (here *guess*), and modification with a *speaker*-oriented adverb seems to independently give rise to pragmatic oddity:

- (44) a. #Frankly, you consider Bob to be handsome.  
b. #Frankly, you can imagine how much money Bill stole from his grandma.

Intuitively, these examples are pragmatically anomalous because *frankly* is speaker-oriented, whereas these main clauses assert a propositional attitude of a second person. In chapter 6, I show amalgams are inherently speaker-oriented, using examples with a 2<sup>nd</sup> person subject in the IC *can* be modified by *frankly*. For now, the Andrews-amalgams are construed with a 1<sup>st</sup> person subject, similar to the standard case of Horn-amalgams. (45) shows that also in this case, speaker-oriented adverbs can modify the IC:

- (45) Bill stole [{frankly/seriously/honestly}, I don't even remember how much money] from his grandma.

The Dutch adverb corresponding to the English *frankly* is the complex phrase *om eerlijk te zijn* ('to be honest'). The data in (46)-(47) show that the above patterns can be reproduced in Dutch amalgams:

- (46) Bill heeft [om eerlijk te zijn dacht ik dat het maar een dollar was] [Dutch]  
Bill has to honest to be thought I that it just a dollar was  
gestolen van zijn oma.  
stolen from his grandma  
'Bill stole frankly, I thought it was just a dollar from his grandma.'

- (47) Bill heeft [om eerlijk te zijn durf ik niet te zeggen hoeveel geld]  
 Bill has to honest to be dare I not to tell how.much money  
 gestolen van zijn oma.  
 stolen from his grandma  
 ‘Bill stole frankly, I wouldn’t be able to tell you how much money from  
 his grandma.’

These data are in line with the observations in §3.1.1 and §3.1.2 above, and corroborate the view that the IC of amalgams is a root clause, and not a subordinate clause. Recall that this is explicitly assumed in the multidominance approach advocated by van Riemsdijk (2006b,c), Guimarães (2004), in which the derivations involve independent roots.

As can be inferred from the ungrammaticality of (39), restrictive relative clauses cannot be modified by speaker-oriented adverbs such as the English *frankly*. Interestingly, TFRs *can* be modified by these adverbs, here again illustrated for English and Dutch:

- (48) Bill is what I {frankly/honestly speaking} wouldn’t exactly call an  
 ideal son in law.
- (49) [Dutch]  
 Bill is wat ik om eerlijk te zijn nou niet bepaald een ideale  
 Bill is what I to honest to be exactly not particularly a perfect  
 schoonzoon zou willen noemen.  
 son.in.law would want call  
 ‘Bill is what I frankly wouldn’t exactly call an ideal son in law.’

Thus, TFRs behave like root-clauses in this respect, and pattern with ARCs and amalgams.

### Independent force in the IC

In the context of the considerations above, the following examples illustrate that subordinate clauses cannot carry illocutionary force independently from the root clause in which they are contained. For instance, a *wh*-question that is embedded in a declarative host does not constitute a question act but is part of an assertion in (51):<sup>5</sup>

- (50) a. Bea believes that Bob is a true gentleman.  
 [ASSERT]  
 b. Does Bea believe that Bob is a true gentleman?  
 [QUESTION]

---

<sup>5</sup>At first sight, independent illocutionary force seems to be possible in variants of (51) that report direct speech, as in (i):

(i) Bill wondered: “Who should I marry?”

(continued on the next page)

- (51) a. Bill wondered [who he should marry].  
           [ASSERT]  
       b. \*Bill wondered [who should he marry?].

Here, (51a) is an assertion (arguably with a declarative matrix and an interrogative matrix); the *wh*-complement is not understood as an independent question act. This is further illustrated in (51b), which shows that the *wh*-complement cannot have the rising intonation and inversion associated with main *wh*-questions.

Similarly, the illocutionary force of a sentence that contains a restrictive relative clause is associated with the force of the matrix clause:

- (52) a. Bill likes a girl who wears mauve socks.  
           [ASSERT]  
       b. Does Bill like a girl who wears mauve socks?  
           [QUESTION]

This further corroborates the idea that a relative CP does not involve a layer that is necessary for the expression of an independent speech act, such as Haegeman's SD. It has been argued by various scholars that ARCs are an exception to this, in support of the nowadays predominant view that ARCs should be analysed as parentheticals. This goes back to at least Ross (1967:435), who observes that an ARC can maintain its declarative 'force' in an interrogative matrix:

- (53) Is even Clarence, who is wearing mauve socks, a swinger?  
           [QUESTION/ASSERT]

This is intuitively correct: contrary to (51), (53) expresses *two* messages. Under the present terminology, (53) constitutes both a question (*Is even Clarence a swinger?*) and an assertion (*Clarence is wearing mauve socks*). In chapter 6, I will reformulate what is expressed in parentheticals in terms of speaker-oriented content, elaborating on Reinhart (1983) and the distinction between *at-issue* (main clause) and 'CI meaning' (parenthetical) in Potts (2002, 2005). But if ARCs are truly independent with respect to illocutionary force, we expect ARCs to be able to constitute questions as well. As (54) shows, this is not the case:

- (54) a. Is even Clarence, who Bill kissed, a swinger?  
       b. \*Is even Clarence, who did Bill kiss? a swinger?

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The quote seems to be independent from its reporting clause, and can have the independent intonation associated with questions. Interestingly, Krifka (2001:31) takes reported direct speech to be a *bona fide* case of *embedded* speech acts. However, this relies on a specific definition of speech acts, and as argued above, this is a controversial idea (for discussion, see McCloskey 2006). In the view that speech acts inherently involve the speaker, it is questionable if the quoted question can be seen as a speech act at all in such reporting contexts, as the point of view shifts to whoever is quoted (Reinhart 1983). I return to quotative contexts in chapter 6 (§6.2) in the context of Horn-amalgams.

Arguably, the derivation of the ARC is blocked by the presence of a relative operator: there can be no *wh*-movement to create the interrogative clause type. As such, the impossibility of an ARC as a question is illustrative of the strong connection between illocutionary force and clause type. It does not mean ARCs do not express illocutionary force, nor that force or clause types in parentheticals are generally restricted. To the contrary, the clausal parentheticals in (55) can have all kinds of force:

- (55) a. Clarence – is she still wearing those mauve socks? – is a swinger.  
[ASSERT/QUESTION]  
b. Clarence – how strange she is! – is wearing mauve socks.  
[ASSERT/EXCL]

The presence of independent illocutionary force in parentheticals (including ARCs) is indicative of their root (i.e. non-subordinate) status. Interestingly, amalgams behave exactly like parentheticals in this respect:

- (56) a. Bob found – [was it a Stradivarius?] – in his attic.  
[ASSERT/QUESTION]  
b. Bob found – [how strange that it turned out to be a Stradivarius!] – in his attic.  
[ASSERT/EXCL]

The ICs in these cases express a question and an exclamation, which is independent of their (assertive) matrix clause. Notice that in these cases, the prosody of the IC is associated with those of root questions and exclamations. This is expected when they express an independent illocution. The same can be witnessed in Andrews-amalgams:

- (57) a. Bob found – [can you believe what?!] – in his attic.  
[ASSERT/QUESTION]  
b. Bob found – [guess what!] – in his attic.  
[ASSERT/ORDER]

The combination of more than one clause type in a sentence has been associated with both parentheticals (see (55)) and particular coordinative constructions (see Mittwoch 1976, Verstraete 2005), but crucially *not* with subordinate clauses. These data thus provide evidence for an approach to amalgams in which the IC is an independent root.

If amalgams involve two root clauses, we would (almost trivially) expect the matrix to be able to be as free as the IC. Surprisingly, this is not the case, as the matrix clause of amalgams appears to be restricted where illocutionary force is concerned. This is illustrated by the complete unacceptability of following examples:<sup>6</sup>

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<sup>6</sup>Interestingly, Hans-Martin Gärtner (p.c.) pointed out to me that the following kind of example is considerably better (*continued on the next page*):

- (58) a. \*Did Bob find [you'll never guess what] in his attic?  
[QUESTION/ASSERT]  
b. \*How odd that Bob found [you'll never guess what] in his attic!  
[EXCL/ASSERT]
- (59) a. \*Did Bob find [I think it was a Stradivarius] in his attic?  
[QUESTION/ASSERT]  
b. \*How odd that Bob found [I think it was a Stradivarius] in his attic!  
[EXCL/ASSERT]

Apparently, the matrix clause can only assert its propositional content. This is further illustrated by (60), which shows that the matrix cannot be a conditional clause (I thank J. Hoeksema for pointing this out to me):

- (60) a. \*If you feed the dog [I think it's fish], he'll meow.  
b. \*If you feed the dog [you can imagine how much fish], he'll meow.

This sets amalgams apart from regular parentheticals, as no such restriction applies to the matrix:

- (61) Did Bob – [he is so stupid] – sell the Stradivarius he found?  
[QUESTION/ASSERT]

Finally, let us briefly examine TFRs with respect to illocutionary force. The fact that they allow for modification by speaker-oriented adverbs suggests that they behave like root clauses, possibly on a par with appositive relative clauses, but this is not the case. Consider (62):

- (62) Is Bea what you'd regard as the perfect daughter in law?  
[QUESTION]

Since the present work is primarily concerned with the structural (and not the pragmatic) properties of amalgams, I won't explicitly discuss this issue in the chapters to come.

Contrary to the ARC in (53) or the amalgams in (56)–(57), the TFR does not have independent illocutionary force. Intuitively, the TFR (65) is understood as part of the question, not as an independent statement as is the case in ARCs. Put differently, the ARC provides additional information to *Clarence* that does not affect what is asked in (53). By contrast, the TFR appears to express information that belongs to the question about the property that holds for *Bea*. The difference is perhaps best illustrated when we detach the relative clauses from their matrices: as (63) shows, the matrix still constitutes the same question and is unaffected when the ARC is detached (detachability is a well-

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(i) ?Did Bob really find [was it a Stradivarius?] when he was tidying the attic?

It should be noted though, that in such a case there are *two* questions: the IC has a separate intonation contour with a rising on *Stradivarius*, as has the matrix on *attic*. The observation that the IC has independent illocutionary force is thus corroborated by such cases.

known characteristic of parentheticals, see also §6.1):

- (63) a. Is even Clarence, [<sub>ARC</sub> who is wearing mauve socks], a swinger?  
 b. Is even Clarence a swinger?

This is not possible in case of TFRs (64), when the TFR is left out: even though in this particular case the matrix without the TFR still constitutes a grammatical question, it is not the same question. The semantic non-detachability of TFRs is reminiscent of the behavior of restrictive relative clauses (RRCs, (65)), at least where the meaning of the sentence is concerned:

- (64) a. Is Bill dating [<sub>TFR</sub> what you'd regard as the perfect daughter in law]?  
 b. #Is Bill dating?  
 (65) a. Is Bea someone [<sub>RRC</sub> who you'd regard as the perfect daughter in law]?  
 b. #Is Bea someone?

Taking the above observations about question formation in relatives into consideration, it seems unsurprising that a TFR cannot carry any type of illocutionary force independent of the matrix clause. For instance, it is impossible for a TFR to be a question while the matrix is declarative:

- (66) \*Bea is [what would you regard as the perfect daughter in law?].  
 [ASSERT/QUESTION]

In fact, Van Riemsdijk (2006b,c), argues that the ungrammaticality of examples such as (66) is due to relative *wh*-movement in the TFR, similar to what I have claimed for ARCs. However, whereas ARCs can express illocutionary force (assertion in my terms), TFRs cannot. This is in sharp contrast with the behavior with respect to speaker-oriented adverbs, i.e. the data in (48)-(49). In chapter 6 I return to this issue, arguing that TFRs can be speaker-oriented but are not necessarily so (contrary to the IC of amalgams). It should be noted that the SD layer (based on Haegeman 2002, 2006) that I adopted to distinguish between root and embedded clauses (36), is not sufficient to account for the apparent contradictory properties of TFRs.

In sum, unlike subordinate clauses, the IC in amalgams can be modified by speaker-oriented adverbs and they can carry independent illocutionary force. As such, the data discussed above nicely supplement the observations regarding the status of the IC in amalgams in §3.1.1 and §3.1.2: amalgams involve two independent root clauses.

## 3.2 Distribution of the IC

### 3.2.1 Grosu's generalization

In §2.2, I discussed Grosu (2006)'s generalization that the IC is a 'homocategorial' XP. That is, he claims that the IC syntactically behaves as if it has the category of its content kernel. So, if the content kernel is adjectival, it can be used as a predicate, if it is nominal, it can function as an argument, *et cetera*. If this generalization holds, the IC does not function as a sentence, nor is it distributed like a sentence, despite of its root properties witnessed in the above.

With this generalization in mind, let us have a closer look at the distribution of the IC in amalgams. In what follows, the terms 'nominal IC', 'adjectival IC' (i.e. *categorial term* IC) are used to avoid the longish terminology 'amalgams with a ... (*categorial term*) content kernel'. First, I contrast the distribution of the IC with the distribution of nominal and sentential arguments in Dutch. In Dutch (and German), nominal arguments appear to the left of the verb (Mittelfeld), whereas sentential arguments appear to the right of the verb (Nachfeld), this is illustrated in (67)-(68):

- (67) [Dutch]
- a. Ik kan me [DP de film] herinneren.  
I can REFL the movie remember  
'I can remember the movie.'
  - b. \*Ik kan me niet [CP welke film Ben gezien heeft] herinneren.  
I can REFL not which movie Ben seen has remember.
- (68)
- a. \*Ik kan me herinneren [DP de film].  
I can REFL remember the movie
  - b. Ik kan me niet herinneren [CP welke film Ben gelezen heeft].  
I can REFL not remember which movie Ben seen has  
'I can't remember which movie Ben has seen.'

The distribution of nominal and clausal complements respectively is subject to a longstanding debate about the underlying word order in Dutch, i.e. VO or OV. For the present purposes, I will assume a basic VO (head-initial) order, in line with minimalist theory (Zwart 1993, 1994), antisymmetry theory (Kayne 1994) and the theory of the configurational matrix (Koster 1987, 2000b). This entails that the position of the nominal object in Dutch is derived by leftward movement of the object across the verb (see for instance Vanden Wyngaerd 1989, Koster 2000b and others). In such an approach, the pattern in (67)-(68) is regarded as a failure of the CP to move leftward. The explicit mentioning of this choice is merely to avoid confusion over the term 'extraposition' later on in this section, it does not reflect a specific position in the debate about word order in Dutch or German (for discussion on VO *versus* OV, I refer to the extensive literature on the topic, including: Haider 1997, 2000, Barbiers 2000, Broekhuis 2008 and the scholarship cited above). The difference in distribution

of Dutch sentential and nominal complements allows us to test the claim that the position of the IC in amalgams is in accordance with nominal arguments.

If the IC is distributed as a clause, we expect it to appear in the Nachfeld position in Dutch, i.e. comparable to how complement clauses are distributed in the matrix clause. This is clearly not the case, considering the contrast between the following Dutch Horn-amalgams:

- (69) a. Bob kan zich [ik geloof dat het Bea was] nog goed herinneren.  
 Bob can REFL I believe that it Bea was still well remember  
 ‘Bob can still remember I believe it was Bea (very) well.’  
 b. \*Bob kan zich nog goed herinneren [ik geloof dat het Bea was].  
 Bob can REFL still well remember I believe that it Bea was

Also in Andrews-amalgams, the IC cannot occur in the position that is associated with sentential complements:

- (70) a. Bob kan zich [je weet wel welk meisje] nog maar al te  
 Bob can REFL you guess AFF which girl still only all too  
 goed herinneren.  
 good remember  
 ‘Bob can remember you can guess which girl only too well.’  
 b. \*Bob kan zich nog maar al te goed herinneren [je raadt wel  
 Bob can REFL still only all too good remember you know AFF  
 welk meisje].  
 which girl

More importantly, these data are evidence against the idea that the IC is a conventional relative clause, as is defended in Tsubomoto and Whitman (2000) (see §2.2). In such an approach, we expect the IC to appear in the position of nominal arguments: the nominal argument is then the empty head of the relative. At first sight, the data above seem consistent with that, as the IC in amalgams is confined to the position of nominal arguments in these cases (corresponding to a missing nominal argument in the matrix). However, in Dutch, relative clauses can optionally be extraposed:

- (71) a. Bill heeft iemand [die hij jaren niet gezien heeft] gekust.  
 Bill has someone REL he years not seen has kissed  
 ‘Bill kissed someone that he hasn’t seen in years.’  
 b. Bill heeft iemand gekust [die hij jaren niet gezien heeft].  
 Bill has someone kissed REL he years not seen has  
 ‘Bill kissed someone that he hasn’t seen in years.’

The ungrammaticality of (69) and (70) shows that the IC cannot occur in the position associated with extraposition (the Nachfeld). I readdress extraposition in the context of amalgamation in §3.2.2 and §7.4.2. Summing up, ICs with nominal content kernels have a nominal and not a clausal distribution. This



suggests that Grosu (2006)'s generalization holds.

Interestingly, a similar generalization was made for TFRs in Wilder (1998:688), who notes that '*... it is the category of the (predicate) XP that determines the distributional possibilities for a TFR*'. The following examples are slightly adapted from Grosu (2003:248):

- (72)
- a. He made [what may appear to be [<sub>DP</sub> a radically new proposal]].
  - b. He made an uninspired and [what I'd describe as [<sub>AP</sub> catastrophic]] decision.
  - c. He came out the next day, but I didn't get a chance to talk to him [what you might call [<sub>AdvP</sub> privately]].
  - d. He felt my mother was [what he called [<sub>VP</sub> poisoning my mind]].

In fact, Grosu (2003) argues that both TFRs and SFRs are multi-categorial. It has been claimed by many (Bresnan and Grimshaw 1978, Groos and van Riemsdijk 1981, van Riemsdijk 2000a, *inter alia*) that SFRs need not be nominal (73a), but can in addition be prepositional (73b), adjectival (73c) or adverbial (73d) (the examples are adapted from van Riemsdijk 2000a:12):

- (73)
- a. The police arrested [<sub>DP</sub> who the witness identified].
  - b. They tend to live [<sub>PP</sub> in whatever town their parents used to live].
  - c. She will make you [<sub>AP</sub> however happy your ex made you].
  - d. I'll play my music [<sub>AdvP</sub> however loudly you play yours].

At first glance, these data seem to support of Grosu's unified analysis for FRs. However, the extent to which SFRs are really multi-categorial is questionable. First, the non-nominal cases are all necessarily associated with one particular reading of SFRs, namely the 'universal' reading (the other reading is the definite reading, see Jacobson 1995). This reading is triggered by adding *-ever* to the *wh*-phrase: this is optional in (73a), but required in (73b)-(73d) due to the presence of an additional internal head *the* (contrary to (73a), where the *wh*-phrase is bare, see also Caponigro 2003, De Vries 2004a,b). So, these 'exceptional heads' are for some reason restricted to *-ever* FRs. Second, in case of (73b), it is not obvious why the PP *in* should be regarded as the head of the relative. Notice that the preposition *in* is associated with the predicates of both the matrix and the FR, as the latter reads as 'whatever town their parents used to live in'. This suggests an alternative analysis in which the FR is nominal. For details of such an account, see Larson (1987) (and for related discussion, see Caponigro and Pearl 2009). (73c) and (73d) seem special instances of *-ever* FRs as well, as the matrix predicates (*make* and *play*) are repeated in the FR, and they can always be paraphrased as comparatives:

- (74)
- a. She will make you as happy as your ex made you.
  - b. I'll play my music as loudly as you play yours.

In fact, Larson (1987) claims that these cases are not FRs to begin with, but should be analysed as ‘free comparatives’. Taking this into consideration, I take being ‘multicategorial’ as a property of TFRs, and not SFRs (which I take to be nominal).

Recall from §2.3 that Dutch TFRs can appear as genuine attributive adjectives, as the content kernel (the predicate in the TFR, here *rampzalig*, ‘catastrophic’) obligatorily acquires the inflection associated with that position:

- (75) een [wat ik zou noemen rampzalig\*(-e)] beslissing  
 a what I would call catastrophic-CG.SG decision:CG.SG  
 ‘a what I’d call catastrophic decision’

However, not all of these categories can easily function as the content kernel in amalgams. First, although predicative APs can be content kernels in Andrews-amalgams (as was also shown by the example cited from Grosu in 2.2), this does not extend to Horn-amalgams, as these were reported to be degraded:<sup>7</sup>

- (76) ?\*Bea is [I think it’s blond].  
 (77) Bob is [you can’t even begin to imagine how handsome].

A similar contrast arises between Andrews-amalgams/TFRs and Horn-amalgams with attributive adjective content kernels:

- (78) a. ?\*an [I think it was [<sub>AP</sub> blond]] woman  
 b. a [you can imagine [<sub>AP</sub> how catastrophic]] decision
- (79) [Dutch]
- a. \*een [ik denk dat het [<sub>AP</sub> blond(-e)] was] vrouw  
 a I think that it blond-CG.SG was woman:CG.SG  
*int.* ‘an I think it was blond woman’
- b. een [je kunt je wel voorstellen [<sub>AP</sub> hoe rampzalig-e]]  
 a you can REFL AFF imagine how catastrophic-CG.SG  
 beslissing  
 decision:CG.SG  
 ‘a you can imagine how catastrophic decision’

The contrast in the Dutch example is considerably stronger. This is probably because in addition to whatever restriction there is on the English case, the Dutch V-final order in the embedded clause in the IC causes a violation of the requirement that attributive adjectives are adjacent to the noun they modify, i.e. an adjacency requirement, see Van Riemsdijk (1998a). I will henceforth use the term ‘A-N adjacency requirement’. I return to an exceptional form of extraposition in TFRs and amalgams in §3.2.2 in the context of this requirement. In chapter 4, I show that the restriction on AP content kernels in Horn-amalgams

<sup>7</sup>My informants gave varying judgments (i.e. from somewhat marked to highly degraded) for (76). It appears that such examples improve when the predicative content kernel bears contrastive focus. I return to this in the context of similar observations for *it*-clefts in §4.3.2.

is due to a more general restriction on predicative pivots in *it*-clefts.

Another restriction concerns the possibility of having a PP content kernel. That is, in English amalgams in which the IC is *associated* with a PP, there is a remarkable contrast related to the position of the IC:

- (80) a. ✓Bob was dancing with [you'll never guess [<sub>DP</sub> who]].  
 b. ??Bob was dancing [you'll never guess [<sub>PP</sub> with who]].

The contrast is subject to some speaker variation, but overall (80a) was reported to be preferred over (80b). In other words, there is a strong preference for the NP complement, but not the whole PP to occur inside the IC. By contrast, Guimarães (2004:133) observes an opposite pattern in Romance languages, here illustrated for Portuguese:

- (81) [Portuguese]
- a. \*João convidou 300 pessoas pra [você pode imaginar que tipo  
 João invited 300 persons to you can imagine what kind  
 de festa].  
 of party  
 'João invited 300 people to you can imagine what kind of party.'
- b. João convidou 300 pessoas [você pode imaginar pra que tipo  
 João invited 300 persons you can imagine to what kind  
 de festa].  
 of party  
 'João invited 300 people to you can imagine what kind of party.'

In §5.2 I show that this crosslinguistic pattern is related to well-known differences between pied-piping and P-stranding languages, in the context of *sluicing*. For now, I tentatively conclude that it depends on the category of the content kernel how the IC is distributed in the amalgam, in agreement with Grosu's generalization.

### 3.2.2 Extraposition in Free Relatives and amalgams

The above is further corroborated by the fact that Dutch, unlike English, does not allow so-called 'Heavy NP Shift' (HNPS). HNPS is the rightward displacement of a prosodically heavy NP, and has been observed in English (this goes back to Ross 1967, Quirk et al. 1972). The alternation is illustrated in (82) for English; (83) shows that Dutch does not generally allow HNPS the way English does:<sup>8</sup>

<sup>8</sup>Well-known contexts in which Dutch seems to allow for HNPS are announcements, as illustrated in (i) (*continued on the next page*):

- (82) a. Bill saw a movie/ a violent movie by Tarantino yesterday.  
 b. Bill saw yesterday {\*a movie/ a violent movie by Tarantino}.
- (83) a. Bill heeft {een film/ een gewelddadige film van Tarantino}  
 Bill has a movie/ a violent movie by Tarantino  
 gezien.  
 seen  
 ‘Bill saw a movie/ a violent movie by Tarantino.’  
 b. \*Bill heeft gezien {een film/ een gewelddadige film van  
 Bill has seen a movie/ a violent movie by  
 Tarantino}.  
 Tarantino  
 ‘Bill saw a movie/ a violent movie by Tarantino.’

If it is the case that amalgams with nominal content kernels behave like nominals, we expect that their IC cannot be displaced by means of HNPS in Dutch either, and this is exactly the pattern we saw in (69)-(70) (§3.2.1). This also extends to TFRs, as the HNPS or extraposed order in (84b) was reported to be highly marginal in Dutch (there was some speaker variation, but no informant I consulted found the extraposed order as acceptable as the regular order):

- (84) a. Bob heeft gisteren [wat men een patserbak noemt] gekocht.  
 Bob has yesterday what people a macho.car call bought  
 ‘Yesterday, Bob bought what people call a ‘pimped out ride’.’  
 b. ?\*Bob heeft gisteren gekocht [wat men een patserbak noemt].  
 Bob has yesterday bought what people a macho.car call  
*int.* ‘Yesterday, Bob bought what people call a ‘pimped out ride’.’

The relative unacceptability of (84b) may seem unsurprising in the light of our tentative generalization and the ban on HNPS in Dutch, but recall that Dutch

- 
- (i) [Dutch]
- a. Op dit moment komt — op spoor 6 aan: de trein naar Amsterdam en  
 at this moment comes at platform 6 to the train to Amsterdam and  
 Schiphol Airport.  
 Schiphol Airport  
 ‘At this moment is arriving at platform 6: the train to Amsterdam and Schiphol  
 Airport.’  
 b. En dan zal het ensemble nu — ten gehore brengen: het pianoquintet van  
 and then will the ensemble now to hearing bring the piano.quintet of  
 Johannes Brahms, opus 34.  
 Johannes Brahms opus 34  
 ‘And now the ensemble will perform Johannes Brahms’ Piano Quintet opus 34.’

Thus, HNPS in Dutch is restricted to very specific contexts and possibly formal register. This does not detract from the point made here: English HNPS applies much more freely and is not restricted to these particular contexts at all. In addition, if these cases are taken as regular HNPS, i.e. comparable to the English cases discussed below, the case in (ia) is quite puzzling. After all, what dislocated here is the subject and not the object. These particular data go well beyond the scope of the present work.

regular relative clauses can optionally be extraposed. In addition, Standard Free Relatives (SFRs) can be extraposed as well, in fact extraposition is even slightly preferred over the normal order, as is illustrated in (85b):

- (85) a. Bob heeft [wie hem ook maar leuk leek] gekust.  
 Bob has who him also just nice seemed kissed  
 ‘Bob kissed whoever seemed nice to him.’  
 b. ✓ Bob heeft gekust [wie hem ook maar leuk leek].  
 Bob has kissed who him also just nice seemed  
 ‘Bob kissed whoever seemed nice to him.’

The possibility to extrapose SFRs in Dutch has been taken as evidence that the *wh*-phrase is in the COMP domain of the SFR and is not the head of the relative: in the COMP-account of FRs (as is defended in Groos and van Riemsdijk 1981, Grosu and Landman 1998), (85b) is simply extraposition and not HNPS.<sup>9</sup> The difficulty of extraposing Dutch TFRs relative to the ease with which SFRs can be extraposed, has never been addressed in the literature, but can be taken as another piece of evidence that TFRs do not behave like regular relative clauses. In addition, it creates a possible confound for theories that unify them with SFRs (such as Grosu 2003, Van Riemsdijk 2000a, 2006a).

Since English does allow for HNPS (although it is generally regarded as ‘stylistically marked’), English amalgams and TFRs should be able to shift to the Nachfeld position. This appears to be the case indeed, as the following examples with extraposition were reported to be acceptable:

- (86) a. Bill was kissing [what seemed to be a student with blond hair] in the corridor.  
 b. Bill was kissing in the corridor [what seemed to be a student with blond hair].  
 (87) a. Bill was kissing [I think it was a student with blond hair] in the corridor.  
 b. Bill was kissing in the corridor [I think it was a student with blond hair].  
 (88) a. Bill invited [you’ll never guess how many weird-looking people] to his party.  
 b. Bill invited to his party [you’ll never guess how many weird-looking people].

It should be noted, however, that some informants found the extraposed variant of the Horn-amalgam more marginal, and indicated the need for a pause between *corridor* and the TFR/IC. I will take these examples as additional ev-

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<sup>9</sup>Proponents of the HEAD-account are for instance Bresnan and Grimshaw (1978) and Larson (1987). Under such assumptions, the *wh*-phrase is the head of the relative clause, and consequently, (85b) can only be explained as an exceptional form of HNPS in Dutch. For more recent discussion, see Citko (2002), Grosu (2002, 2003), Van Riemsdijk (2000a, 2006a), *inter alia*.

idence for the claim that ICs are distributed in accordance with their content kernels. Since HNPS is arguably subject to prosodic constraints that I have little to say about, I will not make further claims based on these specific data.

Another extraposition issue in amalgams and TFRs was already observed in §3.1.1: the content kernel in Dutch TFRs can somehow be extraposed within the TFR. This is especially interesting in the case of attributively used adjectival content kernels, which, by virtue of being extraposed, are able to meet the A-N adjacency requirement. This way, inflection can be obtained on the adjectival depending on the gender and number of the noun it modifies. Recall from the previous section that Horn-amalgams don't seem to fare well with attributively adjectival content kernels (78). The sharp unacceptability of the Dutch Horn-amalgam in (79) contrasts with the judgments for similar examples in Van Riemsdijk (2006b), who puts attributively used Horn-amalgams on a par with TFRs (example adapted from Van Riemsdijk 2006b:35, his (39), my judgment and gloss):

- (89) [Dutch]  
 ?Dit is een, [ik denk dat je het zou mogen noemen  
 this is a I think that you it would may call  
 eenvoudig-\*(e)] oplossing.  
 simple-CG.SG solution:CG.SG  
 'This is an I think you might call it simple solution.'

Although this case was still reported to be somewhat marginal by some of my Dutch informants (including myself), it is indeed a remarkable improvement of the case in (79b) above. This is remarkable, because the predicates of small clauses cannot be extraposed:

- (90) a. Ik denk dat Bill een maniak is.  
 I think that Bill a maniac is  
 'I think Bill is a maniac.'  
 b. \*Ik denk dat Bill is een maniak.  
 I think that Bill is a maniac

I take the exceptional extraposition in (89) to be related to two factors that are not addressed by Van Riemsdijk: 1. in this case, extraposition of the content kernel is *obligatory*, and serves to meet the A-N adjacency requirement on attributive adjectives, and 2. this particular case involves the verb *noemen* ('to call'). That is, the *interplay* of those factors seems to improve the example, as the non-extraposed variant of (89) is painfully ungrammatical (91), and in a Horn-amalgam with another copula, e.g. *zijn* ('to be'), the content kernel cannot be extraposed (92):

- (91) \*Dit is een [ik denk dat je het eenvoudig(-e) zou mogen  
this is a I think that you it simple-CG.SG would may  
noemen] oplossing.  
call solution  
*int.* ‘This is an I think you might call it simple solution.’
- (92) \*Dit is een [ik denk dat het is eenvoudig-e] oplossing.  
this is a I think that it is simple-CG.SG solution:CG.SG  
*int.* ‘This is an I think it is simple solution.’

The ungrammaticality of (91) is due to the violation of the A-N adjacency requirement. We can now tentatively generalize that in case of an attributive content kernel in TFRs and Horn-amalgams, extraposition is *obligatory* to meet this requirement. However, such extraposition seems to be restricted precisely to the cases with the verb *noemen* also in TFRs, that is, when we change the verb into *lijken* (‘seem’), it is not possible to construe a TFR with an attributive adjectival content kernel, similar to the Horn-amalgam in (92):

- (93) They hired a [what seemed to be blond] woman.
- (94) \*Ze hebben een [wat leek te zijn blond-e] vrouw  
they have a what seemed to be blond-CG.SG woman:CG.SG  
aangenomen.  
hired  
*int.* ‘They hired a what seemed to be blond woman.’

The plot thickens, as cases that do *not* involve an adjacency requirement, the extraposed order is strongly preferred over the non-extraposed one (which was even reported to be slightly marginal). Consider the contrast between the TFRs with *noemen* and varying positions of a DP content kernel, and in turn between that and the TFR with *bleek te zijn* (‘appeared to be’) in (95)-(96):

- (95) a. ?Ze hebben [wat je een genie noemt] aangenomen.  
they have what you a genius call hired  
‘They hired what you call a genius’  
b. ✓Ze hebben [wat je noemt een genie] aangenomen.  
they have what you call a genius hired  
‘They hired what you call a genius.’
- (96) a. Ze hebben [wat een genie bleek te zijn] aangenomen.  
they have what a genius appeared to be hired  
‘They hired what appeared to be a genius.’  
b. \*Ze hebben [wat bleek te zijn een genie] aangenomen.  
they have what appeared to be a genius hired

Some informants reported an ‘idiomatic feel’ to TFRs with *noemen*, i.e. *wat-je-noemt-XP* (‘what-you-call-XP’) is possibly a frozen expression of some sort. This seems to be corroborated by the fact that the choice of subject is pre-

ferrably the generic *je* ('you') or the (similarly generic) *men* ('one' or 'people'). Similar sentences with a third person subject such as *Bea*, are generally found to be marginal regardless of the presumed extraposition of the content kernel:

- (97) a. ?\*Ze hebben [wat Bea een genie noemt] aangenomen.  
           they have what Bea a genius calls hired  
           'They hired what Bea calls a genius.'  
       b. ??Ze hebben [wat Bea noemt een genie] aangenomen.  
           they have what Bea calls a genius hired  
           'They hired what Bea calls a genius.'

If *wat-je-noemt-XP* is indeed idiomatic, we may wonder if the preferred word order of these cases is actually an exceptional form of extraposition to begin with: they could alternatively be seen as the use of a frozen form that has a fixed order *wat-je-noemt-XP* in which the 'content kernel' appears in the position of XP. This reasoning can be applied to Horn-amalgams with exceptional extraposition of an AP content kernel as well, as the following Horn-amalgam is completely impossible (cf. the relative acceptability of (89)):

- (98) \*Bill is een [ik denk dat Bea het zou noemen goedgebekte]  
       Bill is a I think that Bea it would call eloquent  
       charmeur.  
       charmer  
       *int.* 'Bill is an I think Bea would call it smooth operator.'

This suggests that (89) may also involve an idiomatic form with *noemen*. I readdress these cases and other frozen subspecies of amalgams in chapter 6 (especially in §6.3.3).

### 3.2.3 A linear restriction on ICs

So far, the examples with nominal ICs involved amalgamation at the object position. If the IC indeed behaves as the placeholder of the missing XP in the matrix, we expect that it can occur in various positions associated with the content kernel, similarly to free relatives. As is observed in Guimarães (2004), the matrix clause can be interrupted at various positions, that is, the IC is not restricted to the (nominal) object position. (99) shows this for direct objects (DO) and indirect objects (IO) in English Horn- and Andrews-amalgams:

- (99) a. Bob gave [{you'll never guess who/I thought it was Bill}] a Stradivarius for this birthday.  
       b. Bob gave Bill [{you'll never guess what/I thought it was a Stradivarius}] for his birthday.  
       c. Bob gave Bill a Stradivarius for [{you will never guess which occasion/I thought it was his birthday}].



These facts carry over Dutch amalgams as well. Based on these data, it can be concluded that ICs of amalgams can occur in positions that are normally associated with argument and adjunct DPs. However, it has been observed in the literature (cf. Guimarães 2004, Grosu 2006, 2008), that the IC of amalgams cannot be subject to a finite clause. (100) illustrates this for Horn-amalgams (comparable to examples in Grosu 2006, 2008), and (101) for Andrews-amalgams, cited from Guimarães (2004:82, his (61)-(62)):

- (100) \**[I think it's Brussels] is the capital of Belgium.*  
 (101) a. \**Tom said that [I forgot who] is dating Amy.*  
       b. \**Tom said that [I forgot who] was kissed by Amy at the party.*

The ungrammaticality of these examples contrasts with (103), where the IC is associated with the subject of a non-finite complement clause:<sup>10</sup>

- (102) Bob arranged for the Kronos Quartet to play at his wedding.  
 (103) a. Bob arranged for [I believe it was the Kronos Quartet] to play at his wedding.  
       b. Bob arranged for [you wouldn't believe which string quartet] to play at his wedding.

Interestingly, TFRs are not subject to such a restriction, as is shown in (104):<sup>11</sup>

- (104) [What the French call Bruxelles] is the capital of Belgium.

The ungrammaticality of (100) is taken as evidence for the main clause status of the IC in Horn-amalgams in Grosu (2006, 2008), in his view contrasting with Andrews-amalgams (I return to this below). That is, it is generally known that main clauses cannot be subjects of sentences, contrary to complement clauses. I illustrate this here for English:

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<sup>10</sup>Guimarães (2004) illustrates a similar point by showing that the 'subjects' of ECM constructions can be amalgamated, as in (i) and (ii):

- (i) The director wanted I think it was Bill to lead the discussion.  
 (ii) The director wanted I forgot who to lead the discussion.

In this case, *Bill* can be seen as the subject of the infinitival complement of *wanted*. However, various scholars have argued that the subject of ECM constructions has object status (see for instance Lasnik 1999, Ter Beek 2008). For this reason I chose another non-finite construction.

<sup>11</sup>In this respect, TFRs pattern with SFRs, as is also observed in Wilder (1998), his (7):

- (i) [What you ordered] is on the desk.

The appearance of FRs in subject positions can be taken as an indication of their transcategorical behavior: in the case of SFRs consistent with nominal *wh*-DP *what* (for the nominal status of similar examples with *when*, *where* and *how*, see Caponigro and Pearl 2009), but in the case of TFRs with whatever the category is of the content kernel, the *wh*-word in TFRs is invariably *what*.

- (105) a. \*Brussels is the capital of Belgium is common knowledge.  
 b. That Brussels is the capital of Belgium, is common knowledge.

In Guimarães (2004)'s account, the restriction on amalgamated subjects in finite clauses is eventually reduced to the inherent asymmetry of structure-sharing. Without going into the details, the derivation of a case such as (101) would require the computation to go back and forth between subcomputations, and this is not allowed (see Guimarães 2004, V.7 and the discussion in §2.4). That is, the ungrammaticality of (100)-(101) is due to derivational restrictions, and is not directly related subjecthood or finiteness. In the following, I argue that subjecthood and (non-)finiteness indeed have little to do with the impossibility of amalgamated subjects. Rather, their ungrammaticality is an epiphenomenon of the tendency of English subjects to be clause-initial: the restriction itself appears to be connected to the linear position in the clause, not subjecthood.

Consider the classic case of *locative inversion* in (106):

- (106) Down the hill rolled a baby carriage.

In English locative inversion, a locative PP such as *down the hill* can be fronted, and behave like a topic. How this can be derived syntactically is an issue outside the scope of this thesis (but see for instance Hoekstra and Mulder 1990, Bresnan 1994, Broekhuis 2005, 2008). What is relevant here, is that the subject, no longer being in its canonical sentence-initial position, can now be amalgamated:

- (107) Down the hill rolled [I think it was a baby carriage].  
 (108) Down the hill rolled [you can only imagine what].

This suggests that sentence *position*, and not grammatical function is a constraint on amalgamation. This tentative claim is corroborated by Dutch examples. Due to its V2 property, fronting in Dutch triggers subject-verb inversion.<sup>12</sup> In a sentence where fronting of something (for instance a temporal adverbial) has taken place, the subject presumably stays in SpecTP, and is preceded by whatever was fronted and the finite verb. Interestingly, such a configuration allows for amalgamation of the subject, i.e. the IC occurring in the place of a subject, as is illustrated in (109) for Horn-amalgams, and (110) for Andrews-amalgams:

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<sup>12</sup>Note that fronting adverbials like *gisteren* ('yesterday') in Dutch is different than it is in English. In English, the fronting of yesterday must be accompanied by a comma-intonation. By contrast in Dutch, fronting does not affect the intonational contour of the main clause (there is no comma-intonation in (109b)-(110b)):

- (i) Yesterday \*(,) Bea did the groceries.

I assume that structurally, English and Dutch differ in this respect. For instance, it could be argued that fronting in Dutch, but not English, behaves like regular A'-movement (see Zwart 1998).

- (109) [Dutch]
- a. \**[Ik geloof dat het Bea was] heeft vroeger viool gespeeld.*  
I believe that it Bea was has once violin played
  - b. *Vroeger heeft [ik geloof dat het Bea was] viool gespeeld.*  
Once has I believe that it Bea was violin played  
'In the past, I believe it was Bea used to play violin.'
- (110)
- a. \**[Je raadt nooit wie] is gisteren vermoord.*  
you guess never who is murdered yesterday
  - b. *Gisteren is [je raadt nooit wie] vermoord.*  
yesterday is you guess never who murdered  
'Yesterday, you'll never guess who was murdered.'

If there is a ban on sentence-initial ICs in amalgams, we expect that ICs that contain the object of the sentence, cannot be topicalized, contrary to for instance complement clauses (111). This turns out to be the case indeed, as (112a) is completely unacceptable in Dutch, contrary to the non-topicalized equivalent in (112b):

- (111) *Dat Bob de kat heeft geaaid viel te verwachten.*  
that Bob the cat has petted fell to expect  
'That Bob petted the cat, was to be expected.'
- (112)
- a. \**[Ik geloof dat het de kat was] heeft Bob geaaid.*  
I believe that it the cat was has Bob petted
  - b. *Bob heeft [ik geloof dat het de kat was] geaaid.*  
Bob has I believe that it the cat was petted  
'Bob petted I believe it was the cat.'

These examples must be compared with regular object-topicalization (that is, the relevant reading of (112) is the one where Bob pets the cat, not vice versa):

- (113) *De kat heeft Bob geaaid.*  
the cat has Bob petted  
'The cat, Bob petted.'

From this, it can be concluded that the IC cannot occupy the sentence-initial position. As such, their distribution seems to be subject to a *linear* restriction. This gives rise to a new question: why would the IC be banned from the sentence-initial position? In the analysis I will present, this aspect of amalgamation is related to the parenthetical nature of the IC.

Notice that this leaves open the cases in (101) (which were adapted from Guimarães 2004). In these cases, the IC (in an Andrews-amalgam) is associated with the subject of a finite complement clause. I repeat the examples for convenience in (114):

- (114)
- a. \*Tom said that [I forgot who] is dating Amy.
  - b. \*Tom said that [I forgot who] was kissed by Amy at the party.

At first blush, it seems that we must amend the above generalization to *clause-initial* position. This implies that these cases are unacceptable for similar reasons as ICs that appear in the initial position of the main clause. I think there is reason to believe that these cases are awkward for another reason. For both practical and expository reasons, I will explain this based on Dutch data. First, note that a case similar to (114) in Dutch is indeed strange (not incomprehensible, but anomalous at the very least):

- (115) [Dutch]  
 ?\*Bill zei dat [ik ben vergeten wie] met Bea gekust heeft.  
 Bill said that I have forgotten who with Bea kissed has  
*int.* ‘Bill said that I forgot who kissed Bea.’

Intuitively, this is marginal for pragmatic, not syntactic reasons: it seems unlikely, in some sense contradictory for a speaker to start out a report what Bill said to him by something he *forgot* (of what Bill said). Strikingly, these examples improve significantly when the embedding environment in the IC is changed:

- (116) Bill zei dat [je raadt nooit wie] met Bea gekust heeft.  
 Bill said that you guess never who with Bea kissed has  
 ‘Bill said that you’ll never guess who kissed Bea.’

Thus, the awkwardness of Guimarães’ examples appears to be related to predicate *forgot*, and is independent from the generalization made in the above. Interestingly, there is a similar contrast between Horn-amalgams in which the IC involves some form of negation (the predicate *forgot* is ruled out in Horn-amalgams, due to its factivity, see §6.2). First, notice that the relevant embedding context can be used in the ‘normal’ case:

- (117) Bea heeft [ik geloof nooit dat het met de professor was] gekust.  
 Bea has I believe never that it with the professor was kissed  
 ‘Bea kissed with I’ll never believe it was the professor.’

Roughly speaking, the IC expresses a disbelief on the speaker’s behalf regarding the identity of the person that Bea allegedly kissed. The expression of this attitude seems incompatible with a context in which the relevant state of affairs is reported:

- (118) ?\*Bill zei dat [ik geloof nooit dat het Bea was] met de professor  
 Bill said that I believe never that it Bea was with the professor  
 gekust had.  
 kissed had  
*int.* ‘Bill said that I’ll never believe it was Bea kissed with the professor.’

However, this awkwardness disappears when there is no negative embedding context: the IC in (119) merely expresses doubt on the speakers behalf considering what is reported of what Bill said about the identity of the person who kissed the professor.

- (119) Bill zei dat [ik geloof dat het Bea was] met de professor gekust  
 Bill said that I believe that it Bea was with the professor kissed  
 had.  
 had  
 ‘Bill said that I believe it was Bea kissed with the professor.’

In sum, the IC can be clause-initial in finite complement clauses, contrary to claims made in Guimarães (2004). The data that illustrate this point, already reveal that the embedding predicates used in amalgams play an important role. I discuss this role extensively in chapter 6.

The last bit of this paragraph is a brief excursus on Grosu (2006, 2008), and relates to the observations above. Based on some specific examples of Andrews-amalgams, Grosu claims that Andrews-amalgams are not subject to such a restriction at all (in his view on amalgamated *subjects*, *pace* Guimarães 2004). As Grosu (2006) notes, the following construction is perfectly acceptable:

- (120) [You know who] wants to kill me.

The brackets in (120) represent the intended, amalgamated reading of the string; importantly, *who wants to kill me* is *not* to be read as the clausal complement of *know*. Examples such as (120) seem to have a special status: the ‘amalgamated’ subject is not possible with other embedding predicates than *know*, for instance. Consider (121):

- (121) \*[You will never guess who] wants to kill me.

In Dutch, the intended reading of the bracketing of such examples coincides with a word order change due to V2. For expository reasons, I contrast the amalgams with examples that correspond to the embedded (non-intended) reading of the English example:

- (122) [Dutch]
- a. [Je weet wel wie] wil mij vermoorden.  
 You know AFF who wants me kill  
 ‘You know who wants to kill me.’
  - b. Je weet wel [wie mij wil vermoorden].  
 You know AFF who me wants kill  
 ‘You know who wants to kill me’

In case we change the predicate into *raden* (‘to guess’), the amalgamated subject becomes ungrammatical, as is shown in (123):

- (123) a. \*[Je raadt nooit wie] wil mij vermoorden.  
           You guess never who wants me kill  
       b. Je raadt nooit [wie mij wil vermoorden].  
           You guess never who me wants kill  
           ‘You (will) never guess who wants to kill me.’

That the ungrammaticality of the Andrews-amalgam is unrelated to subjecthood, is evident when we front an adverbial, forcing the subject into a non-initial position:

- (124) Gisteren wilde [je raadt nooit wie] mij vermoorden.  
           yesterday wanted you guess never who me kill  
           ‘Yesterday, you will never guess who wanted to kill me.’

This raises the question why Grosu’s example (120) behaves differently. Based on a range of different possibilities and restrictions, I will argue that the ‘*you-know-who*’ construction is not a true Andrews-amalgam, but rather a frozen, idiomatic expression that can be used as a regular DP. Most notably, these constructions do not consistently display the root properties discussed in §3.1.3, and, as will be clear in §6.3.3, they are semantically more restricted.

Based on the data described in this section, we can conclude that the distribution of the IC is in accordance with the category of its content kernel. The Dutch data show that ICs do not pattern with relative clauses, since they cannot be extraposed. The ban on extraposition of the IC is further evidence for the generalization that was the starting point of this section: Dutch does not allow for HNPS, and consequently, nominal ICs, which could be regarded as a ‘heavy’ nominal arguments, cannot shift to the Nachfeld. These facts are especially problematic for theories that analyze amalgams on a par with relative clauses. Interestingly, this section also put forward a new puzzle: ICs can be inserted wherever their content kernel allows them to, but not in sentence-initial position.

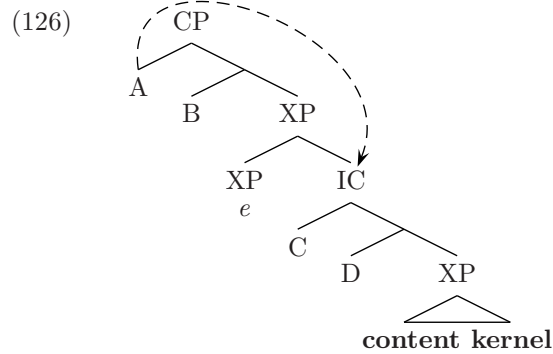
### 3.3 Interim discussion

In the context of the observations in §3.1, it can be concluded that there is a discrepancy between the internal and the external identity of the IC. Internally, the IC is clearly a root clause, similar to clausal parentheticals. However, its distribution within the matrix corresponds to the category of the content kernel. (125) summarizes these findings:

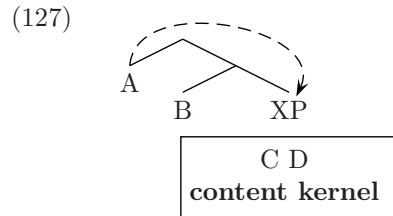
- (125) **External versus internal identity of the IC**  
       In an amalgam configuration [<sub>CP</sub> ... [<sub>IC</sub> ...  $\alpha$  ] ...],  
       ◦ the IC is structured internally as a root clause;  
       ◦ the distribution of the IC corresponds to the category of the content kernel  $\alpha$ .

Let us briefly evaluate the theories about amalgams as discussed in chapter 2 in this context. Obviously, the relative clause approach as proposed in Tsubomoto and Whitman (2000) fails on both accounts: under such assumptions the IC is not expected to display the root phenomena we witnessed in the above (in particular V2 and illocutionary force), and the content kernel can only be an NP, contrary to fact. The latter is circumvented in the proposal of Grosu (2003, 2006, 2008), in which amalgams are analyzed on a par with TFRs. However, as I have shown at various points, the ICs of amalgams and TFRs do not pattern alike in terms of their internal identity, as TFRs generally behave like subordinated clauses. By contrast, the multidominance approach to amalgams (Van Riemsdijk 1998b, 2006b,c, Guimarães 2004) correctly predicts that the IC constitutes an independent root clause. In turn, the multidominance approach to TFRs (Van Riemsdijk 2000a,b) wrongly predicts TFRs to have root properties. A unified account for TFRs and amalgams thus seems undesirable on these grounds. Assuming that there are no categorial restrictions on structure sharing (external remerge or Van Riemsdijk's 'grafting'), we expect content kernels to be multicategorial. Apart from the restriction on Horn-amalgams on AP content kernels (§3.2.1), the multidominance approach seems promising. In Zwart (2006, 2009)'s approach in terms of layered derivations, the IC is not a clause, but an output of a previous derivation that can be used as desired in the derivation of the matrix clause (which in this line of reasoning does not involve a 'missing' constituent, the IC simply functions as that constituent as some complex category). As far as the distributional properties of the IC are concerned, this almost trivially predicts that the IC appears in the position of the missing constituent. However, the attested root properties of the IC are puzzling at the very least under such assumptions.

The different assumptions regarding the status of the IC (i.e. a root or subordinate clause) put forward an issue that hasn't been addressed so far, namely to which extent the matrix *c*-commands into the IC. The remainder of this chapter is mainly devoted to detect *c*-command (or the lack thereof) between the matrix and the IC. For reasons of convenience, I briefly sketch the predictions of the respective theories below. In the view that the IC is a type of empty-headed relative clause (abstracting away from the category of the presumed empty head), a matrix element *A* *c*-commands the subordinated IC, and everything that is contained in it:

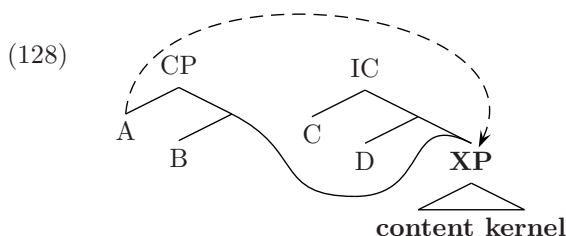


The IC is subordinated as well in the layered derivation approach. However, based on the general opacity of the output that is claimed in Zwart (2006, 2009) (see §2.4), it is not easy to determine if matrix clause material can c-command *into* the IC, i.e. C, D and the content kernel. After all, the general integrity principle applies to operations of *merge*, not necessarily to relations that are presumably established at the interfaces. Taking into account that the IC is atomic once it is part of the numeration that is used to build the matrix clause, it seems most plausible that its internal structure is no longer accessible:



Given the possibility of binding into a complex ECM subject (which is also supposed to be an output of a previous derivation, see the discussion in §2.4), it is however desirable that binding relations are established at the interfaces that may somehow have access to the relevant structure (this is not made explicit in the proposal so far). If we assume this to be the case, we at least predict that the content kernel has no special status in this respect: A may entertain c-command based relationships with C, D and the content kernel. This contrasts with the rather interesting predictions that the multidominance-approach makes. Consider (128):





In this approach, matrix element A does not c-command anything in the IC that is not also part of the matrix (in a c-commanded position): C and D are not c-commanded, but the content kernel is.

In the section to come, I will use movement within and out of the IC (§3.4.1), binding by quantifiers and anaphora binding (§3.4.2), condition B and C effects (§3.4.3), NPI licensing (§3.4.4) and idiom chunks (§3.4.5) as diagnostics for c-command between the matrix and the IC.

### 3.4 The (in)transparency of the IC

#### 3.4.1 Movement within and out of the IC

It is generally assumed that movement of a constituent  $\alpha$  takes place to a position that c-commands the position where  $\alpha$  is moved from, i.e. the displacement of for instance a *wh*-phrase in English *wh*-interrogatives is from a structurally higher position:

- (129) a. Which girl did Bill fancy  $\_$ ?  
 b. Which girl did [<sub>CP</sub> Bea claim [<sub>CP</sub> that Bob thought [<sub>CP</sub> Bill fancied  $\_$ ]]]?

*Wh*-movement is in principle unbounded, as the example of long-distance *wh*-movement (129b) shows: the *wh*-phrase c-commands its original position (its trace in more traditional terms) from its derived position (i.e. SpecCP under conventional assumptions). Certain configurations do not allow for extraction, these are traditionally known as islands. The extent to which a given configuration allows for movement is thus a tool to detect the presence of c-command between its parts (or, in turn, to deem the configuration as an island for extraction). Recall that the analyses discussed globally in chapter 2 seem to yield different predictions with respect to movement in amalgams. In the relative-approach, movement from the IC into the matrix is ruled out by virtue of relative clause islands, i.e. movement out of the IC should be as restricted as movement out of regular relative clauses:

- (130) \*Who did you read the book [<sub>CP</sub> that  $\_$  recommended]?

Likewise, Zwart (2006, 2009)'s General Integrity Principle (see §2.4) rules out movement from the IC: being the output of a previous derivation, the IC should be opaque for such syntactic operations. The multidominance approach *prima*

*facie* predicts the content kernel to be able to move within the IC and within the matrix, as it is part of both (granted that it does not cross any islands on its way). Although Van Riemsdijk (2006a,b,c) and Wilder (1998) (for TFRs) explicitly mention the presumed ability of the content kernel to move out of the IC/TFR, it is not evident that this actually follows from the analysis they have in mind. After all, however the gap is defined that is left by movement (i.e. a trace, a copy), it is only licensed in one of the clauses. For the present purposes, I will evaluate the predictions of the multidominance account in accordance with the claims that have been made in the literature.

This section is a systematic exploration of movement in amalgams, in the pursuit of the structural relationship that bears between the matrix and the IC in amalgams. I first examine movement into the matrix from two positions that I take to be relevant: the subject of the IC and the predicate DP. This is in particular to put the contrasting predictions of the multidominance approach to the test. At first glance, it seems impossible to move any IC constituents into the matrix clause:

- (131) a. \*Who does Bill fancy [I thought it was \_]?  
       b. \*Who did Bill fancy [\_ claimed it was his brother's fiancée]?  
 (132) a. \*Which girl did Bill fancy [you can imagine \_]?  
       b. \*Who did Bill fancy [\_ can imagine who]?

The ungrammaticality of (131a) and (132a) is unexpected in the multidominance-approach, in which the matrix is simply construed as *Bill fancies DP*, which should allow the DP to *wh*-move. In turn, Tsubomoto and Whitman (2000), Grosu (2006, 2008) and Zwart (2006, 2009) seem to correctly predict that the IC cannot be extracted from (which is also explicitly mentioned in Zwart 2006, see §2.4). However, recall from §3.1.3 that there is a rather mysterious restriction on the matrix clause type: it can only be declarative. This means that (131) and (132) do not provide independent evidence of a ban of movement out of the IC.

I will therefore resort to examples with topicalization out of the IC. English topicalization improves when the topicalized constituent is pronounced with some emphasis; I represent this by *italics*. (133) shows that object DPs can be topicalized from embedded positions in English:

- (133) *His fiancée*, Bob claims [Bill adores \_].

As it turns out, topicalizing the content kernel (the object in these cases) is impossible in amalgams. Consider the examples below:

- (134) \**His fiancée*, Bill adores [I think it was \_].  
 (135) \**Which girl*, Bill adores [you can't imagine \_].

Notice that the comma's in (135) are important for the intended reading, i.e. to exclude the reading of a topicalized CP in a normal (non-amalgamated)

configuration:

- (136) [*Which girls Bill adores*], you can't even begin to imagine —.

This is a regular example of CP topicalization: the matrix is *you can't even begin to imagine*, and its complement CP is topicalized to the left-peripheral position. All in all, the topicalization data suggest that we cannot extract out of the IC of amalgams, which provides evidence for Zwart (2006)'s claim that the IC is opaque for syntactic operations.

Finally, notice that the multidominance approach, since it treats the IC as a *root* clause, predicts that the content kernel can also be topicalized inside the IC. The possibility of topicalizing has been argued to be restricted to root clauses, see for instance Hooper and Thompson (1973), Maki et al. (1999) and Haegeman (2003). That is, it is impossible to topicalize an object regular adjunct or relative clauses. (137) is adapted from Maki et al. (1999:3, their (2e), italics mine):

- (137) \*Before *this book*, Mary read —, John had already read it.

By contrast, the content kernel can be topicalized in the IC of amalgams, although it requires a pause between *kissed* and the IC:

- (138) Bob kissed... [*how many girls*, you can't even begin to imagine —!] at the party.

However, based on English data, it appears that Horn-amalgams do not allow for IC-internal topicalization:

- (139) \*Bob proposed to... [*Bea*, I thought it was —].

A similar Dutch Horn-amalgam with internal topicalization appears to be possible as well, although the construction comes across as slightly odd compared to the Andrews-case above:

- (140) [Dutch]  
 Bob heeft [*Bea* dacht ik dat het was —] ten huwelijk gevraagd.  
 Bob has Bea thought I that it was to marriage asked  
 'Bob proposed to Bea I thought it was.'

It is difficult to pinpoint this difference between English and Dutch without anticipating on the story concerning the internal structure of the IC of Horn-amalgams, in particular regarding the assumption that the IC involves a (full-fledged) *it*-cleft. Assuming that it does, the contrast between (139) and (140) can be reduced to the contrast between topicalization in regular (embedded) *it*-cleft constructions in English and Dutch respectively:

- (141) \**Bea*, I thought it was — that Bob proposed to.

- (142) [Dutch]  
 ?*Bea* dacht ik dat het was \_ die Bob ten huwelijk gevraagd had.  
 Bea thought I that it was REL Bob to marriage asked had  
 ‘Bea I thought it was that Bob proposed to.’

The slight marginality of the topicalized variants of Horn-amalgams and *it*-clefts, is likely due to the combination of topicalization and focus: cleft pivots are focused by definition, and topicalizing it could simply be redundant.

The ban on topicalization of IC constituents into the matrix clause suggests that we cannot move anything out of the IC in amalgams. Interestingly, the topicalization facts provide additional support for the claim that the IC is a *bona fide* root clause (see §3.1.3).

This observation is in opposition with what is claimed in Van Riemsdijk (2006b,c). Based on a reported contrast between SFRs and TFRs in (143), Van Riemsdijk (2006b) claims that TFRs are not islands for extraction (contrary to SFRs and regular relative clauses):

- (143) a. \*Who did they copy whatever was identified as a picture of \_?  
 b. \*Who did they copy what was identified as a picture of \_?

However, as is indicated by the judgments here, (143b) was reported to be (completely) unacceptable by my consultants. In addition, similar Dutch examples are also out:

- (144) [Dutch]  
 a. Bea heeft wat ze dacht dat een vogelspin was gedood.  
    Bea has what she thought that a bird.spider was killed  
    ‘Bea killed what she took to be a bird spider.’  
 b. \*Wat heeft Bea [wat ze dacht dat \_ was] gedood?  
    what has Bea what she thought that was killed

From this, we can gather that *wh*-movement of the content kernel out of TFRs is not possible. Although this is expected given the islandhood of relative clauses in a more traditional view on TFRs, it is not in the multidominance account proposed by Van Riemsdijk (see (51) in §2.3). Also Wilder (1998) argues that TFRs seem more compliant to extraction than SFRs, based on the following contrast (the examples are Wilder 1998’s (25) and (26)):

- (145) a. \*something that Mary invited [whoever is angry about \_]  
 b. something that John is [what you might call angry about \_]

Notice that the relevant movement is extraction out of a PP that is part of a complex predicate. The construction in (145b) is indeed acceptable, but the question is if we are truly extracting out of the TFR. After all, this is only the case if we take the complex *angry about something* to be the content kernel. However, in an alternative bracketing of (145b), as in (146), the relative movement is not out of the TFR, but out of the matrix clause:

- (146) something that John is [what you might call angry] about —.

Interestingly, Andrews-amalgams that are construed in a similar fashion, also appear to allow for movement out of the content kernel. But also in this case, alternative bracketing that puts the relevant material outside the IC is possible:

- (147) a. Tolkien is the author [Bob read [you can imagine how many books by —]].  
 b. Tolkien is the author [Bob read [you can imagine how many books] by —].

These data are thus deceptive: extraction of the whole content kernel is impossible in both TFRs and Andrews-amalgams, and this is precisely what the analyses in Van Riemsdijk (2000a, 2006b,c) and Wilder (1998) predict to be possible. That is, the fact that the simple cases below are resistant to movement, suggests that TFRs, like SFRs and relative clauses more generally, are islands for movement:

- (148) a. Bob kissed [you can imagine which girl].  
 b. \*That girl is the girl Bob kissed [you can imagine —].
- (149) a. Bea is [what you might call smart].  
 b. \*Something Bea is [what you might call —].

As for topicalization, in the light of the above it is perhaps unsurprising that the content kernel cannot be topicalized. I illustrate this for Dutch to draw a fair parallel with the amalgams with topicalized constituents, and because topicalization of predicative adjectivals is uncontroversially acceptable in Dutch:

- (150) [Dutch]  
*Slim* zou ik Bea niet — willen noemen.  
 smart would I Bea not want call  
 ‘Smart, I wouldn’t want to call Bea.’
- (151) \**Slim* is Bea niet [wat ik — zou willen noemen].  
 smart is Bea not what I would want call  
 lit. ‘Smart, I wouldn’t want to call Bea.’

Contrary to amalgams, it is not possible to topicalize the content kernel of TFRs inside of the TFR either:

- (152) \*Bea is niet [*slim* wat ik — zou willen noemen].  
 Bea is not smart what I would want call  
*int.* ‘Bea is not what I’d want to call smart.’

The general disallowance of movement out of TFRs and the impossibility to topicalize inside the TFR corroborate the observations in §3.1 that TFRs syntactically behave as subordinated clauses. In the sections to come, I will show that they are indeed transparent in terms of other interactions with the matrix

clause. In sum, the data discussed above show that no IC-internal material can move out of the IC. Consistent with the root properties discussed earlier in this chapter, the content kernel can however topicalize inside the IC.

### 3.4.2 Variable binding into IC

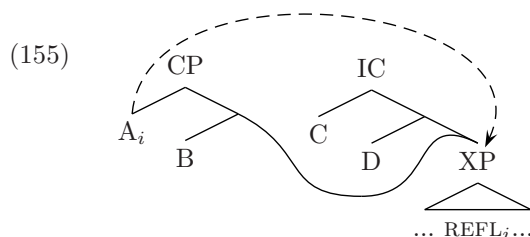
A well-known relationship that relies on the presence of c-command, is binding. That is, reflexive pronouns must be bound by a local antecedent (assuming the traditional binding principles, i.e. Condition A in Chomsky 1981). That this form of binding requires a local antecedent, can be inferred from the contrast between (153a) and (153b):

- (153) a. The professor<sub>*i*</sub> cited himself<sub>*i*</sub> primarily.  
 b. \*The professor<sub>*i*</sub> likes a student [that cites himself<sub>*i*</sub>].

By contrast, the binding of pronouns by quantified antecedents is not subject to such locality restrictions:

- (154) a. Every professor<sub>*i*</sub> kissed his<sub>*i*</sub> mistress.  
 b. Every student<sub>*i*</sub> filed a complaint against the professor [that kissed his<sub>*i*</sub> girlfriend].

The binding of variables enables us to see to what extent elements from the matrix clause c-command the IC: if so, it should be possible for IC pronouns to be bound by quantified matrix antecedents. It is not similarly straightforward that reflexives should be licensed, given the locality condition that restricts this type of binding. However, the multidominance-approach to TFRs and amalgams gives an interesting twist to the idea of local domains: in such an approach, the IC (which is not c-commanded by the matrix) is no intervening boundary for this relation:



Under such assumptions, we expect both kinds of binding relations to be possible between A and the content kernel XP, provided that there is no intervening boundary between A and XP in the matrix itself.

#### Anaphora binding in amalgams

For these purposes, I resort to Dutch data. This is because English reflexive pronouns *himself/herself* can also function as logophors (an *unbound* inter-

pretation that is usually considered to be licensed by subjunctive mood and/or particular discourse factors, see Reuland and Reinhart 1993, Reuland 2001). By contrast, the Dutch *zichzelf* ('himself/herself', SE-self, it is underspecified for gender) is unambiguously anaphoric and cannot remain unbound. Starting out with Horn-amalgams, it appears that a reflexive pronoun that is part of the content kernel can be bound by a matrix clause subject:

- (156) [Dutch]  
 De  $kat_i$  joeg op [ik vermoed dat het een schaduw van  $zichzelf_i$   
 the cat chased on I suppose that it a shadow of SE-self  
 was].  
 was  
 'The cat chased I suppose it was a shadow of himself.'
- (157) Onze  $kat_i$  heeft in zijn leven [je kunt wel raden hoeveel  
 our cat has in its life you can AFF guess how.many  
 schaduwen van  $zichzelf_i$ ] nagejaagd.  
 shadows of SE-self chased  
 'Our cat chased in his life you can imagine how many shadows of  
 himself.'

By contrast, if we use a reflexive DP elsewhere in the IC, it cannot be bound by a matrix clause antecedent:

- (158) Onze  $kat_i$  heeft [alleen {\*de schaduw van  $zichzelf_i$ /  $zijn_i$  schaduw}  
 our cat has only the shadow of SE-self his shadow  
 laat al zien dat het een extreem lange staart is].  
 let already see that it a extremely long tail is  
 'Our cat has the shadow of himself/ his shadow already shows it's an  
 extremely long tail.'
- (159) Onze  $kat_i$  heeft [alleen {\*de schaduw van  $zichzelf_i$ /  $zijn_i$  schaduw}  
 our cat has only the shadow of SE-self his shadow  
 laat al zien hoeveel lange snorharen].  
 let already see how.many long moustache.hairs  
 'Our cat has the shadow of himself/ his shadow already shows how  
 many long whiskers.'

These examples are construed with the DP *een schaduw van zichzelf* ('shadow of himself') on purpose, as the more commonly used possessive picture NPs (i.e. the famous 'the picture of himself' construction) have been criticised in Runner et al. (2006). In this work it is argued, based on experimental evidence, that the reflexive pronouns in these cases are logophors, and thereby exempt of condition A. Taking this into consideration, the binding possibilities of a bare reflexive pronoun as a content kernel would provide stronger evidence. Consider (160):

- (160) De professor<sub>i</sub> sprak [het leek vooral zichzelf<sub>i</sub> te zijn]  
 the professor spoke it appeared especially SE-self to be  
 ernstig tegen.  
 seriously against  
 ‘The professor contradicted it appeared to be himself in particular.’

It is impossible to create such examples for the Andrews-construal, where the content kernel is always a *wh*-DP.

The fact that a reflexive content kernel can be bound in amalgams is quite striking, as it is seemingly in violation of the locality conditions on binding, which rules out binding of reflexives by antecedents of a higher clause. Differently put, these data seem to suggest that the binder is not part of a higher clause, but of the same clause. Similar ‘transparency’ of the content kernel has been observed in TFRs (Wilder 1998, Van Riemsdijk 2000a, 2006a,b). The following examples are from Van Riemsdijk (2006b), his (16):

- (161) a. They<sub>i</sub> live in [what is often referred to as each other<sub>i</sub>’s backyard].  
 b. She<sub>i</sub> was [what can only be interpreted as proud of herself<sub>i</sub>].

Interestingly, the binding relation cannot be established between a DP elsewhere in the TFR and the matrix, corroborating the view that the content kernel bears another relationship with respect to the matrix than the rest of the TFR, similar to amalgams (my examples):

- (162) a. \*They<sub>i</sub> live in [what each other<sub>i</sub>’s neighbours consider to be strange little houses].  
 b. \*She<sub>i</sub> was [what the stories about herself<sub>i</sub> suggested to be rather arrogant].

In sum, both types of amalgams and TFRs can have reflexive content kernels bound by matrix clause antecedents, but this binding relation cannot be established with other elements in the IC/TFR.

### Binding by quantifiers in amalgams

In what follows, I use generalized quantifiers *every* and *no* to bind pronominal elements (pronouns or possessive pronouns) in the IC. Both yield potential confounds, as it is well-known that pronouns can co-vary with quantifiers they are not c-commanded by (E-type pronouns). This unbound reading of the pronoun is often observed in coordinative or paratactic environments (Evans 1980). To circumvent this in the relevant examples, I will use the quantifier *no*, which cannot be taken as an antecedent by E-type pronouns. Unfortunately, *no* cannot be used in the case of Andrews-amalgams, which seems to be a construction-specific restriction.

Consider first the following Horn-amalgams, with a pronominal content kernel (163) and a pronominal IC subject (164):



- (163) No professor<sub>*i*</sub> believed the gossip about [I think it was his<sub>*i*</sub> mistress].  
 (164) \*No professor<sub>*i*</sub> taught, [he<sub>*i*</sub>/his<sub>*i*</sub> students claimed it was a boring class].

As (163) allows for a variable reading of *his*, we can conclude that it can be bound by the matrix clause subject, contrary to the pronoun in the subject of the IC. This is thus consistent with the pattern observed for reflexive pronouns. It also gives us an interesting new piece of evidence: the IC seems to be inaccessible for a binding relationship that is normally possible in subordinate contexts:

- (165) a. No professor<sub>*i*</sub> believed [that his<sub>*i*</sub> mistress kissed his students].  
 b. No professor<sub>*i*</sub> kissed a woman [who kissed his<sub>*i*</sub> students].

The data in (163)-(164) are predicted from the multirooted representations in §2.3 and (155) above: the IC c-commands the content kernel, the matrix c-commands the content kernel, but no elements of the matrix c-command anything else in the IC. Therefore, only the content kernel can contain variables that are bound by the matrix.

It seems quite trivial that the IC can also provide a quantified antecedent for the pronoun to be bound by, but I illustrate this for completeness' sake:

- (166) Bea hit, [no professor<sub>*i*</sub> could have known it was his<sub>*i*</sub> mistress].

Even better, with a little bit of effort, we can even construe examples that are ambiguous for binding by a matrix clause antecedent or internal to the IC, as in (167):

- (167) Every dean<sub>*i*</sub> was kissing, [not a single professor<sub>*j*</sub> would have suspected it was his<sub>*i/j*</sub> mistress].

Matters are a bit harder to test in the case of Andrews-amalgams, as it is impossible to use *no* in the matrix clause of this construction type:

- (168) a. {\*No students/ every student} sold [you can imagine how many books].  
 b. The professor sold {\*no students/ every student} [you can imagine how many books].

So, our options to test the possibility of quantifier-binding in Andrews-cases are limited to the quantifier *every* in the matrix. Based on the following example, we can observe that the pattern is roughly same as in Horn-amalgams, as there is a contrast between a bound content kernel and a bound IC subject:

- (169) Every student<sub>*i*</sub> kissed [you can imagine how many of his<sub>*i*</sub> classmates].  
 (170) ?Every student<sub>*i*</sub> kissed, [he<sub>*i*</sub> didn't even remember how many classmates].

Admittedly though, (170) is considerably better than the similar Horn-case in (164). However, as (171) below shows, a similar reading is available in a paratactic construal. It is thus likely that *he* in (170) is due to an E-type pronoun:

- (171) ?Every student<sub>*i*</sub> kissed a number of classmates. He<sub>*i*</sub> didn't even remember how many.

Also for Andrews-amalgams, we can stretch our imagination a bit and construe examples that are ambiguous for two variable readings (bound by respectively matrix and IC antecedents):

- (172) Every student<sub>*i*</sub> was kissing, [no professor<sub>*i*</sub> could have imagined how many of his<sub>*i/j*</sub> mistresses].

Interestingly, the behavior of TFRs is not completely similar when it comes to quantifier binding. First, and perhaps unsurprisingly, a pronominal content kernel can be bound by a quantifier in the matrix clause (173). However, unlike what is the case in amalgams, a pronominal subject of the TFR can easily have the desired bound variable reading:

- (173) Every professor<sub>*i*</sub> was kissing [what seemed to be his<sub>*i*</sub> mistress].  
 (174) Every student<sub>*i*</sub> was kissing [what he<sub>*i*</sub> considered to be an attractive woman].

In other words, TFRs behave exactly like what is expected in a subordinate context, the bound readings of the relevant pronouns are available just as they are in restrictive relative clauses:

- (175) Every professor<sub>*i*</sub> was kissing a woman [that he<sub>*i*</sub> regarded as his<sub>*i*</sub> mistress].

To some extent, this is unexpected in the approach that Van Riemsdijk envisages for TFRs, where the *c*-command relation bears only between the matrix quantifier and the content kernel, but not the rest of the TFR as in (174). This suggests once again that TFRs are syntactically subordinated to their matrix clauses.

From the availability of reflexive binding and bound pronouns in amalgams, a mixed impression arises of the relationship between the IC and the matrix: reflexive or pronominal content kernels can be bound by matrix clause antecedents, but the same constituents elsewhere in the IC cannot. That is, the IC seems to be opaque for binding relations with the exception of the content kernel, exactly what is expected in the multirooted/multidominance approach discussed in §2.3, in which there is no *c*-command between the matrix and the IC, but elements from both *c*-command the content kernel. Recall that the layered derivation approach proposed in Zwart (2006, 2009) cannot account for the discrepancy between binding relations in subordinate clauses such as

(175) and amalgams. To account for these facts, we are compelled to assume that the relevant interfaces can access the internal structure of elements that entered the derivations as atomic outputs of previous derivations, but the syntactic component cannot. Worse still, the system must somehow differentiate between the content kernel and the other elements of the IC. I suspect that this would require undesirable amendments of that theory.

### 3.4.3 Condition B and C effects

Condition B and C, as formulated in Chomsky (1981) state respectively that a pronoun must be free its local domain, and that an R-expression must be free altogether, ‘free’ meaning that they cannot be c-commanded by a coindexed expression. Violations of these conditions (condition B and C ‘effects’) are then (176) and (177):

(176) \*The professor<sub>i</sub> cited him<sub>i</sub>.

(177) \*He<sub>i</sub> cited the professor<sub>i</sub>.

That the absence of c-command implies an absence of condition C effects in paratactic environments, and that pronouns can be c-commanded by a coindexed expression outside their local domain, is illustrated in (178):

(178) He<sub>i</sub> was shocked. The professor<sub>i</sub> never thought [Chomsky would cite him<sub>i</sub>].

In this section, condition B and C effects are used to detect c-command between matrix and IC in amalgams and TFRs.

#### Condition B effects

To come straight to the point, the English Horn-amalgam below shows that the pronominal content kernel that is coindexed with the matrix clause subject gives rise to a condition B effect:

(179) \*The professor<sub>i</sub> cites [I think it was him<sub>i</sub>] primarily.

This suggests of the presence of c-command between *the professor* and *him* at some level of representation. More importantly, the intervening material (the rest of the IC) apparently does not function as the local domain in which *him* is free under standard assumptions of binding theory. That is, a pronoun in a subordinate must be free in its local domain, but it can be coindexed with a matrix clause expression:

(180) The professor<sub>i</sub> hoped [Chomsky was going to cite him<sub>i</sub>].

Simply put, (180) is as ungrammatical as the standard violation of condition B in (176). By contrast, a pronoun elsewhere in the IC (here part of the subject), can co-refer with a matrix clause expression:

- (181) The professor<sub>*i*</sub> was kissing, [the many rumors about him<sub>*i*</sub> suggested it was Bea].

This is not so surprising, as the pronoun and the coindexed expression are not part of the same local domain under any assumption regarding the status of the IC. In other words, that there is no condition B effect here, is consistent with the claim that the IC is an independent root as well as the idea that it is a subordinate structure. At first sight, it seems that Andrews-amalgams behave similarly, considering the condition B violation in (182):

- (182) \*The professor<sub>*i*</sub> told Bea [you can imagine how many stories about him<sub>*i*</sub>].

However, recall from the discussion about extraction from amalgams and TFRs in §3.4.1 that this specific Andrews-construal also allows for extraction (out) of the PP, contrary to Andrews-amalgams with simplex *wh*-DPs. That is, there is an alternative bracketing of (182) which puts the relevant pronoun outside of the IC (183). In this case, the condition B effect can be reduced to the familiar context in (184):

- (183) \*The professor<sub>*i*</sub> told Bea [you can imagine how many stories] about him<sub>*i*</sub>.

- (184) \*The professor<sub>*i*</sub> told Bea about him<sub>*i*</sub>.

So, although the pattern seems to be the same, the condition B effect in the Andrews-case should not be taken as independent evidence that the content kernel is sensitive to condition B. However, a pronominal subject in the IC that is coindexed with a matrix clause element does not induce a condition B effect, similarly to what was observed for Horn-amalgams:

- (185) The professor<sub>*i*</sub> told Bea [he<sub>*i*</sub> didn't even remember himself how many boring stories].

Fortunately, we can more easily examine TFRs in this respect, by simply using a pronominal content kernel that is coreferent with a matrix clause constituent, as in (186):

- (186) \*The professor<sub>*i*</sub> was proud of [what seemed to me to be primarily him<sub>*i*</sub>].

The ungrammaticality of this example is as striking as the acceptability of its counterpart that has a reflexive content kernel (similar to observations in §3.4.2):

- (187) The professor<sub>*i*</sub> was proud of [what seemed to me to be primarily himself<sub>*i*</sub>].

By contrast, but consistent with what is expected in relative clauses, a coreferent pronoun elsewhere in the TFR does not give rise to such ungrammaticality:

- (188) The professor<sub>*i*</sub> was proud of [what he<sub>*i*</sub> considered to be his most brilliant idea].

The sensitivity of the content kernel to condition B effects thus suggests that the content kernel and the relevant coreferent matrix expression are somehow part of the same local domain, which is expected in theories that assume the content kernel to be simultaneously part of matrix and IC. After all, condition B effects on a pronominal content kernel are then expected, because the matrix clause itself is the relevant local domain, as was coincidentally illustrated in (184). By the same reasoning, we predict a referring content kernel to give rise to condition C effects with a coreferent pronoun in the matrix clause.

#### Condition C effects

The following Horn-amalgam shows that it is indeed impossible to let a referring content kernel corefer with the matrix clause subject, or the subject of the IC:

- (189) \*He<sub>*i*</sub> cites [I think it was the professor<sub>*i*</sub>] primarily.  
 (190) \*The professor kissed, [she<sub>*i*</sub> claimed it was Bea<sub>*i*</sub>].

The latter is not as surprising as the first, but both are evidence that the content kernel is c-commanded by the relevant coreferring constituents. By contrast, the subject of the IC can corefer with the subject of the matrix clause:

- (191) He<sub>*i*</sub> had been kissing, [the professor<sub>*i*</sub> finally admitted it was Bea].

This is interesting, and in line with the fact that a pronominal IC subject cannot be bound by a quantified matrix subject in Horn-amalgams, as was shown in (164) in §3.4.2. Apparently, there is no c-command between the matrix and this part of the IC. As a consequence, a referring IC subject can be coreferent with a matrix DP. This is reminiscent of the use of referential expressions in paratactic contexts such as (192), as coreference with a preceding pronoun does not give rise to a condition C effect:

- (192) He<sub>*i*</sub> had been kissing someone. The professor<sub>*i*</sub> finally admitted it was Bea.

Andrews-amalgams show a similar pattern, disallowing a referring content kernel to corefer with the subjects of matrix or IC, indicative of c-command:

- (193) \*He<sub>*i*</sub> killed [you can imagine which professor<sub>*i*</sub>].  
 (194) \*The professor kissed, [she<sub>*i*</sub> didn't even remember which of Bea<sub>*i*</sub>'s friends]

Furthermore, a referring IC subject can corefer with a pronominal matrix subject, contrary to what is normally the case in subordinate contexts. So, also Andrews-amalgams pattern with their paratactic counterparts in this respect:

- (195) He<sub>i</sub> had been kissing, the professor<sub>i</sub> didn't even remember himself<sub>i</sub> how many of his<sub>i</sub> students.
- (196) He<sub>i</sub> had been kissing some of his<sub>i</sub> students. The professor<sub>i</sub> didn't even remember how many.

Surprisingly, TFRs pattern with amalgams with respect to Condition C, as is shown in (197)-(199):

- (197) \*He<sub>i</sub> praised [what seemed to be the professor<sub>i</sub>].
- (198) \*Bea admires [what he<sub>i</sub> hopes to be the professor<sub>i</sub>].
- (199) He<sub>i</sub> got fired for [what the professor<sub>i</sub> later considered to be his most outrageous idea].

The absence of a condition C effect in (199) is unexpected, as an R-expression in a regular (restrictive) relative clause that corefers with a matrix clause constituent always gives rise to a condition C effect. It is difficult to reconcile this with (174) that shows that a pronoun in a similar position allows for a variable reading bound by a quantifier in the matrix clause. These facts carry over to similar Dutch TFRs as well.

The difference between the content kernel and DPs elsewhere in the IC is striking: the IC, *modulo* the content kernel is not c-commanded by the matrix clause. Notice that these facts are also consistent with the data in §3.4.2. Again, these data seem to support the idea that amalgams are independent clauses with a shared content kernel. After all, R-expressions in subordinate (e.g. relative) clauses normally give rise to condition C effects but not to condition B effects. In addition, the exceptional sensitivity to those conditions of the content kernel but not other positions in the IC does not follow from the layered derivations approach either, for the same reasons as laid out in the above. The fact that *only* the content kernel is sensitive to these conditions cannot follow from the idea that the IC as whole is regularly merged and thus subordinated in the matrix, independently of the extent to which we assume the interfaces to have access to it.

#### 3.4.4 Licensing of NPIs

The licensing of so-called negative polarity items (NPIs), such as the English quantifier *any*, requires a non-veridical context (Zwarts 1995, Giannakidou 1999). Such a context can be provided by a negator or a negative implicative predicate that need not be in the same clause, provided that the NPI is c-commanded by such a licenser:

- (200) a. Bob {didn't help/ refused to help} any victim.  
 b. Bob didn't say [he would help any victim].
- (201) \*Bob helped any victim.
- (202) a. \*Any victim, Bob didn't help \_\_.  
 b. \*[That any victim would be rescued], was not sure \_\_.

(202) shows that the NPI cannot be moved into a position where it c-commands its licensor, even if it was licensed in its base position. This has been formulated as the anti-c-command requirement on NPIs (Heycock and Kroch 2002).<sup>13</sup> Crucially, (201) and (202) are ungrammatical under the NPI reading. Because the English *any* is also used as a free choice item (under which reading these examples are fine), I will use the Dutch NPI *ook maar* (let. 'also just') to avoid interference of the free choice reading in the relevant amalgams. Furthermore, since the content kernels in Andrews-amalgams are always *wh*-DPs, it is impossible to construe the relevant data with NPI content kernels. This section thus only considers Horn-amalgams and TFRs.

Taking into consideration the apparent 'transparency' of the content kernel in amalgams with respect to the matrix clause, we expect that the content kernel can be a NPI in Horn-amalgams, with a matrix clause licensor. But this does not turn out to be the case, considering the marginality of (203) in English and (204) in Dutch:

- (203) ?\*Bob refused to help [I think it was any victim]
- (204) [Dutch]  
 ?\*Bob weigerde ik geloof dat het ook maar enig slachtoffer was te  
 Bob refused I believe that it also just single victim was to  
 helpen.  
 help  
 'Bob refused to help I believe it was any victim.'

Providing a licensor inside the IC doesn't seem to improve matters, as (205) and (206) are similarly marginal:

- (205) ?\*Bob was helping [I think it wasn't any victim].

<sup>13</sup>In chapter 4 I will discuss this condition in relation to NPIs in *it*-clefts, based on observations in Reeve (2010). In fact, I will argue that what rules out NPI content kernels in Horn-amalgams is due to the requirement that cleft constituents must be referential/specific, and has nothing to do with c-commanding their licensor. It should be noted that such a requirement would not explain the behavior of Dutch NPIs that may occur sentence-initial, such as the negative polar verb *hoeven* (approximately 'need to') which usually precedes the mandatory negative element. For more discussion, see Hoeksema (2000).

- (206) [Dutch]  
 ?\*Bob was [ik geloof niet dat het ook maar enig slachtoffer was]  
 Bob was I believe not that it also just single victim was  
 aan het helpen.  
 at the help  
 ‘Bob was helping I don’t believe it was any victim.’

If we assume a multidominance perspective for a moment (which would predict these examples to be correct), it could be argued that a shared NPI can only be interpreted correctly if it can be interpreted as an NPI in both environments, i.e. both matrix and IC need to provide a licensing context for a NPI content kernel, and the marginality of the examples above is due to the failure of the NPI to be interpreted in one of the clauses. But amending the data with two licensors doesn’t help, if anything, it makes things worse:

- (207) \*Bob refused to help [I think it wasn’t any victim].
- (208) [Dutch]  
 \*Bob weigerde [ik geloof niet dat het ook maar enig slachtoffer  
 Bob refused I believe not that it also just single victim  
 was] te helpen.  
 was to help  
 ‘Bob refused to help I don’t believe it was any victim.’

As is expected considering the facts described so far, NPIs cannot be licensed in any other position either:

- (209) Bob refused to help [{\*anyone/ someone} claimed it was Bea].

So, for reasons that are not clear at this point, Horn-amalgams do not tolerate NPI content kernels altogether. It should be pointed out that also the other analyses that have been proposed for amalgams do not *prima facie* predict that NPI content kernels cannot be licensed in this case. I return to these facts in the next chapter (see in particular §5.1.2).

Interestingly, TFR content kernels are not subject to such a restriction, as has been observed in particular in Den Dikken (2005) for Dutch TFRs. The content kernel can be an NPI, but also the subject of the TFR, suggesting that TFR as a whole is c-commanded by the matrix clause. (210) is adopted from den Dikken (2005) (his (3b) and (4b), glossing and translation are mine), the relevant NPIs are the familiar *ook maar* and the Dutch negative polar adverbial *bijster* (‘remotely’):

- (210) [Dutch]  
 a. Jan is niet [wat je zou noemen een bijster slimme vent].  
 Jan is not what you would call a remotely clever guy  
 ‘Jan is not what you’d call a remotely clever guy.’



- b. Jan is niet [wat ook maar iemand zou noemen slim].  
 Jan is not what also just someone would call clever  
 ‘Jan is not what anyone would call smart.’

Den Dikken (2005) argues that these facts follow from both the multidominance approach to TFRs as the unified analysis proposed in Grosu (2003), but that the first should be the case is not straightforward. After all, in Van Riemsdijk’s analysis (represented in §2.3), the matrix clause does not c-command anything in the TFR except the content kernel. From this, only the acceptability of (210a) follows.<sup>14</sup>

### 3.4.5 Idiom chunks

The observation that some idioms can be split by movement operations goes back to Vergnaud (1974), the classical English example is the contrast between the English ‘light’ idiom *make headway* and the ‘heavier’ idiom *kick the bucket*:

- (211) a. The headway that Bea made was far from impressive.  
 b. How much headway did you say Bea made?  
 (212) a. #The bucket that Bob kicked was heavy.

---

<sup>14</sup>It should be noted that the NPI data cited from den Dikken (2005) are reason for Van Riemsdijk (2008) to invoke a new definition of c-command, from which it follows indeed that the TFR can have an NPI subject that has a matrix clause licenser:

- (i) **Makeshift definition of c-command in grafts** [Van Riemsdijk (2008)]  
 Take a host (matrix) tree A, where A dominates a, and a parasitic (dependent, graft) tree B, where B dominates b. Suppose now that b is merged with a. Then for any node c, c dominated by A, if c c-commands a/b, then c c-commands B (and every node dominated by B).

This obviously puts the whole discussion of the supposed opacity of the independent roots in a multidominance configuration in a completely different light: the c-command relations between the matrix and the ‘graft’ are not different than they would be if the graft were subordinated, if everything that c-commands the shared part also c-commands whatever dominates the shared part. Consequently, the multidominance account would fail to predict the opacity of the IC (*modulo* the content kernel) under the assumption of (i). In addition, it should be pointed out that NPIs other than *ook maar* do not fare well in the subject position of the TFR:

- (ii) \*Het examen was niet [wat een bijster slimme student moeilijk zou moeten vinden].  
 the exam was not what a remotely smart student difficult would have to find  
 ‘The exam was not what a remotely clever student would consider to be difficult.’

So, the new definition for c-command is rather heavy machinery to account for questionable data. Since Van Riemsdijk (2008) is not published work, I do not include this severe amendment of c-command in what I take to be the predictions of his account. Thus, assuming the conventional notion of c-command, the NPI facts are not predicted in the multidominance approach, nor are the variable readings of the pronouns the part of the TFR that is not shared under his assumptions.

b. #Which bucket did you say Bob kicked?

Van Riemsdijk (2000a, 2006b,c) argues that as long as idiom chunks (such as *headway*) are still c-commanded by their licensing verb (*make*, in the case of *headway*), the first can also be used as the predicate of a TFR construction:

(213) Bea made [what seemed to be a lot of headway].

This fact can be easily reproduced in amalgams:

(214) Bea made I think it was a lot of headway.

(215) Bea made you wouldn't believe how much headway.

Notice that under the assumption of his analysis, the idiom is not 'split' due to a movement operation (as it is in the cases above). Structurally, *headway* is in the same relation with its licensing verb as it is in the normal case. In other words, unlike what would be predicted for instance from a subordinate view on amalgams and TFRs, we also expect 'heavy' idioms such as *kick the bucket* to be possible in these configurations, and they are not:

(216) #Bob kicked what seemed to be the bucket.

(217) #Bob kicked I think it was the bucket.

(218) #Bob kicked you wouldn't believe which bucket.

This observation is contrary to what is claimed in Van Riemsdijk (2006b:35, my judgment), who considers the following idiom that is split across the matrix and the IC, as acceptable:

(219) \*Bill kicked, I seem to remember you call it the bucket.

However, my informants report this sentence to be completely unacceptable. Gary Thoms (p.c.) notes that this may not even be due to the syntactic configuration, but to the uncertainty that is expressed in the IC, as if the speaker only knows how to use part of the idiom (i.e. *the bucket*). These pragmatic considerations are tightly connected with the generalization that will be explored in more detail in chapter 6, namely that Horn-amalgams and TFRs always involve intensionality. From the perspective of the multidominance-approach, the unacceptability of (219) could alternatively be explained by the fact that *the bucket*, unlike *headway*, requires a proverbial meaning. Arguably, this leads to an interpretation conflict when the IC is processed, whereas *the bucket*, not being in any idiomatic relation, gets a literal interpretation. The idiom facts present an interesting problem for the layered derivation approach (Zwart 2006) as well: it seems hard to explain how the idiom chunks in (214)-(215) can be licensed if they are part of a syntactically opaque constituent.

Abstracting away from these analysis-specific considerations, we can conclude that chunks of light idioms can be used as the content kernel in amalgams and TFRs. This suggests that the idiom chunks in this position, are accessible

to their licensing verb. This neatly fits the overall picture that can be obtained from the sections above: the content kernel, but not the rest of the IC, appears to be transparent with respect to the matrix clause.

### 3.5 Summary

The leading question of this chapter concerned the identity of the IC in relation to the matrix. I started out by providing abundant evidence that the IC is a root clause, using V2, *pro*-drop, illocutionary force and eventually topicalization in the IC as a diagnostic:

**The IC is a root clause**

- the IC has V2 in languages that have strict V2 in main, but not in embedded clauses (Dutch and German);
- *pro* cannot be dropped in the IC in languages that only allow *pro*-drop in embedded contexts (Brazilian Portuguese);
- the IC can express independent illocutionary force;
- the IC can be modified by speaker-oriented adverbs;
- the content kernel can be topicalized inside the IC.

With notable exception of speaker-oriented adverbs, these observations do not hold for TFRs. Next, I focused on the distribution of the IC. For this, I took as a starting point Grosu's generalization that content kernels are multicategorical and that the IC is distributed in accordance with the category of the content kernel. In addition to examples with various content kernels, I used the Dutch Nachfeld (associated with clausal complements), extraposition and HNPS in Dutch and English to further examine the distribution of the IC. As it turns out, this generalization globally holds:

**The distribution of the IC depends on the category of the content kernel**

- the IC does not appear in the Nachfeld position that is associated with clausal complements in Dutch;
- an IC with a DP content kernel cannot be extraposed in languages that do not have HNPS (Dutch);
- an IC with a DP content kernel can be extraposed in languages that do have HNPS (English).

However, we were also faced with a couple of new puzzles that do not follow from this generalization and need closer scrutiny. First, contrary to Andrews-amalgams, Horn-amalgams cannot have AP content kernels. Second, the IC in both types cannot appear in the sentence-initial position. Finally, there seems to be crosslinguistic variation with respect to content kernels that are associated with PPs. These issues are addressed in the chapters to come.

The analyses that have been proposed for amalgams were briefly evaluated in the context of these findings. The root properties of the ICs make an analysis

in terms of (regular or free) relative clauses or layered derivations hard to maintain: both imply subordination of the IC. By contrast, root phenomena were expected in the multirooted multidominance approach. An important consequence of the latter theory is that it predicts the IC, with the exception of the shared content kernel, *not* to be c-commanded by elements of the matrix clause.

The final part of this chapter was therefore a substantial study of c-command based relations in amalgams. In order to detect the presence of c-command, I studied binding, condition B and C effects, NPI licensing and idiom chunks. The data showed an interesting difference between the content kernel and the IC, which seems to be perfectly in line with the predictions of the multidominance account:

**The IC *modulo* the content kernel is not accessible for c-command based relations**

- a reflexive in the IC cannot be bound by a matrix antecedent – a reflexive (in the) content kernel can;
- a pronoun in the IC cannot be bound by a matrix quantifier – a pronoun (in the) content kernel can;
- a pronoun in the IC that corefers with a matrix constituent does not induce a condition B effect – a similarly coreferent pronoun (in the) content kernel does;
- a referential expression in the IC that corefers with a matrix pronoun does not induce a condition C effect – a similarly coreferent referential content kernel does;
- an idiom chunk in the content kernel can be licensed by the matrix.

The remarkable discrepancy between the IC and the content kernel in terms of opacity was not found in TFRs: TFRs seem transparent overall. Although this clearly requires further examination, an analysis of TFRs lies outside the scope of this thesis. As for amalgams, the multidominance/multirooted approach as defended by Van Riemsdijk (2006b,c) and Guimarães (2004) now seems very attractive. However, despite of the fact that the predictions of such an approach are borne out in a surprisingly consistent fashion, the transparency of the content kernel is not necessarily the consequence of sharing in amalgams. That is, the accessibility of the content kernel in amalgams can alternatively be taken as a reflection of how the IC is structured internally. In the chapter to come, I explore the idea that there is more to the IC than meets the eye: the IC in amalgams is elliptical.

## CHAPTER 4

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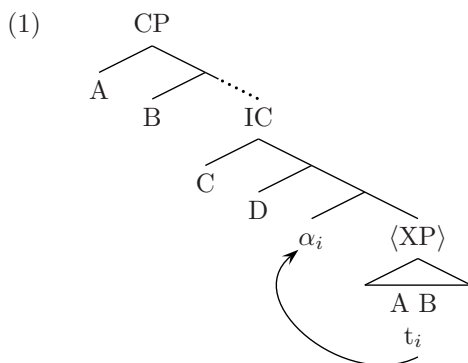
### Amalgams as sluicing configurations

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The various root phenomena witnessed in the above strongly suggest that the IC is a clause. Clearly, what *surfaces* in the IC is not a complete clause. This is most evident in the case of Andrews-amalgams, in which the IC typically involves an embedding predicate, a *wh*-phrase, but not the remainder of what is normally the complement of the predicate. In the assumption that the IC of Horn-amalgams constitutes an *it*-cleft, the IC is not complete either: *it*-clefts are normally accompanied by a relative clause.

This chapter and the chapter to come are primarily concerned with the internal structure of the IC. The central claim of my analysis is that both types of amalgams underlie full-fledged clauses: an embedded *wh*-interrogative in Andrews-amalgams, and a complete *it*-cleft in the Horn-cases. Both types of amalgams then involve a form of ellipsis, *viz.* sluicing. This will eventually account for one of the key observations in chapter 3, namely that the content kernel appears to be accessible to the matrix clause. This is reanalysed in terms of reconstruction, and is discussed at length in chapter 5, where the predictions of the proposal presented here are put to the test. My proposal is that 1. the content kernel is base-generated inside an IP, and moves into CP and 2. ellipsis is licensed by  $C^\circ$ . As such, the content kernel is the remnant of sluicing that has undergone A'-movement (*wh*-movement or focus movement) out of the ellipsis site. I will adopt a PF-approach to ellipsis, in line with Merchant (2001) and implement the idea that ellipsis is licensed via an E-feature in a layered CP. Taking a focus-triggered raising analysis as a starting point for the derivation of the cleft clause in Horn-amalgams, I propose a unified account of the incompleteness of the IC, albeit that ellipsis in Horn-amalgams is licensed

by an E-feature that is responsible for the ellipsis of relative CPs rather than IPs. Abstracting away from the relation between matrix and IC, this approach yields the following representation, where  $\langle XP \rangle$  indicates an elided XP, and  $\alpha$  represents the content kernel:



I start out by introducing the theoretical framework, the basic and well-known properties of sluicing, and the E-feature that licenses ellipsis in sluicing configurations (Merchant's  $E_S$ ) in §4.1. In §4.2 I briefly discuss the licensing of ellipsis in Andrews-amalgams. In addition, I discuss some subvarieties of sluicing that have been distinguished in the literature (such as swiping and sprouting). More time is spent on the implementation of ellipsis licensing via an E-feature in Horn-amalgams. Related to the inherent presence of focus on the cleft pivot of *it*-clefts, I argue for a raising analysis for cleft clauses and propose an E-feature that licenses the ellipsis of relative clauses with focused heads in §4.3. Ultimately, both types of amalgams involve sluicing: the content kernel is an ellipsis remnant. Contrary to familiar sluicing, however, the remnant does not have an overt correlate in the antecedent clause. In §4.4, I show that Merchant's e-GIVENness can be met in spite of this, and briefly point at the empirical predictions that the sluicing approach makes for amalgams. These predictions are the starting point for chapter 5. Finally, in §4.5 I embed this proposal in the recent developments in the theory on sluicing.

## 4.1 Introducing sluicing

### 4.1.1 Theories of sluicing

In analysing amalgams as elliptical constructions, I will argue in favor of an approach to ellipsis that assumes the elided material to be present at the level of syntax, i.e. ellipsis is a process that takes place at PF which is licensed under certain syntactic and semantic conditions. Furthermore, I generalize that both types of amalgams involve sluicing, albeit that the type of sluicing in Horn-amalgams is of a less familiar kind. That sluicing should be the PF-deletion of material that is present in the syntactic output is by no means uncontroversial,

so for completeness' sake, I start out with a minimal (if not scant) summary of the ways ellipsis has been approached in the (generative) literature. This brief discussion is meant as a theoretical background on ellipsis in general and sluicing in particular, and relies (heavily) on the overviews in recent studies of ellipsis that are focused on sluicing in Merchant (2001), van Craenenbroeck (2004, 2010b) and Aelbrecht (2010).

Sluicing was first observed in (and named by) Ross (1969), and can be seen as the absence of an IP. That is, where we normally expect a [+WH] CP, only the *wh*-phrase is pronounced:

- (2) Bob kissed someone, but I don't know [<sub>CP</sub> who [<sub>IP</sub> e]].

A basic distinction can be made between proposals that assume the elided material to be absent from the syntactic structure, such as Van Riemsdijk (1978) and more recently Culicover and Jackendoff (2005), and proposals that assume the elided material to be syntactically present. In the first type of approach, it is assumed that the complement of the embedding verb is simply a *wh*-DP; this can be seen as the *non-structural* approach to ellipsis:

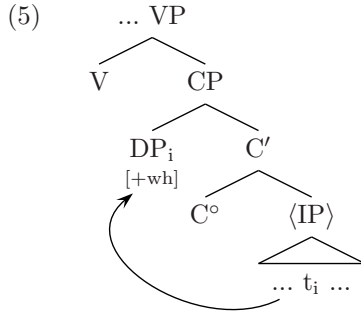
- (3)
- $$\begin{array}{c} \text{VP} \\ \swarrow \quad \searrow \\ \text{V} \quad \text{DP} \\ \quad \quad [+wh] \end{array}$$

By contrast, in *structural* approaches it is assumed that the missing category, here the IP, is present at the syntactic level. These approaches can be divided in those that take the elided material to be a null category (a *proform*, or an 'empty non-NP pronominal' as in Lobeck 1995:§1.3) that is interpreted at LF (Lobeck 1995, Chung et al. 1995), and those who assume that the missing elements are structurally present but deleted (i.e. not pronounced) at PF (Merchant 2001, 2004, Van Craenenbroeck 2004, 2010b, Aelbrecht 2010). Under the assumption of the first, the *wh*-phrase in a sluicing configuration is base-generated in SpecCP, and merged with a *pro* of the category IP:

- (4)
- $$\begin{array}{c} \text{VP} \\ \swarrow \quad \searrow \\ \text{V} \quad \text{CP} \\ \quad \swarrow \quad \searrow \\ \quad \text{DP} \quad \text{C}' \\ \quad \quad [+wh] \quad \swarrow \quad \searrow \\ \quad \quad \text{C}^\circ \quad \text{pro}_{\text{IP}} \end{array}$$

So, in this type of approach, the *wh*-phrase has not moved. By contrast, the PF-deletion approach posits that the complete IP is generated, which contains the verb that selects the *wh*-DP (this would be *kissed*, corresponding to the main verb in the antecedent clause in (2)). In this analysis, the *wh*-DP *wh*-moves

out of the IP to SpecCP, and the IP is deleted at PF (I represent PF-deleted material as  $\langle XP \rangle$ ):



Based on four key properties of sluicing, i.e. reconstruction effects, their behavior with respect to islands, case matching effects, and the distribution of PPs (to be discussed in the section below), I will argue in favor of a theory of ellipsis in which the elided material is present at the level of syntax, and implement the basics of Merchant's approach to the internal structure of the IC in amalgams.

#### 4.1.2 Four key properties of sluicing

There are four key observations that go back to Ross (1969), that I will readdress in the context of both types of amalgams in the chapter to come: reconstruction effects, the lack of island effects, strict case matching and the interaction with P-stranding/pied-piping under regular *wh*-movement. To start out with reconstruction effects, the following example is from Lasnik (2001) and shows that the *wh*-remnant can be bound by a quantifier that is part of the ellipsis site:

- (6) Every linguist<sub>*i*</sub> criticized some of his<sub>*i*</sub> work, but I don't know how much of his<sub>*i*</sub> work  $\langle$ every linguist criticized  $t_i$  $\rangle$ .

Crucially, *his* in the second conjunct cannot be bound by the quantifier in the first conjunct. Arguably, there is no c-command between the first conjunct and the rest of the coordination (for discussion, see Culicover and Jackendoff 1997, Progovac 1998). This is illustrated by the contrast in (7) (Culicover and Jackendoff 1997:203, their (21)):

- (7) a. Every senator<sub>*i*</sub> at the party thought that he<sub>*i*</sub> would have no trouble getting elected.  
 b. \*Every senator<sub>*i*</sub> was at the party and he<sub>*i*</sub> was worrying about getting elected.

However, the bound reading is expected when we assume the *wh*-phrase has moved out of the sluiced IP: the relevant binding relation is then established



via reconstruction in the ellipsis site (i.e. the base position of the *wh*-phrase), as is indicated by means of a trace in (6). Reconstruction effects in sluicing are thus conform with the predictions of the PF-deletion approach.

This contrasts sharply with the observation that sluicing is *insensitive* to islands, i.e. the *wh*-phrase may move out of islands. This is shown in (8): the *wh*-phrase moves out of a relative clause, but the example is grammatical. This is exceptional, as ellipsis is generally a process that is island-sensitive, as is illustrated by the ungrammaticality of similar examples of VP-ellipsis (9) and gapping (10) (examples (8)-(9) are from Merchant 2001, (10) is mine):

- (8) They want to hire someone who speaks a Balkan language, but I don't remember which ⟨\*they want to hire someone who speaks⟩.
- (9) \*They want to hire someone who speaks a Balkan language, but I don't remember who they do ⟨want to hire someone who speaks⟩.
- (10) \*Bill wants to hire someone who speaks a Balkan language, and Bob ⟨wants to hire someone who speaks⟩ an Avar-Andic language.

For some reason, sluicing ameliorates the island violation in (8), while VP-ellipsis nor gapping have such an effect. Obviously, the claim that sluicing is island *insensitive* depends on the assumption that the ellipsis site in sluicing involves movement of the *wh*-phrase to begin with, which is not assumed to be the case in proposals in the spirit of van Riemsdijk (1978), or in LF-oriented analyses such as Chung et al. (1995). These data are hard to reconcile with the PF-approach to sluicing as advocated by Merchant. However, the case and PP facts discussed below are a big obstacle for approaches that do not assume the IP to be present at the level of syntax. Within the PF-approach, several proposals have been made to account for the remarkable difference between sluicing and other kinds of ellipsis (Lasnik 2001, Fox and Lasnik 2003, Merchant 2008). I address these in 5.4.3.

Third, the *wh*-phrase exhibits the case marking that can only be associated with its correlate in the antecedent clause ((11) goes back to Ross 1969, but is cited from Merchant 2001:89):

- (11) [German]
  - a. Er will jemandem schmeicheln, aber sie wissen nicht,  
he wants someone-DAT flatter but they know not  
{\*wer / \*wen / wem}.  
who-NOM who-ACC who-DAT  
‘He wants to flatter someone, but they don’t know who.’
  - b. Er will jemanden loben, aber sie wissen nicht, {\*wer  
he wants someone-ACC praise but they know not who-NOM  
/wen / \*wem}.  
who-ACC who-DAT  
‘He wants to praise someone, but they don’t know who.’

The correlate of *wem* in (11) is *jemandem*, the object of *schmeicheln*, which assigns dative case. This is a strong indication that the *wh*-phrase in fact received case prior to moving out of the ellipsis site. This is described as the Case-matching generalization (the first of what Merchant calls the ‘form-identity generalizations’):

- (12) **Case-matching generalization** [Merchant (2001:91)]  
 The sluiced *wh*-phrase must bear the case that its correlate bears.

Merchant (2001) shows that this pattern extends to Greek, Russian, Polish, Czech and several other languages with rich case morphology.

Finally, as is observed in Ross (1969), and worked out in great detail in Merchant (2001), there appears to be an interaction between the availability of P-stranding in a language and the presence or absence of a preposition in the sluice, based on a contrast between English (P-stranding) and for instance Czech (pied-piping) (Merchant 2001’s (22) and (34), chapter 3):

- (13) a. Peter was talking with someone, but I don’t know (with) who.  
 b. Who was he talking with?
- (14) [Czech]
- a. Anna mluliva s někým, ale nevím \*(s) kým.  
 Anna spoke with someone but not.I.know with who  
 ‘Anna spoke with someone, but I don’t know who.’
- b. \*Kým mluvila Anna s?  
 who spoke Anna with  
*int.* ‘Who did Anna talk with?’

Apparently, only languages that can strand prepositions in *wh*-movement configurations can have sluices of the form in (13), i.e. where the *wh*-phrase is not necessarily accompanied by its preposition. Also this is a strong indication that the *wh*-phrase has undergone movement, and that the elided IP is present at the syntactic level. Based on these contrasts amongst various languages, Merchant (2001) proposes the P-stranding generalization (the second form-identity generalization):

- (15) **P-stranding generalization** [Merchant (2001:107)]  
 A language *L* will allow preposition-stranding under sluicing iff *L* allows preposition-stranding under regular *wh*-movement.

The difference between the English and Czech sluices in (13)-(14) is then due to the general ban on P-stranding under *wh*-movement in the latter: the English preposition can be stranded in the ellipsis site. By contrast, the preposition is obligatorily pied-piped under *wh*-movement in Czech and therefore moves out of the ellipsis site under sluicing:

- (16) Peter was talking with someone, but I don’t know who ⟨Peter was

talking with).

(17)

[Czech]

- a. \*Anna mluliva s někým, ale nevím kým (mluvila Anna  
Anna spoke with someone but not.I.know who spoke Anna  
s).  
with  
'Anna spoke with someone, but I don't know who.'
- b. Anna mluliva s někým, ale nevím s kým (mluvila  
Anna spoke with someone but not.I.know with who spoke  
Anna).  
Anna  
'Anna spoke with someone, but I don't know who.'

It should be noted that the P-stranding generalization has been contested by several in the literature, based on strict pied-piping languages that seemingly allow for stranding under sluicing (De A. Almeida and Yoshida 2007, for Brazilian Portuguese). In the discussion of patterns with PPs in amalgams in §5.2, it will be clear that there is some unexpected variation in amalgams as well.

In sum, the observations concerning case matching, the stranding of prepositions under sluicing and reconstruction effects are puzzling in an approach that does not assume movement in sluicing (such as Chung et al. 1995). At the same time, the absence of island effects is unexpected in an approach that does assume movement of the *wh*-remnant, although it should be noted that the exceptional behavior of sluicing is hard to reconcile with other types of ellipsis in any general theory of ellipsis. In chapter 5 (§5.1 and §5.2), I show that these properties can be recovered in amalgams, corroborating the view that amalgams are full-fledged clauses at the level of syntactic representation.

#### 4.1.3 Licensing ellipsis via an E-feature: Merchant (2001)

Merchant (2001, 2004) proposes that ellipsis is licensed by a syntactic feature, the E-feature [E]. This feature is present on a head and basically instructs PF to not pronounce its complement. In line with observations in Lobeck (1995), he claims that only certain heads are able to license the ellipsis of their complement. In the case of sluicing, the relevant feature is defined as  $E_S$ , which can only occur with a C head that is [+wh,+Q]. More specifically,  $E_S$  carries the (strong) uninterpretable features [ $uwh^*, uQ^*$ ], that need to be checked locally (Merchant 2004:671). As such, *sluicing* is restricted to interrogative *wh*-environments in his view. Other instances of [E] (such as  $E_{VP}$  for VP-ellipsis) may have different properties, and are subject to cross-linguistic variation. Although I will primarily be concerned with the *syntactic* implementation of this feature in amalgams, let me briefly summarize the semantic properties and conditions associated with ellipsis.

Evidently, ellipsis is not the random non-pronunciation of a given part of

a syntactic output, its content must be recoverable at the interpretive level. It is widely acknowledged that the semantic licensing of ellipsis (in general) is closely related to the presence of *focus*. In what follows, I will indicate focused constituents with SMALL CAPS when relevant to the point. Romero (1998) observes that the remnant *wh*-phrase in sluicing is focused:

- (18) Bea kissed someone, but I don't know WHO  $\langle [_{IP}$  Bea kissed  $\rangle$ .

Material that is not focused, is generally assumed to be 'given'. Both Romero (1998) and Merchant (2001) adopt Schwarzschild (1999)'s notion of GIVENness:

- (19) **GIVENness** [Schwarzschild1999:155]  
If a constituent is not F-marked, it must be GIVEN.

By uttering a reply such as B, where *red* is focused (or 'F-marked'), A's original statement seems to function as the antecedent (Schwarzschild 1999:149):

- (20) A: John ate a green apple.  
B: No, he ate a RED<sub>F</sub> apple.

What A said does not entail B's reply, but it does entail that John ate an apple with *some* property, i.e. the antecedent has the following entailment:

- (21) John ate a green apple entails  $\exists Y$ [John ate a Y apple]

In other words, the antecedent entails what is the result when we replace the focused material by an existentially bound variable, and the notion of what is given can be formulated as (22):

- (22) **GIVEN** [Schwarzschild1999:150]  
An utterance U counts as GIVEN iff it has a salient antecedent A and modulo  $\exists$ -type shifting, A entails the Existential F-Closure of U.

This is implemented in Merchant (2001), who adapts Schwarzschild's definition of F-closure (see Schwarzschild 1999:150) as in (23) and implements his GIVEN as 'e-GIVENness' (ellipsis-GIVENness) to guarantee recoverability of the elided material at the interpretive level:

- (23) **F-closure** [Merchant2001:14]  
The F-closure of  $\alpha$ , written  $F\text{-clo}(\alpha)$ , is the result of replacing F-marked parts of  $\alpha$  with  $\exists$ -bound variables of the appropriate type (modulo  $\exists$ -type shifting).

- (24) **e-GIVENness** [Merchant2001:31]  
An expression E counts as e-given iff E has a salient antecedent A and, modulo  $\exists$ -type shifting,  
(i) A entails  $F\text{-clo}(E)$ , and  
(ii) E entails  $F\text{-clo}(A)$ .

Applied to the example of sluicing (18), we can now see how ellipsis of the IP can be licensed semantically by meeting the requirements of e-GIVENNESS. Adopting Merchant (2001:27) notational convention,  $\alpha'$  is  $\alpha$  after  $\exists$ -type shifting. I will illustrate this step-by-step for (25):

$$(25) \quad [_{CP} [_{IP_A} \text{Bea kissed someone}], \text{ but I don't know } [_{CP} \text{WHO}_i [_{IP_E} \text{Bea kissed } t_i]]].$$

The remnant *wh*-phrase *who* is F-marked, and the relevant ellipsis that needs to be licensed targets the IP out of which the *wh*-phrase has moved. The  $IP_E$  contains the trace of *who* (for discussion concerning the deletion of traces and F-marking see Merchant 2001:27 ff), which is replaced by an  $\exists$ -bound variable under  $\exists$ -type shifting (see (23)). I will use  $t^x$  to represent the variable introduced by the trace:

$$(26) \quad IP_A = \text{Bea kissed } t^x$$

This then yields (27) after  $\exists$ -type shifting:

$$(27) \quad \begin{aligned} F\text{-clo}(IP_E) &= \exists x. \text{Bea kissed } x \\ IP'_A &= \exists x. \text{Bea kissed } x \end{aligned}$$

Clearly,  $IP'_A$  entails  $F\text{-clo}(IP_E)$ , so the first condition of e-GIVENNESS is met. For clarity's sake, the relevant  $\exists$ -bound variable in  $IP'_A$  is the result of  $\exists$ -type shifting of the indefinite *someone*. I return to restrictions on the correlate and F-marking in §4.4 below. The second condition is met in a similar fashion:

$$(28) \quad \begin{aligned} F\text{-clo}(IP_A) &= \exists x. \text{Bea kissed } x \\ IP'_E &= \exists x. \text{Bea kissed } x \end{aligned}$$

So, the e-GIVENNESS is met in (25) and ellipsis of  $IP_E$  is licensed. The focus condition on ellipsis can thus be described as follows, based on Merchant (2001):

$$(29) \quad \begin{array}{ll} \textbf{Focus condition on ellipsis} & [\text{Aelbrecht2010:11}] \\ \text{A constituent } \alpha \text{ can be deleted only if } \alpha \text{ is e-GIVEN.} & \end{array}$$

The phonology of  $E_S$  is quite straightforward: it is merely an instruction to the phonological component to refrain from parsing (pronouncing, if you will) whatever is the complement of the head on which  $E_S$  resides (Merchant 2004:671). How this works precisely is not made explicit in Merchant (2001, 2004), and lies outside the scope of this thesis. The properties of the E-feature for sluicing can now be summarized as follows:

$$(30) \quad \begin{array}{l} \textbf{The properties of } E_S \\ \text{i. The syntax of } E_S: E_S [uwh^*, uQ^*] \\ \text{ii. The phonology of } E_S: \phi TP \rightarrow \emptyset / E_S- \\ \text{iii. The semantics of } E_S: \llbracket E_S \rrbracket = \lambda p: \text{e-GIVEN } (p) [p] \end{array}$$

Importantly, both features associated with  $E_S$  are strong: they must be checked locally (i.e. in a Spec-Head configuration) under standard minimalist assumptions (Chomsky 1993, 1995, see also Lasnik 1999). Accordingly, Merchant (2001) assumes  $E_S$  to be on the  $C^\circ$  head, yielding the deletion (or non-pronunciation) of the IP (the complement of  $C^\circ$  under basic assumptions) out of which the relevant *wh*-phrase has moved, allowing the strong features of  $E$  to be checked locally as desired.

In the remainder of this section, I will discuss ellipsis in the IC of amalgams in the context of the PF-deletion approach to sluicing. I will argue that things can take an unexpected turn if we modify the syntactic aspects of the  $E$ -feature and the level at which it applies in the CP. This allows us to unite the two types of amalgams, taking sluicing with focused remnants that have  $A'$ -moved out of the ellipsis site to be their common denominator at the syntactic level. First, I discuss the basic properties of the elliptical ICs in relation to basic properties of sluicing configurations and *it*-clefts.

## 4.2 Sluicing in Andrews amalgams

### 4.2.1 Licensing ellipsis in Andrews-amalgams by $E_S$

There is general agreement in the literature about Andrews-amalgams (Lakoff 1974, Tsubomoto and Whitman 2000, Guimarães 2004, Grosu 2006, 2008) that the *wh*-content kernel is the remnant of *sluicing*. This becomes clear when we examine the main predicate of the IC, here *guess*:

- (31) Bob married [you'll never guess who].  
IC = *you'll never guess who*

As an out-of-the-blue expression, (32) is unacceptable:<sup>1</sup>

- (32) #You'll never guess [<sub>DP</sub> who].

That is, the complement of *guess* cannot be a *wh*-DP (that for some mysterious reason stays *in situ*). Intuitively, the IC is understood as '*who Bob married*'.

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<sup>1</sup>This is not to say that *guess* (or other embedding predicates that are used in the IC) cannot take a nominal arguments. The predicates in the IC of amalgams are typically (complexes of) *attitude* verbs such as *guess*, *believe*, *know* and *imagine*. Although such verbs are often associated with sentential arguments, they also allow for a restricted set of nominal arguments:

- (i) I believe {something/this claim/it/Bob/?\*the book/\*the house}.

Arguably, such arguments always express things that can be believed: *something* is understood as some proposition, and Bob refers to (a set of) propositions that Bob is believed to consider true. That is, the propositional content that such predicates require does not need to take the shape of a sentential argument (for discussion, see Moltmann 2003, Kratzer 2006, Moulton 2009, *inter alia*).

This suggests that the *wh*-phrase is part of a regular interrogative CP, as in (33):

- (33) You'll never guess [<sub>CP</sub> who Bob married].

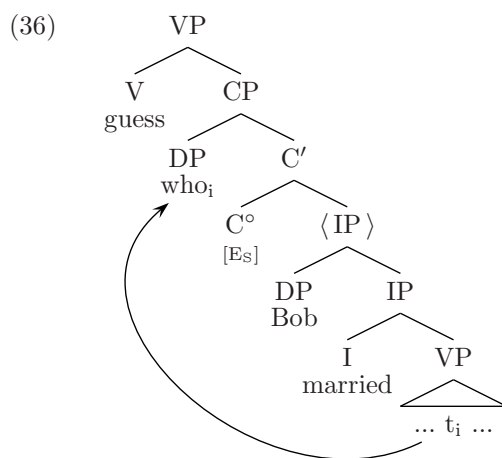
It is therefore more plausible that the *wh*-CP that is selected by the main predicate of the IC, is structurally present, but involves a phonologically null IP. In other words, the IC has undergone *sluicing* (34), similar to the regular example of sluicing in (35):

- (34) Bob married [you'll never guess who ⟨Bob married⟩].

- (35) Bob married someone, but I don't know who ⟨Bob married⟩.

The most obvious difference between regular sluicing and the Andrews-amalgam is the absent correlate of the *wh*-remnant. This is the (indefinite) DP *someone* in the antecedent clause in (35), the object of *married*. By contrast, the object position of *married* in the amalgam is empty. This is precisely the position in which the IC, which contains the ellipsis site, occurs. Under the assumption of the sluicing approach I propose, then, we can reformulate the 'content kernel' and the 'missing matrix constituent' as a sluicing remnant and its (absent) correlate respectively. This immediately raises the question how ellipsis can be licensed in amalgams. That is, it is not directly clear how Merchant's e-GIVENNESS is met in amalgams. I will argue in the present chapter as well as in chapter 7 of this thesis that amalgams involve a *null* correlate: the antecedent contains an empty position. This gives rise to a free variable in the structure, from which the necessary entailment relations can be derived. Since Horn-amalgams show the same pattern, I postpone this issue until later in §4.4.

Let us for the moment assume that the IC in Andrews-amalgams is a sluice. In the PF-deletion approach, the underlying structure of the IC in (34) is then as follows:



Here, the *wh*-phrase *who* moves to SpecCP, and IP is deleted at PF due to the presence of the E-feature on C. Since the sluicing remnant is a *wh*-phrase, comparable to regular sluicing, we can assume that the E-feature in this case is E<sub>S</sub>. In the discussion of Horn-amalgams below, sluicing will be generalized to A'-movement contexts, which crucially includes focus-movement.

Under these assumptions, the matrix clause is the antecedent for the ellipsis site in the IC. Notice that without further assumptions about the relation between the matrix and the IC, it appears that the antecedent (the matrix) contains the ellipsis site (the IC) (34), contrary to (35), where the antecedent and the ellipsis site are part of two conjoined clauses. Taking the root properties (amongst other things) into consideration, I will argue in chapter 6 and 7 that the ICs in amalgams are *parentheticals*. As such, both (34) and (35) both belong to the paratactic domain, which includes coordination, parentheses, and subsequent sentences. It should be noted that also the latter are well-known contexts for sluicing:

- (37) Bob married someone. You wouldn't believe who (Bob married).

Data that corroborate the claim that the IC in Andrews-amalgams is in fact a sluiced interrogative clause, are provided in §5.1 and §5.2. In the context of the proposal that is central to this chapter, I will focus on two puzzles and its subvariants that have been noticed in the literature.

#### 4.2.2 Varieties of sluicing in Andrews-amalgams

The literature distinguishes a couple of subvarieties of sluicing. The first involve a *wh*-phrase that does not have an overt correlate in the antecedent clause, which is most extensively discussed in Chung et al. (1995), who dub such cases 'sprouting'. The correlates of the *wh*-phrases in regular sluicing in (38) are the indefinites DPs *someone* and *a professor*:

- (38) a. Bea kissed someone, but I don't know who.  
       b. Bea kissed a professor, but I don't know which.
- (39) Bea served the customers, but I don't know what.
- (40) Bill asked Bea to marry him, but I don't know {when/where/how/why}.

In (39) the *wh*-phrase corresponds to an implicit argument of the matrix verb in the antecedent clause, in (41) to nothing at all, i.e. a distinction can be made between *argument*-sprouting and *adjunct*-sprouting. (41) shows that sprouting only applies to 'minimal' or 'bare' *wh*-phrases:

- (41) \*Bea served the customers, but I don't know which soup.

In the case of Andrews-amalgams, it is difficult to see if there is such thing as sprouting. As pointed out in the above, the correlate in the matrix is absent



altogether, regardless of whether the matrix verb has implicit arguments (such as *serve* (*someone*) (*something*)):

- (42) a. Bea served the customers (\*something) [you'll never guess what].  
       b. Bea served the customers, but I don't know what.
- (43) a. Bea gave the customers (\*something) [you'll never guess what].  
       b. \*Bea gave the customers, but I don't know what.

This means that amalgams are not generally instances of sprouting, because if this were the case, we would expect (43a) to be ruled out similar to (43b). Another indication is that sprouting, unlike sluicing (and unlike sluicing in amalgams, as I show in chapter 5), is sensitive to island constraints. The example is adapted from Chung et al. (1995:279), in which the relevant *wh*-constituent in the ellipsis site moves across a complex NP (assuming a PF-deletion account). Such movement is possible in a sluicing configuration, but not in sprouting:

- (44) Tony sent Mo a picture that he painted \*(with something), but it's not clear with what<sub>*i*</sub> ⟨Tony sent Mo a picture that he painted t<sub>*i*</sub>⟩.

Still, there is reason to believe that some Andrews-amalgams involve sprouting. Indirect evidence for this is provided by the fact that Andrews-amalgams allow for another variety of sluicing, namely swiping, and swiping is restricted to sprouting.

Merchant (2002) (but see also the data in Van Riemsdijk 1978, Chung et al. 1995) distinguishes between sluicing and 'swiping', an acronym for 'sluiced *wh*-word inversion with prepositions in Northern Germanic'. The example is from Merchant (2002:295):

- (45) Peter went to the movies, but I don't know who with.

In this case, the preposition is pied-piped, but instead of preceding the *wh*-phrase, it appears in postposition. This inverted order is only possible in the context of sluicing, and can only affect 'minimal' (i.e. non-complex) *wh*-phrases that have no correlate in the antecedent (Merchant 2002, Van Craenenbroeck 2004, 2010b), i.e. instances of *sprouting* (although this is not discussed as such by Merchant or Van Craenenbroeck):

- (46) a. \*Who with did Peter go to the movies?  
       b. \*I don't know who with Peter went to the movies.
- (47) \*Peter went to the movies with someone, but I don't know who with.

Interestingly, Grosu (2006) (his (2b)) shows that this form of sluicing is also possible in Andrews-amalgams:

- (48) a. Bill has been involved with [you will never guess who] since August.

- b. Bill has been involved [you will never guess who with] since August.

As is expected on the basis of (47), the inversion of the preposition and the *wh*-phrase is not possible with complex (D-linked) *wh*-phrases:

- (49)
- a. Bill has been involved with [you will never guess which girl] since August.
  - b. \*Bill has been involved [you will never guess which girl with] since August.

Merchant (2002) and Van Craenenbroeck (2004, 2010b) are two fundamentally different approaches to swiping. The first basically proposes that the inversion is post-syntactic (PF) head movement. By contrast, the latter derives swiping in terms of stranding of the preposition in a lower layer of the CP (SpecCP<sub>2</sub>), while the *wh*-phrase moves into SpecCP<sub>1</sub>, assuming a split CP. Since in this proposal only minimal *wh*-phrases move (complex *wh*-phrases are base generated in SpecCP<sub>1</sub>), Van Craenenbroeck can derive the restriction on swiping in this way. For an alternative proposal in a non-deletion approach to sluicing, see Van Riemsdijk (1978:231ff). Although I won't discuss swiping in relation to amalgams, the analysis of sluicing in terms of layered CPs, as in Van Craenenbroeck (2004, 2010b) will be addressed at several points throughout the remainder of this chapter.

The last subvariant of sluicing is 'spading', which is discussed extensively in Van Craenenbroeck (2004, 2010b). The relevant examples are seemingly in opposition to the generalization that no COMP material can follow the sluiced *wh*-phrase. I discuss this in §4.2.3 below. The West-Flemish variant of Dutch spoken in the area of Wambeek, allows for the element *da* ('that') to follow the *wh*-phrase under sluicing:

- (50) [Wambeek Dutch]
- Jef eid iemand gezien, mo ik weet nie wou da.  
 Jef has someone seen but I know not who that  
 'Jef saw someone, but I don't know who.'

The term 'spading' is short for sluicing *plus a demonstrative in noninsular Germanic*, and has also been observed in Frisian (J. Hoekstra (1993)). Importantly, *da* is to be regarded as a demonstrative pronoun, and *not* as a complementizer (although they are homophonous). Arguably, then, (50) is not an exception to the generalization above that complementizers do not survive sluicing. Surprisingly, there is no such thing as a spading Andrews-amalgam (J. van Craenenbroeck, p.c.). Consider (51):

- (51)
- a. Ij ei [kwee nie wa] gekocht.  
 he has I.know not what bought  
 'He bought I don't know what.'

- b. \*Ik ei [kwee nie wa da] gekocht.  
 he has I.know not what that bought  
 ‘He bought I don’t know what.’

The specific use of *kwee-nie-wa* (‘I don’t know what’) could be a more idiomized form that looks like an Andrews-amalgam, but is much more restricted, reminiscent of the use of the (standard) Dutch *ik-weet-niet-wat* (‘I don’t know what’) or similarly *weet-ik-wat* (lit. ‘know I what’, similar to ‘God knows what’ in English) that I will argue to be idiomatic forms in chapter 6. In the assumption that such uses do not involve sluicing, the contrast in (51) is not surprising. Unfortunately, the following case rules out the possible interference of idiomization, but is still ungrammatical:

- (52) \*Jef ei [ge kindj al pauze wou da] gezien.  
 Jef has you can-REFL al think who that  
 ‘Jef saw you can imagine who.’

But it cannot only be the occurrence of *da* that presumably causes ungrammaticality, as the version without *da* is also quite marginal (granted that there is a contrast):

- (53) ??Jef ei [ge kindj al pauze wou] gezien.  
 Jef has you can-REFL already think who seen  
 ‘Jef saw you can imagine who.’

How these specific facts should be accounted for, is an issue I will leave open. It should be noted, however, that such stranding under sluicing is generally more restricted than these cases show. First, observe that spading always induces a surprise-reading (Van Craenenbroeck 2010b, §3.2.5), i.e. in using the ‘spading’ reaction in B to the statement in A, speaker B indicates that the statement in A is surprising to him/her (example from Van Craenenbroeck 2010b, his (14)):

- (54) A: Jef eid iemand gezien.  
 Jef has someone seen  
 ‘Jef saw someone.’  
 B: Wou da?  
 who that  
 ‘Who?’

The use of *da* is unfelicitous in a context where it is unlikely that B is surprised by the statement expressed by A. Interestingly, Van Craenenbroeck (2010b, §8.3.1) also describes cases that involve stranding of material (in this case the temporal adverb *dan*, ‘then’) in COMP in standard Dutch that seem comparable to *da*-stranding:

- (55) [Dutch]
- A: Ed heeft iemand gezien.  
     Ed has someone seen  
     ‘Ed saw someone.’
- B: Oh? Wie dan?  
     oh who then  
     ‘Really? Who?’

Also this is only felicitous in case speaker B is surprised. However, what is not addressed by Van Craenenbroeck, is that unlike spading in Wambeek Dutch, *dan*-stranding in standard Dutch is not possible in coordinative contexts, the usual configuration in which sluicing is discussed in the literature, not even in a setting in which the speaker could be surprised by what is expressed in the antecedent clause. This is shown in (56), where I use the verb *vermoorden*, ‘to kill’ to enhance an unlikely state of affairs:

- (56) Bob heeft iemand vermoord, en je raadt nooit wie (\*dan).  
       Bob has someone killed and you guess never who then  
       ‘Bob has killed someone and you’ll never guess who.’

*Dan*-stranding is not possible in the context of Andrews-amalgams either:

- (57) Bob heeft [je raadt nooit wie (\*dan)] vermoord.  
       Bob has you guess never who then killed  
       ‘Bob killed you’ll never guess who.’

The observation that Andrews-amalgams do not allow for spading could thus be related to more general restrictions on this type of sluicing.

In sum, not all varieties of sluicing that have been distinguished in the literature are found in amalgams: sprouting can only be recovered indirectly via the possibility of swiping in English Andrews-amalgams, and spading does not seem to exist at all. I will not be concerned with these apparent restrictions at this point, as the basic claim that amalgamation involves sluicing does not imply that all varieties of sluicing should have amalgamated counterparts.

#### 4.2.3 Sluicing puzzles in the COMP-domain

Sluicing appears to have particular restrictions in the COMP-domain. It is observed by Merchant (2001) that sluicing disallows any material in the COMP-domain to follow the sluiced *wh*-phrase. That is, various elements that are associated with the COMP-domain other than the *wh*-phrase do not survive sluicing. I will show this for elements that are generally assumed to move into the COMP domain (Slovene Wackernagel clitics) and base-generated occupants of the COMP-domain (Dutch complementizers). I will consider a possible solution for the latter in §4.5.3.

For example, so-called ‘Wackernagel’ clitics (clitics that obligatorily appear

in the 2<sup>nd</sup> position, reminiscent of V2) are disallowed under sluicing. Consider the Slovene example with such a clitic *je* (an aspectual auxiliary) in a normal context and in sluicing (example from Merchant 2001:66, his (82) and (84a)):

- (58) [Slovenian]  
 Peter se je spraševal, kako<sub>i</sub> je Špela popravila t<sub>i</sub>.  
 Peter REFL AUX asked what AUX Spela fixed  
 ‘Peter wondered what Spela fixed.’
- (59) Špela je popravila nekako, a nisem vprašal, kako  
 Spela AUX fixed something but NEG.AUX.1SG asked what  
 (\*je).  
 AUX  
 ‘Spela fixed something, but I didn’t ask what.’

This restriction carries over to Slovenian Andrews-amalgams as well, considering the contrast that was reported (M. Hladnik and T. Marvin, p.c.) in (60):

- (60) a. Nikoli ne boš uganil, kaj je Špela  
 never NEG AUX.2SG.FUT guess.SG.PART what AUX Spela  
 popravila.  
 fixed  
 ‘You’ll never guess what Spela fixed.’
- b. Špela je popravila - nikoli ne boš uganil  
 Spela AUX fixed - never NEG AUX.2SG.FUT guess.SG.PART  
 kaj (\*je).  
 what AUX  
 ‘Spela fixed you’ll never guess what.’

The ungrammaticality of (60b) is hard to explain if it assumed that sluicing is PF-deletion after movement of the *wh*-phrase, as the clitic is presumably moved along with the *wh*-phrase. To overcome this, Merchant (2001) argues that these clitics are ruled out because their ordering is at PF and not in syntax.

However, elements that are *base*-generated in the COMP-domain, such as complementizers, cannot follow the sluiced *wh*-remnant either. Although such examples could argued to be ruled out independently by the Doubly-Filled Comp-filter, it is a well-established fact that (subvarieties of) Dutch and Frisian are not subject to such a constraint and allow for one or more complementizers to co-occur with the *wh*-phrase in an embedded interrogative. The examples are from Merchant (2001), but the observation goes back to Bennis (1986), Zwart (1993) and J. Hoekstra (1993):

- (61) [Dutch]  
 Ik weet niet wie (of) (dat) hij gezien heeft.  
 I know not who if that he seen has  
 ‘I don’t know who he has seen.’

Interestingly, none of these complementizers survives sluicing:

- (62) Hij heeft iemand gezien, maar ik weet niet {wie/ \*wie of/ \*wie  
 he has someone seen but I know not who who if who  
 dat/ \*wie of dat}.  
 that who if that  
 ‘He has seen someone, but I don’t know who.’

We can generalize that somehow, the C head of the CP in which the *wh*-phrase occupies the Spec position, must be empty (even in languages that are not sensitive for violations of the Doubly-Filled Comp-filter). These facts also carry over to Andrews-amalgams, as (63) is ungrammatical with any overt complementizer following the *wh*-phrase:

- (63) Bob heeft [je kunt je wel voorstellen {wie/ \*wie of/ \*wie dat/  
 Bob has you can REFL AFF imagine who who if who that  
 \*wie of dat}] gezien.  
 who if that seen  
 ‘Bob has seen you can imagine who.’

In the absence of further assumptions, these facts are hard to explain, independent of the type of analysis that is pursued (proform or PF-deletion). What is relevant for the present purposes is that these facts extend to Andrews-amalgams. Although the issues related to the COMP-domain in sluicing lie well beyond the scope of this thesis, I will speculate about an explanation for at least the Dutch facts in §4.5.3 in the context of a layered CP.

### 4.3 *It-cleft reduction in Horn-amalgams as sluicing*

#### 4.3.1 A preliminary sketch of ellipsis in Horn-amalgams

The ellipsis that can be ascribed to Horn-amalgams is not of such a familiar kind, at least not at first sight. Consider first a Horn-amalgam and its IC:

- (64) Bea married [I think it’s Bob].  
 IC = *I think it’s Bob*

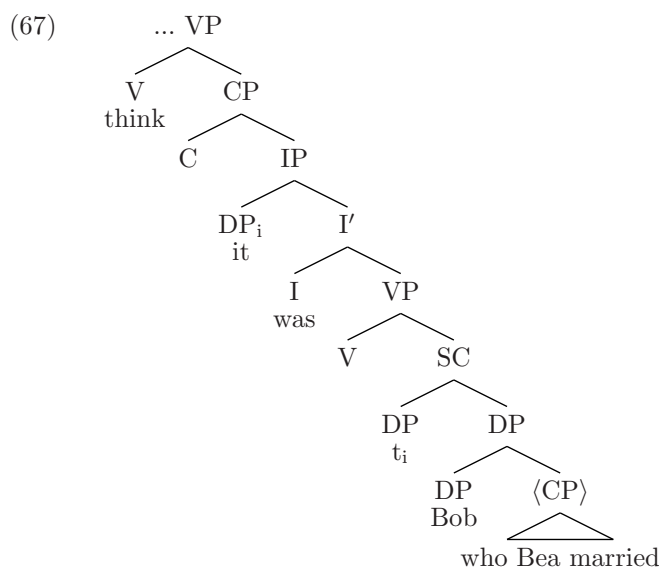
In Van Riemsdijk’s multidominance analysis of Horn-amalgams, the IC is taken to be an embedded copular clause (see §2.3). Although this may seem plausible, this specific combination with the pronoun *it* cannot be used as an out-of-the-blue statement (65a), but is usually accompanied by some embedded clause (65b):

- (65) a. #I think it’s Bob  
 b. I think it’s Bob who Bea married.

In other words, the IC of Horn-amalgams resembles a reduced *it*-cleft construction. The English *it*-cleft is commonly assumed to be built up as follows (see Hedberg 1990, 2000, Reeve 2010, *inter alia*):

- (66) It is BOB [who Bea married].  
           *cleft pronoun - copula - cleft pivot - cleft clause*

Importantly, the cleft pronoun in *it*-clefts is invariably *it* (hence the name), and the cleft pivot is always focused. The presence of focus is a direct parallel with the *wh*-remnant of sluicing in Andrews-amalgams, and it is a key factor in the analysis I propose in this section. The nature of focus in *it*-clefts is discussed in more detail below. For expository reasons, I will not represent focus except when it is relevant to the point. Focus on a constituent is represented by SMALL CAPS. That Horn-amalgams involve an *it*-cleft is assumed by Lakoff (1974) (see §2.1), and is also implicit in the proposal in Tsubomoto and Whitman (2000) (recall that they move ‘the presupposition of the *it*-cleft’ in order for the empty head to bind an operator in COMP domain of the IC, see §2.2). In the absence of any specific assumptions about the cleft clause, an ellipsis approach to Horn-amalgams yields the following internal structure of the IC:



Here, the content kernel is the cleft pivot of an *it*-cleft of which the cleft clause has undergone ellipsis. In what follows, I address the key properties of *it*-clefts in relation to Horn-amalgams, and some consequences of the idea that the cleft clause is elided in these constructions. The structure in (67) is just a preliminary sketch. In unifying Horn-amalgams with Andrews-amalgams, I will argue for a crucially different structure of the cleft clause.

## 4.3.2 The cleft clause as relative clause

There is a strong tendency in the literature to analyse the cleft clause of *it*-cleft constructions as a restrictive relative clause. The link between clefting and relativization goes back at least to Schachter (1973). This relative clause is assumed to either modify the cleft pronoun *it* (Akmajian 1970, Percus 1997, Hedberg 1990), or the clefted constituent (Hedberg 2000, Reeve 2010). I will argue in line with Hedberg (2000) and Reeve (2010), and analyse the cleft clause as a restrictive relative clause that modifies the clefted constituent. It should be noted in advance that the present discussion is limited to *it*-clefts, and is not intended to make any claims about so-called ‘pseudoclefts’ or ‘specificational sentences’, i.e. constructions of the type in (68):

- (68) a. What Bea ate was a big apple pie.  
 b. What Bea is is smart.

For discussion of their properties, and various proposals of their syntax and semantics, I refer to the classic works on the topic Higgins (1979), Akmajian (1970, 1979). In addition, there is a large literature on their semantic (Iatridou and Varlokosta 1998, Sharvit 1999, Schlenker 2003) and syntactic (Heggie 1988, 1993, É.Kiss 1998, Heycock and Kroch 1999, Den Dikken 2009) properties. Finally, as I will be primarily concerned with the structure of the cleft clause and the cleft pivot, I will represent the *it*-cleft itself as a small clause. In doing so, I abstract away from theoretical considerations about predicate inversion discussed extensively in Den Dikken’s seminal work on predication and clefts (Den Dikken 2006, 2009).

**Parallels between cleft clauses and regular relative clauses**

A convincing piece of evidence for the claim that the cleft clause is a relative clause, is the behavior of the cleft clause with respect to the COMP domain: English restrictive relative clauses can be introduced by either a relativizer or a (null) complementizer, Dutch restrictive relative clauses are obligatorily introduced by a relative operator. This is shown in (69), adopted from Reeve (2010:41, his (37a,b)), the Dutch example is mine:

- (69) a. It was the vodka [{which/ that/ *e*} Boris drank].  
 b. I bought the vodka [{which/ that/ *e*} Boris drank].

- (70) [Dutch]  
 a. Bea sloeg de jongen [{die/ \*dat/ \**e*} ik gekust heb].  
    Bea hit the boy REL COMPL  $\emptyset$  I kissed have  
    ‘Bea hit the boy who I kissed.’  
 b. Het was Bob [{die/ \*dat/ \**e*} ik gekust heb].  
    it was Bob REL COMPL  $\emptyset$  I kissed have  
    ‘It was Bob who I kissed.’



The choice of relativizer in Dutch further corroborates this view, as there is normally  $\phi$ -feature agreement between the relativizer and the head in relative clauses (70). The pronoun *het* ('it') is neuter. If the cleft clause would syntactically belong to the pronoun, we would expect the relativizer corresponding to those features, *dat*, to appear consistently in cleft clauses. But as it turns out, the relativizer appears to bear the features of the cleft pivot (72), similar to the restrictive relative clauses in (71):

- (71) [Dutch]
- a. het schilderij { \*die/ dat } ik gekocht heb  
the painting REL:CG:SG REL:NEUT:SG I bought have  
'the painting I bought'
  - b. de sculptuur { die/ \*dat } ik gekocht heb  
the sculpture REL:CG:SG REL:NEUT:SG I bought have  
'the sculpture I bought'
- (72)
- a. Het is een mooi schilderij { \*die/ dat } ik  
it was a beautiful painting REL:CG:SG REL:NEUT:SG I  
gekocht heb.  
bought have  
'It's a beautiful painting that I bought.'
  - b. Het is een mooie sculptuur { die/ \*dat } ik  
it was a beautiful sculpture REL:CG:SG REL:NEUT:SG I  
gekocht heb.  
bought have  
'It's a beautiful sculpture that I bought.'

However, in case the cleft pivot is not an NP (as would normally be the head of a relative clause), Dutch cleft clauses are always introduced by *dat* ('that'):

- (73) [Dutch]
- a. Het was [PP met Bea] { dat/ \*die } ik gedanst heb.  
it was with Bea that who I danced have  
'It was Bea that I danced with.'
  - b. Het is [AP boos] dat ik ben, niet vrolijk.  
it is angry that I am not happy  
'It's angry that I am, not happy.'

It is hard to see what the *dat* in these cases is, as this form is homophonous with the complementizer, the neuter singular demonstrative or the neuter singular relative pronoun. I suggest that in case the cleft pivot has a category that cannot normally be relativized, such as a PP or AP, Dutch has a strategy to relativize these via a complementizer using *dat*. After all, a PP or predicate AP arguably lacks the  $\phi$ -features that the relative pronoun needs to agree with. Furthermore, it was reported by British speakers (P. Patel, G. Thoms and R. Truswell, p.c.) that in English clefts with PP pivots, the relative pronoun

cannot be used to introduce the cleft clause, and the use of the complementizer is obligatory (in these cases, the complementizer cannot be null like in object relative clauses):

- (74) It's [<sub>PP</sub> about John] {that/\*who} I want to talk.

This is in agreement with a similar observations in Reeve (2010:71), and seems to pattern with the Dutch facts. In addition, he observes that this pattern is consistent in locative PP pivots:

- (75) a. It's [<sub>DP</sub> Paris] {\*that/where} Bob wants to live.  
b. It's [<sub>PP</sub> in Paris] {that/\*where} Bob wants to live.

This holds for similar Dutch data as well. In the Dutch variant with a DP pivot, the relativizer *waar* ('where') would be used and *dat* ('that') would be impossible, whereas a PP pivot only allows for the complementizer. How this can be explained in the context of the general pattern of cleft clauses with relative clauses, especially considering the fact that Dutch relative clauses cannot normally be introduced by a complementizer, goes well beyond the scope of this thesis.

Finally, like restrictive relative clauses, *it*-clefts exhibit reconstruction effects: the cleft pivot syntactically behaves as if it were part of the cleft clause. This is something that has been described in particular in relation to 'pseudoclefts' (also known as *wh*-clefts or specificational sentences) as well, see for instance Bach and Peters (1968), Akmajian (1970), Higgins (1979), Heycock and Kroch (1999), Sharvit (1999) and Reeve (2010):

- (76) The stories about {himself<sub>*i*</sub>/\*him<sub>*i*</sub>/\*Bill<sub>*i*</sub>} that he<sub>*i*</sub> told Bea were unbelievable.  
(77) a. What he<sub>*i*</sub> is, is proud of {himself<sub>*i*</sub>/\*him<sub>*i*</sub>/Bill<sub>*i*</sub>}.  
b. It is proud of {himself<sub>*i*</sub>/\*him<sub>*i*</sub>/\*Bill<sub>*i*</sub>} that he<sub>*i*</sub> appears to be.

The presence of reconstruction effects in *it*-clefts is central to the analysis I propose in §4.3.3. In §5.1.2 I show that under the assumption that Horn-amalgams involve fully-fledged *it*-clefts that have undergone ellipsis of the cleft clause, we can reduce the alleged 'transparency' effects on the content kernel to the more general reconstruction effects associated with *it*-clefts.

#### **Referentiality, exceptional relativization and the role of focus**

The older literature on English *it*-clefts (Akmajian 1970, Emonds 1976) explains an apparent restriction on what can be clefted constituents in *it*-cleft constructions that is traditionally known as 'the predicate constraint' (see also Hedberg 1990:31 and references cited therein). That is, it has been claimed by several that predicate nominals and predicate adjectives cannot function as cleft pivots. (78) is from Emonds (1976:133 and 140), but see Declerck (1988) and Hedberg (1990) for more examples and discussion:

- (78) a. \*It's very unhappy that Bill is.  
 b. \*It's dark that he likes his study.  
 c. \*It's the football coach that John is.

Arguably, this is in part related to the fact that such constituents cannot generally be relativized (Akmajian 1970). Emonds (1976) attributes this to a mismatch between the non-referentiality of the relativized NP and its referential antecedent: matching with respect to referentiality is required in his analysis of relative clauses. Under his assumptions, only NPs and PPs can be clefted (Emonds 1976:138). Hedberg (1990) generalizes Emonds' observation and proposes the following condition on the cleft pivots of *it*-clefts (in her terms 'specificational' clefts, the condition is slightly adapted to the terminology used here, see Hedberg 1990:31):

- (79) **Referentiality condition on *it*-clefts** [based on Hedberg (1990)]  
 Only referential expressions may be *it*-clefted.

This condition not only accounts for the predicate restriction, it accounts for the impossibility of quantified cleft-pivots as well. Consider (80):

- (80) \*It's EVERY MAN I want to kiss.

In terms of Montegovian types, cleft pivots are then restricted to those of type *e*. The predicative type  $\langle e, t \rangle$  and the quantificational type  $\langle \langle e, t \rangle, t \rangle$  are thus both ruled out under (79).

Surprisingly, it has been observed that in special contexts, AP cleft pivots are possible (Delahunty 1982, Declerck 1988, Hedberg 1990). This is for instance the case in (81):<sup>2</sup>

- (81) a. It is BOILING HOT that I want my coffee to be (, not LUKEWARM).  
 b. It's ANGRY that Bob seems to be (, not SAD).

Notice that these are only acceptable when the cleft pivot is contrastively focused. Declerck (1988) notes that cases such as these are specificational despite of their appearances: the predicate XP still specifies the variable for the property *x* of *coffee* and *Bob* respectively. Hedberg (1990) makes a stronger claim than Declerck (1988) and suggests a type-shifting operation to resolve the type-mismatch in examples with AP pivots (81), although she does not elaborate on the details. Such a solution would make use of type-shifting rules that have been

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<sup>2</sup>I abstract away from examples of AP cleft pivots that involve secondary predication, which are discussed in particular in Delahunty (1982), Heggie (1993). These are examples such as (i) (Heggie 1993:45, her (1a/d), my judgments):

- (i) a. ??It's drunk that John sounds intelligent.  
 b. ??It's naked that many people appear slim.

These data were reported to be rather marked/marginal, and cannot be reproduced in Dutch *it*-clefts to begin with. For further discussion, see references cited above and Hedberg (1990:§3.5.3).

proposed in Chierchia (1984) and Partee (1986a,b), such as IOTA (a Russellian operator that is commonly used for the interpretation of definites):

$$(82) \quad \textbf{Type shifting rule IOTA } (\iota) \quad [\text{Partee (1986a,b)}]$$

$$\text{IOTA } (\iota): P \rightarrow \iota x P(x) \ (\langle e, t \rangle \rightarrow \langle e \rangle)$$

The IOTA operator is a uniqueness operator: it identifies the unique individual for which the content of the XP (a predicative NP or AP, which denotes a property P) holds (see Giannakidou and Stavrou 1999, Dayal 2004, Caponigro 2004, Alexiadou et al. 2007 for various implementations). Extending this to *it*-clefts with predicative pivots, Hedberg’s solution would then look as follows:

$$(83) \quad \begin{aligned} &\text{It's } \textit{angry} \text{ that Bob seems to be } (, \text{ not } \textit{sad}). \\ &\approx \text{The property that Bob has is the property of being } \textit{angry}. \\ &= \iota x[(\text{Bob})(x)] = \textit{angry} \end{aligned}$$

The predicative AP *angry* undergoes type-shifting to type *e*, meeting the referentiality condition as in (79), and the example is not ruled out. Clearly, this requires more study (in particular in the context of the obligatory contrastive focus in these exceptional cases), but the idea to solve this via type-shifting seems promising.

Recall now the awkwardness of Horn-amalgams with predicative adjectival content kernels, that was observed in §3.2 (examples (76) and (78)), I repeat the examples below:

$$(84) \quad ?*\text{Bea is [I think it's [}_{\text{AP}} \text{ blond}]\text{].}$$

$$(85) \quad ?*\text{an [I think it was [}_{\text{AP}} \text{ blond]\text{] woman}$$

The marginality of these examples can thus be related to the fact that *it*-clefts generally disallow the predicative interpretation that is associated with the predicate nominals and adjectives, i.e. it follows from the condition in (79). Interestingly, contrastive focus ameliorates the case in (84):<sup>3</sup>

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<sup>3</sup>It should be pointed out that not all APs behave the same. For instance, it seems that tall (vs. *short*) or *pretty* (vs. *bright*) fare less well in the same configurations:

- (i) a. ??Bea is I think it's *tall* (, not *short*).
- b. ??I think it's *tall* that Bea is (, not *short*).
- (ii) a. ??Bea is I think it's *pretty* (, but not particularly *bright*).
- b. ??I think it's *pretty* that Bea is (, but not particularly *bright*).

Intuitively, this is related to the fact that these adjectives belong to a different class. Whereas *blond* is a classic example of an intersective, absolute adjective (denoting an inherent property), *tall* and *pretty* are both subsective, gradable and/or relative (for classifications of adjectives and discussions of their varying distributional and semantic properties, see for instance Sproat and Shih 1990, Kamp and Partee 1995, Larson 1998, Alexiadou et al. 2007, and many others). Perhaps only particular predicates can undergo IOTA in the context of *it*-clefts to be used as a type *e* expression. Since regular *it*-clefts are similarly marginal, I will not be concerned with these apparent counterexamples.

- (86) ?Bea is I think it's *blond* (, but it could be *ginger*).

Such amelioration is expected if predicates can undergo type-shifting to meet the referentiality condition, as suggested above. This does not hold for AP cleft pivots that are used attributively, considering (87):

- (87) ?\*Bea is an I think it's *blond* woman (, but it could be a *ginger* woman).

For the present purposes, I tentatively conclude that we can trace the awkwardness of (84)-(85) back to a more general constraint on *it*-clefts.

Finally, as the cases above already illustrated, relativization in *it*-clefts is not completely the same as regular restrictive relativization, as cleft pivots of categories are allowed that cannot normally be relativized. Based on Hedberg (1990), I have explained exceptional relativization of APs by the referentiality condition, which may be met via type-shifting (to type *e*). The referentiality condition straightforwardly predicts that proper names (as *bona fide* type *e* expressions) can function as cleft pivots as well (89). However, this seems to complicate an analysis of the cleft clause as a restrictive relative clause, as regular *restrictive* relative clauses cannot take proper names as their antecedent (88):

- (88) a. the boy {who/that/*e*} kissed Bea  
       b. \*Bob {who/that/*e*} Bea kissed
- (89) a. It was the boy {who/that/*e*} Bea kissed.  
       b. It was Bob {who/that/*e*} Bea kissed.

The contrast in (88) follows from the basic intuition that there is nothing to restrict in case the antecedent already has a unique referent in the discourse. As it turns out, the possibility of proper names as cleft pivots can be related to focus as well. Reeve (2010:80) observes that the cleft clauses pattern alike with what he calls '*only*-relatives':

- (90) Q: Who did you see that you like?  
       A: \*I saw John that I like.  
       A': I only saw JOHN that I like.

Reeve argues that the relative clause here takes the focused constituent as its antecedent, but it semantically restricts *only*: it restricts the set of persons that the speaker saw to those that he likes. Likewise, the cleft clause does not restrict the interpretation of the clefted constituent (*Bob* or *the boy* in (89)), but rather the cleft pronoun *it*. That is, the cleft pronoun can be interpreted as a definite description, i.e. a *referential* expression (and not an expletive as is sometimes assumed for *it*-cleft constructions), and its domain is restricted by the cleft clause. Reeve (2010) formulates this using a Russellian  $\iota$ -operator, in line with Hedberg's suggestion as described above:

- (91) It's BOB that Bea kissed.  
 $\approx$  The person that Bea kissed is BOB.  
 $= \iota x[\text{kiss}(x)(\text{Bea})] = \text{Bob}$

Reeve then argues that the cleft clause *syntactically* belongs to the cleft pivot, but semantically restricts the interpretation of the cleft pronoun. From a compositional point of view, this is hard to maintain.

It could alternatively be argued that the semantic restriction does not apply to the (unique) individual denoted by the cleft pivot, but on the *set of alternatives* that come into existence as the consequence of focus (Rooth 1992). After all, even a constituent that denotes unique individual, such as a proper name, gives rise to a set of alternatives (i.e. a set of unique individuals) when it is focused. More specifically, I suggest we apply Schwarzschild (1999)'s F-closure to *it*-clefts, and subsequently apply IOTA to derive the specificational meaning of *it*-clefts. This yields (92):

- (92) It's BOB that Bea kissed. F-closure  $\rightarrow$   
 $\exists x. \text{Bea kissed } x$  IOTA  $\rightarrow$   
 $\iota x[\text{kiss}(x)(\text{Bea})] = \text{Bob}$

F-closure will later on in this chapter be argued to play a role in the licensing of ellipsis of the cleft clause in Horn-amalgams, similar to sluicing. I will thus *not* concur with Reeve (2010)'s assumptions in this respect. For the present purposes, I will mainly be concerned with the derivation of the cleft clause as a relative clause. In extending this to Horn-amalgams, I argue that the cleft clause is syntactically headed by content kernel (*viz.* restrictive relatives), and that the presence of focus eventually licenses its ellipsis. The specificational nature of amalgams in general is discussed at length in chapter 7.

#### **A note on clefts and cleft-strategies cross-linguistically: Germanic versus Slavonic and Romance**

Although this thesis is primarily focused on an account of sentence amalgamation in *Germanic* languages, it will be clear that the set of languages discussed in relation to Horn-amalgams is considerably smaller than the set of languages used in the discussion of Andrews-cases. This was already the case in §3.1.2, where *pro*-drop in Romance amalgams was not addressed for Horn-amalgams. In the sections to come, I use case-marking and patterns with preposition stranding in amalgams as additional evidence for the claim that they involve ellipsis of structurally present material, and especially for those facts it would be useful to resort to languages outside the Germanic family, such as Slavic languages, which generally have richer morphological paradigms.

However, the speakers I consulted for various languages in the course of this research project seemed to be remarkably hesitant in construing Horn-amalgams. Since the aim of this project was not a cross-linguistic study of amalgamation, I have no systematic report about which languages allow for

such amalgamation, and which don't, but I believe that part of the explanation is given in Reeve (2010) who shows that Slavonic clefts differ from English clefts syntactically, and in É. Kiss (1998) and Sleeman (2010a) who show that languages may vary with respect to the kind of identificational focus that is involved in focus-related constructions such as clefts.

Reeve (2010) convincingly argues that Slavonic languages seem to employ a focus-fronting strategy rather than an English-style *it*-cleft. This does not involve a copula like the Germanic variant does (which is generally analysed in terms of a small clause), but a tensed IP. The pronouns that are used in Slavonic languages (*è/to* in Russian, Polish, Serbo-Croatian and Czech) is arguably a demonstrative pronoun. The clefted constituent is focused (similar to *it*-clefts in English), but there is no copular verb and the cleft clause does not behave like a restrictive relative clause. Reeve's discussion is primarily focused on Russian, the data in (93)-(94) are from Reeve (2010:156), his (15) and (16):

- (93) [Russian]
- a. Ja uvidela knigu, \*(kotoraja/ čto) ležit na stole.  
I saw book which that lies on table  
'I saw the book which was lying on the table.'
  - b. VODKU (\*kotoruju/ \*čto ja ljublju pit'.  
vodka which that I love to.drink  
'Vodka, I love to drink.'
- (94) Èto IVANA (\*kotorogo/ \*čto) ja uvidel.  
this Ivan who that I saw  
*int.*: 'It's Ivan I saw.'

Example (93a) shows that restrictive relative clauses in Russian are obligatorily introduced by a relativizer or complementizer, but that these cannot occur in focus-fronting sentences (93b). In that respect, the cleft in (94) patterns with the focus-fronting example, and disallows introduction by a relativizer or complementizer.

More importantly, whereas the cleft clause in *it*-clefts in English-style *it*-clefts can be reduced if their content is recoverable from the discourse (see also §4.5.2), Slavonic languages do not allow for such ellipsis (adapted from Reeve 2010:157, his (17) and (18)):

- (95)
- a. What did John say that Bill drank? John said it was the vodka (that Bill drank).
  - b. John drank the vodka that Bill bought, and Mary the water (that Bill bought).
  - c. John said that Bill drank the water. No, John said that the VODKA \*(Bill drank).

These examples illustrate that the cleft clause can be left out optionally (95a). Material that follows a focus-fronted constituent cannot be elided in a similar

fashion, even though it is similarly given or old in the discourse (95b). The relevant observation is that the optional ellipsis in the *it*-cleft is a parallel with the example in (95b). For Reeve, this corroborates the view that cleft clauses pattern with restrictive relative clauses. Taking this further, I will argue below for a raising analysis based on these facts. For now, the important contrast is with the Russian cases below:

- (96) [Russian]  
 Maria skazal, čto Maša vypila vodu. Net, Maria skazal, čto (èto)  
 Maria said that Masha drank water no Maria said that this  
 VODKU \*(Maša vypila).  
 vodka Masha drank  
 ‘Maria said that Masha drank the water. No, Maria said that Masha  
 drank the VODKA.’

This example is the counterpart of the English examples above: in the presence of *èto*, it resembles the English *it*-cleft (95a), and in its absence a focus-fronting sentence (95c). In either case, leaving out the material that follows the focused constituent is impossible. Thus, the Russian clefting strategy patterns with focus-fronting sentences, and not with relative clauses (*contra* claims made in Gundel 1977). As will be clear later on, ellipsis of the relative clause in Horn-amalgams is obligatory:

- (97) \*Bill was drinking [I think it was vodka that Bill was drinking].

The fact that Slavonic languages employ a focus-fronting cleft strategy that does not allow for ellipsis of the cleft clause could thus prohibit the formation of Horn-amalgams in Russian. The impossibility in Russian to construe examples that correspond precisely to Horn-amalgams has been confirmed (E. Markovskaya, p.c.) and the data above can be seen as part of the reason. For this reason, my analysis of Horn-amalgams only applies to languages that employ the Germanic-style relativization strategy for the formation of cleft clauses.

Although Romance languages generally have clefts (see for instance Lambrecht 2001, Kato and Ribeiro 2007, Belletti 2008), they do not pattern exactly with the Germanic-style *it*-cleft either. The most obvious difference is that there is no equivalent of *it* due to *pro*-drop (in those languages that have *pro*-drop). I illustrate this for Portuguese (the example is from Kato and Ribeiro 2007:126, who consequently refer to the construction as *that*-clefts):

- (98) [Portuguese]  
*pro* foi o meu iPod que o ladrão levou.  
 Ø was the my iPod that the thief took  
 ‘It was my iPod that the thief took.’

Recall from the previous chapter (§3.1.2) that due to morphological impoverishment, *Brazilian* Portuguese has a tendency to overtly realize referential



pronouns. The fact that there never is an overt pronoun in clefts in Brazilian Portuguese, suggests that at least in this language, the corresponding *pro* must be analysed as *expletive* (see Kato and Ribeiro 2007, the expletive-drop in cleft environments was in addition confirmed by M. Guimarães for Brazilian Portuguese, p.c.). By contrast, has been argued that English-style *it*-clefts, (Hedberg 1990, 2000, Reeve 2010 *inter alia*) that the *it* in English (or: Germanic) style *it*-clefts is referential. Whether this amounts to a more principled distinction between the Germanic *it* and the corresponding ‘droppable’ *pro* in Romance clefts, is an issue I leave open.

Another relevant distinction that has at least been made between Italian clefts on the one side, and English and French clefts on the other hand, is found in Belletti (2008) and Sleeman (2010a), who argue that Italian (but not English and French) clefts can license infinitival subject relative clauses, as in (99):

- (99) [Italian]  
 È stato Gianni a darmi la chiave.  
 is been Gianni to give-me the key  
 ‘It was Gianni who gave me the key.’

- (100) \*It was John to have given me the key.

The impossibility of construing a similar cleft in English also holds for French, Dutch and German. Interestingly, Sleeman (2010a) relates this to É. Kiss (1998) who claims the focus in English clefts to be *identificational*, but not necessarily contrastive. By contrast, Italian clefts are *always* contrastive. For discussion and definitions, see É. Kiss (1998:245ff). This is in agreement with observations in QA-pairs in Belletti (2008). Interestingly, French clefts are more like the English type in this respect. Sleeman (2010a) then relates the licensing of infinitival subject relatives to the obligatory contrastive focus that is also present in other contexts in which such relatives are licensed (see Sleeman 2010b for detailed discussion). Abstracting away from the context of *it*-clefts specifically, É. Kiss (1998) distinguishes explicitly between identificational focus English and Hungarian on the one hand, and Romanian, Catalan and Italian on the other hand: in the first, identificational focus is [ $\pm$ contrastive], in the latter [+contrastive]. The difference in the kind of focus that is expressed in Italian clefts and English clefts is another reason to proceed with caution in generalizing over *it*-clefts.

Taking all of this in consideration, and to avoid unjustified generalizations, I will therefore make no further claims about Horn-amalgams in languages outside the Germanic family, because this requires a cross-linguistic study of cleft-strategies first.

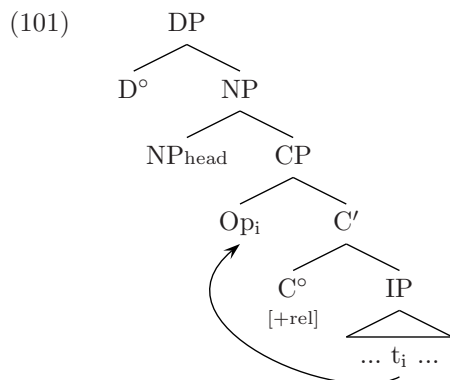
#### 4.3.3 A raising analysis for *it*-clefts

Based on the clear parallels with relative clauses discussed above, I concur with the idea that the cleft clause of *it*-clefts must be analysed as a restrictive rel-

ative clause. More specifically, I propose an analysis of *it*-clefts in which the cleft clause is a particular type of relative clause, namely one with a focused head. In the abundant literature on (restrictive) relative clauses, there are three competing analyses: the head-external analysis, the matching analysis, and the raising analysis. I will argue in favor of the latter in the analysis of the cleft clause. The following part is merely intended as an overview of different analyses of relative clauses; it should *not* be taken as a view of how restrictive relative clauses should be derived in general. For extensive discussion on the strengths and weaknesses of the various analyses of relative clauses, I refer to De Vries (2002), Bianchi (2002) and Salzmann (2006).

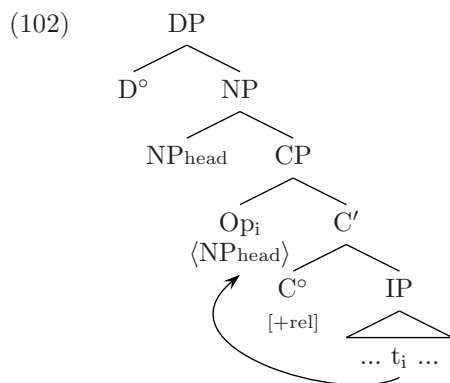
#### Setting the stage: competing analyses of relatives and the position of the head

The main difference between the analyses mentioned above, is the position of the head NP. In the head-external analysis, the head is base-generated in the matrix, external to the relative clause which right-adjoins it (Ross 1967, Chomsky 1977, Safir 1986, *inter alia*). This is represented in (101):



Here, relative clauses are derived via operator movement (on a par with for instance *wh*-questions). The relative pronoun and the head NP are related via some rule (agreement in Chomsky 1977, predication in Safir 1986) to derive the matching  $\phi$ -features between head and relative pronoun. I call this the head-external analysis (following Bhatt 2002 and others). In the literature, this is also known as the ‘matching’ or ‘standard’ analysis.

I will instead reserve the term matching analysis for theories that assume the presence of an internal head in addition to an external head. This idea (going back to Lees 1960, 1961, Chomsky 1965) has recently been revived in Sauerland (1998), Citko (2001), Hulse and Sauerland (2006) and Salzmann (2006). Under their assumptions, there is an internal head that has been PF-deleted under identity in the relative clause:



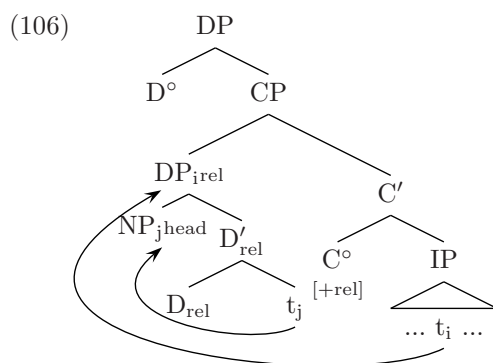
These heads are not related by movement: the external head does not originate in the relative clause. In addition, deletion does not require strict identity, but the external and the internal instance of the head need to be ‘*sufficiently similar in interpretation*’ Sauerland (2004:75), see also Hulsey and Sauerland (2006), fn. 1. This analysis can be seen as an extension of the traditional head external analysis. Importantly, due to the presence of an internal head, the matching analysis can account for the well-known reconstruction effects (such as idioms and binding) that are associated with restrictive relative clauses. That is, the head noun behaves as if it is inside the relative clause (the data are adapted from Schachter 1973, his (35c), (41) and (42)):

- (103) The headway that we made was satisfactory.
- (104) a. The opinion of him<sub>i</sub> that John<sub>i</sub> thinks that Mary has is unfavorable.  
 b. \*The opinion of John<sub>i</sub> that he<sub>i</sub> thinks that Mary has is unfavorable.
- (105) a. The portrait of himself<sub>i</sub> that John<sub>i</sub> painted is extremely flattering.  
 b. \*The portrait of John<sub>i</sub> that he<sub>i</sub> painted is extremely flattering

It should be noted that it has been argued that English *wh*-relatives do not reconstruct this way (see Aoun and Li 2003:§4.2.2). For Aoun and Li, this is reason to assume that different strategies may be available to derive relatives (i.e. via operator-movement as in the head-external analysis for English *wh*-relatives and relative-internal base-generation of the head for *that*-relatives). I return to this in the context of *it*-clefts below.

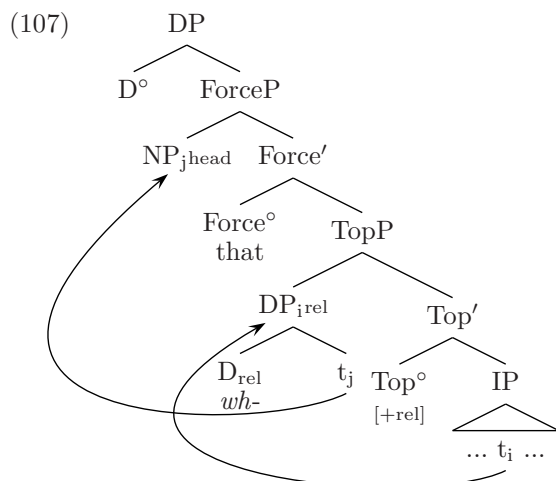
The reconstruction facts in (103)-(105) are often used in a defense of the so-called raising analysis of relatives. Contrary to the head-external and the matching analyses, this theory assumes the head NP to originate in the relative clause and move to SpecCP. The facts in (103)-(105) are then explained via reconstruction. For instance, a reflexive head NP can be bound in its base-position as the complement of *painted* in (105a), and the condition B and C

effects can be accounted for in a similar fashion. This type of analysis goes back at least to Schachter (1973) and Vergnaud (1974), and was renewed in Åfarli (1994) (who calls it the ‘promotion’ analysis) and Kayne (1994). Although there are various implementations of the raising analysis of relative clauses, the present discussion is limited to Kayne (1994) and Bianchi (1999). For alternative views, see in particular De Vries (2002, 2006b), Bhatt (2002) and Aoun and Li (2003). In Kayne’s assumptions, the relative clause is taken to be the sister of the determiner that is associated with the head NP.  $DP_{rel}$  moves to SpecCP due to the presence of  $[+REL]$  on  $C^\circ$ . Consequently, the head NP moves (locally) to SpecDP $_{rel}$ :



Well-known objections that have been raised against this analysis are that the relative clause does not form a constituent to the exclusion of the head NP, which seems undesirable because relative CPs can be coordinated (Borsley 1997, Bianchi 1999, Bhatt 2002). In addition, the movement of the head NP is ‘improper’ (arguably because SpecDP is an operator position, see Bianchi 1999:191). Finally, movement from the complementizer position to the specifier position of the same projection is ruled out under anti-locality hypotheses that have been formulated on varying empirical grounds in the literature (see Abels 2003, Grohmann 2003, Kayne 2005, *inter alia*): such movement results in too short a movement chain.

To circumvent these problems, Bianchi (1999) argues that a raising analysis of (*wh*-)relatives requires more than one specifier position (for the relative determiner and the head). For this, she exploits a Rizgian layered CP, in which  $Top^\circ$  may carry the feature  $[+REL]$ . In her analysis,  $DP_{rel}$  moves to SpecTopP, and subsequently, the head NP moves out of  $DP_{rel}$  to SpecForceP, stranding the relative pronoun. In the case of *that*-relatives, the complementizer *that* is in Force°. This is globally represented for English *wh*- and *that*-relatives in (107):



In what follows, the idea of a layered CP in the derivation of the cleft clause of *it*-clefts is adopted, while abstracting away from the particular Rizgian notions of ‘TopP’ and ‘ForceP’ in the context of relative clauses. In chapter 3 (in particular §3.1.3), I argued against the assimilation of illocutionary force and clause type, reserving illocutionary force for root clauses (based on for instance Green 2000). In addition, Bianchi’s use of the TopP implies a connection between relativization and topicalization, which lacks empirical motivation and seems conceptually questionable. I will therefore refrain from pursuing analysis of restrictive relative clauses in these specific terms. I will, however, adhere to the more general insight that underlies Rizzi’s approach: the CP domain may consist of several functional layers, possibly corresponding to different complementizers and/or operators (i.e. [+REL], [+F], [+WH], *et cetera*). As such, the proposal fits in with J. Hoekstra (1993), E. Hoekstra (1993) and Zwart (2000) for the COMP-domain and relative clauses in Dutch, and eventually with recent studies on sluicing that assume a split CP (Van Craenenbroeck and Lipták 2006, Van Craenenbroeck 2010b, to appear).

#### Arguments for a head-internal analysis of the cleft clause: reconstruction effects

In agreement with Hedberg (2000) and Reeve (2010), I propose an analysis of the cleft clause as a restrictive relative clause that syntactically belongs to the cleft pivot. In the above, I have mentioned reconstruction effects in *it*-clefts as a parallel between the cleft clause and restrictive relative clauses. I illustrated this with the examples below (repeated from (76)-(77)):

- (108) The stories about {himself<sub>i</sub>/\*him<sub>i</sub>/\*Bill<sub>i</sub>} that he<sub>i</sub> told Bea were unbelievable.
- (109) a. What he<sub>i</sub> is, is proud of {himself<sub>i</sub>/\*him<sub>i</sub>/Bill<sub>i</sub>}.  
 b. It is proud of {himself<sub>i</sub>/\*him<sub>i</sub>/\*Bill<sub>i</sub>} that he<sub>i</sub> appears to be.

However, Reeve (2010) claims there are cases in English that ‘force’ a head-external analysis of the cleft clause.<sup>4</sup> Such an analysis is necessary for cleft clauses that are introduced by an overt relativizer (in English a *wh*-phrase), because these give rise to *anti*-reconstruction effects, as is illustrated in (110) and (111) (data adapted from Reeve 2010:67, his (86)):

- Apparently, the idiomatic expression *to keep track* cannot be split across the cleft and the cleft clause, nor can a universal quantifier in such a cleft clause have wide scope (but see also the remarks below). Based on these data, Reeve concludes that the presence of a relativizer in *it*-clefts blocks (some) reconstruction effects. This is in line with Aoun and Li (2003), who explicitly argue that *wh*-relatives, as opposed to *that*-relatives, do not give rise to reconstruction effects and therefore require a head-external analysis. Their claim is based on data such as (112)-(113) (data adapted from Aoun and Li 2003:110, their (2a) and (42a-b)):

- It must be pointed out though, that the *it*-cleft in (111) should not be compared with (113) (from Aoun and Li 2003), but should be evaluated in the context of Bianchi (adapted from 1999:46)'s (31):

- The contrast here shows that the wide scope reading is only available if *two* is part of the head, and is straightforwardly explained via reconstruction in her raising analysis. In other words, the exclusion of the wide scope reading in

<sup>4</sup>Reeve calls this a *matching* analysis, as do Aoun and Li (2003). Since this analysis is invoked to account for anti-reconstruction data, ‘the matching analysis’ in their view cannot refer to the versions involving an internal head discussed above (i.e. Sauerland 1998, Citko 2001, Salzmann 2006).

(111) can be accounted for independently under the raising account.

Clearly, there is no general agreement in the literature about the status of (110)-(113). In particular, Authier and Reed (2005:642) make an opposite claim about *it*-clefts ‘... *in that they allow for reconstruction regardless of whether or not a *wh*-element is used*’. This is illustrated by (115), slightly adapted from their (22):<sup>5</sup>

- (115)    a. It’s herself<sub>i</sub> {that/who} she<sub>i</sub> hates the most.  
           b. It’s this sort story about herself<sub>i</sub> {that/which} no woman<sub>i</sub> would tell a man.  
           c. It’s two cancer patients {that/who} every intern had to examine yesterday. [2>∀/∀>2]

I have little to say about the contrast between the grammaticality judgments provided in Reeve (2010) and Authier and Reed (2005) respectively, except that there is clearly speaker-variation (which is in fact also noted in Aoun and Li 2003 for *wh*-relatives). Thus, the claim that some *it*-clefts force a head-external analysis is not based on particularly convincing evidence.

Finally, it should be stressed that contrary to what Reeve (2010:67, fn. 42) claims, reconstruction can be generally observed in Dutch restrictive relative clauses, which are obligatorily introduced by an overt relativizer. Dutch relative pronouns are *die* (‘who/which’ for common gender, singular and plural) and *dat* (‘who/which’ for singular neuter). Unlike English, there is no [±HUMAN] distinction. The example is adapted from De Vries (2002:80), his (20):

- (116) [Dutch]  
       De verhalen over zichzelf<sub>i</sub> die Paul<sub>i</sub> gisteren hoorde, waren  
       the stories about SE-self REL Paul yesterday heard were  
       pure leugens.  
       mere lies  
       ‘The stories about himself that Paul heard yesterday were mere lies.’

Similarly, the presence of the relative operator does not block the idiomatic interpretation of *voortgang boeken* (‘make headway’) in a relative context:

- (117) De voortgang die Bea geboekt heeft is verrassend.  
       the headway REL Bea booked has is surprising  
       ‘The headway that Bea booked is surprising.’

Importantly, Dutch *it*-clefts behave accordingly, and show the same reconstruction effects as English *it*-clefts:

<sup>5</sup>For Authier and Reed (2005), who adopt the claim about the lack of reconstruction effects in *wh*-relatives of Aoun and Li (2003), this is actually a reason to argue against an assimilation of the cleft clause with restrictive relative clauses. Instead, they argue in favor of the focus-movement account proposed in É. Kiss (1998) for *it*-clefts. See also Authier and Reed (2001) for discussion.

- (118) Het waren (vooral) de verhalen over zichzelf<sub>i</sub> die Paul<sub>i</sub>  
 it were primarily the stories about SE-self REL Paul  
 gisteren ontkende.  
 yesterday denied  
*lit.* 'It was the stories about himself that Paul denied.'
- (119) Het was aanzienlijke voortgang die Bea geboekt had.  
 it was considerable headway REL Bea booked has  
 'It was considerable headway that Bea made.'

These reconstruction effects hold for German restrictive relative clauses, which are obligatorily introduced by a relative operator, as well. For extensive discussion, I refer to Salzmann (2006) (see in particular chapter 2, §2.2). In other words, the presence of an overt relativizer does not (convincingly) block reconstruction effects in restrictive relative clauses and *it*-clefts in the languages that are relevant for the present purposes.

#### Focus as the trigger for raising in *it*-clefts: a preliminary sketch

The presence of these effects favor a head-internal account of the cleft clause. Based on the discussion above, both the matching and the raising analysis are candidates to account for reconstruction effects in *it*-clefts. In the raising account this is explained in terms of an A'-chain (i.e. a chain between the moved element and its trace in conventional terms), in the matching account via a phonologically deleted copy of the head.

For the present purposes, I will develop a raising analysis of the cleft clause. This is not to say that the matching account as proposed in Sauerland (1998), Hulse and Sauerland (2006), Salzmann (2006) cannot be implemented. However, such an analysis is *prima facie* incompatible with the focus condition on ellipsis as assumed in §4.1.1. Recall that the cleft pivot (i.e. the head of the relative clause under our present assumptions), is inherently focused. Unless we assume that the internal representation of the head is not marked for focus while the external head *is*, this yields the deletion of focused material, in violation of Merchant's E-GIVENNESS in (24). For this reason, the analysis that I propose for *it*-clefts that eventually represents the internal structure of the IC of Horn-amalgams, is founded on the raising analysis.

Recall that Bianchi (1999)'s analysis involves two steps: DP<sub>rel</sub> moves out of the IP to SpecCP (her SpecTopP) due a C° that is specified for [+REL]. Subsequently, the head NP moves to a higher layer of the CP (her SpecForceP). For reasons stated above and in §3.1.3, I will not assume a layered CP in these particular terms, but simply speak of CP<sub>1</sub> (the highest projection of the CP) and assume at least one additional layer in the CP (CP<sub>2</sub>). The raising analysis then involves relative movement into SpecCP<sub>2</sub>, and additional movement of the head NP to SpecCP<sub>1</sub> (rather than the local movement to SpecDP<sub>rel</sub> as in Kayne's version). This second step has been subject to criticism in the literature (see in particular Borsley 1997 for the Kaynian raising account). Obviously, this step

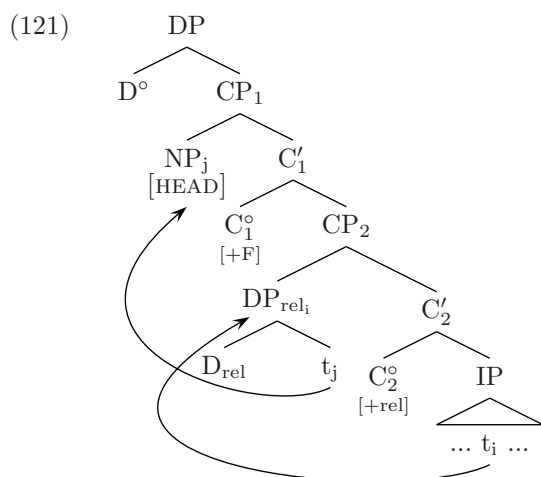


is necessary to ensure that the word order is (120b) and not (120a):

- (120) a. \*The  $[_{CP} [_{DP_{rel}} \text{who man}]_i \text{Bea kissed } t_i]$ .  
 b. The  $[_{CP} [_{NP} \text{man}]_j [_{DP_{rel}} \text{who } t_j]_i \text{Bea kissed } t_i]$ .

Unfortunately, the empirical evidence presented in Bianchi (1999:§6.4) for moving the head NP into a second layer of the CP is notably scarce. The present proposal should therefore *not* be taken as a commitment to a raising approach for restrictive relative clauses in general.

However, the fact that the cleft pivot (i.e. the relative head XP in my assumptions) is inherently focused *does* provide us with a clear trigger for movement: the raising of the head in *it*-clefts is an instance of regular focus movement. Thus, whereas the  $DP_{rel}$  moves to the lowest layer of the CP due to  $[+REL]$  on  $C_2^\circ$ , the presence of  $[+F]$  on the (higher)  $C_1^\circ$  head triggers additional movement of the focused NP head:



I will argue in §4.3.4 below that we can defend such an analysis for the cleft clause of *it*-clefts, and more generally for restrictive relative clauses with focused heads. The structure in (121) lifts a corner of the veil of my proposal for the ellipsis of the cleft clause in Horn-amalgams below. Similarly to Andrews-amalgams, the content kernel is argued to be the remnant of sluicing. In both cases the content kernel has thus undergone some form of A'-movement, i.e. *wh*-movement and focus-movement. The difference lies in the level of sluicing, which is obviously not IP in Horn-amalgams, and consequently in the properties of the responsible E-feature.

#### 4.3.4 Ellipsis licensing by $E_{RC}$ in *it*-clefts

To account for the internal structure of the IC of Horn-amalgams, I have proposed a raising analysis of cleft clauses in which the movement of the head

noun out of the relative DP to a higher layer of the CP is triggered by focus on the higher  $C^\circ$ . In this section, I relate the presence of focus to the licensing of ellipsis in *it*-clefts. Although focus (and its related presupposition) are traditionally viewed as inherent properties of *it*-clefts, I show that similar deletion is possible in regular restrictive relatives with focused heads.

#### Abstracting sluicing away from interrogative *wh*-movement contexts

Recall from §4.1.1 that Merchant (2001) assumes  $[E]$  to reside on  $C^\circ$  in sluicing, more specifically, on a  $C^\circ$  head that is specified for  $[+wh, +Q]$ , matching the strong (\*), uninterpretable (*u*) features  $[uwh^*]$  and  $[uQ^*]$  on  $[E]$ . Merchant (2004:671) more explicitly refers to this as a ‘matching requirement’. I repeat the syntax, semantics and phonology of  $[E_S]$  below (122), this specific *E*-feature is responsible for *sluicing* in *wh*-interrogative complement clauses:

- (122)    **The properties of  $E_S$**  [based on Merchant (2001)]
- i.    The syntax of  $E_S$ :  $E_S [uwh^*, uQ^*]$
  - ii.   The phonology of  $E_S$ :  $\phi TP \rightarrow \emptyset / E_S-$
  - iii.   The semantics of  $E_S$ :  $\llbracket E_S \rrbracket = \lambda p: e\text{-GIVEN } (p) [p]$

As such, the matching requirement and the features of  $[E_S]$  limits sluicing to interrogative *wh*-questions in Merchant (2001). This seems desirable, because sluicing is not possible in non-*wh* interrogatives or declaratives:

- (123)    \*Bea said that Bob killed someone, but Bill {wonders if/is not convinced that} {Bob killed someone}.

Put differently, if we define sluicing as in (122), the remnant of sluicing is always a *wh*-phrase. In the recent literature, there is however a tendency to assume that sluicing applies more generally in the context of *operator* movement, in particular movement related to focus. The remnants of sluicing are then ‘operator remnants’ rather than *wh*-remnants (see Van Craenenbroeck and Lipták 2006). I will argue below that such an approach explains the parallels between Horn- and Andrews-amalgams: whereas the latter involves the familiar kind of sluicing with a *wh*-remnant, the first involves a remnant of movement triggered by focus. This is closely related to observations in both Merchant (2004) for fragment answers and Van Craenenbroeck and Lipták (2006) for sluicing in the context of relatives in Hungarian. I discuss these briefly in §4.5.

#### Relative clause ellipsis and the role of presupposition in *it*-clefts

Assuming a raising analysis of relative clauses, I generalized that the content kernel in both Andrews and Horn-cases has  $A'$ -moved out of the ellipsis site. However, how and where this ellipsis of the cleft clause takes place requires further scrutiny. First, ‘relative clause ellipsis’ is not a commonly acknowledged form of ellipsis. Recall from §4.3 that Reeve (2010) observed that relative clauses can sometimes be elided, I repeat the example for convenience:

- (124) John drank the vodka that Bill bought, and Mary drank the water.

What is not addressed by Reeve, is that this kind of ellipsis is only possible if the head of the relative is focused. First of all, in the absence of such focus, the second conjunct in (124) is not interpreted as *Mary drank the water that Bill bought*, but simply as *Mary drank the water*. It can be inferred from the contrast between (125) and (126) that the ellipsis of the relative clause requires focus of its head:

- (125) \*John drank the vodka that BILL bought, and Mary drank the water  
 ⟨that Bill bought⟩.  
 (126) John drank the VODKA that Bill bought, and Mary drank the WATER  
 ⟨that Bill bought⟩.

In (125), material in the relative clause is focused (*Bill*). By the definition of Schwarzschild (1999) in (22), §4.1.1, what is not focused, is GIVEN. Assuming e-GIVENNESS, only GIVEN material can be elided: (125) is ruled out because the antecedent (A) does not entail the F-closure of the ellipsis site, nor *vice versa*:

- (127)  $F\text{-clo}(CP_E) = \exists x. \text{Bill bought } x$   
 $CP'_A = \exists x. x \text{ bought vodka}$   
 (128)  $F\text{-clo}(CP_A) = \exists x. x \text{ bought vodka}$   
 $CP'_E = \exists x. \text{Bill bought } x$

In other words, e-GIVENNESS is not met. By contrast, when the heads of the relative CPs are focused, respectively *vodka* and *water*, as in (126), the required entailments *do* hold:

- (129)  $F\text{-clo}(CP_E) = \exists x. \text{Bill bought } x$   
 $CP'_A = \exists x. \text{Bill bought } x$   
 (130)  $F\text{-clo}(CP_A) = \exists x. \text{Bill bought } x$   
 $CP'_E = \exists x. \text{Bill bought } x$

And indeed, ellipsis of the relative clause is licensed in (126). So, it appears that more generally, restrictive relative clauses can be elided, provided that e-GIVENNESS is met. I take  $[E_{RC}]$  to be responsible for such deletion, and propose that its features are  $[u_{rel}, uF^*]$ . The phonology and semantics are the same as those of other instances of  $[E]$ , and are summarized in (131):

- (131) **The properties of  $E_{RC}$**   
 i. The syntax of  $E_{RC}$ :  $E_{RC} [u_{rel}, uF^*]$   
 ii. The phonology of  $E_{RC}$ :  $\phi CP \rightarrow \emptyset / E_{RC}$ -  
 iii. The semantics of  $E_{RC}$ :  $\llbracket E_{RC} \rrbracket = \lambda p: e\text{-GIVEN } (p) [p]$

How this can be implemented is discussed below. Crucially, the kind of ellipsis in Horn-amalgams is similar to the one in (126). Considering the fact that the

relevant head (i.e. the cleft pivot) is always focused, it is now even less surprising that the cleft clause can be left out: it is GIVEN by definition. This is tightly related to the classic observation that *it*-clefts involve a ‘logical’ or ‘existence’ presupposition (see Chomsky 1971, Prince 1978, Gazdar 1979, Delin 1989, 1992, *inter alia*). I will use the symbol ‘ $\gg$ ’ for presupposition. Interestingly, Gazdar (1979) derives the presupposition from the relative structure, by replacing the relativizer by an existential quantifier:

- (132) It was VODKA that Bill bought.  
 $\gg \exists x$ .Bill bought  $x$

Notice that this bears resemblance to the way the notion GIVEN is defined in Schwarzschild (1999), as discussed in §4.1.1 above. The presuppositional status of the cleft clause is shown by the fact that it survives negation:

- (133) It was VODKA that Bill bought.  
 It wasn’t VODKA that Bill bought.  
 $\gg \exists x$ .Bill bought  $x$

Under conventional assumptions, presuppositional content cannot be cancelled: it projects out of embedded contexts such as negation (Soames 1989, Heim 1992, Beaver 2001). Another test for presupposition that is used in more recent literature is the ‘*Hey, wait a minute*’-test in Von Stechow (2004). This test distinguishes the asserted from the presupposed content: only presupposed information can be challenged by ‘*Hey wait a minute, I didn’t know (...)*’:

- (134) A: It was VODKA that Bill bought.  
 B: Hey, wait a minute, I didn’t know Bill bought something!  
 B’:#Hey wait a minute, I didn’t know that that was Bill!

Both of these tests show that the cleft clause in *it*-clefts is presupposed. As such, the licensing of ellipsis of this clause in the context of Horn-amalgams may seem straightforward. Both the QA-pair in (135) and the IC of the Horn amalgam in (136) contain a full-fledged *it*-cleft under our present assumptions, which triggers a presupposition:

- (135) Q: Who did Bea see?  
 A: I think it was Bob (that Bea saw).  
 $\gg \exists x$ .Bea saw  $x$
- (136) Bea saw [I think it was BOB (that Bea saw)].  
 $\gg \exists x$ .Bea saw  $x$

I will argue below that the cleft clause in Horn-amalgams can be elided in (135), because e-GIVENness is met. That is, the question functions as the antecedent, and the entailment relation holds in both ways as required:

$$(137) \quad \begin{aligned} \text{F-clo}(\text{CP}_E) &= \exists x. \text{Bea saw } x \\ \text{CP}'_A &= \exists x. \text{Bea saw } x \end{aligned}$$

$$(138) \quad \begin{aligned} \text{F-clo}(\text{CP}_A) &= \exists x. \text{Bea saw } x \\ \text{CP}'_E &= \exists x. \text{Bea saw } x \end{aligned}$$

However, these representations here anticipate on how sluicing in amalgams is license, which is discussed in §4.4 below. More specifically, it is not clear how the meaning of  $\text{CP}_A$  can be derived, considering that it does not appear to be a complete sentence:

$$(139) \quad * \text{Bea saw.}$$

This holds for Andrews-amalgams as well, and is of course directly related to what I originally phrased as ‘Lakoff’s puzzle’: the matrix is potentially syntactically incomplete. In the context of ellipsis we can now rephrase this as the ‘missing overt correlate’ to a part of the ellipsis site. For the moment, I assume that the apparent incomplete argument structure of the matrix verb involves an empty slot, which can be interpreted as a variable at the relevant level of interpretation (this is more or less in line with Chung et al. 1995, who posit the requirement that such a variable is present at LF in case of sprouting). I return to the specifics below in §4.4. That is, the construction *Bea saw* can only be interpreted if there is *something* or *someone* that is seen (call it an implicit object, although this particular verb does not allow for implicit objects):

$$(140) \quad \begin{aligned} &\text{Bea saw someone/something.} \\ &= \exists x. \text{Bea saw } x \end{aligned}$$

Under these provisional assumptions, the matrix clause yields the same entailment as the antecedent in the QA-pair in (144), and e-GIVENNESS is met in a similar fashion. Taking this into account, I discuss below how an E-feature can be implemented in these cases.

### Locating the E-feature in *it*-cleft reduction and Horn-amalgams

Assuming that relative clause ellipsis is licensed by  $[\text{E}_{\text{RC}}]$ , the question arises on which head  $\text{E}_{\text{RC}}$  resides, and consequently, which syntactic projection is the target of ellipsis. Under standard assumptions (e.g. Ross 1969, Merchant 2001, 2004, Stjepanović 2003, Aelbrecht 2010), sluicing is regarded as ellipsis at the level of IP. In the context of a layered CP, such deletion can only take place if  $[\text{E}]$  is licensed on the lowest C head, i.e.  $\text{C}_2^\circ$  assuming that there are two layers (this is for example assumed in Van Craenenbroeck 2010b):

$$(141) \quad \begin{array}{c} \dots \text{C}'_2 \\ \swarrow \quad \searrow \\ \text{C}_2^\circ \quad \langle \text{IP} \rangle \\ [\text{E}] \quad \triangle \\ \quad \quad \dots \end{array}$$

I return to some specifics of Van Craenenbroeck's proposal and some examples that he assumes to involve  $CP_2$  rather than IP deletion below. Unfortunately, if we assume (141) to apply to relative clause ellipsis, the relative pronoun will survive ellipsis. This is independent of the analysis assumed for relative clauses, and clearly contrary to fact:

(142) \*Bea married [I think it was Bob who].

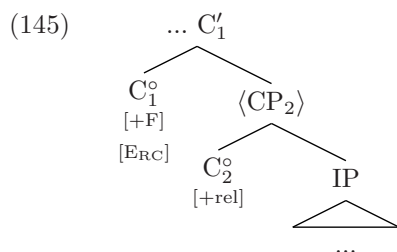
(143) Q: Who did Bea marry?  
A: \*I think it was Bob who.

So, ellipsis must target one of the levels of the layered CP rather than IP: the kind of ellipsis here cannot be ellipsis of the IP. The fact that the IP in a relative clause cannot be the target of sluicing seems to follow from Merchant (2001)'s generalization that sluicing is restricted to *wh*-interrogatives, and goes back to observations in Lobeck (1995:57, her (57)), based on the ungrammaticality of (144):

- (144) a. \*Someone wants to talk to Mary, but [<sub>DP</sub> the person [<sub>CP</sub> who [<sub>IP</sub> e]]] is to shy to approach her.  
b. \*Although the place [<sub>CP</sub> where [<sub>IP</sub> e]] is unclear, the time when the meeting is to be held is posted on the door.

The relevant difference between these cases and the cases I will explain via  $E_{RC}$  lies in the presence of the relative pronoun. In (144), this is the remnant of sluicing. By contrast, in what I have called relative clause ellipsis in the above, the relative pronoun does not survive ellipsis.

I propose that in relative clause ellipsis,  $C_1^o$  is marked [+F], and  $[E_{RC}]$  is generated and licensed there. I separate relativization from the presence of focus, the first being due to properties of  $C_2^o$ , the second to properties of  $C_1^o$ . This corresponds to the basic intuition that relative movement does not imply focus movement (which would be an undesirable implication), nor the presence of focus on the relative head. Ellipsis of relative clauses is then ellipsis of  $CP_2$ , due to the presence of the licensed  $[E]$  on  $C_1^o$ :



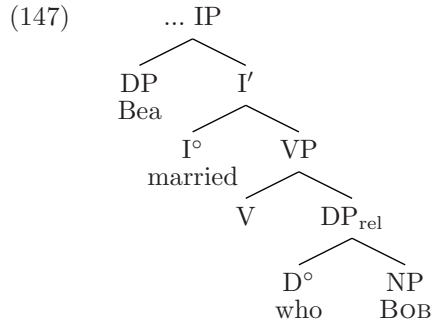
Recall that I assumed focus to be a *strong* feature: for checking, a local configuration is needed. The presence of the strong [+F] feature on  $C_1^o$  is what triggers movement of the focused relative head to  $SpecCP_1$ . Recall in addition

that  $[E]$  is endowed with both a strong  $[uF^*]$  feature and a weak  $[urel]$  feature. Whereas the first is checked locally against the features of the  $C_1^\circ$  the latter can be established via Agree, and hence  $[E_{RC}]$  is licensed at  $C_1^\circ$  and triggers deletion of its complement ( $CP_2$ ) at PF.

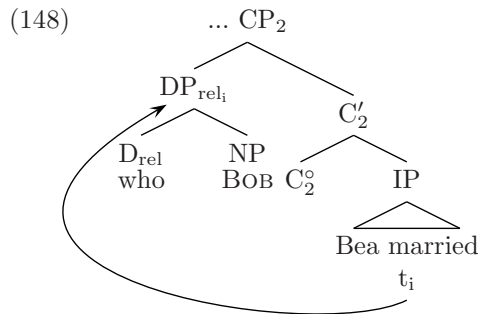
How this works precisely is best illustrated in a step-by-step derivation of a concrete example. I will illustrate this for the IC of a Horn-amalgam, but recall that cleft clauses can also be reduced in QA-pairs, and that relative clauses can more generally be elided in the context of a focused head. Consider the IC of (146):

- (146) Bea married  $[_{IC}$  I think it was  $[_{DP}$   $[_{D^\circ}$   $[_{CP}$  BOB  $\langle$ who Bea married $\rangle$ ].

I will derive the internal structure of the IC up to the DP here. Before relativization, *Bob* is merged as the object of *married*, and the following IP is built:

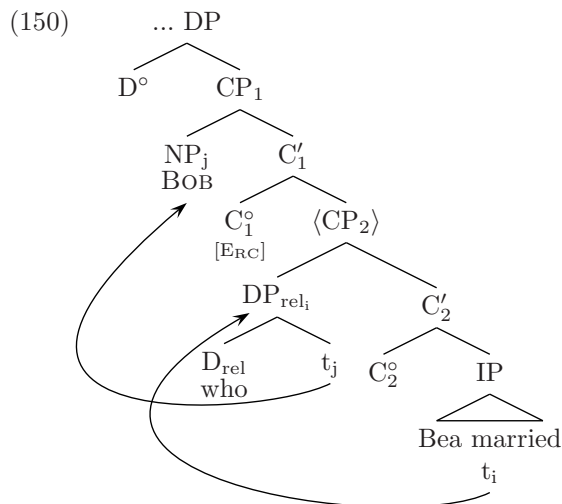


This IP is the complement of a C head ( $C_2^\circ$ ), which is  $[+REL]$ , triggering relative movement of  $DP_{rel}$  to Spec $CP_2$ :



Next,  $CP_2$  is merged as the complement of the next layer of the CP, which is headed by  $C_1^\circ$ , which is  $[+F]$  and hosts  $[E_{RC}]$ . The strong focus feature on  $C_1^\circ$  triggers movement of the focused head into Spec $CP_1$ . Under the basic assumptions of the raising analysis,  $CP_1$  is then selected as the complement of the external determiner  $D^\circ$ . At this point, the relative clause is derived:

(149) ... BOB who Bea married



This DP is then part of a small clause where it is merged with *it*, which is eventually the subject of the CP that is embedded under *think* in (146). Obviously,  $[E_{RC}]$  is syntactically licensed (and for expository reasons represented as such), but  $CP_2$  is not deleted at this point: there is no antecedent that is needed for the semantic licensing, and the actual deletion (non-pronunciation) is assumed to take place at PF. Although I won't elaborate on how the IC is eventually part of the matrix (this is topic to chapter 7), it is easy to see that the matrix clause *Bea married* provides the antecedent for the ellipsis of the relative clause that is triggered by  $[E_{RC}]$  when the complete syntactic structure enters PF.

In sum, the central claim of my proposal for the internal structure of the IC is thus that *both* types of amalgams involve sluicing: the familiar type of sluicing at the level of IP in Andrews-amalgams that is licensed by Merchant's ellipsis feature for sluicing in embedded *wh*-interrogatives ( $E_S$ ), and sluicing of a relative CP in Horn-amalgams. For the latter, I have invoked  $E_{RC}$ , which resides on  $C_1'$ , and deletes  $CP_2$ . This unified approach in terms of sluicing is theoretically attractive because it places our quirky amalgams in the context of familiar sluicing configurations. The main empirical virtue of this analysis will be laid out in the chapter to come: the apparent 'transparent' status of the content kernel is due to general reconstruction effects associated with A'-movement in the context of *it*-clefts (*viz.* relativization) and *wh*-questions respectively.

Before I proceed, I address the puzzle of the missing constituent in relation to the licensing condition on sluicing (e-GIVENNESS) in §4.4, in addition to an overview of the empirical predication entailed by this analysis. The basic ingredients and novelties of this approach are finally evaluated in the context of recent advances in the theory of sluicing in §4.5.



## 4.4 Puzzles and predictions of the sluicing account

### 4.4.1 The missing constituent is a null correlate

An issue that has surfaced a couple of times in the discussion so far, is that amalgams lack a correlate of the sluicing remnant in the antecedent. This constituent plays a crucial role in the licensing of regular sluicing. Consider the cases in (151):

- (151) a. Bea fancies *someone*. You'll never guess WHO<sub>i</sub> ⟨Bea fancies t<sub>i</sub>⟩.  
 b. Bea fancies *someone*. I think it's a PROFESSOR IN LINGUISTICS<sub>i</sub> ⟨that Bea fancies t<sub>i</sub>⟩.

Clearly, the indefinite DP *someone* corresponds to the sluicing remnants *who* and *professor in Linguistics* in (151). Recall now that e-GIVENNESS was formulated as follows (repeated from §4.1.3):

- (152) **e-GIVENNESS** [Merchant2001:31]  
 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).

The role of the correlate in the antecedent becomes clear when we have a closer look at how e-GIVENNESS is met in the regular sluice in (151a). The necessary steps for IP<sub>E</sub> are in (153), elaborating on Merchant (2001:§1.4.2):

- (153) IP<sub>E</sub> = Bea fancies t<sub>i</sub>  $\exists$ -type shift →  
 IP'<sub>E</sub> =  $\exists x$ .Bea fancies x F-closure →  
 F-clo(IP<sub>E</sub>) =  $\exists x$ .Bea fancies x

As pointed out in the above, the *wh*-trace is treated as an existentially bound variable. Turning to the antecedent IP<sub>A</sub>, we can similarly apply  $\exists$ -type shifting to the indefinite DP *someone*, yielding (154):

- (154) IP<sub>A</sub> = Bea fancies someone  $\exists$ -type shift →  
 IP'<sub>A</sub> =  $\exists x$ .Bea fancies x F-closure →  
 F-clo(IP<sub>A</sub>) =  $\exists x$ .Bea fancies x

Thus, e-GIVENNESS is met because F-clo(IP<sub>A</sub>) entails IP'<sub>E</sub>, and *vice versa*, F-clo(IP<sub>E</sub>) entails IP'<sub>A</sub>. It should be noted that these particular examples (arguably) do not involve F-marking in the respective IPs. Why the subsequent steps taken here (i.e. both  $\exists$ -type shifting and F-clo, more implicitly taken in Merchant's account) are necessary will be clear below, where I discuss cases that do involve F-marking.

The question is then how sluicing can similarly be licensed in the absence of a correlate in XP<sub>A</sub>, as is assumed in the present proposal for amalgams. Consider (155):

- (155) a. Bea fancies [you'll never guess who].  
 b. Bea fancies [I think it's a professor in Linguistics].

Intuitively, the interpretation of the antecedent (the matrix) is no different in the amalgams in (155): the remnant in the ICs in (155) seem to be related to an understood, but silent indefinite DP (i.e. *someone*). That is, amalgams appear to have a *null* correlate. So, what needs to be accounted for is what step is taken to derive (156):

- (156)  $IP_A = \text{Bea fancies}$   $??? \rightarrow$   
 $\exists x. \text{Bea fancies } x$

Relying on the restrictions on such correlates discussed in Chung et al. (1995), I suggest below that the null correlate corresponds to an empty position in the matrix, which in turn gives yields a free variable. This then allows us to derive the required entailment relations via  $\exists$ -type shifting.

#### 4.4.2 Meeting e-GIVENness via a null correlate

The example in the above suggests that not every XP can function as a correlate for the sluicing remnant: only those XPs that can be replaced by a variable via  $\exists$ -type shifting or F-closure are suitable candidates. That is, under assumptions of Merchant's e-GIVENness, which I have adopted so far. Chung et al. (1995:252) describe the restrictions on the correlate (in their terms 'the inner antecedent') more explicitly, and generalize (at least for DP cases) that the correlate is necessarily a weak or *indefinite* DP (see also Romero 1998, Schwabe 2001, Fox and Lasnik 2003, Dayal and Schwarzschild 2010 *inter alia* for similar observations). Their observation is that referential expressions nor generalized quantified expressions can function as such antecedents. Consider (157):

- (157) a. \*Bob married Bea, but Bill doesn't know who.  
 b. \*The professor kissed every student, but he couldn't remember who.

That this extends to reduced *it*-clefts and Horn-amalgams as well has, at least to my knowledge, never been addressed in the literature, especially not in relation to correlates in sluicing. The following pair shows that the correlate in reduced clefts in these paratactic configurations cannot be a referential expression or be universally quantified either:

- (158) a. \*Bea fancies Bob. I think it's the professor.  
 b. \*Bea fancies everyone. I think it's Bob.

Another interesting restriction on the correlate is that it cannot be in the scope of downward-monotonic quantifiers such as *few* or *no* (see also Merchant 2001, Schwabe 2001, Romero 2000, the latter for sprouting in particular):

- (159) a. Bea dated {a/some} professor who spoke a lot of languages.  
           You'll never guess how many.  
       b. \*Bea dated {few/no} professors who spoke a lot of languages.  
           You'll never guess how many.

This holds for reduced *it*-clefts and Horn-amalgams as well:

- (160) a. Bea dated {a/some} professor who spoke *a Balkan language*. I  
           think it was Avar-Andic.  
       b. \*Bea dated {few/no} professors who spoke *a Balkan language*. I  
           think it was Avar-Andic.

As the present discussion is not aimed at deriving the precise semantic nature of these apparent restrictions, I will not elaborate on these examples. For extensive discussion of the semantic relation between sluicing remnants and correlates, I refer in particular to Romero (1998, 2000) and Romero (2003).

For the present purposes, I adopt the generalization made in Chung et al. (1995) without further commitment to how they implement it in their analysis for sluicing. Chung et al. (1995:254) generalize that the correlate (inner antecedent in their terms) must introduce a *free* variable. This immediately rules out R-expressions (such as names or demonstratives) because those do not introduce any variable, and expressions with generalized quantifiers because they yield closure of the quantificational domain of the antecedent IP. However, such expressions *can* function as correlates when they are F-marked (Merchant 2001). Compare the cases in (161):

- (161) a. \*Bea fancies Bob, but I don't know who ELSE.  
       b. Bea fancies BOB, but I don't know who ELSE.

That is, in the absence of F-marking (161a) on *else*, sluicing is not licensed. This follows neatly from e-GIVENNESS:

- |       |   |  |
|-------|---|--|
| (162) | $IP_A = \text{Bea fancies Bob}$<br>$IP'_A = \text{Bea fancies Bob}$<br>$F\text{-clo}(IP_A) = \text{Bea fancies Bob}$                      | $\exists$ -type shift $\rightarrow$<br>F-closure $\rightarrow$ |
| (163) | $IP_E = \text{Bea fancies } t^x$<br>$IP'_E = \exists x. \text{Bea fancies } x$<br>$F\text{-clo}(IP_E) = \exists x. \text{Bea fancies } x$ | $\exists$ -type shift $\rightarrow$<br>F-closure $\rightarrow$ |

This example not only shows the added value of F-marking in the licensing of sluicing, it also shows why the entailment relations must hold in both ways. Clearly, condition (i) of e-GIVENNESS is met: that Bea fancies Bob entails that there is someone that she fancies ( $IP'_A$  entails  $F\text{-clo}(IP_E)$ ). However, the reverse entailment obviously doesn't hold. Sluicing is thus not licensed in this case because  $IP'_E$  does not entail  $F\text{-clo}(IP_A)$ . This is resolved immediately when *Bob* is F-marked (161b), and gives rise to a set of alternatives such that we can

apply F-closure and obtain (164):

$$\begin{array}{ll}
 (164) & \text{IP}'_A = \text{Bea fancies Bob} \\
 & \text{F-clo(IP}_A) = \exists x. \text{Bea fancies } x
 \end{array}
 \quad \text{F-closure} \rightarrow$$

The generalization that can be made based on this reconciles the insights in both Chung et al. (1995) and Merchant (2001): the correlate must in some way be able to introduce a variable. This variable can either be obtained by F-closure, or by  $\exists$ -type shifting.

Turning to amalgams, the first option is excluded: an absent, or better *null* correlate cannot be F-marked. However, we can assume that the desired free variable is related to the empty position in the matrix clause. In a way this is reminiscent to how sprouting is approached in Chung et al. (1995). That is, the object position of *serve* need not be filled with an overt DP:

$$\begin{array}{ll}
 (165) & \text{Bea served the guests } \{\text{something}/e^x\}, \text{ but I don't know what.} \\
 (166) & \text{IP}_A = \text{Bea served the guests } e^x/\text{something} \quad \exists\text{-type shift} \rightarrow \\
 & \text{IP}'_A = \exists x. \text{Bea served the guests } x \quad \text{F-closure} \rightarrow \\
 & \text{F-clo(IP}_A) = \exists x. \text{Bea served the guests } x
 \end{array}$$

We can now similarly approach the incomplete matrix clauses of amalgams. I will adopt the notational convention of (Chung et al. 1995) for my purposes. In (167) then,  $x$  stands for an individual that would normally be denoted by the argument DP selected by *dated*:

$$\begin{array}{ll}
 (167) & \text{Bea dated } e^x \text{ [you'll never guess who].} \\
 (168) & \text{IP}_A = \text{Bea dated } e^x \quad \exists\text{-type shift} \rightarrow \\
 & \text{IP}'_A = \exists x. \text{Bea dated } x \quad \text{F-closure} \rightarrow \\
 & \text{F-clo(IP}_A) = \exists x. \text{Bea dated } x
 \end{array}$$

So, e-GIVENNESS is met in (167) and therefore sluicing is licensed. For this, we do not need to amend the licensing condition on ellipsis. Under the assumption of the presence of a null correlate in the matrix and the variable it gives rise to, the entailment relations can be calculated as desired. Contrary to regular sluicing, however, the relevant variable in amalgams is invariably due to  $\exists$ -type shifting and not to F-closure.

On a side note, we predict from this a *wh*-remnant that requires an F-marked correlate are excluded in amalgams. Interestingly, the case with *else*-modification appears to be such a case, as a non-F-marked correlate is excluded in regular sluicing:

$$(169) \quad * \text{Bea fancies } \{\text{someone/a girl}\}, \text{ but I don't know who ELSE.}$$

This is likely related to the sets of alternatives that *else*-modification gives rise to (for discussion, see Romero 1998:51ff). Interestingly, *else*-modification is completely impossible in Andrews-amalgams:

- (170) \*Bea fancies [you'll never guess who else].

This then follows from the basic assumption that null correlates cannot be F-marked.

Summing up, under the assumption that amalgams involve null correlates, the antecedent provides the variable that is desired for calculating the entailment relations, and Merchant's e-GIVENness can be maintained to condition sluicing in amalgams. In chapter 7, I will show in more detail how e-GIVENness regulates the relation between the null correlate and the content kernel in amalgams. Finally, it should be pointed out that this does not mean that amalgams are instances of sprouting. We have seen in §4.2.2 that sprouting is far more restricted than sluicing when it comes to the type of matrix verbs and island sensitivity (see also Romero 2000 for more discussion). I will argue at length in chapter 5 that ellipsis in amalgams is similar to regular sluicing in all respects. As we have seen in chapter 3, the IC can be related to both argument and adjunct positions. Clearly, an empty slot in the matrix clause that corresponds to an obligatory argument would otherwise give rise to ungrammaticality: the IC cannot be left out in these cases. I will leave this matter open for now, and discuss it in relation to the syntactic configuration in which sluicing in amalgams ultimately takes place in chapter 7.

#### 4.4.3 Empirical predictions for amalgams

The sluicing generalization along with the PF-theory of ellipsis that I assumed gives rise to a couple of predictions for amalgams. Recall from §4.1.2 that sluicing has four characteristic properties, which have been taken to constitute evidence for the PF-approach (Ross 1969, Merchant 2001). I will divide these in two sets: the first relate to movement properties, the second to form-identity (in Merchant 2001's terms). First, the *wh*-remnant displays reconstruction effects. This can be taken as an indication the *wh*-remnant has undergone movement. Interestingly, such A'-movement can be across islands in sluicing contexts: sluicing is island insensitive. I repeat the examples in (171)-(172):

- (171) Every linguist<sub>*i*</sub> criticized some of his<sub>*i*</sub> work, but I don't know how much of his<sub>*i*</sub> work ⟨every linguist criticized t<sub>*i*</sub>⟩.
- (172) They want to hire someone who speaks a Balkan language, but I don't remember which ⟨\*they want to hire someone who speaks⟩.

The other two properties have been described as 'form-identity generalizations' in Merchant (2001). First, the *wh*-remnant is subject to Case matching, i.e. it bears the case-marking on the *wh*-remnant corresponds with the case-marking on the *wh*-remnant. This is illustrated in (173) (repeated from §4.1.2):

- (173) [German]
- a. Er will jemandem schmeicheln, aber sie wissen nicht,  
 he wants someone-DAT flatter but they know not  
 { \*wer / \*wen / wem }.  
 who-NOM who-ACC who-DAT  
 ‘He wants to flatter someone, but they don’t know who.’
  - b. Er will jemanden loben, aber sie wissen nicht, { \*wer  
 he wants someone-ACC praise but they know not who-NOM  
 / wen / \*wem }.  
 who-ACC who-DAT  
 ‘He wants to praise someone, but they don’t know who.’

This is expected under the assumption of the PF-approach, in which the *wh*-remnant acquires case in its base position in the IP that is left unpronounced at PF. The second form-identity generalization relates to the distribution of prepositions that are related to the *wh*-remnant. That is, Merchant observes languages that ban P-stranding under *wh*-movement, the preposition shows up in the sluice. By contrast, the preposition may be absent in the sluice in languages that allow for P-stranding under regular *wh*-movement:

- (174) a. Peter was talking with someone, but I don’t know (with) who.  
 b. Who was he talking with?

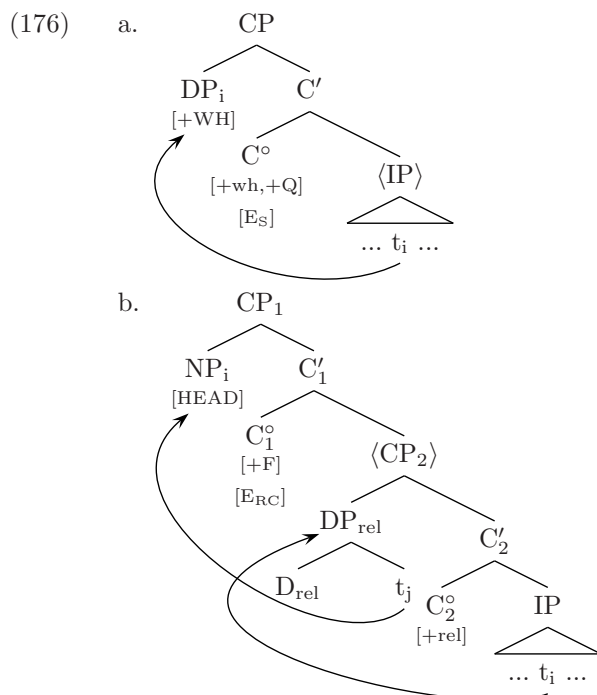
- (175) [Czech]
- a. Anna mluliva s někým, ale nevím \*(s) kým.  
 Anna spoke with someone but not.I.know with who  
 ‘Anna spoke with someone, but I don’t know who.’
  - b. \*Kým mluvila Anna s?  
 who spoke Anna with  
*int.* ‘Who did Anna talk with?’

Based on the analysis I proposed in the above, we expect that these properties resonate in both types of amalgams. Obviously, we will need to carefully look into the predictions that the PF-approach makes for Horn-amalgams, as deletion here targets a layer of the CP and not the IP. The chapter to come is an empirical investigation of these predictions, taking into account the different levels of sluicing and the structural differences between Horn- and Andrews-amalgams respectively.

## 4.5 Theoretical embedding of the proposal

### 4.5.1 Generalizing sluicing to A'-movement contexts

The central claim of this chapter is that both types of amalgams involve sluicing: in Andrews-amalgams this applies to IP, triggered by [E<sub>S</sub>] on C°, in Horn-amalgams this applies to CP<sub>2</sub>, triggered by [E<sub>RC</sub>] on C<sub>1</sub>°:



In both cases, ellipsis is constrained by Merchant (2001)'s e-GIVENness (going back to Schwarzschild 1999).

This seems to involve three theoretical novelties: 1. sluicing can be associated with non-interrogative A'-movement contexts, *viz.* focus movement, 2. sluicing may target a layer of the CP in the assumption of a split CP, and 3. sluicing can occur in the context of relative clauses, contrary to what is observed in Lobeck (1995). Since the details of this proposal are in keeping with recent proposals for sluicing in the context of focus movement, i.e. ellipsis in fragment answers rather than the usual *wh*-interrogative contexts, I briefly discuss Merchant (2004) first.

#### 4.5.2 Focus movement and sluicing in fragments: E<sub>F</sub>

Merchant (2004) argues that fragment answers such as involve sluicing(177):

- (177) Q: Who did Bea marry?  
A: Bob.

In fact, the data that provide evidence for this claim are comparable to the data discussed in the above for sluicing, and involve reconstruction effects, case-marking and alternations related to the P-stranding generalization. That the answer in fact involves a complete syntactic structure, is evident from the fact that it needs to get the case-marking that is associated with a sentential

answer. I slightly adapt the German and Russian examples from Merchant (2004:677-8, his (49), (50) and (55)):

- (178) [German]
- Q: Wen sucht Hans?  
 who.ACC seeks Hans  
 ‘Who is Hans looking for?’
- A: { \*Dem/ den } Lehrer.  
 the.DAT the.ACC teacher  
 ‘The teacher.’
- (179) Q: Wem folgt Hans?  
 who.DAT follows Hans  
 ‘Who is Hans following?’
- A: { Dem/ \*den } Lehrer.  
 the.DAT the.ACC teacher  
 ‘The teacher.’
- (180) [Russian]
- Q: Komu pomogla Anna?  
 who.DAT helped Anna  
 ‘Who did Anna help?’
- A: { Ivanu/ \*Ivan/ \*Ivana }  
 Ivan.DAT Ivan.NOM Ivan.ACC  
 ‘Ivan.’

These examples show that the fragment answer receives the case-marking that is associated with a full sentential structure, i.e. as in (181):

- (181) [German]
- Hans folgt { dem/ \*den } Lehrer.  
 Hans follows the.DAT the.ACC teacher  
 ‘Hans follows the teacher.’

These matching effects are similar to the ones found in regular sluicing: the *wh*-phrase obtains the case that it would receive in a configuration in which the IP that contains its selecting verb is present (see the discussion above).

As for alternations related to the P-stranding generalization, the following data are taken to be evidence for movement in fragment answers (the type of movement will be addressed below). I take English as the typical P-stranding language, and Czech as the pied-piping counterpart. The contrast between (182) and (183) is indeed reminiscent of the patterns discussed in regular sluicing and later on in amalgams, examples again slightly adapted from Merchant (2004:685-6, his (72) and (80)):

- (182) Q: Who was Peter talking with?  
 A: (With) Mary.



(183)

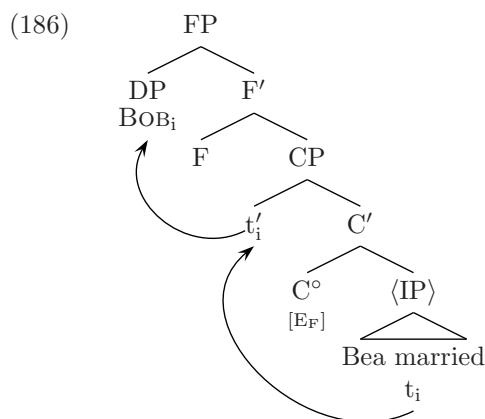
[Czech]

- Q: S kým mluvila Anna?  
 with whom spoke Anna  
 ‘With who did Anna speak?’  
 A: \*(S) Jindřichem.  
 with Jindřichem  
 ‘With Jindřichem.’

That fragment answers behave as if they are part of a full sentential structure, is in addition suggested by the fact they show reconstruction effects, which is shown by the following examples:

- (184) Q: Who did John<sub>i</sub> try to shave?  
 A: { \*Him<sub>i</sub> / himself<sub>i</sub> }  
 (185) Q: Where is he<sub>i</sub> staying?  
 A: \*In John<sub>i</sub>’s apartment.

To account for these facts, Merchant (2004) proposes that fragment answers involve elliptical sentences, and not simple DPs (i.e. *contra* the non-structural accounts discussed in §4.1.1), in line with Hankamer (1979). However, contrary to the non-constituent deletion that is assumed in Hankamer’s proposal, Merchant submits that there is focus-movement in fragment answers, and that the relevant DP moves out of the TP. The latter is subsequently deleted due to the presence of an E-feature. This way, the assumption of non-constituent deletion can be circumvented. This particular E-feature, a lexical entry dubbed E<sub>F</sub>, for ‘fragment-ellipsis’, and the structure of the simple fragment answer *Bob* underlies the following structure:<sup>6</sup>



<sup>6</sup>Note that Merchant invokes a functional layer FP to host the focus feature F. Contrary to Van Craenenbroeck and Lipták (2006), Van Craenenbroeck (2010b) and the present work, Merchant (2001, 2004) does not assume a split CP. The present proposal will however rely crucially on the presence of more than one C° head, one of which is [+F]. The representation in (186) should thus not be taken as representative for the claims to be made below.

In such an analysis, fragment answers are analysed on a par with focus-fronting, in which the TP in which the fronted constituent is generated is deleted at PF, *viz.* regular sluicing. Similar to the features of  $E_S$  [ $uwh^*, uQ^*$ ], the features of  $E_F$  are at first defined as [ $uC^*, uF^*$ ]. However, for Merchant revises this into a weak feature, its checking domain need not be local and can be established via Agree (Merchant 2004:707). This is closely related to the role of the trace in ellipsis contexts where A'-movement violates islands. I address islands under sluicing in great detail in the chapter to come in §5.4.3.

#### A note on reduced *it*-clefts in QA-contexts

The relevant parallel which connects these examples to amalgams, is the presence of *focus*. As we have seen before, focus also plays an important role in sluicing in *wh*-interrogatives (see also Romero 1998), although it is not part of the featural properties in the syntax of the E-feature in Merchant (2001)'s proposal. That I discuss fragment answers somewhat extensively here is no accident: it has been observed in the literature that reduced or 'truncated' clefts (in general) can be used in the context of QA-pairs (187) or in a particular paratactic environments (188), (see Declerck 1988, Büring 1998, Mikkelsen 2007, Belletti 2008):

- (187) A: Who died?  
       B: It was BILL ⟨who died⟩.
- (188) Someone died. It might be Bill ⟨who died⟩.

Mikkelsen (2007) argues that these truncated clefts are in fact *monoclausal* specificational construals, and do not involve the ellipsis of a cleft clause. This is argued based on cases such as (189), which cannot be realized as a full-fledged *it*-cleft to begin with, contrary to (187):

- (189) Q: Who is it?  
       A: It's BEA ⟨\*who it is⟩.

In addition, the fact that truncated clefts in these contexts do not display reconstruction effects that were observed in amalgams in 5.1 and in Merchant's fragment answers, indeed seems to complicate an analysis that puts reduced cleft answers on a par with fragment answers such as (177). This is illustrated in (190) and (191). I use Dutch data here because of the considerations about English reflexives mentioned in chapter 3:

- (190) [Dutch]
- Q: Wie vindt Bob<sub>i</sub> het leukst?  
           who likes Bob the nicest  
           'Who does Bob like best?'
- A: ZICHZELF<sub>i</sub>.  
           SE-self  
           'Himself.'

- (191) Q: Wie vindt Bob<sub>i</sub> het leukst?  
           who likes Bob the nicest  
           ‘Who does Bob like best?’  
       A: \*Het is ZICHZELF<sub>i</sub>.  
           it is SE-self  
           ‘It’s himself.’

Although Mikkelsen does not discuss the absence of reconstruction effects in truncated clefts, these data seem to corroborate her view that these do not involve the presence of an elided cleft clause. However, the contrast between regular fragment answers and truncated clefts disappears when we embed the cleft under an attitude verb, or use a modal instead of the copular BE, as reconstruction effects arise in these cases:

- (192) Q: Wie vindt Bob<sub>i</sub> het leukst?  
           who likes Bob the nicest  
           ‘Who does Bob like best?’  
       A: Ik zou denken dat het ZICHZELF<sub>i</sub> is.  
           I would think that it SE-self is  
           ‘I’d think it’s himself.’
- (193) Q: Wie vindt Bob<sub>i</sub> het leukst?  
           who likes Bob the nicest  
           ‘Who does Bob like best?’  
       A: Het lijkt ZICHZELF<sub>i</sub> te zijn.  
           it appears SE-self to be  
           ‘It appears to be himself.’

This is particularly intriguing given the fact that the *it*-cleft in Horn-amalgams requires the presence of such an intensional context, as is shown by the contrast between (194) and (195). I use English data here, but the observation extends to Dutch as well:

- (194) \*Bea kissed [it was Bob].
- (195) a. Bea kissed [I think it was Bob].  
       b. Bea kissed [it seemed to be Bob].

I discuss this requirement at length in chapter 6, also in the context of TFRs, which have been argued to have a similar need for the presence of such an operator. What is relevant for the present purposes is that the truncated clefts that are part of such an intensional environment do appear to involve an elided cleft-clause, and should not be regarded as monoclausal specificational sentences in the sense of Mikkelsen (2007).

### Sluicing in Hungarian relative clauses with focused remnants

Sluicing in the context of relative clauses appears to have a predecessor in the literature as well. Van Craenenbroeck and Lipták (2006) observe that Hun-

garian allows for ‘relative deletion’ (which they abbreviate to ‘RD’) in examples such as (196) (the example is cited from Van Craenenbroeck and Lipták 2006:249, the *e* represents the elided material in their examples):

- (196) [Hungarian]  
 AZ A FIÚ hívta meg Esztert, aki KATIT [e].  
 that the boy invited PV Eszter-ACC REL-who Kati-ACC  
 ‘The boy who invited Eszter was the one who invited Kati.’

Importantly, the head of this relative is focused (indicated by SMALL CAPS), as is the remnant of ellipsis. Although this seems parallel to the relative clause ellipsis that I claim to be licensed in Horn-amalgams and QA-pairs, there is a big difference that can immediately be observed in (196): both the relative pronoun and some focused remnant (here *Kati*) survive ellipsis. Regarding the latter, it is not immediately obvious that this is not VP-ellipsis of some sort. However, based on the observation that auxiliaries and certain adverbs do not survive this kind of ellipsis, Van Craenenbroeck and Lipták (2006) argue that this is a form of sluicing, i.e. deletion targets the IP in the relative clause. The Hungarian data are thus in opposition with Lobeck’s data in (144), and do not directly pattern with my cases, although the fact that they both involve focused heads is a remarkable parallel.

#### 4.5.3 Sluicing in a layered CP and the Dutch COMP-facts

The present proposal for Horn-amalgams employs a layered CP, which is in line with Van Craenenbroeck (2004), Van Craenenbroeck and Lipták (2008) and Van Craenenbroeck (2010b). More specifically, Van Craenenbroeck (2004, 2010b) argues that complex *wh*-phrases are base-generated in SpecCP<sub>1</sub> and [E] in these cases is licensed on C<sub>1</sub><sup>o</sup> (after movement from C<sub>2</sub><sup>o</sup>), and affects the second layer of the CP rather than IP. This then accounts for the fact that *spading*, which is arguably the striding of the focused *da* in SpecCP<sub>2</sub>, is only possible with minimal *wh*-phrases (Van Craenenbroeck 2010b:48ff, his (3) and (27)):<sup>7</sup>

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<sup>7</sup>The assumption that complex *wh*-phrases are base-generated in SpecCP<sub>1</sub> is, however, quite problematic in the perspective of the reconstruction effects that we can clearly observe in sluicing with complex *wh*-remnants. Since the reconstruction effects are central to the proposal that amalgams involve ellipsis to begin with, I will not concur with this specific idea, but for discussion see Van Craenenbroeck (to appear).

(197) [Wambeek Dutch]

- A: Jef eid iemand gezien.  
 Jeff has someone seen  
 ‘Jeff saw someone.’  
 B: Wou da?  
 who that<sub>DEM</sub>  
 ‘Who?’

(198) A: Jef ei nen boek gekocht.  
 Jeff has a boek bought  
 ‘Jeff bought a book.’  
 B: Welken boek (\*da)?  
 which book that  
 ‘Which book?’

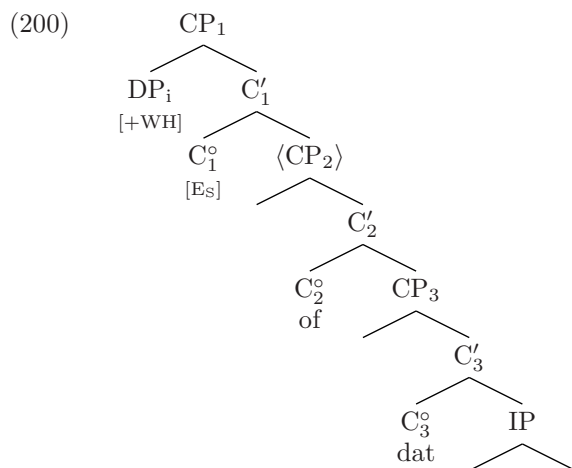
Under the assumption of a layered CP, *da*, which is [+F], moves to SpecCP<sub>2</sub>. In case of a minimal *wh*-DP (197), the E-feature is licensed at C<sub>2</sub><sup>o</sup>, and triggers the deletion of IP. In this case, *da* survives ellipsis. By contrast, in the case of a complex *wh*-DP, it does not survive sluicing because the E-feature in that case is licensed at C<sub>1</sub><sup>o</sup>, yielding the deletion of CP<sub>2</sub> (including *da*).

The assumption that sluicing in *wh*-interrogative contexts involves a split CP as well may have interesting consequences for the theory of sluicing in general. That is, the idea that sluicing can be licensed by a higher C<sup>o</sup>-head may be a key in solving the puzzling COMP facts briefly illustrated in §4.2. Consider the Dutch facts: complementizers *of* (‘if’) and *dat* (‘that’) may be overtly realized in *wh*-movement contexts, but they are disallowed under sluicing. By hypothesis, Dutch licenses [E<sub>S</sub>] at the highest C<sup>o</sup>, such that the complementizers do not survive sluicing. The relevant example is repeated in (199):

(199) [Dutch]

- a. Ik weet niet wie of dat Bob gezien heeft.  
 I know not who if that Bob seen has  
 ‘I don’t know who Bob saw.’  
 b. Bob heeft iemand gezien, maar ik weet niet wie (\*of dat).  
 Bob has someone seen but I know not who if that  
 ‘Bob saw someone, but I don’t know who.’

Under such assumptions, the complementizers in (199b) could be excluded because they are contained in the ellipsis site, as in (200):



This layered CP in which the relevant complementizers correspond to separate functional heads is in spirit of E. Hoekstra (1993) and J. Hoekstra (1993) (see also Zwart 2000). Obviously, the empirical and theoretical implications of such an idea, and how a layered CP can exactly be implemented in the theory of sluicing in general lies beyond the scope of the present work.

## 4.6 Summary

This chapter concerned the internal structure of the IC. For this, I took the main observation of chapter 3 as a point of departure: the IC is a root clause. Clearly, a part of that clause is not pronounced. In the case of Andrews-amalgams, only an embedding predicate with a *wh*-DP surfaces, in Horn-amalgams a copular construction with *it*. The remainder of the structure is the target of ellipsis, for which I have defended a PF-approach inspired by Merchant (2001). Under such assumptions, ellipsis is licensed by a syntactic feature (the E-feature) on a head, which basically instructs PF to not pronounce its complement. Ellipsis is constrained by e-GIVENNESS: XP can be elided if XP is given. The main goal of this chapter was to implement such an idea to the IC in amalgams, and to generalize the type of ellipsis to sluicing.

I started out by defending and elaborating on the first implication of this hypothesis, namely that the IC is a full-fledged clause:

**The IC is structurally derived as a full-fledged clause at the level of syntax**

- the content kernel in Andrews-amalgams is in SpecCP of the CP that is selected by the main predicate of the IC;
- the content kernel in Horn-amalgams is the cleft pivot of an *it*-cleft;
- in both cases, it is base-generated in a lower IP that is, or is contained

in an ellipsis site.

Due to the *wh*-remnant, the parallel between regular sluicing in Andrews-amalgams seems rather obvious: the IC is an embedded *wh*-interrogative. I showed that Andrews-amalgams show the same restrictions in the COMP-domain, and that they allow for particular subvariants of sluicing, *viz.* sprouting and swiping. The assumption that Horn-amalgams involve a full-fledged *it*-cleft (including an elided cleft clause) required more explanation. The main argument for this analysis, is the observation that cleft pivots are always focused, similarly to the content kernel of amalgams and *wh*-remnants in regular sluicing. In addition, the mysterious restriction witnessed in the previous chapter on quantified (NPI and generalized QPs) and predicative content kernels follows straightforwardly, as these follow from the referentiality condition on cleft pivots in *it*-clefts. Elaborating on the predominant idea that the cleft clause is a restrictive relative clause, I have defended a raising analysis for these. This raising analysis involves a layered CP, relative movement is into SpecCP<sub>2</sub>, and the additional movement out of DP<sub>rel</sub> of the relative head is into SpecCP<sub>1</sub>. Importantly, the trigger for movement of the cleft pivot (the relative head) is *focus*:

**A raising analysis for cleft clauses**

- the cleft pivot is base-generated inside the IP out of which relativization takes place (CP<sub>2</sub>);
- focus on the (higher) C<sub>1</sub><sup>o</sup> head triggers movement of the relative [+F] head into SpecCP<sub>1</sub>.

The inherent focus on the cleft pivot is also a main figure in the licensing of ellipsis proposed for Horn-amalgams, which I formulated as E<sub>RC</sub>. This E-feature is specified for a (weak) relative feature and a strong focus feature [*urel*, *uF\**]. The strong feature is checked locally on C<sub>1</sub><sup>o</sup>, a head that is [+F] and eventually triggers the movement of the relative head out of DP<sub>rel</sub>. E<sub>RC</sub> is then responsible for the deletion of CP<sub>2</sub>, and licensed if the relative has a focused head. This enables us to generalize sluicing to both types of amalgams:

**The sluicing generalization for amalgams**

- E<sub>S</sub> on a C<sup>o</sup>-head licenses ellipsis of the IP in Andrews-amalgams;
- E<sub>RC</sub> on C<sub>1</sub><sup>o</sup> licenses ellipsis of CP<sub>2</sub> in Horn-amalgams;
- sluicing can be generalized to A'-movement contexts and may apply to a layer of the CP instead of IP in case the E-feature is licensed at a higher C<sup>o</sup> head.

In the last part of this chapter, I elaborated on a peculiarity of sluicing in amalgams: namely the lack of an overt correlate. Whereas the remnants of regular sluices correspond to some correlate XP in the antecedent, amalgams lack such a constituent. I have argued that this gives rise to a variable in the matrix, and that e-GIVENNESS can be met via  $\exists$ -type shifting of this variable.

Consequently, Andrews-amalgams cannot have *wh*-remnants that require a F-marked correlate:

**Amalgams and e-GIVENness**

- the missing matrix constituent is a null correlate of the sluicing remnant in the IC;
- the null correlate corresponds to an empty position in the matrix, which gives rise to a free variable;
- $\exists$ -type shifting of the null correlate allows us to calculate the entailment relations between antecedent and ellipsis site;
- sluicing in amalgams is thus subject to e-GIVENness, like regular sluicing.

In implementing this idea, I not only unified the internal structures of the ICs in Andrews- and Horn-amalgams, I also broadened the domain of sluicing configurations in the context of a layered CP, in line with recent advances in theories on sluicing (in particular Van Craenenbroeck 2010b).

Clearly, this approach comes with a burden of proof: if amalgams involve sluicing, we expect them to behave similarly to regular sluicing when it comes to reconstruction effects, island (in)sensitivity, case-matching and patterns of P-stranding. In the chapter to come, I provide abundant empirical evidence for the unified analysis toward amalgams in terms of sluicing configurations.



## CHAPTER 5

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### Empirical evidence for the sluicing approach

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The sluicing approach unsurprisingly predicts that the typical properties of sluicing configurations can be found in amalgams: reconstruction of the remnant, case matching, cross-linguistic variation due to P-stranding and island insensitivity. In this chapter, I demonstrate that this is indeed the case: the content kernel is the remnant of sluicing in the IC. This straightforwardly explains the puzzling accessibility of the content kernel observed in chapter 3, and reduces it to reconstruction. Most of this chapter is spent on the question whether Merchant’s form-identity generalizations for sluicing apply to amalgams as expected. For this, I first discuss in more detail what we expect exactly under the assumption of the PF-theory, as the absence of an overt correlate in the antecedent requires a slight reformulation of the generalizations themselves. As it turns out, case restrictions on the content kernel are consistent with those in regular sluicing (strictly matching) and *it*-clefts (default case). In addition, the cross-linguistic variation that was found in the distribution of PP content kernels resembles patterns with PPs in sluicing. However, the data are not always consistent with what Merchant’s P-stranding generalization predicts. In addition, under the assumption that sluicing remnants have A’-moved out of the ellipsis site, the observed lack of island effects in sluicing are far from self-evident. I address these challenges for the PF-theory in the context of recent literature on the P-stranding generalization and island repair under sluicing.

The chapter is organized as follows. In §5.1, I show that like regular sluicing remnants, the content kernel in amalgams has undergone A’-movement. Similarly to what is commonly assumed for regular sluicing, A’-movement out of the ellipsis site in amalgams may be across island boundaries. The case facts

are discussed in §5.2, followed by an extensive study of the PP facts in §5.3. The merits of this approach over in particular the multidominance theory for amalgams are summarized in §5.4, followed by a discussion of how the puzzling P-stranding and island facts can be dealt with within the boundaries of the PF-theory of ellipsis.

## 5.1 *A'-movement in amalgams: reconstruction and islands*

### 5.1.1 Reconstruction effects in Andrews-amalgams

So far, I have discussed reconstruction in the context of relative clauses. Of course, such effects are generally associated with *A'*-movement and are traditionally related to *wh*-movement contexts, i.e. *wh*-question formation. I illustrate this here for anaphora binding and condition C effects. For simplicity's sake, I will not use traces in the representations, but '—', the indices indicate the relevant binding relations. Consider (1):

- (1) a. Which stories about himself<sub>*i*</sub> did Bill<sub>*i*</sub> hear —?
- b. \*Which stories about Bill<sub>*i*</sub> did he<sub>*i*</sub> hear —?

That sluicing constructions exhibit similar reconstruction effects (see Lasnik 2001, and discussion in §4.2) corroborates the view that the *wh*-phrase has moved out of the IP in which it was base-generated, as is assumed in the PF-approach to sluicing. (2) is from Lasnik, repeated from the discussion above:

- (2) Every linguist<sub>*i*</sub> criticized some of his<sub>*i*</sub> work, but I don't know how much of his<sub>*i*</sub> work (every linguist<sub>*i*</sub> criticized —).

Thus, the availability of the bound reading of *his* in the remnant of the sluiced CP, can be accounted for via reconstruction in its base position. To illustrate reconstruction, I represent the base position of the relevant constituent with a grey copy and its binder as **boldfaced**:

- (3) Every linguist<sub>*i*</sub> criticized some of his<sub>*i*</sub> work, but I don't know how much of his<sub>*i*</sub> work (**every linguist<sub>*i*</sub>** criticized how much of his<sub>*i*</sub> work).

In this subsection, I show that the exceptional transparency of the content kernels in Andrews-amalgams can be reduced to more general reconstruction effects.

Starting out with reflexives, we can clearly see that a reflexive that is part of a *wh*-phrase can be bound even though it is no longer c-commanded by its binder in its derived position. For reasons laid out in §3.4.2, I use Dutch data here:

- (4) [Dutch]  
 Je kunt wel raden hoeveel schaduwen van zichzelf<sub>i</sub> onze kat<sub>i</sub> heeft  
 you can AFF guess how.many shadows of SE-self our cat has  
 \_ nagejaagd.  
 chased  
 ‘You can guess how many shadows of himself our cat chased.’

Similarly, pronouns that are part of *wh*-moved constituents can be bound by quantifiers in their base position:

- (5) You can imagine how many of his<sub>i</sub> classmates every student<sub>i</sub> kissed \_.

In turn, pronouns that are part of *wh*-moved constituents give rise to condition B effects if they are c-commanded by a coindexed expression in the local domain of their base position, as is illustrated in (6):

- (6) \*You’ll never guess which story about him<sub>i</sub> the professor<sub>i</sub> told Bea \_.

Condition C effects arise when a *wh*-moved R-expression is c-commanded by a coindexed element in its base position:

- (7) \*You’ll never guess which story about the professor<sub>i</sub> he<sub>i</sub> told Bea \_.

Reconstruction effects in sluicing thus corroborate the view that the elided IP is present at the syntactic level. A similar assumption that the IC of Andrews-amalgams contains the complete *wh*-interrogative *viz.* regular sluicing configurations, the transparency effects observed in §3.4 follow straightforwardly. I show this for reflexive binding and condition B effects:

- (8) [Dutch]  
 Onze kat heeft [je kunt wel raden hoeveel schaduwen van zichzelf<sub>i</sub>  
 our cat has you can AFF guess how.many shadows of SE-self  
 ⟨**onze kat**<sub>i</sub> schaduwen van zichzelf<sub>i</sub> nagejaagd heeft⟩] nagejaagd.  
 our cat shadows of SE-self chased has chased  
 ‘Our cat chased you can imagine how many shadows of himself.’

The fact that a reflexive *wh*-content kernel is accessible for binding by a constituent in the matrix can thus be explained by its base position in the elided IP of which the matrix is the syntactic antecedent. The fact that the content kernel in Andrews-amalgams gives rise to condition B effects can be explained in a similar fashion:

- (9) The professor told Bea [you’ll never guess which story about him<sub>i</sub> ⟨**the professor**<sub>i</sub> told Bea the story about him<sub>i</sub>⟩].

The pronoun *him* is bound in its local domain by *the professor*, and hence the amalgam gives rise to a condition B effect.

Thus, the apparent transparency of the content kernel can be explained

without assuming multidominance by the matrix, and be reduced to reconstruction effects associated with A'-movement of this constituent.

### 5.1.2 Reconstruction effects in *it*-clefts and Horn-amalgams

The reconstruction effects in restrictive relative clauses such as (10) are familiar by now:

- (10) a. The stories about himself<sub>*i*</sub> [that Bill<sub>*i*</sub> heard  $\_\$ ] were outrageous.  
 b. \*The stories about Bill<sub>*i*</sub> [that he<sub>*i*</sub> heard  $\_\$ ] were outrageous.

For expository reasons, I will briefly discuss a set of data that show that *it*-clefts display reconstruction. This expands on §4.3-§4.3.3. Let us start out with binding facts in *it*-clefts. The following example shows that a reflexive that is part of the cleft pivot, can be bound by an element in the cleft clause (that follows it):

- (11) [Dutch]  
 Ik vermoed dat het een schaduw van zichzelf<sub>*i*</sub> was die de kat<sub>*i*</sub>  $\_\$   
 I suppose that it a shadow of SE-self was REL the cat  
 najoeg.  
 chased  
 'I suppose it was a shadow of himself that the cat was chasing.'  
 (12) Het leek vooral zichzelf<sub>*i*</sub> te zijn die de professor<sub>*i*</sub>  $\_\$   
 it appeared especially SE-self to be REL the professor  
 ernstig tegensprak.  
 seriously against.spoke  
 'It appeared that it was especially himself who the professor contradicted.'

Similarly, pronouns in cleft pivots can be bound by a quantified constituent in the cleft clause:

- (13) I believe it was his<sub>*i*</sub> mistress [that every/no professor<sub>*i*</sub> wanted to kiss  $\_\$  in public].

In turn, cleft pivots give rise to condition B and C effects when they are coindexed with a phrase that they are c-commanded by in their base position. This is shown in (14) and (15):

- (14) \*I'm afraid it's him<sub>*i*</sub> [that the professor<sub>*i*</sub> cites  $\_\$  primarily].  
 (15) \*I'm afraid it's the professor<sub>*i*</sub> [that he<sub>*i*</sub> cites  $\_\$  primarily].

However, the ungrammaticality of (14) is not necessarily indicative of movement of the cleft pivot, as it can alternatively be explained as a condition C effect between the head in its surface position and the coindexed R-expression it c-commands in the relative clause.

Finally, idiom chunks of light idioms can be licensed in *it*-cleft configurations as well, similar to restrictive relative clauses. The example is from Reeve (2010:64):

- (16) It's careful track [that she's keeping  $\_$  of her expenses].

Thus, clefted pivots are accessible to c-command-based relations with the cleft clause, via their reconstruction site.

Recall now from §3.4.4, that Horn-amalgams disallow NPI content kernels, even if they are in a non-veridical context that normally licenses them. Interestingly, *it*-clefts similarly refuse NPIs as clefted constituents even if they seem to be licensed in their base position (this example is from Reeve 2010, his (72a)):

- (17) \*It's any bread [that I don't have  $\_$ ].

This is quite surprising given the observations above. Reeve (2010) takes this as evidence that the clefted constituent at some point c-commands into the cleft clause, and thereby violates the anti-c-command requirement on NPIs as put forward in Heycock and Kroch (2002). Roughly put, a NPI may not c-command its licensor, (see Heycock and Kroch 2002:155 and the data in §3.4.4). However, providing a setting with a c-commanding licensor that the clefted constituent does not c-command only slightly ameliorates the *it*-cleft (18). Given the contrast between (18) and a restrictive relative clause in which an NPI relative head is licensed by matrix negation (19), it seems that there is more to the ungrammaticality of (17) than the violation of the anti-c-command requirement:

- (18) ?\*It isn't any bread [that I want  $\_$ ].

- (19) I haven't met anyone [{who/that} I want to marry  $\_$ ] yet.

Alternatively, we can explain the impossibility of NPI cleft pivots by Hedberg's referentiality condition (see §4.3, (79)). This condition restricts cleft pivots to expressions of type *e*. Since NPIs are quantificational by definition (i.e. type  $\langle\langle e, t \rangle t\rangle$ ), (17)-(18) follow automatically from the condition that also rules out (20):

- (20) \*It is {every/most/two} girl(s) {who/that} I want to marry.

I will take the persistent impossibility of NPI clefted constituents as an important parallel between *it*-clefts and Horn-amalgams, and leave open the issue why this cannot be resolved via some type-shifting rule (as was suggested for AP cleft pivots using Partee's IOTA-operator).

Similarly to what I have argued in the previous section for Andrews-amalgams, the 'transparency' of the content kernel in Horn-amalgams can be reduced to classic reconstruction effects. This time, I illustrate this for variable binding and condition C effects, (21) and (22) are repeated from §3.4:

- (21) No professor<sub>i</sub> believed the gossip about [I think it was his<sub>i</sub> mistress].  
 (22) \*He<sub>i</sub> cites [I think it was the professor<sub>i</sub>] primarily.

These facts follow straightforwardly when we assume the IC to involve the ellipsis of a cleft clause that is structurally present. More specifically: the content kernel is a cleft pivot that moves out of that clause for relativization, and consequently gives rise to reconstruction effects.

- (23) No professor<sub>i</sub> believed the gossip about [I think it was [his<sub>i</sub> mistress] <[no professor<sub>i</sub> believed the gossip about his<sub>i</sub> mistress]>].

The desired binding relation between *no professor* and *his mistress* can be established via reconstruction in the ellipsis site in Horn-amalgams. That content kernels give rise to condition C effects can be explained in a similar fashion:

- (24) \*He<sub>i</sub> cites [I think it was the professor<sub>i</sub> <that he<sub>i</sub> cites the professor<sub>i</sub>>] primarily.

After all, the content kernel *the professor* is c-commanded by a coindexed pronoun (*he*) in its base position. The reflexive binding facts, the condition B effects and the licensing of idioms can thus all be reduced to reconstruction effects in *it*-clefts if we assume the complete cleft clause to be syntactically present in Horn-amalgams. In other words, they are not necessarily an argument for the multidominance approach as proposed by Van Riemsdijk (1998b, 2006b,c) and Guimarães (2004).

### 5.1.3 Island repair in Andrews-amalgams

Both reconstruction effects and the form-identity generalizations (Case and PPs, I discuss these in the context of amalgams below) in sluicing can be taken as evidence that the elided material is present at the level of syntax, and that the relevant constituent has moved out of the ellipsis site. The fact that sluicing configurations are known to be island *insensitive* is quite surprising in this regard, especially since other forms of ellipsis, such as VP-ellipsis and gapping are notably sensitive to island violations. I repeat the examples from §4.2:

- (25) They want to hire someone who speaks a Balkan language, but I don't remember which <\*they want to hire someone who speaks>.  
 (26) \*They want to hire someone who speaks a Balkan language, but I don't remember who they do <want to hire someone who speaks>.  
 (27) \*Bill wants to hire someone who speaks a Balkan language, and Bob <wants to hire someone who speaks> an Avar-Andic language.

In this section, I will demonstrate that amalgams are insensitive to islands in exactly the same way that sluicing configurations are, in agreement with the

findings in Guimarães (2004). I will take these data as another piece of evidence that amalgams involve sluicing, *pace* Guimarães (2004) who explains the island insensitivity in terms of ‘relativized islandhood’ and does not assume amalgams to involve ellipsis to begin with (see chapter 2, §2.3.3 of this thesis). However, that sluicing (in general) appears to be insensitive to island constraints, is not expected in the PF-deletion approach. After all, under such assumptions, the *wh*-phrase has A'-moved out of the ellipsis site, and island effects are expected to apply. How the opposition between (25) and (26)–(27), and the lack of island effects in amalgams can be accounted for is discussed extensively in §5.4.3.

For expository reasons, I will consistently compare Andrews-amalgams with both an ungrammatical counterpart sentence, i.e. a island-violating *wh*-question, and a similar example of sluicing. In §5.1.4 I show that this applies to Horn-amalgams as well. This is (similarly) surprising given the fact that *it*-cleft formation (like *wh*-movement and relativization) is sensitive to island constraints. The observation that sluicing ameliorates island-violations goes back to Ross (1969), and is discussed at length in Chung et al. (1995), Romero (1998), Lasnik (2001), Merchant (2001), Fox and Lasnik (2003) and Merchant (2008). The insensitivity is often approached in terms of ‘repair’, the title of this section anticipates on the explanation discussed in §5.4.3. The data discussed here are based on Merchant (2001, 2008), who in turn adopts a substantial part of the data from Chung et al. (1995).

Example (25) shows that sluicing ameliorates (or ‘repairs’) a relative clause island. The island effect is shown in (28), and that Andrews-amalgams are similarly insensitive to this island is shown in (29) (these examples are adapted from Merchant 2001:87–8):

- (28) \*I don’t remember [which language]<sub>i</sub> they want to hire someone who speaks t<sub>i</sub>.
- (29) They want to hire someone who speaks [you’ll never guess which language].

Similar patterns can be observed with adjunct clauses, which are otherwise known as strong islands for extraction (31):

- (30) a. Ben left the party after one of the professors insulted him, but he wouldn’t tell me which.  
b. Ben left the party after [you can imagine which professor] insulted him.
- (31) \*Ben wouldn’t tell me [which of the professors]<sub>i</sub> he left the party after t<sub>i</sub> insulted him.

The Coordinate Structure Constraint (Ross 1967) can be violated under sluicing and in Andrews-amalgams as well (my examples):

- (32) a. Bob kissed ten students and (also) a number of professors when he was drunk, but I don't know how many.  
 b. Bob kissed ten students and [you'll never guess how many professors] when he was drunk.
- (33) \*I don't know how many professors<sub>i</sub> Bob kissed ten students and t<sub>i</sub> when he was drunk.

Chung et al. (1995:276) further observe that sluicing can take place in the context of an embedded question, which would normally give rise to a *wh*-island effect (as is the case in (35)):

- (34) Sandy was trying to work out which students would be able to solve a certain problem, but she wouldn't tell us which one.
- (35) \*Sandy wouldn't tell us [which problem]<sub>i</sub> she was trying to work out which students would be able to solve t<sub>i</sub>.

And also in this context, Andrews-amalgams are possible:

- (36) Sandy was trying to work out which students would be able to solve [you can imagine what kind of problem].

Recall from the discussion in §3.2.3 that there is a particular linear restriction on amalgams: they may not occupy the first position of the sentence. Interestingly, this transfers to violations of sentential subject islands as well. That sluicing may take place in such a context is evident from (37) (Chung et al. 1995:276):

- (37) That certain countries would vote against the resolution has been widely reported, but I'm not sure which ones.
- (38) \*I'm not sure [which countries]<sub>i</sub> that t<sub>i</sub> would vote against the resolution has been widely reported.

Consider now the Andrews-amalgam in (39):

- (39) \*That [you can imagine which countries] would vote against the resolution has been widely reported.

The exceptional unacceptability of this amalgam can directly be related to the observation that amalgams may not occupy the sentence-initial position. However, it is difficult to provide evidence that the ungrammaticality of (39) is not due to a subject island. In §3.2.3, I used V2 and topicalization to show that there was a linear restriction on amalgams. However, these are both root clause phenomena and as such, they are of no use for the present purposes. However, recall that I also explained the alleviation of this restriction for Guimarães (2004)'s ECM data and non-finite complement clauses. And precisely these data can be used to show that amalgams are as insensitive with respect to the sentential subject island as sluicing is:



- (40) a. That Byrd wanted some countries to vote against the resolution has been widely reported, but I don't know which.  
 b. That Byrd wanted [you can imagine which countries] to vote against the resolution has been widely reported.
- (41) a. That the president arranged for some famous string quartet to play on his wedding was widely reported, but no one knew which.  
 b. That the president arranged for [you wouldn't believe which famous string quartet] to play on his wedding was widely reported.
- (42) \*You can imagine [which countries]<sub>i</sub> that Byrd wanted t<sub>i</sub> to vote against the resolution has been widely reported.
- (43) \*You wouldn't believe [which famous string quartet]<sub>i</sub> that the president arranged for t<sub>i</sub> to play on his wedding has been widely reported.

Likewise, the presumed extraction of the object of the sentential subject is also possible:

- (44) a. That Byrd would vote against certain resolutions has been widely reported, but I'm not sure which ones.  
 b. That Byrd would vote against [you can imagine which resolutions] has been widely reported.
- (45) \*You can imagine [which resolutions]<sub>i</sub> that Byrd would vote against t<sub>i</sub> has been widely reported.

Thus, these data do not only show that Andrews-amalgams are insensitive to islands comparable to sluicing, but also further corroborate the claim that the IC cannot appear in the sentence-initial position.

Guimarães (2004:75) shows that Andrews-amalgams are not sensitive to complex NP/DP islands, the examples are slightly adapted from his:

- (46) a. Susan dismissed the claim that her husband dated someone before they got married, but I don't know who.  
 b. Susan dismissed the claim that her husband dated [I can't remember who before they got married].
- (47) \*I can't remember [who]<sub>i</sub> Susan dismissed the claim that her husband dated t<sub>i</sub> before they got married.

All in all, the data suggest that amalgams show the same island-insensitivity that has been reported in the literature for regular sluicing. An exceptional case is the violation of the Left Branch Condition (henceforth the LBC, see also Ross 1967, Grosu 1974, Corver 1990):

- (48) **Left Branch Condition** [Ross (1967)]  
 No NP which is the leftmost constituent of a larger NP can be reordered out of this NP by a transformational rule.

This rule accounts for the well-known contrast in (49), which shows that a predicate modified by a degree phrase (the same holds for amount phrases and prenominal genitives such as *whose*) must be pied-piped along with the degree phrase in *wh*-movement:

- (49) a. \*How<sub>i</sub> is Bob t<sub>i</sub> tall?  
 b. [How tall]<sub>i</sub> is Bob t<sub>i</sub>?

Ross (1969) argues that sluicing cannot repair LBC violations, contrary to the islands described above:

- (50) \*I know that he must be proud of it, but I don't know how.

However, based on the seminal work on left branch extractions in Corver (1990), Merchant (2001) argues that the ungrammaticality of (49a) and the sluice in (50) is due to restrictions on head movement. That is, they are not island violations, but require head movement of Deg° into SpecCP, which is impossible for independent reasons (Merchant 2001:166, his (14)):

- (51) \*[Deg° How]<sub>i</sub> is he [DegP [Deg° t<sub>i</sub>] [AP proud of it]]?

This explains why *wh*-movement that questions degree (which is relevant here), requires movement of the entire phrase (i.e. pied-piping of the predicative adjective here), under regular *wh*-movement and accordingly under sluicing:

- (52) I don't know [DegP how proud]<sub>i</sub> he is t<sub>i</sub>.

This is particularly interesting in the context of attributive adjectives in sluicing and amalgams. Recall that I observed in §3.2 that contrary to Horn-amalgams, Andrews-amalgams can have attributive adjectival content kernels. I repeat the example, and for convenience also in the context of a complete sentence:

- (53) a. a [you can imagine how catastrophic] decision  
 b. Bea made a [you can imagine how catastrophic] decision.

As Corver (1990) observes, building on Ross (1967), attributive adjective phrases appear to be 'frozen'. That is, the extraction in (54) is not grammatical:

- (54) \*[How catastrophic]<sub>i</sub> did Bea make a t<sub>i</sub> decision?

And precisely this kind of LBC-related ungrammaticality can be alleviated in the context of sluicing, considering the grammaticality of (55):

- (55) Bea made a catastrophic decision, but I don't know how catastrophic.

In line with earlier proposals in Kennedy and Merchant (2000), and partially relying on suggestions in Corver (1990), Merchant (2001) proposes that DegP moves to a higher SpecDP (he uses FP, related to the presence of a focus head), and then into SpecCP:

- (56) ... I don't know [<sub>DegP</sub> how catastrophic]<sub>i</sub> ⟨Bea made [<sub>FP</sub> <sub>t<sub>i</sub></sub> F° [a <sub>t<sub>i</sub></sub> decision]]⟩.

Applying such a reasoning to Andrews-amalgams, we can extend the representation in (56) to (57):

- (57) Bea made a [you can imagine how catastrophic ⟨Bea made [<sub>FP</sub> F° <sub>t<sub>i</sub></sub> [a <sub>t<sub>i</sub></sub> decision]]⟩]decision.

This representation reveals an important aspect of the explanation of island-repair in sluicing I will adhere to later on: the traces are all contained in the ellipsis site (the sluiced IP in (56) and (57)). In §5.4.3 I relate this to the absence of island effects of amalgams in general. For now, I conclude that Andrews-amalgams patterns exactly with sluicing configurations in island contexts. Thus, the facts described in the above can be reduced to the well-known island insensitivity of regular sluicing.

#### 5.1.4 The unexpected island-insensitivity of Horn-amalgams

Although Guimarães (2004) does not discuss Horn-amalgams in much detail, he does observe that the island facts extend to this type as well. Recall that Tsubomoto and Whitman (2000) argue to the contrary for Horn-amalgams, but since their data are quite limited and aimed at a completely different point, I won't digress in a debate based on those. For reasons of consistency, the data below are construed on a par with those in the above section, but see Guimarães (2004:II.5) for similar data.

That *it*-clefts are sensitive to islands can be observed in (58):

- (58) \*I think it was [an Avar-Andic language]<sub>i</sub> that Bob wants to hire someone who speaks <sub>t<sub>i</sub></sub>.

That is, the clefted constituent cannot be part of a deeper relative clause. That the formation of *it*-clefts must obey island constraints is unsurprising in an analysis that treats clefts on a par with relativization. That is, the ungrammaticality in (58) is related to the contrast in (59):

- (59) a. I don't know [the Avar-Andic language]<sub>i</sub> that he speaks <sub>t<sub>i</sub></sub>.  
 b. \*I don't know [the Avar-Andic language]<sub>i</sub> that Bob wants to hire someone who speaks <sub>t<sub>i</sub></sub>.

Interestingly, the relative clause island seems to be alleviated in the context of Horn-amalgams. This is illustrated in (60):

- (60) Bob wants to hire someone who speaks [I think it was an Avar-Andic language].

A similar observation can be made regarding adjunct islands: the clefted constituent cannot move out of an adjunct clause (here a temporal adjunct), but

in the context of a Horn-amalgam, this does not give rise to ungrammaticality:

- (61) Bob left the party after Bea started to kiss [I think it was the professor].  
 (62) \*I think it was [the professor]<sub>i</sub> that Bob left the party after Bea started to kiss t<sub>i</sub>.

(64) shows that *it*-clefts may not violate the CSC. Again, Horn-amalgams do not appear to be sensitive to this island constraint:

- (63) Bob kissed ten students and [I think it was a professor] when he was drunk.  
 (64) \*I think it was [a professor]<sub>i</sub> that Bob kissed ten students and t<sub>i</sub> when he was drunk.

Also the observation that Andrews-amalgams, like regular sluicing configurations, are not sensitive to *wh*-islands can be extended to Horn-amalgams:

- (65) Sandy was trying to work out which students would be able to solve I think it was the twin prime conjecture.  
 (66) \*I think it was the twin prime conjecture that Sandy was trying to work out which students would be able to solve t<sub>i</sub>.

The sharp ungrammaticality of (67) shows that a cleft pivot cannot be relativized out of a sentential subject:

- (67) \*I think it's Byrd<sub>i</sub> who that t<sub>i</sub> would vote against certain resolutions has been widely reported.

The relativizer *who* introduces the cleft clause, and should facilitate the correct 'reading' of this example, as the complementizer *that* is here the complementizer that introduces the subject clause. Either way, this is completely impossible. However, that the Horn-amalgam in a similar context is also ruled out, must be related to the linear restriction observed in chapter 3 (§3.2.3, see also the discussion above), and not to island effects. Consider first the impossible Horn-amalgam in (68):

- (68) \*That [I think it's Byrd] would vote against certain resolutions has been widely reported.

The possibility of (69a) and (69b) (respectively the amalgamation of an ECM subject and the object of the sentential subject) further supports the idea that (68) is ungrammatical for different reasons than (67) is. Again, this contrasts with regular *it*-cleft formation in a similar environment:

- (69) a. That Byrd wanted [I think it was the entire Senate] to vote against certain resolutions has been widely reported.

- b. That Byrd wanted the entire Senate to vote against [I think it was the Murkowski resolution] has been widely reported.
- (70)
- a. \*I think it was [the entire Senate]<sub>i</sub> that that Byrd wanted  $t_i$  to vote against certain resolutions has been widely reported.
  - b. \*I think it was [the Murkowski resolution]<sub>i</sub> that that Byrd wanted the entire Senate to vote against  $t_i$  has been widely reported.

This holds for infinitival complement clauses as well, considering the contrast between (71) and (72):

- (71) That the president arranged for [I think it was the Kronos Quartet] to play at his wedding has been widely reported.
- (72) \*I think it was the Kronos Quartet that the president arranged for  $t_i$  to play on his wedding has been widely reported.

Finally, Guimarães (2004:75) notes that also Horn-amalgams are not sensitive to the complex NP/DP island:

- (73) Susan dismissed the claim that her husband dated [I guess it was Sarah] before they got married.
- (74) \*I guess it was Sarah that Susan dismissed the claim that her husband dated  $t_i$  before they got married.

Contrary to Andrews-amalgams, Horn-amalgams do not ameliorate LBC violations. That is, the Horn-amalgam (76) is as bad as the regular *it*-cleft in (75):

- (75) \*I think it is [tall]<sub>i</sub> that Bea is dating a  $t_i$  boy
- (76) \*Bea is dating an [I think it's tall] boy.

This is unsurprising given the referentiality condition put forward in Hedberg (1990) in particular (see (79) in §4.3 above): clefted predicates that do not constitute a LBC-violation are marginal as well. Thus, even if a Horn-amalgam would alleviate the island violation, the result is still ungrammatical because of the more general restriction on clefted adjectives that rules out (77):

- (77) \*It's tall that Bea's fiancé is.

In sum, Horn- and Andrews amalgams pattern alike when it comes to island restrictions, and their notable insensitivity to islands is a striking parallel with well-known sluicing configurations.

A couple of things should be pointed out before I proceed. Obviously, the idea that amalgams are island insensitive arises from the underlying assumption that they contain more material than is visible at first sight. Arguably, this is more compelling in the case of Andrews-amalgams, as the IC of Horn-amalgams could alternatively be approached as a simple (possibly specificational) copular

clause, as is tacitly assumed in Van Riemsdijk's multidominance analysis. Interestingly, the absence of island effects in the context of such a multidominance analysis has been approached from a different perspective in De Vries (2010a). He observes that the presumed externally remerged material (i.e. the content kernel) in amalgams and in other configurations displays non-local behavior. That is, the IC can be complex and/or contain an island for movement, but this does not affect the grammaticality of the amalgam. Consider (78) and (79), adopted from De Vries (2010a:137), his (15) and (16):

- (78) [Dutch]  
 Joop krijgt [ik vermoed dat ik je ervan moet overtuigen dat het  
 Joop gets I suspect that I you there.of must convince that it  
 een didgeridoo is] voor zijn verjaardag.  
 a didgeridoo is for his birthday  
 'Joop will get I presume I have to convince you that it's a didgeridoo  
 for his birthday.'
- (79) Joop kreeg [ik dacht dat er wel iemand zou zijn die  
 Joop got I thought that there indeed someone would be who  
 zou beweren dat het een didgeridoo was] – maar het is dus  
 would claim that it a didgeridoo was but it is thus  
 eigenlijk een midwinterhoorn.  
 really a midwinter.horn  
 'Joop got I figured there would have been someone who claimed that  
 it's a didgeridoo – but it is in fact a midwinter horn.'

The content kernel is contained in respectively a factive island and a complex NP/DP island in the IC in these examples.<sup>1</sup> These data were not part of the discussion above, because they do not yield possible island violations *within* the IC. Rather, they show that content kernels can appear inside an island

<sup>1</sup>Surprisingly, Tsubomoto and Whitman (2000) provide similar data to make an opposite claim: Horn-amalgams are argued to be sensitive to islands considering the reported marginality of the following examples (Tsubomoto and Whitman 2000:179, their (9c) and (9d)):

- (i) a. ?\*John is going to [NP e] I got angry because it was Chicago on Sunday.  
 b. ??John is going to [NP e] I believe the claim that it is Chicago on Sunday.

Unfortunately, there is an independent reason why at least (ia) is ruled out: the *it*-cleft in Horn-amalgams cannot be embedded in a factive predicate to begin with (I discuss this in detail in chapter 6). This is circumvented in (78), because the relevant factive island is in turn embedded in the non-factive predicate *vermoeden* ('suspect'). And indeed, (ia) improves with an additional embedding predicate:

- (ii) John is going to I suspect {I/Bill} got angry because it was Chicago on Sunday.

The reported marginality of (ib) is inconsistent with the acceptability of the Dutch counterpart in (79). Arguably, this is due to other factors, such as processing. This is an inevitable confound for the rating of such complex examples.

that is contained in the IC, and this island does not play a role in the matrix. This is consistent with the multidominance approach, but it is not evidence for such a theory. This said, the basic insight underlying De Vries (2010a) about the apparent non-local behavior of externally remerged constituents, is crucial for the details of my proposal that are discussed in chapter 7. Important (for now) is that nothing in our present assumptions about the IC rules out (78)-(79). They are just more complex examples as the A'-movement of the content kernels is into the SpecCP of a deeper embedded CP.

Finally, the absence of island effects in sluicing is particularly puzzling in the PF-approach adopted here, in which the remnant is assumed to move out of the ellipsis site. However, there is clear evidence that this constituent is indeed base-generated in the ellipsis site: this is where it obtains case, and where prepositions associated with it are possibly stranded. §5.2 is then devoted to what Merchant (2001) formulates as the 'form-identity' generalizations in sluicing. The first is based on the observation that sluicing requires strict case-matching, which can be extended quite easily to Andrews-amalgams. The second is perhaps the most challenged generalization in the literature on sluicing: the P-stranding generalization. I will address the island facts again in §5.4.3.

## 5.2 Amalgams and form-identity I: Case

### 5.2.1 The case matching generalization for amalgams

Recall from §4.2 that Merchant (2001) demonstrated that sluicing shows case-matching on the *wh*-phrase, which he generalizes as follows:

- (80) **Case-matching generalization** [Merchant (2001:89)]  
 The sluiced *wh*-phrase must bear the case that its correlate bears.

The traditional example is German and goes back to Ross (1969):

- (81) [German]  
 Er will jemandem schmeicheln, aber sie wissen nicht {\*wen/  
 he wants someone flatter but they know not who.ACC/  
 wem}.  
 who.DAT  
 'He wants to flatter someone, but they don't know who.'

The generalization holds cross-linguistically and is best explained when we assume that sluicing is the PF-deletion of the IP out of which the *wh*-phrase has moved: case is then assigned prior to movement. If it is the case that Andrews-amalgams involve sluicing similar to regular examples such as (81), we expect the Case-matching generalization to hold for these cases as well. However, in amalgams, the *wh*-phrase functions as the content kernel: there is no overt correlate. For that reason, I will reformulate the Case-matching generalization in terms of the locus of assignment:

(82) **Case-matching generalization for amalgams**

A *wh*-content kernel must bear the case that its selecting verb assigns.

That is, the content kernel should bear the case that is associated with the case-assigner in the presumed ellipsis site. It should be noted that the multidominance theory of amalgams yields exactly the same prediction: the relevant case-assigner is then in the matrix clause instead of in the ellipsis site.

## 5.2.2 Case matching in Andrews-amalgams

Let us start out with a German Andrews-amalgam (D. Hessler, p.c.):

- (83) [German]  
 Bea wollte [ich weiss nicht mehr {wem/ \*wer/ \*wen}]  
 Bea wanted I know not anymore who.DAT who.NOM who.ACC  
*schmeicheln*.  
 flatter  
 ‘Bea wanted to flatter I don’t know who.’

As is expected based on (82), the required form is dative, which can only have been assigned by *schmeicheln*. These facts are consistent with the view that the content kernel in these Andrews-amalgams is assigned prior to *wh*-movement out of the IP that is the target of deletion at PF, in which it is base-generated as an argument of *schmeicheln* (‘flatter’).

This pattern can also be observed in Slavic languages, which generally have a much richer case paradigm than Germanic languages. I will use Czech and Russian data to illustrate that the Case-matching generalization holds in Andrews-amalgams. (84) is an example of regular sluicing in Czech (R. Šimík and J. Dotlačil, p.c.):

- (84)  
 Včera Anna někomu telefonovala. Vsadím se, že  
 yesterday Anna somebody:DAT phoned bet REFL that  
 nikdy neuhodneš {komu/ \*kdo/ \*koho}.  
 never:NCI NEG:guess:2SG who:DAT who:NOM who:ACC  
 ‘Yesterday, Anna phoned somebody. I bet you’ll never guess who.’

This is in line with Merchant’s Case-matching generalization: the *wh*-phrase is dative, which can only come from the verb *telefonovala*, the other potential case-assigner *uhodnout* (‘guess’) is an accusative assigning verb. The amalgams in (85)-(86) provide evidence for the Case-matching generalization for amalgams (82):



- (85) Včera Anna telefonovala [vsadím se, že nikdy neuhodneš  
 yesterday Anna phoned bet:1SG REFL that never guess:2SG  
 {komu/ \*kdo/ \*koho}.  
 who:DAT who:NOM who:ACC  
 ‘Yesterday Anna phoned I bet you’ll never guess who.’

The only case that can appear on the *wh*-DP is dative, the accusative case associated with *uhodnout* is excluded here. The verb *volala* (‘call’) assigns dative if it means ‘phone’ and accusative if it means ‘send for (someone)’. If an accusative *wh*-word is used in the amalgam, as below, it disambiguates the reading of *volat* in favor of the latter meaning. This further proves that the case cannot come from the verb *uhodnout* (‘guess’):

- (86) Včera Anna volala [vsadím se, že nikdy neuhodneš  
 yesterday Anna called (bet:1SG REFL that) never guess:2SG  
 {komu/ koho}].  
 who:DAT who:ACC  
 ‘Yesterday Anna phoned/called (I bet) you’ll never guess who.’

Based on these facts, we can conclude that Czech sluicing and Andrews-amalgams pattern alike, and both are consistent with the Case-matching generalization.

Unsurprisingly, this extends to Russian sluices and Andrews-amalgams as well. The case-marking on the *wh*-phrase is associated with its selecting verb in the ellipsis site, and not the embedding predicate that hosts the sluice (the data are from A. Arylova and E. Markovskaya, p.c.). Consider first the case patterns in a regular sluicing configuration:

- (87) Igor vosxišča-jet-sja kem-to, no ja ne [Russian]  
 Igor:NOM admire:PRS-3SG-REFL somebody.INST but I.NOM NEG  
 zna-ju {kem/ \*kogo}.  
 know:PRS-1SG who.INST who.ACC  
 ‘Igor admires somebody but I don’t know who.’

The predicate that embeds the sluice *znat’* (‘to know’) assigns accusative, but the *wh*-phrase gets instrumental case, which is associated with *vosxiščat’sja* (‘to admire’). The same can be observed in Andrews-amalgams:

- (88) Igor vosxišča-je-sja (ty) mož-eš  
 Igor.NOM admire:PRS-3SG-REFL you.NOM can:PRS-2SG  
 dogada-t’-sja {kem/ \*kogo}.  
 guess-INF-REFL who.INST who.ACC  
 ‘Igor admires you can guess who.’
- (89) Igor pozvoni-l predstav’ {komu/ \*kogo}.  
 Igor.NOM call-PST:M.SG imagine.IMPR:2SG who.DAT who.ACC  
 ‘Igor called imagine who.’

The verb *pozvonit* ‘(to have called)’ assigns dative case, whereas both *ugada-t* ‘(to guess)’ and *predstavi-t* ‘(to imagine)’ require an accusative object, which is impossible in both examples.

Finally, the following Greek examples (Merchant 2001:43, his (16a) and A. Giannakidou, p.c.) show that case matching is strict in regular sluicing:

- (90) [Greek]  
 Kapjos irthe, alle dhe ksero {pjos/ \*pjon}.  
 someone came but not know.1SG who.NOM who.ACC  
 ‘Someone came, but I don’t know who.’

Here, the *wh*-DP *pjos* is nominative, which is associated with its function as a subject. Consider now the following amalgam (A. Giannakidou, p.c.):

- (91) I Maria filise [den tha pistepsis {\*pjos/ pjon}].  
 the Maria kissed not FUT believe.2SG who.NOM who.ACC  
 ‘Maria kissed you wouldn’t believe who.’

Here, the *wh*-DP obtains accusative case, associated with *filise* ‘(kiss)’. I return to the relevance of this particular example in §5.4.2.

Clearly, these facts corroborate the view that case is assigned in the VP that is part of the ellipsis site in sluicing in both the regular case and Andrews-amalgams. However, they are not *evidence* for the claim that amalgams involve ellipsis with a *wh*-DP remnant rather than multidominance of that *wh*-DP: the observation that amalgams involve (strict) case matching is consistent with both views. I evaluate the facts in relation to the analyses that have been proposed for amalgams below.

### 5.2.3 Case in *it*-clefts and Horn-amalgams

The assumption that Horn-amalgams involve ellipsis of the cleft clause gives rise to a different expectation. That is, we expect case on the content kernel to be the case that is normally assigned on cleft pivots in a given language. Here, the ellipsis approach diverges from the multidominance approach to amalgams, as in the latter, the content kernel is an argument of the matrix verb as well as the copula in the IC, and therefore strict case-matching is expected. More specifically: in the assumption that the content kernel is syntactically part of both matrix and IC, we expect that Horn-amalgams are ruled out if the matrix and the IC do not assign the same case to the content kernel. After all, such case-matching effects are argued to be evidence for the multidominance approach to FRs in Van Riemsdijk (2000a, 2006a,b). To explore case-marking in Horn-amalgams, I will use German and Greek data.

To start out with the first, German cleft pivots are nominative by default (D. Hessler, p.c.):

- (92) [German]  
 Ich glaube daß es {dieser Junge/ \*diesen Jungen} war,  
 I believe that it this.NOM boy.NOM this.ACC boy.ACC rel.NOM  
 {\*der/ den} Bea schlug.  
 rel.ACC Bea hit  
 ‘I believe it was this boy that Bea hit.’

The clefted constituent *dieser Junge* (‘this boy’) is obligatorily nominative. The accusative case that is assigned by the verb *schlug* (‘hit’) is visible on the morphology of the relative pronoun. Note that this case pattern is additional evidence for the claim made in §4.3.2 that the cleft clause in (Germanic) *it*-clefts should be analysed as a restrictive relative clause:

- (93) {der Junge/ \*den Jungen} {\*der/ den} Bea schlug  
 the.NOM boy.NOM the.ACC boy.ACC REL.NOM REL.ACC Bea hit  
 ‘the boy that Bea hit’

This provides us with the prediction that the clefted constituent in German Horn-amalgams should behave similarly. And this prediction is borne out, considering (94):

- (94) Bea schlug, [ich glaube daß es {dieser Junge/ \*diesen Jungen}]  
 Bea hit I believe that it this.NOM boy.NOM this.ACC boy.ACC  
 war.  
 was  
 ‘Bea hit I believe it was this boy.’

A similar observation can be made for Greek *it*-clefts and Horn-amalgams. In Greek, cleft pivots are nominative (default case). However, if they are object, they can also be accusative. The data are from A. Giannakidou, p.c.:

- (95) [Greek]  
 Ine {o Janis/ ton Jani} pu thelo na  
 is the.NOM John.NOM the.ACC John.ACC that want.1SG to  
 pandrefto.  
 marry.1SG  
 ‘It’s John that I want to marry.’

Interestingly, only the default nominative case is possible in a Horn-amalgam:

- (96) O Janis skotose, [pistevo itan {o kathijitis/ \*ton  
 the John killed believe.1SG was the.NOM professor.NOM the.ACC  
 kathijiti}].  
 professor.ACC  
 ‘John killed I believe it was the professor.’

Crucially, the nominative case of the content kernel can *only* come from the copula. As such, the case facts in German and Greek Horn-amalgams constitute an important piece of evidence in favor of the ellipsis approach to amalgams that I defend in this chapter: the case of the content kernel corresponds to what is normally expected in *it*-clefts. They are in opposition to what the multidominance approach to amalgams predicts: if the content kernel is remerged in the matrix, we would expect the accusative case associated with the matrix verb to rule out (94) and to be possible in (75).

We can conclude that Andrews-amalgams pattern with regular sluicing with respect to the Case-matching generalization: the *wh*-content kernel obtains case from its selecting verb and not from the embedding predicate. This is consistent with the view that the *wh*-content kernel is base-generated in the VP that is part of the ellipsis site in this type of amalgam. By contrast, the content kernel of Horn-amalgams obtains default case, which is associated with the copula. This is expected under the assumption that the cleft clause is a relative clause.

### 5.3 Amalgams and form-identity II: P-stranding

#### 5.3.1 Andrews-amalgams and the P-stranding generalization

A key argument in favor of the PF-deletion approach to sluicing as defended in Merchant (2001) relates to the presence or absence of a preposition in the sluice in case of a PP *wh*-phrase. It is observed that in English, a language which allows for P-stranding, the preposition need not be realized in the sluice. By contrast, languages such as Czech, in which the PP is obligatorily pied-piped in the case of *wh*-movement, the preposition cannot be left out from the sluice. Merchant (2001) generalizes this as the P-stranding generalization, which I repeat for convenience:

- (97) **P-stranding generalization** [Merchant (2001:107)]  
 A language *L* will allow preposition-stranding under sluicing iff *L* allows preposition-stranding under regular *wh*-movement.

Concretely put, a preposition that is stranded in the IP, is part of the ellipsis site in sluicing. This generalization then captures the contrast between English and Czech in (98) and (99), adapted from (16) and (17) in §4.2:

- (98) a. ✓ Peter was talking with someone, but I don't know who ⟨Peter was talking with⟩.  
 b. Peter was talking with someone, but I don't know with who ⟨Peter was talking⟩.

- (99) [Czech]
- a. \*Anna mluliva s někým, ale nevím kým ⟨mluvila Anna  
Anna spoke with someone but not.I.know who spoke Anna  
s⟩.  
with
- b. Anna mluliva s někým, ale nevím s kým ⟨mluvila  
Anna spoke with someone but not.I.know with who spoke  
Anna⟩.  
Anna  
'Anna spoke with someone, but I don't know who.'

It should be stressed that P-stranding is *optional*: in languages that allow for P-stranding, the preposition may also be pied-piped. Abstracting away from these specific languages, we can distinguish a P-stranding and a pied-piping pattern in sluicing constructions:

- (100) **Pied-piping pattern in sluicing**  
[CoP [CP<sub>1</sub> ... [PP [P DP]] Co [CP<sub>2</sub> ... [PP P *wh*-DP]<sub>i</sub> ⟨[IP ... t<sub>i</sub>]]]]]
- (101) **P-stranding pattern in sluicing**  
[CoP [CP<sub>1</sub> ... [PP [P DP]] Co [CP<sub>2</sub> ... [*wh*-DP]<sub>i</sub> ⟨[IP ... [PP P t<sub>i</sub>]]]]]]]

Turning to amalgams, recall from §3.2 that the distribution of the IC corresponds to the category of the content kernel (Grosu's generalization). In Andrews-amalgams, content kernels are not restricted to DPs. Although Grosu's generalization is purely descriptive, (102) is consistent with it:

- (102) \*Bob was dancing with [you'll never guess with who].

In this case, an IC with a PP content kernel appears in the complement position of a preposition, i.e. a position in which a PP cannot occur. Taking this further, we expect either order in (103) to be possible:

- (103) a. ✓Bob was dancing with [you'll never guess [DP who]].  
b. ??Bob was dancing [you'll never guess [PP with who]].

However, the reported marginality of (103b) (already discussed in §3.2 shows that this is not the case: the order with the DP content kernel and the P in the matrix clause is preferred over the case with the PP content kernel in English. Worse still, Portuguese amalgams disallow the order that is preferred in English, and only permit PP content kernels:

- (104) [Portuguese]
- a. \*João convidou 300 pessoas pra [você pode imaginar que tipo  
João invited 300 persons to you can imagine what kind  
de festa].  
of party

- b. João convidou 300 pessoas [você pode imaginar pra que tipo  
 João invited 300 persons you can imagine to what kind  
 de festa].  
 of party  
 ‘João invited 300 people to you can imagine what kind of party.’

In other words, in the context of the generalization that the IC is distributed in accordance with the category of its content kernel, this apparent cross-linguistic variation requires further scrutiny. I will argue in the remainder of this section that these facts can be captured by the P-stranding generalization.

As Guimarães (2004) observes, Portuguese does not allow for P-stranding in *wh*-questions:

- (105) a. \*[O quê]<sub>i</sub> você está falando sobre t<sub>i</sub>?  
           what you are talking about  
       b. [Sobre o quê]<sub>i</sub> você está falando t<sub>i</sub>?  
           about what you are talking  
           ‘About what are you talking?’

Under the assumption that the IC has undergone sluicing, we can at least explain why the IC in the Portuguese amalgam includes the preposition: this preposition was obligatorily pied-piped along with the *wh*-DP that moved out of the ellipsis site (IP). I generalize this as the pied-piping pattern:

- (106) **Pied-piping pattern in Andrews-amalgams**  
 [MC ... [IC ... [PP P *wh*-phrase]<sub>i</sub> <[IP ... t<sub>i</sub>]]]]

By contrast, in the P-stranding pattern the preposition is stranded in the ellipsis site, and hence they are not present in the sluiced IC:

- (107) **P-stranding pattern in Andrews-amalgams**  
 [MC ... [PP P [IC ... [*wh*-phrase]<sub>i</sub> <[IP ... [PP P t<sub>i</sub>]]]]]]

The respective patterns that arise from pied-piping and P-stranding can then be explained in terms of recoverability of elided material. That is, in case the preposition is stranded, it is part of the ellipsis site. Ellipsis of P can only be licensed if there is an antecedent P. This immediately explains why examples in which the preposition is absent in *both* matrix and IC are completely impossible:

- (108) \*Bob was dancing [you’ll never guess who <Bob was dancing *with*>].

In this case, the preposition is stranded in the ellipsis site, but it does not have an antecedent to license its ellipsis. In turn, languages that cannot strand prepositions under movement, will have PP content kernels because the preposition is pied-piped along with the moved *wh*-phrase.

Finally, it should be noted that these generalizations rely on the assumption

that the relevant Andrews-amalgams involve regular sluicing, and not sprouting. Recall from §4.2 that due to the inherent absence of the indefinite correlate of the *wh*-XP, Andrews-amalgams are *prima facie* reminiscent of a variety of sluicing known as sprouting. In this form, optional arguments of the verb can be absent in the antecedent IP, but present in the sluice:

- (109) a. Bea served the customers, but I don't know what ⟨Bea served the customers⟩.  
 b. Bea served the customers [you'll never guess what ⟨Bea served the customers⟩].

Since the examples that are relevant for our present purposes will inevitably involve such optional arguments, the claim that a preposition in the ellipsis site requires licensing by an overt preposition in the antecedent, must be underpinned empirically. As it turns out, we can easily show that the relevant Andrews-amalgams are *not* instances of sprouting, as P-stranding is disallowed in these cases (see in particular Chung et al. 1995, Chung 2005):

- (110) a. Bob was dancing, but I don't know [<sub>PP</sub> with who]<sub>i</sub> ⟨Bob was dancing t<sub>i</sub>⟩.  
 b. \*Bob was dancing, but I don't know [<sub>DP</sub> who]<sub>i</sub> ⟨ Bob was dancing [<sub>PP</sub> with t<sub>i</sub>]⟩.

Moreover, recall that sprouting is generally more restricted than sluicing: they are sensitive to islands and limited to particular verbs. Since amalgams do not display with such restrictions (in particular not the island sensitivity), it seems more plausible that they involve regular sluicing and not sprouting.

I first discuss this generalization for Andrews-amalgams, and then how it can be extended to Horn-amalgams. Although the patterns appear to be quite consistent at first, it will turn out that especially the Romance languages (which are pied-piping) seem to allow for the P-stranding pattern in amalgams. I will argue that in the majority of the cases, this can be related to a more general observation that these languages allow for P-stranding under sluicing. This is in fact a recurring issue in the more recent literature on sluicing, and topic to the last part of this section.

### 5.3.2 Patterns with PPs in Andrews-amalgams

We expect the pied-piping pattern to hold for languages in which P-stranding is forbidden under *wh*-movement, which in fact applies to the vast majority of languages (see Merchant 2001 for discussion). I start out by the languages that are strictly pied-piping: Czech, Russian (Slavic languages) and French, Italian and Spanish in addition to the Romance data illustrated in Guimarães (2004).

#### Patterns with PPs in Andrews-amalgams in pied-piping languages

The pied-piping pattern as illustrated above can clearly be found in Czech

Andrews-amalgams (J. Dotlačil and R. Šimík, p.c.):

- (111) [Czech]
- a. Včera Anna mluvila [nikdy neuhodneš s kým].  
yesterday Anna spoke never guess:2SG with who:INSTR  
'Yesterday Anna spoke with you'll never guess who.'
  - b. \*Včera Anna mluvila s [nikdy neuhodneš kým].  
yesterday Anna spoke with never guess:2SG who:INSTR

Given the impossibility of stranding the preposition under sluicing in a regular context (and in *wh*-movement constructions in general) in this language, the contrast in (111) is not surprising:

- (112) Anna mluvila s někým, ale nevím \*(s) kým.  
Anna spoke with someone but not.know:1SG with who  
'Anna spoke with someone, but I don't know who.'

Russian Andrews-amalgams (A. Arylova and E. Markovskaya, p.c.) show the same pattern as Czech:

- (113) [Russian]
- a. Igor poexal, [ty znaeš v kakoi magazin za knigami].  
Igor went you know in which:ACC store for books  
'Igor went to you know which store for books.'
  - b. \*Igor poexal v, [ty znaeš kakoi magazin za knigami].  
Igor went to you know which store for books.

And also this fits in with Merchant's observation about Russian sluicing (Merchant 2001:96):

- (114) Anja govorila s kem-to, no ne znaju \*(s) kem.  
Anja spoke with someone but not know with who  
'Anja spoke with someone, but I don't know who.'

These facts thus neatly fit the picture laid out in the above: languages that obligatorily pied-pipe prepositions in *wh*-movement cannot strand the preposition under sluicing. The preposition in these languages is then moved along with the sluiced *wh*-phrase and consequently shows up inside the IC in Andrews-amalgams.

By contrast, the Romance data show more variation with respect to judgments of amalgams with a PP content kernel. First, Italian Andrews-amalgams with PP content kernels allow for the order that corresponds to the P-stranding pattern (data from S. Versace, G. Fiorin, D. Delfitto and C. Melloni, p.c.):



- (115) [Italian]
- a. ?Maria ha invitato Giuseppe a [non puoi immaginare che  
 Maria has invited Giuseppe to not can imagine what  
 tipo di festa].  
 kind of party
  - b. Maria ha invitato Giuseppe [non puoi immaginare a che  
 Maria has invited Giuseppe not can imagine to what  
 tipo di festa].  
 kind of party  
 ‘Maria invited Giuseppe to you can’t imagine what kind of party.’

People generally agreed that both options were allowed, although some slightly preferred the (expected) pied-piping pattern. This is unexpected given the fact that Italian does not allow stranding under *wh*-movement:

- (116) \*Tu puoi immaginare che tipo di festa Giuseppe abbia  
 you can imagine what kind of party Giuseppe has:SUBJ  
 invitato Maria a.  
 invited Maria to  
*int.* ‘You can imagine what kind of party Giuseppe invited Maria to.’

However, people that allowed for the P-stranding pattern in the amalgam, also allowed for stranding under sluicing (these data are from C. Melloni, p.c.):

- (117) Giuseppe ha invitato Maria a un qualche tipo di festa. Tu puoi  
 Giuseppe has invited Maria to some kind of party you can  
 immaginare (a) quale tipo.  
 imagine to what kind  
 ‘Giuseppe invited Maria to some kind of party. You can imagine (to)  
 what kind.’

That P-stranding seems to be allowed under sluicing in languages that are strictly pied-piping under *wh*-movement has been observed more generally in the literature, starting with observations in De A. Almeida and Yoshida (2007) for Brazilian Portuguese. The examples are from De A. Almeida and Yoshida (2007:350, their (5) and (6), slightly adapted) based on the fact that the preposition is optionally left out in the sluice in (119):

- (118) [Brazilian Portuguese]
- a. Com quem<sub>i</sub> que a Maria dançou t<sub>i</sub>?  
 with who that the Maria danced  
 ‘With whom did Maria dance?’
  - b. \*Quem<sub>i</sub> que a Maria dançou com t<sub>i</sub>?  
 who that the Maria danced with

- (119) A Maria dançou com alguém, mas eu não lembro (com)  
 the Maria danced with someone, but I don't remember with  
 quem.  
 who  
 'Maria danced with someone, but I don't remember (with) who.'

How this is reflected in Brazilian Portuguese Andrews-amalgams is in fact discussed in Guimarães (2004:136, his (72)):

- (120) a. Bob deu dinheiro pra [eu não sei quem].  
 Bob gave money to I not know who  
 'Bob gave money to I don't know who.'  
 b. Bob deu dinheiro [eu não sei pra quem].  
 Bob gave money I not know to who  
 'Bob gave money to I don't know who.'

Both options were reported to be acceptable (R. Nonato, p.c.). This is expected considering the sluicing facts in this language (119). However, Guimarães (2004:136) indicates that the order in (120a) is impossible. Possibly, there is some speaker variation in this respect. This is also the case for Italian, and also P-stranding under sluicing in Greek, which I discuss below, has been reported to be subject to a similar speaker variation.

Rodrigues et al. (2009) show that Spanish belongs to the set of languages that appear to allow for P-stranding under sluicing, as is illustrated by the contrast between (121) and (122). The Spanish examples (121) are theirs, (122)-(123) are from L. Vicente (p.c.):

- (121) [Spanish]  
 a. ¿Con qué chica ha bailado Juan?  
 with what girl has danced Juan  
 'With which girl did Juan dance?'  
 b. \*¿Qué chica ha bailado Juan con?  
 what girl has danced Juan with
- (122) Juan ha bailado con una chica, pero no sé (con) qual.  
 Juan has danced with a girl, but I not know with which  
 'Juan danced with a girl, but I don't know which.'

In Spanish Andrews-amalgams with a PP content kernel, no contrast was reported between the respective possibilities:

- (123) a. Juan estaba bailando con [no te vas a cree  
 Juan was dancing with not CL.DAT.you you.go to believe  
 quién].  
 who  
 'Juan was dancing with you wouldn't believe who.'

- b. Juan estaba bailando [no te                      vas    a creer    con  
 Juan was    dancing    not CL.DAT.you you.go to believe with  
 quién].  
 who  
 ‘Juan was dancing with you wouldn’t believe who.’

In the context of these Romance deviations of the expected pattern, Romanian is an interesting case. Grosu (2006, 2008) discusses some Andrews-amalgams. He observes that the Romanian *datorită* (lit. ‘thanks to’) can appear before the IC (the example is from Grosu 2006, his (5)):

- (124) [Romanian]  
 Ion a reușit datorită [știi tu cui] la  
 Ion has succeeded thanks-to know.2.SG you.SG who.DAT at  
 examenul de ieri.  
 exam-the of yesterday  
 ‘Ion succeeded thanks to you know who at yesterday’s examination.’

This is not expected given the fact that Romanian does not allow for P-stranding under movement, and it is in particular surprising given the fact that it disallows stranding under sluicing as well:

- (125) Ion a reușit datorită cuiva, dar n-am  
 Ion has succeeded thanks-to someone.DAT but not-have.1  
 să-ti                      spun ?\*(datorită) cui.  
 SUBJ.PRT.-you.SG.DAT tell thanks-to who.DAT  
 ‘Ion succeeded thanks to someone, but I won’t tell you who.’

However, A. Grosu (p.c.) reports that the alternative order, i.e. the order associated with the pied-piping pattern is possible as well, although this possibly involves another intonation pattern:

- (126) Ion a reușit [știi tu datorită cui] la examenul  
 Ion has succeeded know.2SG you.SG thanks-to who.DAT at exam-the  
 de ieri.  
 of yesterday  
 ‘Ion succeeded thanks to you know who at yesterday’s examination.’

Interestingly, in examples that do not involve the particular combination of *știi-tu-cine* (‘you-know-who’), there is a preference for the pied-piping pattern, as expected:

- (127) a. ?Ion a plecat cu [n-ai să ghicești niciodată cine] la Paris.  
 Ion has left with you will guess never who to Paris  
 b. ✓ Ion a plecat [n-ai să ghicești niciodată cu cine] la Paris  
 Ion has left you will guess never with who to Paris  
 ‘Ion went to Paris with you’ll never guess who.’

In chapter 6, I will argue that combinations such as *you-know-who*, which look a lot like Andrews-amalgams, have grammaticized and do not function as true amalgams in that they do not involve a full-fledged clause in the IC. This could at least explain the facts in (124)-(126).

I close this section with some examples from Greek, again based on Grosu's work on amalgams. Grosu (2008:28, his (75)) notes that Greek allows for the P-stranding pattern in Andrews-amalgams:

- (128) [Greek]  
 O Giannis pige me [dhen ksero pjon].  
 the Giannis went with not know.I who.ACC  
 'Giannis went with I don't know who.'

As was observed above for Romance languages, the pied-piping pattern is also allowed (G. Spathas and A. Giannakidou, p.c.):

- (129) O Giannis pige [dhen ksero me pjon].  
 the Giannis went not know.I with who.ACC  
 'Giannis went with I don't know who.'

However, (128) seems to be in opposition with the observation in Merchant (2001) that Greek does not allow for stranding under sluicing. Apparently there is more speaker-variation, as examples such as (130) (J. Merchant and A. Giannakidou, p.c.) are in fact reported to be acceptable:

- (130) Xoreve o Giannis me ena koritsi: mandepse (me) pjo!  
 danced the Giannis with a girl guess with which  
 'Giannis danced with a girl: guess which!'

Whether the kinds of sluicing environments in which stranding is acceptable are more limited in Greek and how this relates to amalgams is an issue I will leave open. What is important for the present purposes is that the cases that deviate from the predicted patterns in the above, seem to be tightly connected to variation in P-stranding under sluicing *in general*. Thus, the fact that pied-piping languages allow for the P-stranding pattern in amalgams is not to be seen as counterevidence to the claim that amalgams involve sluicing, but rather as a more general problem for P-stranding generalization. Although this thesis does not aim at a solution for this issue, I will briefly discuss some suggestions that have been done in the recent literature below.

#### **Patterns with PPs in Andrews-amalgams in P-stranding languages: English and Frisian**

Languages in which P-stranding under *wh*-movement is well-attested are English, Frisian, Dutch (although limited to R-pronouns) and the Scandinavian languages (Van Riemsdijk 1978, Hornstein and Weinberg 1981). I will focus on English and Frisian in particular in relation to amalgams, and discuss some

intriguing Dutch facts at the end of this part.<sup>2</sup> Although I take English and Frisian as *bona fide* P-stranding languages, two things should be taken into account. First, the fact that they allow for P-stranding does not make pied-piping in similar configurations completely unacceptable. In regular sluicing in English, the stranding of the preposition is optional (albeit preferred). Second, as was pointed out by E. Hoekstra (p.c.), the vast majority of speakers of Frisian is bilingual, the second native language being Dutch. Although Dutch allows for P-stranding, it is limited to so-called R-pronouns that I will discuss below. This possibly leads to interference that is not related to the construction under discussion.

To start out with English, the different possibilities then correspond to the following underlying structures of the ellipsis site assuming the PF-deletion approach:

- (131) a. Bob danced with someone, but I don't know [with who]<sub>i</sub> ⟨Bob talked *t<sub>i</sub>*⟩.  
 b. ✓Bob talked to someone, but I don't know who<sub>i</sub> ⟨Bob talked to *t<sub>i</sub>*⟩.

In the above the pattern that corresponds to pied-piping of the preposition in amalgams was stated to be ungrammatical. However, speakers who are more accepting to pied-piping in *wh*-movement and sluicing configurations, also seem to be more compliant for the pied-piping pattern in amalgams. However, this is still more marked than the P-stranding pattern:

- (132) a. ??Bob was dancing [you'll never guess with who].  
 b. ✓Bob was dancing with [you'll never guess who].

Recall that English amalgams also allow for inversion of *wh*-word and preposition, a variant of sluicing known as 'swiping'. For this order, the pied-piping of the preposition is necessary, so it cannot be generally ruled out (for discussion, see Merchant 2002, van Craenenbroeck 2010b):

- (133) Bob was dancing [you'll never guess who with].

As was already suggested above, the preference for the order in (132b) is related to the preference for P-stranding under *wh*-movement in English.

With respect to Frisian, Merchant (2001:93) observes that prepositions can be stranded under sluicing:

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<sup>2</sup>It should be noted that the status of Frisian as a P-stranding language is contested in J. Hoekstra (1995), based on the observation that not all Frisian prepositions can be stranded. This is why the discussion below involves more than a single example. For discussion, see also Abels (2003).

- (134) [Frisian]  
 Piet hat mei ien sprutsen, mar ik wyt net (mei) wa.  
 Piet has with someone talked but I know not with who  
 ‘Piet talked with someone, but I don’t know (with) who.’

The Frisian data that I discuss below are from E. Hoekstra and O. de Vries. The following data show that Frisian allows for P-stranding under movement, but that pied-piping the preposition is possible as well:

- (135) a. Kinst dy wol yntinke oer hokker boek as Bea in  
 you.can REFL AFF imagine about which book COMP Bea a  
 krityk skreaun hat.  
 critique written has  
 ‘You can imagine about which book Bea wrote a critique.’  
 b. Kist dy wol yntinke hokke boek as Bea in krityk  
 you.can REFL AFF imagine which book COMP Bea a critique  
 oer skreaun hat.  
 about written has  
 ‘You can imagine which book Bea wrote a critique about.’

This also holds for similar examples with other prepositions:

- (136) a. Dû riedst noait mei hoefolle famkes oft Bob wol net  
 you guess never with how.many girls COMP Bob AFF NEG  
 dûnse hat.  
 danced has  
 ‘You’ll never guess with how many girls Bob danced.’  
 b. Dû riedst noait hoefolle famkes oft Bob wol net mei  
 you guess never how.many girls COMP Bob AFF NEG with  
 dûnse hat.  
 danced had  
 ‘You’ll never guess how many girls Bob has danced with.’

Interestingly, although both orders are available, the one that corresponds to pied-piping was reported to be (slightly) more marked than the P-stranding variant in Andrews-amalgams:

- (137) a. ??Bea hat kin-st dy wol yntinke over hok boek in  
 Bea has can-2SG REFL AFF imagine about which book a  
 krityk skreaun.  
 critique written  
 ‘Bea wrote a critique you can imagine about which book.’

- b. Bea hat over kin-st dy wol yntinke hok boek in  
 Bea has about can-2SG REFL AFF imagine which book a  
 kritical skreaun.  
 critique written  
 ‘Bea wrote a critique about you can imagine which book.’
- (138) a. ?Bob hat ried-st noait mei hoefolle famkes dûnse.  
 Bob has guess-2SG never with how.many girls danced  
 ‘Bob danced you’ll never guess with how.many girls.’
- b. Bob hat mei ried-st noait hoefolle famkes dûnse.  
 Bob has with guess-2SG never how.many girls danced  
 ‘Bob danced with you’ll never guess how many girls.’

Based on the patterns in English and these Frisian data, we can conclude that in languages that allow for P-stranding (in *wh*-movement and sluicing contexts), the P-stranding pattern in amalgams is preferred, but the pied-piping pattern is available as well. In relation to the P-stranding generalization for sluicing, it can be concluded that Andrews-amalgams behave according to the respective P-stranding and pied-piping patterns if the corresponding regular sluices do.

### The mysterious obligatoriness of pied-piping in Dutch R-pronouns under ellipsis

The Dutch examples with PPs in sluicing and Andrews-amalgams form perhaps the most intriguing pattern. I devote this last section to an observation made in Merchant (2001:95, fn. 5), namely that bare R-pronouns cannot be remnants of sluicing.

Dutch, German and Swiss German are known to have P-stranding, provided that the preposition is preceded by a special kind of pronoun, known as ‘R-pronouns.’ The availability of P-stranding with R-pronouns is much more limited in German. For extensive discussion of P-stranding and various proposals, I refer to Van Riemsdijk (1978), Corver (1990), Zwarts (1997) and Abels (2003). Relevant for the present purposes is the *wh*-R-pronoun: *waar* (‘where’). This pronoun occurs in the place of the *wh*-word *wat* (‘what’) when it is the complement of a preposition, for instance *op* (‘on’). Importantly, the resulting form one in which the preposition follows the R-pronoun: *waarop* (‘on what’), which appears instead of *\*op wat*, but *\*op waar* is excluded. I will refer to this as ‘obligatory permutation’ (following Den Besten 1978, Van Riemsdijk 1978, *inter alia*). This contrasts with the *wh*-word *wie* (‘who’), for which there is no R-pronoun and which can be used as the complement of a preposition. The relevant contrast is illustrated in (139):

- (139) [Dutch]
- a. {\*Wie/ waar} wacht hij op?  
 who what waits he on  
*int.* ‘Who/what is he waiting for?’

- b. {Op wie/ ?\*waarop} wacht hij?  
 on who what.for waits he  
 ‘Who/what is he waiting for?’

The special property of R-pronouns, is that they can strand their prepositions, as is shown in (139b).<sup>3</sup> However, contrary to what we expect based on the P-stranding generalization, the R-pronoun itself cannot be the remnant of sluicing. (140a) is adapted from Merchant (2001), (140b) and (141) are mine, and show that the underlying forms corresponding to (140a) and (140b) are grammatical:

- (140) a. \*Hij wacht ergens op, maar ik weet niet waar.  
 he waits something on but I know not what  
 b. Hij wacht ergens op, maar ik weet niet waarop.  
 he waits something on but I know not what.for  
 ‘He is waiting for something, but I don’t know what.’
- (141) a. Hij wacht ergens op, maar ik weet niet waar hij op wacht.  
 he waits something for but I know not what he for waits  
 ‘He is waiting for something, but I don’t what he is waiting for.’  
 b. Hij wacht ergens op, maar ik weet niet waarop hij wacht.  
 he waits something for but I know not what.for he waits  
 ‘He is waiting for something but I don’t know what he is waiting for.’

Thus, P-stranding that is normally allowed, is for some reason disallowed under sluicing. The contrast in (140) is not subject to discussion: sluices with an R-pronoun remnant and a stranded preposition (140a) are completely out. Before I go into possible reasons for this, let me first show that this carries over to Andrews-amalgams as well:

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<sup>3</sup>There seems to be a difference between the use of R-pronouns in interrogative versus relative contexts. Whereas (139) shows that *waarop* cannot be used to refer to a person, (i) shows that it can be used as a relative pronoun despite the [+HUMAN] head:

- (i) [Dutch]
- a. de vrouw {waarop/ op wie} ik mijn hele leven gewacht heb  
 the woman what.for for who I my whole life waited have  
 ‘the woman I’ve been waiting for my entire life’
- b. de vrouw {waar/ \*wie} ik mijn hele leven op gewacht heb  
 the woman what who I my whole life for waited have  
 ‘the woman I’ve been waiting for my entire life’

Although the use of *waarop* in the context of a [+HUMAN] head is colloquial, the contrast with the interrogative context is remarkable, and cannot be ignored considering my assumptions about cleft clauses as relative clauses. Possibly, the acceptability of (i) is related to the fact that Dutch relative pronouns, unlike Dutch interrogative *wh*-words, are not specified for [±HUMAN] (see also the discussion in §4.3.3). I leave this issue open, as it does not detract from the points made here and below.



- (142) a. \*Hij wacht op [ik zou werkelijk niet weten waar].  
           he waits on I would really not know what  
       b. Hij wacht [ik zou werkelijk niet weten waarop].  
           he waits I would really not know what.for  
           ‘He is waiting for I really wouldn’t know what.’

Merchant argues that sluicing with P-stranding in these cases is impossible, because the bare *wh*-R-pronoun *waar* cannot be focused. As is discussed in §4.1.1, the remnant of sluicing must be focused. In the remainder of this excursus on the Dutch facts, I will indicate the relevant focused constituents with SMALL CAPS. Merchant (2001:95) gives the following pair (*his* judgements):

- (143) [to be corrected]
- a. \*Ik weet niet WAAR hij op rekt.  
       I know not where he on counts  
       b. Ik weet niet waar hij OP rekt.  
           I know not where he on counts  
           ‘I don’t know what he’s counting on’

However, this cannot be the explanation of the pattern in (140)-(142). First, (143a) is perfectly acceptable, and gives rise to a contrastive reading:

- (144) Ik weet niet WAAR hij op rekt (, maar het zal toch hopelijk  
       I know not what he on counts but it will surely hopefully  
       niet op een fors salaris zijn).  
       not on a large salary be  
       ‘I don’t know what he’s counting on, but I surely hope it isn’t a large  
       salary.’

In other words, a regular embedded *wh*-interrogative can have the desired focus that is needed for sluicing, contrary to what Merchant claims. Worse still, focusing only the stranded preposition is utterly impossible in Dutch: (143b) is ungrammatical, see also J. Hoekstra (1995). Thus, the grammaticality judgements in (143) are exactly the reverse:

- (145) [correction of Merchant (2001:95)]
- a. Ik weet niet WAAR hij op rekt.  
       I know not where he on counts  
       ‘I don’t know what he’s counting on.’  
       b. \*Ik weet niet waar hij OP rekt.  
           I know not where he on counts

The following example, which is not addressed in Merchant (2001), completes the puzzle. Apparently, the form *op wat*, which is normally disallowed in the paradigm, is somewhat acceptable in a sluicing configuration (albeit marginal, and certainly less acceptable than the use of *waarop* with pied-piping). For

some reason, realizing the preposition (i.e. the pied-piping variant) is worse in case the correlate in the antecedent clause *ergens* is stressed:

- (146) a. ?Hij reKent ergens op, maar ik weet niet (?op) WAT.  
           he counts something on but I know not on what  
       b. ?Hij reKent ERGENS op, maar ik weet niet (?\*op) WAT  
           he counts something on but I know not on what  
           *int.* ‘He is counting for something, but I don’t know what.’

These patters transfer to Andrews-amalgams as well, but the order that is associated with pied-piping seems more marginal than pied-piping under sluicing:

- (147) a. ?Hij reKent op [ik zou werkelijk niet weten WAT].  
           he counts on I would really not know what  
       b. ??Hij reKent [ik zou werkelijk niet weten op WAT].  
           he counts I would really not know on what  
           ‘He is counting on I really wouldn’t know what.’

All together, the judgments for sluices with (*op*) *wat* are notably murky. The availability of P-stranding in (146) in itself seems to fit in with Merchant’s claim that Dutch seems to be a ‘transition’ case where P-stranding is concerned. This is based on similar examples without an R-pronoun that allow for P-stranding under sluicing, but not under interrogative *wh*-movement. This is illustrated by the various judgments that were reported for the examples in (148) (adapted from Merchant 2001:95, his (30), his reported judgments):

- (148) a. Anna heeft met iemand gesproken, maar ik weet niet  
           Anna has with someone spoken but I know not  
           ??/?/✓ (met) wie.  
           with who  
           ‘Anna spoke with someone, but I don’t know who.’  
       b. \*/??/? Wie heeft zij mee gesproken?  
           who has she with spoken  
           *int.* ‘Who did she talk with?’

Recall from the above that a subset of otherwise strict pied-piping languages allow for P-stranding under sluicing as well. So, in addition to possible diachronic considerations, the contrast in (148) can be viewed in the context of these cross-linguistically attested exceptions. What is puzzling about (146)-(147), is the availability of the regular *wh*-phrase *wat* (‘what’) with the preposition *op* (‘on’) that would normally appear as the R-pronoun *waarop* (*lit.* ‘what.on’). Importantly, *wat ... op* (stranding) nor *op wat* (pied-piping) are available in *wh*-interrogatives. I illustrate this for the embedded context as this is associated with sluicing, but this holds similarly for root *wh*-questions:

- (149) a. \*Ik weet niet op wat hij reKent.  
           I know not on what he counts

- b. \*Ik weet niet wat hij op rekt.  
 I know not what he on counts  
*int.* ‘I don’t know what he is counting on.’

This leaves us with an intricate puzzle: the Dutch data are precisely the opposite of what the P-stranding generalization for sluicing predicts. Whereas R-pronouns allow (even prefer) for P-stranding under regular *wh*-movement, they obligatorily pied-pipe the preposition under sluicing. Vice versa, *wh*-phrases that obligatorily pied-pipe prepositions under movement, can strand them under sluicing (Merchant’s ‘transition’ claim for Dutch). To top it off, *wh*-phrases with prepositions that would normally appear as R-pronouns, appear as regular *wh*-phrases that allow for P-stranding.

Although I cannot present a detailed analysis of all these facts, I will speculate briefly about the obstinate behavior of the R-pronouns when it comes to stranding a preposition in an ellipsis site. The observation that P-stranding applies more freely than expected under sluicing in non-R-pronoun contexts (where pied-piping is expected), fits in with the patterns we already witnessed for Romance sluicing and will be readdressed below. I suggest that the unexpected obligatory pied-piping with R-pronouns under sluicing is due to the unrecoverability of *waar* in its use as a *wh*-R-pronoun when the stranded preposition is deleted. Importantly, the *wh*-word *waar* is homonymous. In its regular use it is an adverbial *wh*-pronoun, corresponding the English *where*. In its use as an R-pronoun, its meaning is *what*. To see what underlies the impossibility of Merchant’s example with a bare R-pronoun as the remnant of sluicing (140), let me first show that there is at least one reason why this example is as bad as it is. Consider a similar example with a different main predicate:

- (150) Bea heeft ergens een boek over gelezen, maar ik weet niet  
 Bea has something a book about read, but I know not  
 WAAR.  
 what  
 ‘Bea read a book about something, but I don’t know where.’  
 #Bea read a book about something, but I don’t know about what she  
 read a book.  
 ≈ Bea read a book about something, but I don’t know where she read  
 the book about something.

This example is not ungrammatical in itself, it is just impossible as a sluicing configuration. It is acceptable when *waar* is read an adverbial pronoun (‘where’). That is, *waar* can only be understood this way, in spite of the presence of an indefinite correlate in the antecedent clause. As such, this example can only be read as an instance of sprouting, which corresponds to the second paraphrase. The impossibility of Merchant’s example is then at least due to the fact that the predicate *rekenen op* (‘to count on’) cannot similarly be used in a sprouting configuration, simply because this particular predicate

(which is coincidentally an idiomatic expression) is not likely something you do in a particular place:

- (151) \*Hij rekent ergens op maar ik weet niet WAAR.  
 he counts something on but I know not what  
*int.* ‘He is counting on something but I don’t know what.’  
 #He is counting on something, but I don’t know where he is counting  
 on something.

This is further corroborated in (152), where focusing the indefinite *ergens* forces the intended sluicing reading:

- (152) \*Bea heeft ERGENS een boek over gelezen, maar ik weet niet  
 Bea has something a book about read, but I know not  
 WAAR.  
 what  
*int.* ‘Bea has read a book about something, but I don’t know what.’

Recall from the above that R-pronominalization involves obligatory permutation, i.e. the pronoun (a complement) must precede the preposition:

- (153) [op wat] → waar-op  
 on what what-on

In case of movement, this preposition may be stranded. However, if a stranded preposition is subsequently *deleted*, the meaning of the focused R-pronoun (*what* and not *where*) is unrecoverable at the interface. It thus seems that the interpretation of the *wh*-R-pronoun requires an overt preposition, and for this reason, pied-piping is obligatory under sluicing:

- (154) Bea heeft ERGENS een boek over gelezen, maar ik weet niet  
 Bea has something a book about read, but I know not  
 WAARover.  
 what.about  
 ‘Bea read a book about something, but I don’t know what.’

This recoverability problem may also be the reason why the form (*over*) *wat* (‘(about) what’) can be used in such cases, comparable to (146)-(147): the pronominal interpretation that is required is then guaranteed.

Interestingly, the obligatory pied-piping in the context of ellipsis seems to be more general than the cases described here. As it turns out, we can observe exactly the same in the context of ‘stripping’ (Lobeck 1995, Merchant 2003, Aelbrecht 2006, *inter alia*). Stripping can roughly be defined as the deletion of everything in a clause under identity with correlates in the preceding clause, such that one constituent (and usually a polarity marker or particular adverb) is left (Lobeck 1995, Merchant 2003). The following is an example of stripping in Dutch:

- (155) Ik heb een stuk over BACH geschreven, maar niet over  
 I have a piece about Bach written but not about  
 BUXTEHUDE.  
 Buxtehude  
 'I wrote a piece about Bach, but not about Buxtehude.'

Merchant (2003:3) provides evidence that the P-stranding facts observed for sluicing, extend to stripping as well, as is shown by the following contrast between English and Greek (his (16) and (17a) (see also Giannakidou 2000:486):

- (156) I spoke with Sakis yesterday, and (with) Anna.  
 (157) [Greek]  
 Milisa me ton Sake xthes, kai \*(me) tin Anna.  
 I.spoke with the Sakis yesterday and with the Anna  
 'I spoke with Sakis yesterday, and with Anna.'

Taking this into account, we expect that Dutch stripping with R-pronoun remnants, give rise to the English pattern. For these purposes, we can replace the complements of the preposition *over* (*Bach* and *Buxtehude*) in (155) by demonstratives *dit* ('this') and *dat* ('that'), which triggers the use of R-pronouns. That is, instead of \**over dit* ('about this') and \**over dat*, we get *hierover* and *daarover*. Importantly, these may again strand the preposition:

- (158) [Dutch]  
 a. Ik heb {hierover/ over Bach} een stuk geschreven.  
 I have this.about about Bach a piece written  
 b. Ik heb {hier/ \*Bach} een stuk over geschreven.  
 I have this Bach a piece about written  
 'I wrote a piece about this/about Bach.'

As it turns out, stranding the preposition in the ellipsis site is ungrammatical in stripping configurations as well. For simplicity's sake, I will only represent the relevant elided structure:

- (159) \*Ik heb HIER een stuk over geschreven, maar niet DAAR ⟨een  
 I have this a piece about written but that not a  
 stuk over geschreven⟩.  
 piece about written  
*int.* 'I wrote a piece about this, but not about that.'

It should be stressed that the counterpart of this sentence in which the elided material is pronounced, is acceptable, just like I observed for the counterparts of the sluices above (140)-(141). And again, this sentence is only ungrammatical under the reading that corresponds to stripping, i.e. where *daar* is supposed to contrast with *hierover*. Similar to (150), the following example is acceptable (no focus on *hier*, only on *daar*):

- (160) Ik heb hier een stuk over geschreven, maar niet DAAR.  
 I have this a piece about written but not there  
 ‘I wrote a piece about this, but not there.’  
 ≈ I wrote a piece about this, but not in that (particular) place.

In other words, the bare R-pronoun remnant *daar* can only be interpreted in its regular adverbial meaning corresponding to the English *there*. Pied-piping of the preposition is thus obligatory in these cases as well in order for the R-pronoun to get the required pronominal interpretation:

- (161) Ik heb HIER een stuk over geschreven, maar niet DAARover.  
 I have this a piece about written but not that.about  
 I wrote a piece about this, but not about that.’

In sum, the unexpected behavior of R-pronouns in the context of the P-stranding generalization is in fact a puzzle about the recoverability of their pronominal meaning when the selecting preposition is stranded in an ellipsis site. I leave this issue open for future investigation.

### 5.3.3 Patterns with PPs in Horn-amalgams

As observed in the above, it is possible in English to have non-DP cleft pivots in *it*-clefts, such as APs and PPs. In those cases, the cleft clause is necessarily introduced by the complementizer, the use of relativizers is excluded. This also holds for Dutch *it*-clefts as well, even though cleft clauses in Dutch are otherwise obligatorily introduced by relativizers and not complementizers. The data in Reeve (2010:70, his (89a/c)) illustrate the possibilities:

- (162) a. It was with A PICTURE OF MARX [that he decorated his door].  
 b. It was A PICTURE OF MARX [that he decorated his door with].

In case of the first, (162a), the cleft pivot is a DP and the P it belongs to is stranded inside the cleft clause, whereas (162b) has a PP pivot. Based on the English data it would then seem as if we can reformulate the P-stranding generalization for Horn-amalgams in a similar fashion as for Andrews-amalgams. However, this is related to the possibility of clefting a PP, and not to the distinction between P-stranding and pied-piping. As discussed above, Dutch R-pronouns allow for stranding under movement. This also holds for relativization using R-pronouns:

- (163) [Dutch]
- a. de pen waarmee Dickens schreef  
 the pen which.with Dickens wrote  
 ‘the pen with which Dickens wrote’  
 b. de pen waar Dickens mee schreef  
 the pen which Dickens with wrote  
 ‘the pen that Dickens wrote with’

Consider now Dutch *it*-clefts in which the cleft constituent is associated with a PP:

- (164)
- a. Het was een veer waarmee Dickens zijn boeken schreef.  
it was a feather which.with Dickens his books wrote
  - b. Het was een veer waar Dickens zijn boeken mee schreef.  
it was a feather which Dickens his books with wrote
  - c. Het was met een veer dat Dickens zijn boeken schreef.  
it was with a feather that Dickens his books wrote  
'It was a feather that Dickens wrote with'

Examples (164a) and (164b) respectively represent the pied-piping and P-stranding pattern in Dutch *it*-clefts, in (164c) the cleft pivot is a PP. I leave out judgments in the examples here. All are possible, although there is a strong preference for either of the options with a DP cleft pivot. Taking into account that it is the entire cleft clause that undergoes ellipsis in Horn-amalgams, the resulting pattern does not depend on whether the preposition was pied-piped or stranded in the relativization process: in both cases it is part of the ellipsis site, and as such, it requires an antecedent in the matrix clause. This is shown in (165):

- (165)
- a. Dickens schreef zijn boeken met [ik geloof dat het een Dickens wrote his books with I believe that it a veer was ⟨waarmee Dickens zijn boeken schreef⟩].  
feather was which.with Dickens his books wrote
  - b. Dickens schreef zijn boeken met [ik geloof dat het een Dickens wrote his books with I believe that it a veer was ⟨waar Dickens zijn boeken mee schreef⟩].  
feather was which Dickens his books with wrote  
'Dickens wrote his books with I believe it was a feather.'

Taking this further, the Horn-amalgam in which the preposition is internal to the IC corresponds to the variant in (164c) (and the English (162a)), where the cleft pivot is the PP:

- (166) Dickens schreef zijn boeken [ik geloof dat het met een veer was Dickens wrote his books I believe that it with a feather was ⟨dat Dickens zijn boeken schreef⟩].  
that Dickens his books wrote  
'Dickens wrote his books I believe it was with a feather.'

We can now generalize this to a pattern that we expect when the cleft has a PP pivot and a DP pivot respectively:

- (167) **PP pivot pattern in Horn-amalgams**  
[<sub>MC</sub> ... [<sub>IC</sub> ... [<sub>PP</sub> cleft pivot]<sub>*i*</sub> ⟨[<sub>CP</sub> ... *t<sub>i</sub>*⟩]]]

(168) **DP pivot pattern in Horn-amalgams**

$$[_{MC} \dots [_{PP} P [_{IC} \dots [_{DP} \text{cleft pivot}]_i \langle [_{CP} \dots [_{PP} P t_i] \rangle ] ] ] ] ]$$

In (168) I abstract away from stranding or pied-piping of the preposition under relativization. So, the only variation in Horn-amalgams that we expect based on these generalizations, is related to restrictions on *it*-clefts with PP pivots.

As it turns out, PP pivots are already a marked option in the languages that allow for them (I illustrate this for English and Dutch). For English, it was reported (M. Sheenan, p.c.) that using a PP pivot is ‘high register’, and the DP-pivot is preferred. This then explains the preference that was found for Horn-amalgams with the preposition in the matrix:

- (169) a. ?Dickens wrote his books [I think it was with a feather].  
 b. ✓Dickens wrote his books with [I think it was a feather].

Also in Dutch, *it*-clefts with PP pivots are slightly marked. The similar preference for Horn-amalgams with the pattern associated with DP-pivots, is thus unsurprising:

- (170) [Dutch]
- a. ?Dickens heeft zijn boeken [ik dacht dat het met een veer  
 Dickens has his books I thought that it with a feather  
 was] geschreven.  
 was written  
 ‘Dickens wrote his books I thought it was with a feather.’
- b. ✓Dickens heeft zijn boeken met [ik dacht dat het een veer  
 Dickens has his books with I thought that it a feather  
 was] geschreven.  
 was written  
 ‘Dickens wrote his books with I thought it was a feather.’

Interestingly, it has been noted in the literature that German disallows clefts with PP pivots, the example is from Merchant (2001:125), but goes back to Grewendorf and Poletto (1991), and is considered ungrammatical:

- (171) [German]
- ?\*Mit wem war es, daß er gesprochen hat?  
 with who was it that he spoken has  
*int.* ‘With whom was it that he spoke?’

D. Hessler (p.c.) notes that this is indeed marked, but not completely unacceptable (hence my modification of the judgment). The restriction in German on (171) seems to be related to what was observed in Dutch *it*-clefts with a PP pivot, these are necessarily introduced by the complementizer *dat*. As Lambrecht (2001) observes, German cleft clauses are always introduced by a relativizer, similar to Dutch. Apparently, the complementizer-strategy that I suggested Dutch employs to construe the cleft clause of *it*-clefts with non-DP



pivots, is more restricted in German.<sup>4</sup> That is, when the cleft pivot is associated with a PP, there is a strong preference to have a DP pivot, as illustrated in (172):

- (172) a. ?\*Es war mit einem Bild von Marx daß Bob sein Zimmer  
it was with a poster of Marx that Bob his room  
dekorierete.  
decorated  
b. ✓Es war ein Bild von Marx womit Bob sein Zimmer  
it was a poster of Marx which.with Bob his room  
dekorierete.  
decorated  
'It was a poster of Marx that Bob decorated his room with.'

This exact pattern is found in German Horn-amalgams as well:

- (173) a. ??Bob dekorierete sein Zimmer [ich glaube es war mit einem  
Bob decorated his room I believe it was with a  
Bild von Marx].  
poster of Marx  
'Bob decorated his room I believe it was with a poster of Marx.  
b. ✓Bob dekorierete sein Zimmer mit [ich glaube es war ein Bild  
Bob decorated his room with I believe it was a poster  
von Marx].  
of Marx  
'Bob decorated his room with I believe it was a poster of Marx.'

But this was merely reported as a preference, which is surprising considering the marginality of (171). It seems plausible to attribute this amelioration to the fact that the cleft clause, which requires a special mechanism for relativization, is left unpronounced in the Horn-amalgam.

Finally, Frisian speakers (this particular example is from E. Hoekstra, p.c.) did not report any preference between the order associated with a DP and a PP cleft pivot respectively:

- (174) [Frisian]  
a. Bob fersierde syn keamer mei [ik tocht dat it in poster  
Bob decorated his room with I thought that it a poster  
fan Marx wie].  
of Marx was  
'Bob decorated his room with I thought it was a poster of Marx.'

<sup>4</sup>Lambrecht (2001) and Kato and Ribeiro (2007) relate the German lack of this strategy (in their terms the lack of 'that-clefts') to the V2 nature of German, a property that English lost. However, Dutch does allow for these examples, and is no less V2 than German is. This suggests that the explanation for the restriction in German must be sought elsewhere.

- b. Bob fersierde syn keamer [ik tocht dat it mei in poster  
 Bob decorated his room I thought that it with a poster  
 fan Marx wie].  
 of Marx was  
 ‘Bob decorated his room I thought it was with a poster of Marx.’

The absence of a particular preference is in line with the fact that in regular embedded *it*-clefts in Frisian, a PP-pivot is as acceptable as a similar example with a DP:

- (175) a. Ik tocht dat it in poster fan Marx wie dêr’t Bob syn  
 I thought that it a poster of Marx was which.that Bob his  
 keamer mei fersierd hie.  
 room with decorated has  
 ‘I thought it was a poster of Marx that Bob decorated his room  
 with.’  
 b. Ik tocht dat it mei in poster fan Marx wie dat Bob syn  
 I thought that it with a poster of Marx was that Bob his  
 keamer fersierd hie.  
 room decorated has  
 ‘I thought it was with a poster of Marx that Bob decorated his  
 room.’

We can conclude that the patterns with PPs in Horn-amalgams are in agreement with those in regular *it*-clefts. The P appears in the matrix if there is a corresponding preposition in the ellipsis site. Whether there is P-stranding or pied-piping along with the relative pronoun does not matter for the eventual outcome: in either case it is part of the cleft clause that is the target of deletion. However, the P does not turn up in the matrix in case of a PP cleft pivot. With the exception of Frisian, this option seems more marked, and is possibly a form restricted to particular contexts. The preferences in regular *it*-clefts are reflected in Horn-amalgams, as is expected in the analysis pursued here.

## 5.4 Benefits and bottlenecks of the PF-approach

### 5.4.1 The content kernel as remnant of sluicing

The most important virtue of the sluicing approach is that the ‘transparency’ of the content kernel can simply be explained as a reconstruction effect related to A’ movement of the content kernel. For the theory of amalgams, this means that 1. we do not need to invoke a special syntactic means such as external remerge to account for the patterns observed in §3.4 and 2. we can analyse rather idiosyncratic data as special instances of a more familiar configuration, *viz.* sluicing.

Moreover, the form-identity generalizations, albeit in adapted versions, ex-

plain properties of amalgams that are puzzling if we do not assume IC-internal sluicing to begin with. This holds in particular for the distribution of amalgams that involve a content kernel that is related to a PP. In the idea that the content kernel is a shared constituent, we would need to stipulate a rule that excludes sharing a DP content kernel in Russian examples such as (176b) (repeated from §5.3.2 above):

- (176) [Russian]
- a. Igor poexal, [ty znaës v kakoi magazin za knigami].  
 Igor went you know in which:ACC store for books  
 ‘Igor went to you know which store for books.’
  - b. \*Igor poexal v, [ty znaës kakoi magazin za knigami].  
 Igor went to you know which store for books.  
 ‘Igor went to you know which store for books.’

This rule obviously should not get in the way of deriving Andrews-amalgams without such DPs, considering (177)

- (177) Igor vosxišča-je-sja [(ty) mož-eš  
 Igor.NOM admire:PRS-3SG-REFL you.NOM can:PRS-2SG  
 dogada-t'-sja {kem/ \*kogo}].  
 guess-INF-REFL who.INST who.ACC  
 ‘Igor admires you can guess who.’

In addition, this rule needs to be language-specific in order not to exclude English cases such as (178):

- (178) Bob danced with [you’ll never guess who].

The only possibility then seems to be to disallow sharing of DPs that are selected by prepositions in those languages that pattern with Russian, which would probably lack any independent motivation. After all, the contrast in (176) cannot be explained in terms of P-stranding violations in Russian, if P is not assumed to be stranded anywhere to begin with. In the present proposal, the pattern found in amalgams clearly corresponds to the ban on P-stranding in Russian: the only correct way to construe the amalgam is to pied-pipe the preposition along with the DP content kernel when it moves out of the ellipsis site. (176b) is thus ruled out because it involves stranding of the preposition.

Obviously, the assumption that the content kernel is the remnant of IC-internal sluicing raises the question what has happened to the correlate. After all, in regular sluicing configurations, the remnant is associated with a constituent in the antecedent, and the licensing of ellipsis is strongly connected to focus on these respective constituents. These and more questions are topic to chapter 7, where I discuss sluicing (in amalgams as well as in the familiar configurations) in relation to specification. In the context of the sluicing analysis, the content kernel is now identified as a sluicing remnant, and the missing

matrix constituent as its null correlate.

Two aspects of the PF-approach to sluicing require some further discussion. Firstly, although the patterns with PPs in amalgams were found to be consistent with those in regular sluicing, we found some striking deviations of the patterns predicted by the P-stranding generalization. Second, as was mentioned a few times throughout the present and the previous chapter, if we assume the remnant of sluicing to have moved out of the ellipsis site, we expect such movement to be constrained by islands, and this is clearly not the case. Both of these issues are well-known and have been tackled in the literature in various ways. §5.4.2 and §5.4.3 discuss the P-stranding generalization and the peculiar absence of island-effects. Importantly, both of these issues can be tackled within the boundaries of the PF-theory. In the case of islands, the solution as proposed in the literature not only explains the sluicing facts, it also presents a way to look at (lack of) island-repair effects under ellipsis in general. Thus, these issues will not be taken to detract from the explanatory force of the PF-approach to sluicing.

#### 5.4.2 On the deviations from the P-stranding generalization

The distribution of PPs in amalgams is generally in line with sluicing configurations. However, the facts in sluicing and Andrews-amalgams were not always found to be consistent with Merchant's P-stranding generalization: a lot of languages that are strictly pied-piping under *wh*-movement mysteriously allow for the stranding of prepositions under sluicing. Without further amendments of the theory, this seems to put the PF-theory for sluicing that I pursue here in a difficult position. As pointed out in the above, the unexpected findings presented here are in a way superseded, as there is a growing body of literature challenging the P-stranding generalization, starting with De A. Almeida and Yoshida (2007) for Brazilian Portuguese. Similarly problematic data are discussed in Fortin (2007) for Indonesian, Szczegelnik (2006, 2008) for Polish and Rodrigues et al. (2009) for Spanish.<sup>5</sup> I will briefly discuss two ideas that have been presented to solve the issue within the PF-approach: 1. the suggestion to parallel these facts with island repair under deletion (De A. Almeida and Yoshida 2007) 2. the assumption of another syntactic structure than a *wh*-interrogative to underlie P-stranding sluices in the languages that otherwise forbid P-stranding, *viz.* *cleft* sentences (Rodrigues et al. 2009). Both views yield new problems, and the idea to approach sluicing in terms of clefting (or, 'pseudosluicing') has been refuted for various reasons in Merchant (2001:§4.2). Relying heavily on insights in Van Craenenbroeck (2010a), I will however argue in favor of the latter approach, and adopt Van Craenenbroeck's idea that

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<sup>5</sup>In addition, Stjepanović (2008) discusses Serbo-Croatian facts that are *prima facie* seem to contradict Merchant's P-stranding generalization as well. However, she argues that the mysterious 'loss of P' does not involve movement of the relevant out of the PP in these particular cases, i.e. there is no 'P-stranding' involved. As such, those data are not relevant for the issue at stake.

although clefts are available as a last resort strategy, sluices are derived from *wh*-interrogatives in the general case.

### Sluicing as repair mechanism

De A. Almeida and Yoshida (2007) present problematic data for Merchant's P-stranding generalization in Brazilian Portuguese, a pied-piping language. For convenience, I repeat the relevant sluice where the preposition is stranded in the ellipsis site from examples from §5.3.2 (De A. Almeida and Yoshida 2007:350):

- (179) [Brazilian Portuguese]  
 A Maria dançou com alguém, mas eu não lembro quem<sub>i</sub>  
 the Maria danced with someone, but I don't remember with  
 ⟨a Maria dançou com t<sub>i</sub>⟩.  
 who the Maria danced with  
 'Maria danced with someone, but I don't remember (with) who.'

De A. Almeida and Yoshida (2007) observe that sluicing Brazilian Portuguese ameliorates island violations similar to English sluicing (contrary to VP-ellipsis in either language, see also §4.1.1 above). In addition, they point out that VP-ellipsis in Brazilian Portuguese does *not* allow for P-stranding (De A. Almeida and Yoshida 2007:358, their (31)):

- (180) O João sabia que a gente tinha conversado com alguns  
 the João knew that the people had talked to some  
 professores, mas ele não podia revelar \*(com) quais professores  
 professors but he not could reveal to which professors  
 (que) a gente NÃO tinha.  
 that the people not had  
 'João knew that we had talked to some professors, but he could not  
 reveal (to) which professors we had not.'

Due to the parallel between amelioration of island violations and P-stranding in sluicing contexts, De A. Almeida and Yoshida (2007) argue that both are instances of repair at PF: the ban on P-stranding can be alleviated at PF, if the locus of the violation is part of the ellipsis site. This is the case in sluicing, but not in VP-ellipsis. Interestingly, this forces them to assume that the restriction on P-stranding in languages that allow for such stranding under sluicing, is a condition on representations rather than derivations (in line with Aoun et al. 1987), although they do not elaborate on this.

### Deriving sluicing from underlying *it*-clefts

Rodrigues et al. (2009) observe that in addition to Brazilian Portuguese, prepositions can be stranded under sluicing in Spanish as well (see also the discussion in relation to Andrews-amalgams in §5.3.2). They argue against the PF-repair analysis as suggested in De A. Almeida and Yoshida (2007), mainly based on the fact that P-stranding is not allowed in multiple sluices such as (181) (data

adapted from Rodrigues et al. 2009, their (10a) and (11a)):

- (181) [Spanish]
- a. Ella compró algo            para alguien, pero no sé    qué  
    she bought something for   someone but   not know what  
    \*(para) quién.  
    for        who  
    ‘She bought something for someone, but I don’t know what for  
    who.’
  - b. Ella habló con alguien sobre algo,            pero no sé  
    she talked with someone about something but   not know  
    \*(con) quién \*(sobre) qué.  
    with    who    about    what  
    ‘She talked to someone about something but I don’t know with  
    who about what.’

The fact that sluicing does cannot ‘repair’ these violations of P-stranding under sluicing is hard to explain in the PF-based account of De A. Almeida and Yoshida (2007). Instead, Rodrigues et al. (2009) propose that in the languages that allow for P-stranding under sluicing another IP is deleted than in those that do not. That is, in languages that *prima facie* violate the P-stranding generalization *wh*-interrogative as is assumed in the mainstream variant of the PF-deletion theory, or a truncated *it*-cleft. The last goes back to proposals in the mid-seventies that sluicing is the reduction of a ‘short cleft’ (Pollman 1975, Erteschik-Shir 1977):

(182) Bill killed someone, but I don’t know who ⟨Bill killed⟩.

(183) Bill killed someone, but I don’t know who ⟨it was⟩.

The fact that prepositions can be absent in the sluice but not be stranded under normal *wh*-movement follows straightforwardly if sluicing yields a structure such as in (183). I illustrate this with a Spanish example adapted from Rodrigues et al. (2009:248), but it should be noted directly that they assume that Spanish (and Brazilian Portuguese) employs both options, but only the one with underlying clefts (or: ‘pseudosluices’) results in apparent violations of the P-stranding generalization:

- (184) [Spanish]
- Juan ha hablado con una chica pero no sé    cuál    ⟨es la chica  
 Juan has talked with a girl but not know which is the girl  
 con la que ha hablado Juan⟩.  
 with the that has talked Juan  
 ‘Juan talked with a girl but I don’t know which.’

Here, the preposition *con* is pied-piped to the relativization site, hence the general ban on P-stranding is not violated. After all, it is just the DP that is the

cleft pivot, the preposition is part of the elided IP (which is effectively the whole cleft structure with the exception of the clefted *wh*-DP). They conclude *contra* De A. Almeida and Yoshida (2007) that the P-stranding facts cannot be analysed on a par with island repair, but that the P-stranding generalization can be maintained (albeit in a different form). Languages that seemingly violate the ban on P-stranding delete a clefted IP rather than a *wh*-interrogative. In this view, the unexpected absence of the preposition in the Brazilian Portuguese and the Spanish sluices is no counterevidence to the PF-approach towards sluicing.

### Underlying clefts as Last Resort

The most recent work on this issue is Van Craenenbroeck (2010a), whose proposal I will adopt to account for the unexpected facts presented in the above. Van Craenenbroeck discusses the idea of underlying clefts in the context of (the ten) arguments against such an analysis in Merchant (2001:§4.2). In a nutshell, his conclusion is that ‘*all instances of sluicing are derived from the corresponding full *wh*-question, but a short cleft is available as Last Resort when the *wh*-question is not well-formed*’ (Van Craenenbroeck 2010a:1725). Crucially, violations of the ban on P-stranding constitute a source of unwellformedness of the *wh*-interrogative (in strict pied-piping languages). The present discussion is limited to three of Merchant’s arguments, because they are most relevant to the points made in the present work. For discussion of the other arguments, I refer to the literature cited here, as well as Rodrigues et al. (2009).

The first argument concerns the cross-linguistic variation in cleft-strategies (see also §4.3 and Reeve 2010). Merchant observes that sluicing is not limited to languages that have the English type (*it*)-clefts. For example, Romanian has sluicing (185) and Andrews amalgams, but no clefts (186) as is pointed out in Grosu (1994) and Grosu (2006, 2008):

- (185) [Romanian]  
 Ion a reușit datorită cuiva, dar n-am  
 Ion has succeeded thanks-to someone.DAT but not-have.1  
 să-ti spun ?\*(datorită) cui.  
 SUBJ.PRT.-you.SG.DAT tell thanks-to who.DAT  
 ‘Ion succeeded thanks to someone, but I won’t tell you who.’
- (186) \*E Maria (că) vreau să întâlnesc.  
 is Maria that want.1SG SUBJ meet.1SG  
*int.* ‘It’s Maria that I want to meet.’

This also holds for Hungarian, which, similar to Slavic languages (see Reeve 2010 and discussion above) has a focus-fronting strategy (É. Kiss 1998, van Craenenbroeck and Lipták 2006), but no *it*-clefts (the examples are from Merchant 2001:126):

- (187) [Hungarian]  
 \*Volt a kalap amit Mari nézte  
 it.was the hat.NOM which.ACC Mary looked.at  
*int.* ‘It was the hat that Mary was looking at.’
- (188) Mari nézett valamit, de nem emlékszem, mit.  
 Mary looked.at something.ACC but not I.remember what  
 ‘Mary was looking at something, but I don’t remember what.’

This is hard to reconcile with the idea that sluicing can *generally* be reduced to clefts (Pollman 1975, Erteschik-Shir 1977). However, one could of course make a weaker claim and argue that only pied-piping languages that have a cleft-strategy similar to English (like the majority of Romance languages) have this option available (Rodrigues et al. 2009).

Second, in languages that have clefts in addition to overt case marking, such as German and Greek, the case patterns associated with clefts (with *wh*-pivots) are different than what is observed in sluices, as is illustrated in (188) (the example is from Merchant 2001:127, his (51)):

- (189) [Greek]  
 a. I astinomia anekrine enan apo tous Kiprious prota,  
 the police interrogated one.ACC from the Cypriots first  
 ala dhen ksero { \*pjos/ pjon }.  
 but not I.know which.NOM which.ACC  
 ‘The police interrogated one of the Cypriots first, but I don’t know which.’  
 b. I astinomia anekrine enan apo tous Kiprious prota,  
 the police interrogated one.ACC from the Cypriots first  
 ala dhen ksero { pjos itan/ \*pjon itan }.  
 but not I.know which.NOM it.was which.ACC it.was  
 ‘The police interrogated one of the Cypriots first, but I don’t know which it was.’

That is, if the sluice is derived from an underlying cleft, we would expect the (default) case that is associated with the cleft (nominative) and not the accusative, contrary to fact. A similar reasoning then extends to my earlier findings regarding differing Case patterns in German and Greek amalgams, I repeat the examples from §5.2.1:

- (190) [German]  
 Bea hat [ich weiss nicht mehr { wen/ \*wer/ \*wem }]  
 Bea has I know not anymore who.ACC who.NOM who.DAT  
 ins Gesicht geschlagen.  
 in.the face hit  
 ‘Bea hit I don’t remember who in the face.’



- (191) Bea schlug, ich glaube daß es {dieser Junge/ \*diesen Jungen}  
 Bea hit I believe that it this.NOM boy.NOM this.ACC boy.ACC  
 war.  
 was  
 ‘Bea hit I believe it was this boy.’

If (190) would in fact have a cleft structure similar to (191) as a source, the *wh*-phrase would be derived as a cleft-pivot and receive default nominative case, and this is clearly not the case. A similar reasoning applies to the Greek examples. In the Andrews-amalgam (192), nominative case is excluded, as is consistent with a corresponding example of regular sluicing (A. Giannakidou, p.c.):

- (192) I Maria filise [den tha pistepsis {\*pjós/ pjon}]. [Greek]  
 the Maria kissed not FUT believe.2SG who.NOM who.ACC  
 ‘Maria kissed you wouldn’t believe who.’

However, recall that both default nominative and accusative are possible in Greek *it*-clefts if the pivot is an object:

- (193) Ine {o Janis/ ton Jani} pu thelo na  
 is the.NOM John.NOM the.ACC John.ACC that want.1SG to  
 pandrefto.  
 marry.1SG  
 ‘It’s John that I want to marry.’

These data show that sluicing cannot generally be derived from underlying clefts: we would expect the default nominative case to be allowed in German and Greek, contrary to fact.

A final argument against the assimilation of the underlying structure of sluices to clefts concerns so-called ‘left-branch sluices’ (see §5.1.3). Recall that *it*-clefts are restricted by the referentiality condition (see §4.3 and Hedberg 1990). Crucially, this condition does not apply to the familiar examples of sluicing and Andrews-amalgams. Consider the following impossible *it*-cleft and the corresponding Horn-amalgam:

- (194) \*It is strong that Bea drinks an espresso.  
 (195) \*Bea drinks an [I think it’s strong] espresso.

Not only do these examples constitute an LBC violation, they also violate the requirement that cleft pivots are of type *e*. As a consequence, even if the ellipsis in the Horn-amalgam would repair the island effect, the result is still ungrammatical. This is cannot easily be reconciled with the fact that regular sluicing repairs violations of the LBC. In other words, it seems unlikely that the grammatical Andrews-amalgams and sluices with predicative pivots (i.e.

the *wh*-phrase and the content kernel) would derive from an underlying cleft if such a cleft is impossible, apart from the LBC violation it gives rise to. This is illustrated in the hypothetical structures in (196) and (197), which thus constitute grammatical examples derived from ungrammatical clefts:

- (196) Bea was drinking [a you wouldn't believe how strong (it was that Bea was drinking an  $\_\$  espresso)] espresso.
- (197) Bea was drinking a strong espresso – you wouldn't believe how strong (it was that Bea was drinking an  $\_\$  espresso)!

All in all, there is reason enough to maintain the idea that sluicing in general should be derived from *wh*-interrogatives rather than *it*-clefts. However, the P-stranding facts can be explained by assuming that clefts are available as a last resort. Interestingly, we then predict that not all pied-piping languages will display P-stranding under sluicing, which is indeed what we found in §5.3.2. In addition, we expect strict pied-piping languages that have nominative cleft pivots to show variation when the cleft strategy is forced. That is, if the preposition is missing from the sluice in a pied-piping language, we do not predict the case of the *wh*-DP (the cleft pivot) to bear the case of its correlate in the antecedent, but the nominative associated with the cleft. This would follow from my adapted version of the Case-matching generalization in (82) above, but not from Merchant's original formulation.

### 5.4.3 Island repair under sluicing

The data in §5.1 are ample evidence that amalgams, like regular sluicing constructions, are insensitive to island constraints. Although this is a striking parallel, this is not what is *prima facie* expected under the assumption of the PF-deletion approach. That is, in the perspective of the proposal that the IC in amalgams is a sluiced sentence out of which the content kernel has moved, we still need an explanation why this movement may cross islands. In this section, I argue that the proposed analyses for Andrews- and Horn-amalgams fit in with more general ideas about island repair in sluicing.

#### The PF-theory of islands and \* as a feature of traces

Ross (1969)'s observation that sluicing ameliorates island violations is topic to extensive discussion in recent literature (e.g. Kennedy and Merchant 2000, Lasnik 2001, Merchant 2001, Fox and Lasnik 2003, Merchant 2004, 2008). For the present purposes, I focus primarily on the discussion in Merchant (2004, 2008). There are two basic assumptions central to his idea. First, island violations are a PF-phenomenon, and not due to constraints on derivations or LF representations. The second is the implementation of the idea that intermediate traces of movement across an island are in some way defective (marked by '\*' in Fox and Lasnik 2003, Merchant 2004, 2008). This goes back to Chomsky (1972a) who proposes that islands that have been crossed by some element are marked

by # (in his notation, a similar idea is presented in Lasnik and Saito 1984, 1992, who call it  $\gamma$ -marking). A node  $XP^*$  is uninterpretable at PF, which is why island violations give rise to ungrammaticality. (198) illustrates this for *wh*-movement out of a relative clause:

- (198) \*Who<sub>i</sub> did Ann kiss [<sub>CP</sub>\* that Bea fancies t<sub>i</sub>]?

However, if  $XP^*$  is part of an ellipsis site, it is eliminated (by PF-deletion). This is then what is understood as ‘island repair under ellipsis’, and can be illustrated by the familiar sluicing example that yields an island violation similar to (199):

- (199) Ann kissed someone that Bea fancies, but I don’t know [<sub>CP</sub> who<sub>i</sub> <[<sub>IP</sub> Ann kissed [<sub>CP</sub>\* that Bea fancies t<sub>i</sub>]]].

However, the fact that VP-ellipsis in a similar environment is illicit cannot be derived from this basic idea: the  $CP^*$  is subsumed in the ellipsis site here as well, but VP-ellipsis is ungrammatical in this case:

- (200) \*Ann kissed someone that Bea fancies, but I don’t remember who<sub>i</sub> [<sub>IP</sub> she did <[<sub>VP</sub> kiss [<sub>CP</sub>\* that Bea fancies t<sub>i</sub>]]].

To account for this, Lasnik (2001) and Merchant (2001, 2004, 2008) suggest that ellipsis under *wh*-extraction is subject to a rule that basically states that ellipsis should apply to the largest possible constituent that contains the trace of this extraction (an  $A'$ -trace). This is called MAXELIDE:<sup>6</sup>

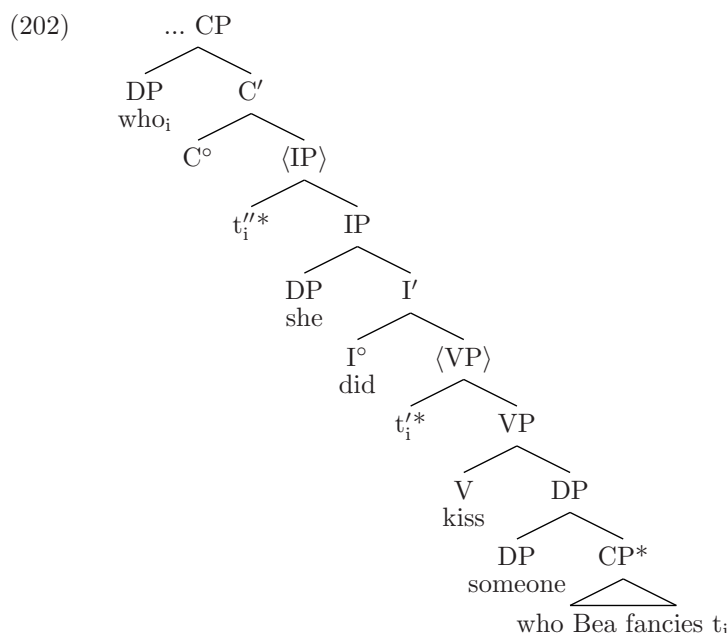
- (201) MAXELIDE [Merchant (2008:141)]  
Let  $XP$  be an elided constituent containing an  $A'$ -trace. Let  $YP$  be a possible target for deletion.  $YP$  must not properly contain  $XP$  ( $XP \not\subset YP$ ).

So, (200) is ruled out because there is a larger constituent that contains the  $A'$ -trace (the IP), in violation of MAXELIDE. Since the present discussion is not aimed at how the lack of island-repair effects in VP-ellipsis should be accounted for, I won’t elaborate further on MAXELIDE, but see the references cited above

<sup>6</sup>Since my proposal for amalgams is broadly in line with Merchant’s analysis of sluicing, I have chosen to discuss his account of the island facts, and put other proposals aside. Especially Fox and Lasnik (2003) is an interesting alternative to the approach taken here. In their account, *wh*-movement in sluicing is related to the (obligatory) presence of an indefinite in the antecedent clause, i.e. the correlate to the *wh*-phrase that is associated with the elided IP. Crucially, this indefinite must be bound by existential closure in a parallel fashion as the *wh*-trace is bound in the ellipsis site (this is more in spirit of Chung et al. 1995’s account of sluicing). Due to this ‘parallelism’ requirement, there are no intermediate landing sites available for the *wh*-phrase: sluicing is then an instance of ‘one-fell-swoop’ movement. Island violation that is induced by this movement can be repaired by ellipsis if the relevant position, an  $XP$  which is  $*$ -marked in Chomsky (1972a)’s original sense, is elided too. Assuming this approach would lead to interesting complications given the fact that amalgams have no overt correlate in the antecedent clause to begin with. However, the solution I will propose in chapter 7 can probably be reconciled with Fox and Lasnik (2003)’s proposal as well. This is a matter I leave open for future investigation.

for discussion.

Importantly, Merchant (2008) shows that MAXELIDE alone is not enough to account for the differences. That is, it predicts that VP ellipsis may apply in an island violating context as long as MAXELIDE (along with the other conditions on ellipsis) is satisfied, and this is not the case (see Merchant 2008:143-146 for data and discussion). For this reason, Merchant appeals to Chomsky (1972a)'s idea as addressed in the above, but reformulates \* as a feature on island nodes as a feature on the element that crosses that node, i.e. as a feature of traces (pace Kitahara 1999). Under these assumptions, a trace that is marked with this feature ('t\*') because it is the trace of movement that crossed an island node, is responsible for the ungrammaticality that is normally understood as an island violation: this is due to the presence of such a trace at PF. Concretely put, *'... whatever the correct characterization of the set of islands and how they interact with movement (whether in Empty Category Principle terms, or a Minimal Link Condition, or phases, etc.), the application of Move to an XP that results in crossing an island will also result in a featural alteration to the XP itself, adding a PF-uninterpretable feature, which for convenience we can call \*. This \* feature must be eliminated from the object interpreted by PF, which in the usual, nonelliptical case does not happen, yielding PF uninterpretability for island-violating extractions.'* (Merchant 2004:706). So, if all instances of t\* are part of the ellipsis site, their role is eliminated. This is best explained in a representation of both VP ellipsis and IP ellipsis (sluicing) (adapted from Merchant 2004, 2008 and applied to (199) and (200) above). For expository reasons, I mark the relevant traces as well as the island XP they cross with the '\*':



Obviously, this approach relies on the assumption of successive-cyclic movement of the *wh*-phrase: its intermediate landing sites are SpecVP (or SpecvP) and IP. We can now see where VP and IP ellipsis depart: whereas the latter deletes all offending instances of  $t^*$ , the former leaves the trace that is in SpecIP.

#### On the elimination of \*-traces in amalgams versus fragment answers

That the above extends to Andrews-amalgams is not surprising: those involve the same kind of deletion that targets the IP and thereby eliminates all \*-traces in case the *wh*-phrase crossed an island. However, that Horn-amalgams are similarly island insensitive does not follow directly. Recall that in §4.5.2 I put the kind of reduction in Horn-amalgams on a par with fragment answers. However, as Merchant (2004) shows, the latter are sensitive to islands. Consider (203):

- (203) Q: Does Abby speak the same Balkan language that *Ben* speaks?  
A: \*No, Charlie.

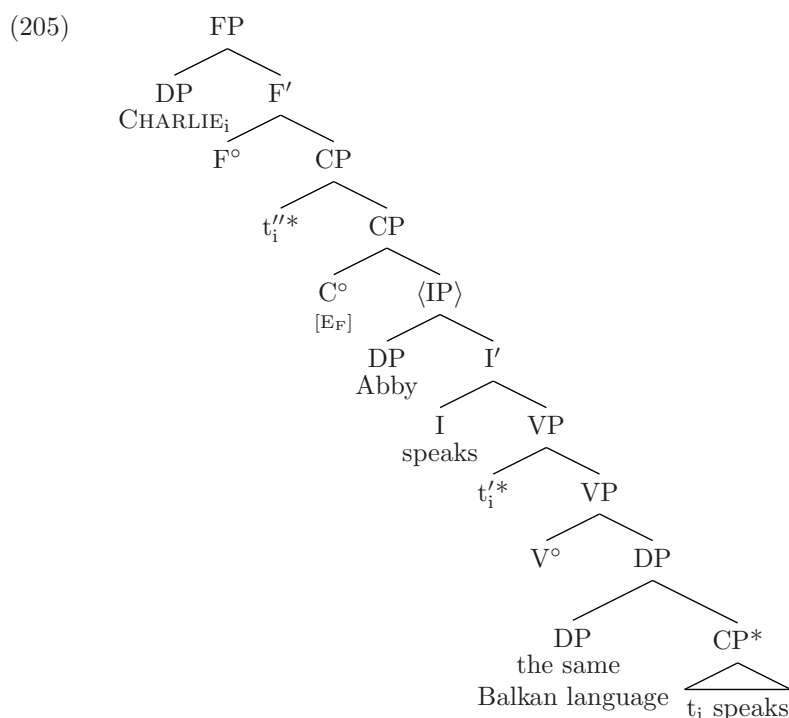
What (203) intends to show can more easily be demonstrated by the complete sentence from which the fragment answer should be derived. The idea is that *Charlie* is focus-moved, after which the IP can be deleted. This clearly violates the island in relation to the question in (203):

- (204) \*CHARLIE<sub>i</sub> Abby speaks the same Balkan language that  $t_i$  does.

Recall that the E-feature in fragment answers,  $[E_F]$ , has a weak feature for

focus [ $uF$ ]. This feature can be checked via Agree, and [ $E_F$ ], located on C, need not move to F for checking of this feature in the derivation of fragment answers. As a result, the focus movement of the relevant constituent to SpecFP leaves an A'-trace at SpecCP, while deletion applies at the level of IP.<sup>7</sup>

The fact that fragments involve a kind of sluicing that is island sensitive, is then due to the presence of a trace that is not included in the ellipsis site: if this trace is an \*-trace because it crossed an island, the derivation of the fragment answer causes a crash at PF. I illustrate this for (204) in (205):



The A'-movement of *Charlie* in (203) crosses a relative CP, and obtains the '\*' there. Ellipsis of the IP leaves  $t_i''^*$  at the intermediate landing site in the higher SpecCP. Consequently, (203), is ungrammatical, as are all other fragment answers that violate islands: the deletion of IP cannot repair such violations because it does not eliminate all \*-traces.

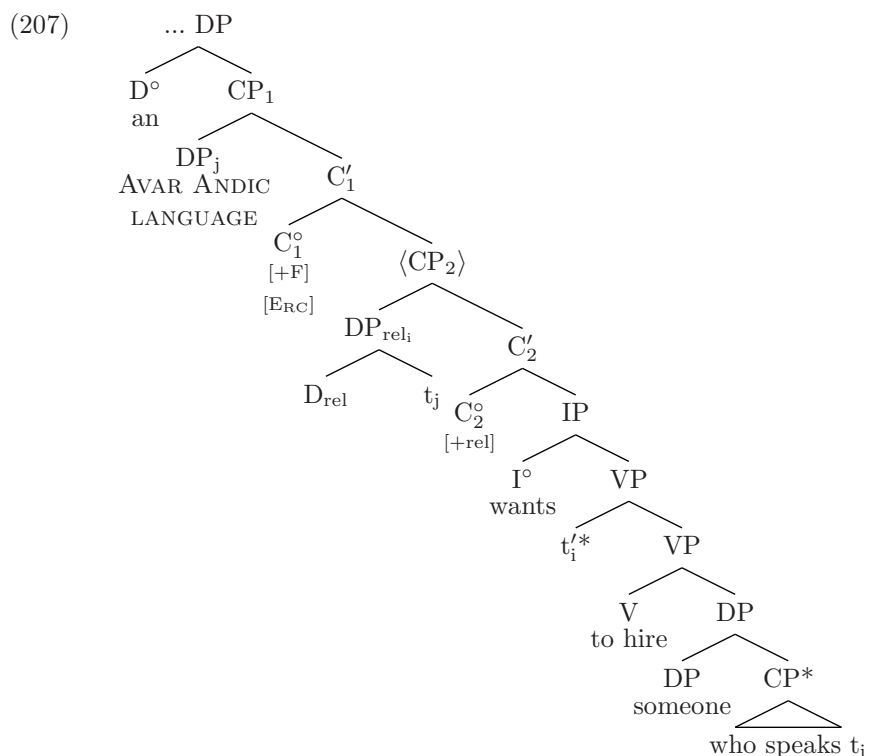
The derivation of the *it*-cleft in Horn-amalgams that I proposed in §4.3.4

<sup>7</sup>Interestingly, from Merchant (2004) it follows that languages in which focus and *wh*-elements occupy the same position, sluicing and fragment answers should display similar behavior with respect to island constraints. Lipták (2011) shows that this is contrary to fact in Hungarian, and argues for a distinction between contrastive and non-contrastive fragments, and the latter *do* display island repair effects. These cross-linguistic considerations lie outside the scope of the present work, but they touch upon the issue that we may need to distinguish focus movement from *wh*-movement more generally. For discussion, see also Temmerman (to appear), who observes that Dutch embedded fragment answers repair island violations.

involves deletion at the level of CP<sub>1</sub> after the head moves out for reasons of focus. Contrary to fragment answers, Horn-amalgams are not sensitive to island constraints, although the underlying *it*-cleft is. That is, the cleft pivot itself cannot be extracted out of an island. The contrast is in (206) (repeated from §5.1.4):

- (206) a. Bob wants to hire someone who speaks [I think it's an Avar-Andic language].  
 b. \*I think it's [an Avar-Andic language]<sub>i</sub> that Bob wants to hire someone who speaks t<sub>i</sub>.

The grammaticality of (206a) shows that ellipsis of the cleft clause after the relative head has moved out for reasons of focus can repair island violations, similar to sluicing in *wh*-questions (in the well-known configurations and in Andrews-amalgams). I argue that this is because the deletion of CP<sub>2</sub> eliminates all offending traces in the derivation that involves extraction (*viz.* relativization) out of an island. I take at least VP to be an intermediate landing site, but for ease of representation abstract away from other landing sites. The relevant observation is that no \*-trace survives at PF, accounting for the island insensitivity of Horn-amalgams:



Thus, the island insensitivity that we observed in both types of amalgams now follows from the fact that the ellipsis they involve, targets a constituent that includes the \*-traces that are left by the A'-movement of the content kernels across syntactic islands. Thus, under such assumptions the idea that ellipsis (in general) is deletion at PF can be maintained.

## 5.5 Summary

In the defense of a sluicing approach to amalgams, this chapter was focused on four well-known structural properties of this type of ellipsis. Three of those properties corroborate the view that the remnant has undergone A'-movement out of the ellipsis site: reconstruction effects, case-matching on the remnant *wh*-DP and variation related to the (un)availability of P-stranding. The latter two properties are also known as the 'form-identity generalizations' in the literature on sluicing (in particular Merchant 2001). These contrast sharply with the observation that sluicing, unlike other forms of ellipsis such as VP-ellipsis and gapping, is not sensitive to island-conditions. The evidence that the content kernel has A'-moved out of an ellipsis site, on a par with the remnant of regular sluicing, is abundant:

### **The content kernel has undergone A'-movement**

- the content kernel can be reconstructed in its base position, which can be shown by binding and condition B/C effects;
- the content kernel in Andrews-amalgams bears the case that is associated with its selecting verb in the sluiced IP;
- the content kernel in Horn-amalgams patterns with cleft-pivots and relative clauses, and obtains default case associated with the copula.

Importantly, the sluicing approach relieves us from invoking special syntactic means such as external remerge to account for the 'transparency' effects observed in chapter 3: all these facts can be accounted for via reconstruction in the ellipsis site.

The patterns related to the P-stranding generalization seemed less straightforward. However, the deviations of the expected pattern based on the P-stranding generalization all resonated in regular sluicing: some pied-piping languages allow for stranding under sluicing, and those languages allow for the corresponding pattern in Andrews-amalgams as well. The P-stranding generalization is orthogonal to the patterns that were expected for Horn-amalgams, since deletion targets the relative CP including a pied-piped or stranded preposition. The patterns observed there corresponded to intuitions about PP cleft pivots, which showed speaker-variation as well as cross-linguistic variation. Interestingly, the *it*-cleft pattern could be used as an explanation for the deviations that were found for the P-stranding generalization:



**The P-stranding generalization in amalgams**

- pied-piping of the preposition in Andrews-amalgams gives rise to a pattern with a PP content kernel;
- stranding in Andrews-amalgams gives rise to a DP content kernel and forces the presence of an antecedent preposition in the matrix of Andrews-amalgams;
- pied-piping languages that allow for stranding under sluicing displayed the stranding pattern in Andrews-amalgams as well;
- these languages do not violate the ban on P-stranding but can derive sluices via a cleft strategy.

The generalization that both types of amalgams involve sluicing, is thus corroborated by the reconstruction facts, the form-identity facts, as well as the lack of island effects. For the latter, I adopted the widely held view that differences in island-repair under ellipsis are related to \*-traces. In this view, the acceptability of island-violating sluicing is explained because the \*-traces are all contained in the ellipsis site. Ellipsis can thus ‘repair’ offensive structures as long as the relevant traces are part of the ellipsis site. In the present approach, this could easily be extended to account for the lack of island effects in amalgams as well.

So far, the sluicing approach was mainly focused on the internal structure of the IC, and abstracted away from its relation with respect to the matrix clause, which is the antecedent for ellipsis in the IC. This raises the question what kind of relationship the IC bears with respect to the matrix. After all, the IC, containing the ellipsis site, is distributed as if it were a constituent in the matrix. The nature of the IC as a particular type of root clause, *viz.* a parenthetical clause, is discussed in detail in the chapter to come. Chapter 7 is then a syntactic proposal that unites the sluicing approach with the view that amalgams involve parentheticals.



## CHAPTER 6

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### Parenthetical properties of amalgams

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The sluicing approach defended in the previous two chapters was focused on the internal structure of the IC in amalgams, but revealed at least one aspect of the relation between matrix and IC, namely that the former provides the antecedent for ellipsis in the latter. Although ellipsis licensing is arguably more common in non-subordinate contexts than it is in subordinated contexts, the sluicing approach in itself does entail anything about the structural or interpretive relation that the IC bears with respect to the matrix. The present chapter and the chapter to come aim at defining and deriving this relation. Fortunately, we do not need to start from scratch: we already know from the data in chapter 3 that the IC is not subordinated with respect to the matrix. The clear lack of c-command based relationships between the matrix and the IC, as well as the various root phenomena in the IC are convincing evidence for this claim.

The central questions that this chapter seeks to answer is concretely how the *kind* of root clause that the IC constitutes can be characterized more precisely. Based on various primarily interpretive observations, it will be argued that the answer is basically ‘a parenthetical’. The main argument for this lies in the inherent speaker-oriented nature of what is expressed in the IC. In Horn-amalgams, speaker-orientation can be characterized as a form of epistemic modality. That is, the information in the IC adds information that reflects the speakers cognitive relation towards a part of what is asserted in the matrix. Andrews-amalgams similarly involve speaker-oriented content. Their interpretation has been ascribed ‘exclamativity’ in the literature. However, relying on recent scholarship on exclamations and in line with claims about illocutionary force in chapter 3 of this thesis, I show that this is not the right way to define

the interpretive effect of Andrews-amalgams. Instead, I argue that the effect (which I define as ‘DIVERGE’) is due to how the predicate that hosts the sluiced CP operates on the interpretation of the *wh*-remnant.

The organization of the chapter is as follows: in order to get a clear picture of what it takes to be a parenthetical, I first introduce this class of constructions in §6.1. The main focus of the introduction is the notion ‘speaker-orientation’. I proceed in §6.2 and §6.3 by showing in detail how we can fine-tune the interpretation of amalgams in the context of various aspects of speaker-orientation. These observations create the empirical basis for the syntactic account of amalgams as sluiced parentheticals with null correlates in chapter 7.

## 6.1 Hallmarks of parentheticals

### 6.1.1 Structural and truth-conditional independence

Although the idea that amalgams are ‘parenthetical’ is quite intuitive, defining what a parenthetical exactly *is*, is particularly hard. As Dehé and Kavalova (2007:1) put it, parentheticals are a ‘motley crew’. For instance: parentheticals need not be full-fledged sentences, but can have the appearance as small as a single constituent, such as appositions (Potts 2005). In addition, although they are often associated with an independent intonational contour (Selkirk 1984, Nespor and Vogel 1986, and also assumed in Potts 2002, 2005), they may also be prosodically integrated (Reis 1995a, 2002, Dehé 2007).

The general agreement seems to be that parentheticals are structurally and semantically independent from their hosts, and that they express information related to the speaker. Espinal (1991:726) observes that there is ‘*a variety of constituents that bear no obvious relationship to the sentences they seem to be included in*’, introducing a set of data containing for instance appositive relative clauses and certain types of adverbial clauses/phrases. All of these constituents (in her terms ‘disjunct constituents’) can be detached from the host sentence without affecting the syntactic structure of the latter. The semantic independence of parentheticals is tightly related to this: in a compositional approach to semantics, the meaning of structurally independent material is not seen as part of the truth-value of what is asserted in their host. This is essentially the reasoning behind Potts (2005) seminal work on the semantics of parentheticals: their meaning corresponds to independent lambda terms. Potts (2005:6) then defines parentheticals as ‘speaker-oriented entailments’ and ‘independent of the *at-issue* entailment’. Potts (2005) employs the term ‘CI’, i.e. conventional implicature, for a variety of parenthetical construals, such as nominal appositions, non-restrictive relatives, expressives, and *as*-parentheticals (Potts 2002). In Potts’ work, this is related to the distinction between conversational and conventional implicatures in Grice (1975). What distinguishes them is that conversational implicatures are related to cooperative principles of conversation. As such, they are central to Grice’s theory of *Maxims*, whereas conventional implicatures are idiosyncratic properties of grammar and lie outside Grice’s

primary (pragmatic) interest.<sup>1</sup> In what follows, I will refrain from using the somewhat confusing term ‘implicature’ and simply speak of ‘parentheticals’, while concurring with the idea that they belong to grammar.

Based on the above, I use the following working definition for parentheticals:

- (1) **Parenthetical** [working definition]  
 A parenthetical is an expression that is structurally and semantically independent of its host, and expresses speaker-oriented content.

The structural independence of the IC in amalgams was discussed at length in chapter 3 of this thesis, I will only briefly summarize the main findings below, along with an illustration of what ‘semantic independence’ and ‘speaker-orientation’ mean in the context of parentheticals. The remainder of this section is primarily concerned with content expressed by the IC, and provides evidence that the IC is inherently speaker-oriented. Before that, I briefly discuss amalgams in the context of the first part of the definition in (1): syntactic detachability and semantic independence.

### Syntactic opacity and detachability

In §3.4 I showed that the IC *modulo* the content kernel appears to be inaccessible for c-command based relationships. Based on this, I concluded that the IC is not embedded in the matrix. In this section, will show that this is a striking parallel with parentheticals. This also explains its root properties (such V2 in Dutch, independent illocutionary force and topicalization within the IC, see §3.1). I repeat some examples from chapter 3 to illustrate the parallel with parentheticals. (2) and (3) are amalgams that show that 1. pronouns in the IC do not give rise to condition B effects, and 2. R-expressions in the IC do not give rise to condition C effects:

- (2) a. The professor<sub>i</sub> told Bea [he<sub>i</sub> didn’t even remember himself how many boring stories].  
 b. The professor<sub>i</sub> was kissing, [the many rumors about him<sub>i</sub> suggest it was Bea].
- (3) a. He<sub>i</sub> had been kissing, [the professor<sub>i</sub> finally admitted it was Bea].  
 b. He<sub>i</sub> had been kissing, [the professor<sub>i</sub> didn’t even remember himself<sub>i</sub> how many of his<sub>i</sub> students].

The inaccessibility of the IC with respect to the matrix clause, combined with the root properties that it exhibits, makes amalgams reminiscent of parenthet-

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<sup>1</sup>The idea that parentheticals should be seen as conventional manner of expressing a (speaker-oriented) comment on what is asserted, is already presented in Strawson (1964:450-1, boldfacing mine), who states that: ‘If there exists any **conventional linguistic means** of doing so, the speaker has both a right to use, and a motive for using, those means. One such means, available sometimes, which comes very close to the employment of the explicit performative form, would be to attach, or subjoin, to the substance of the message what looks like a **force-elucidating comment** on it, which may or may not have the form of a self-ascription.’ For a recent discussion, see Green (2000).

icals.

I illustrate this based on De Vries (2007), which is a systematic study of the (lack) of syntactic interaction between parentheticals and their host sentences. He hypothesizes, in line with observations in Haegeman (1991), Espinal (1991) and others that there is no c-command between matrix and host, i.e. a parenthetical clause is ‘invisible’:

- (4) **Invisibility** [De Vries (2007:207)]  
 A paratactic phrase/clause does not interact with the host in terms of c-command-based relations.

The idea that parentheticals are ‘invisible’ is corroborated by a set of data that are construed to detect the presence of c-command. The diagnostics for c-command are the familiar tests that also were the basis for the exploration of c-command between matrix and IC in §3.4. The examples in what follows are all cited or slightly adapted from De Vries (2007:207-218).

As De Vries observes, matrix clause elements cannot bind pronouns in a parenthetical clause:

- (5) \*Every<sub>i</sub> guest – he<sub>i</sub> just arrived – was talking about Hank.

In addition, pronouns in a parenthetical clause do not give rise to condition B effects with coreferent matrix antecedents (6), nor do referential expressions in a parenthetical clause trigger condition C effects when they corefer with preceding matrix constituents (7):

- (6) John<sub>i</sub> – and who will blame him<sub>i</sub> for it? – bought a new bicycle.  
[ASSERT/QUESTION]

- (7) [Dutch]  
 Hij<sub>i</sub> zei – dat is typisch iets – voor Joop<sub>i</sub> – dat hij nog  
 he said that is typically something for Joop that he yet  
 liever op zijn kop ging staan.  
 rather on his head went stand  
*lit.* ‘He said – this is typical for Joop – that he would rather stand on  
 his head.’

(7) not only shows that R-expressions in parentheticals do not induce condition C violations, it also shows that the parenthetical can have independent force: the host is an assertion and the parenthetical a question. The absence of condition C effects, the impossibility to bind variables and independent illocutionary force are striking parallels with the IC in amalgams witnessed in chapter 3.

In §3.1.1, I briefly addressed so-called V2 relatives. It has been observed in Gärtner (2001, 2002b), that German V2 relatives are inaccessible for binding relations, similar to parentheticals and appositive relative clauses. That is, as Gärtner (2002b:39) (his (19b), my gloss and translation) notes, pronouns

cannot be bound by matrix clause quantifiers in this construction:<sup>2</sup>

- (8) [German]
- a. Kein Professor<sub>i</sub> mag eine Studentin, [die ihn<sub>i</sub> nicht zitiert].  
no professor likes a student-FEM who him not cites  
'No professor likes a female student, who doesn't cite him.'
  - b. \*Kein Professor<sub>i</sub> mag eine Studentin, [die zitiert ihn<sub>i</sub> nicht].  
no professor likes a student-FEM who cites him not

The indicated ungrammaticality applies to the bound variable reading of (8a), that is present in (8b). This is also noted for the Dutch variants of this construction in Zwart (2005) (his (35), my indices, gloss and translation), who more explicitly relates the impossibility of a bound variable reading to the absence of a c-command relation between matrix and V2 relative:

- (9) [Dutch]
- a. Iedereen<sub>i</sub> kent wel iemand die hem<sub>i</sub> geweldig vindt.  
everybody knows AFF somebody REL him great considers  
'Everybody knows somebody who considers him to be great.'
  - b. \*Iedereen<sub>i</sub> kent wel iemand die vindt hem<sub>i</sub> geweldig.  
everybody knows AFF somebody who considers him great

The only reading under which (9b) is (somewhat) acceptable, is what Zwart calls a 'fixed' interpretation, i.e. related to E-type pronouns (see also for similar observations about amalgams with *every* §3.4.2). Both Gärtner (2001, 2002b) and Zwart (2005) take the absence of c-command based relations as an indication that V2 relatives are not actually relative (subordinated) clauses, but should be analysed as paratactic configurations. I readdress their structural proposals in §7.2.<sup>3</sup>

<sup>2</sup>The contrasts in all examples that are cited from Gärtner's work are between V2 relatives and *restrictive* relative clauses. The use of a comma is due to German punctuation conventions, and does not reflect on the status of the relative as non-restrictive or restrictive, as is usually the case in English and Dutch examples.

<sup>3</sup>V2 relatives show notable patterns with respect to condition C effects as well. As is perhaps to be expected taking into account the impossibility of Q-binding in V2 relatives, the following German example (taken from Gärtner 2001, his (12), glosses mine) shows that this condition C can be alleviated in this construction, contrary to similar restrictive relatives:

- (i) [German]
- a. ??In Köln traf er<sub>i</sub> Leute, die Hans<sub>i</sub> nicht erkannt haben.  
in Cologne met he people who Hans not recognized have  
'In Cologne, Hans met people who didn't recognize him.'
  - b. In Köln traf er<sub>i</sub> Leute, die haben Hans<sub>i</sub> nicht erkannt.  
in Cologne met he people who have Hans not recognized

However, Dutch V2 relatives do not behave alike in this respect, as is pointed out in Zwart (2005) (*continued on the next page*):

Recall that the content kernel in amalgams appeared to be transparent. In chapter 4, I have shown that this can be reduced to reconstruction effects within the IC, and do not constitute evidence of a special interaction between the matrix and the IC. In other words, we can now take the IC to be completely opaque (or, ‘invisible’) with respect to the matrix: sentence amalgams belong to the paratactic, non-subordinated domain. Obviously, there is one crucial difference: where all the parentheticals in the above are completely independent with respect to their hosts, amalgams are possibly ungrammatical in the absence of the IC. Differently put, as Espinal (1991:730, her (13)) notes, parentheticals cannot fill the syntactic position of an argument of the host predicate:

- (10) a. \*I have – my goodness!  
       b. I have – my goodness! – no idea what you mean.
- (11) I have no idea what you mean.

Clearly, this does not hold for amalgams: in the absence of the IC, the matrix is incomplete and possibly ungrammatical, depending on what the content kernel is associated with (an argument or adjunct in the matrix):

- (12) a. Bob was hitting the professor {I think it was in the face/you’ll never guess how hard}.  
       b. Bob was hitting the professor.
- (13) a. Bob was hitting {I think it was the professor/you can imagine who}.  
       b. \*Bob was hitting.

In the context of the sluicing approach I defended in the last chapter, we can reformulate this as the ‘missing correlate’ in amalgams. To refresh our memory, regular sluicing configurations involve a correlate XP in the antecedent clause, a constituent that corresponds to the *wh*-phrase or the cleft pivot. Compare (13) to (14):

- (14) Bob was hitting *someone* in the face...  
       a. I think it was the professor ⟨that Bob was hitting⟩.  
       b. You can imagine who ⟨Bob was hitting⟩.

---

(ii)

[Dutch]

- a. \*Hij<sub>i</sub> kent iemand die Jan<sub>i</sub> geweldig vindt.  
       he knows someone who Jan great considers
- b. \*Hij<sub>i</sub> kent iemand, die vindt Jan<sub>i</sub> geweldig.  
       he knows someone who considers Jan great  
       ‘He knows someone who considers Jan to be great.’

However, given that the condition C effect in the regular case in German is also less sharp than it is in either of the Dutch case, this can perhaps be taken as a sign that German and Dutch differ with respect to such effects.



Amalgams lack an overt correlate, and in the position that would normally be occupied by that constituent, the IC appears. I return to this issue in the context of free versus anchored parentheticals in chapter 7. I introduce the difference below in §6.1.2.

### Independence of the main proposition

Closely related to the syntactic detachability of parentheticals is the semantic independence from the proposition denoted by their host. In the literature, this independence has been characterized in various ways. For instance, Corazza (2005) distinguishes between the ‘official’ (matrix) and the ‘background’ (parenthetical) proposition; Blakemore (1990/1991, 2006) (in a relevance-theoretical pragmatic approach) describes what is expressed by the main clause as ‘the explicature of the main relevance of the utterance’, whereas parentheticals have higher-level explicatures; finally, as noted in the above, Potts separates the ‘asserted’ (Potts 2002), ‘*at-issue*’ (Potts 2005) or ‘descriptive’ (Potts 2007) content from ‘CI meaning’, in a multidimensional syntactic/semantic approach.

The basic observation that unites these different characterizations, is that parentheticals express a different kind of information than their hosts do, which I will argue to be inherently speaker-oriented (I discuss this below). I discuss the independence of truth-values of parentheticals based on Potts (2002, 2005). To illustrate the point, I use so-called ‘*as*-parentheticals’ (see Potts 2002, but also Green 2000 and Blakemore 2006 for radically different proposals) because like the IC of amalgams, these parentheticals involve embedding verbs. An example is (15) Potts (2002:652, his (67)):

- (15) Tito, as you know, paid to visit the moon.

Abstracting away from how the semantic denotation of the parenthetical in (15) must be derived, it is clear that the sentence as a whole denotes the same proposition as (16):

- (16) Tito paid to visit the moon.

That is, the truth value of (15) is independent of whether it is actually the case that the addressee *you* in the parenthetical knows that Tito paid to visit the moon. Nonetheless, in Potts’ terminology, (15) conventionally implicates that the addressee possesses this knowledge:

- (17) Tito, as you know, paid to visit the moon.  
 a. Tito paid to visit the moon. (asserted content)  
 b. You know that Tito visited the moon. (conventional implicature)

This extends to *as*-parentheticals with evidential and attitude verbs such as (18):

- (18) Bea, as {Bob said/I heard/I believe}, wants to marry a professor.
- a. Bea wants to marry a professor. (asserted content)
  - b. {Bob said/I heard/I believe} that Bea wants to marry a professor. (conventional implicature)

Although it is indeed the case that the asserted content is true or false independent from the parenthetical, the parenthetical clearly expresses something *about* what is asserted in the host. Potts (2005) generalizes this as a core property of parentheticals: they *comment* on what is expressed by their host. Taking this further, the *as*-parenthetical in (15) adds to the asserted content that this is not only something that the speaker commits to being true, it is also something that the speaker supposes the addressee knows. Informally, we could describe that as a rhetorical means to *strengthen* the conviction that underlies the commitment to the truth of what is expressed in the main clause. By contrast, an *as*-parenthetical such as *as I believe* or *as Bob said* (18) may *weaken* the degree of commitment of what is asserted in the host. Reinhart (1983), Green (2000) make similar observations with respect to the meaning of such parentheticals: Reinhart (1983:181) formulates this as the degree of the ‘speaker’s responsibility’ for what he asserts, and Green (2000:460) approaches parentheticals (*as*-parentheticals specifically) as a way of the speaker to ‘...*undertake assertoric commitment to a content without asserting it*’. This relates to the final property of parentheticals as stated in the working definition above, namely that they are (or should be taken to be) inherently speaker-oriented, which I discuss in §6.1.3.

### 6.1.2 Free *versus* anchored parentheticals

An important distinction that can be made in the class of parentheticals is based on the presence (or absence) of an anchor in their host. In the context of syntactic opacity and truth-conditional independence, it is widely accepted that appositives are a kind of parentheticals (eg. Emonds 1979, Bianchi 1999, Potts 2005, De Vries 2006b, 2007, to appear, Heringa to appear, *inter alia*). I will use the term ‘appositives’ to cover both ARCs (19a) and nominal appositions ((19b), henceforth NAs):

- (19) a. I saw that Bob, who just got fired, was booking a flight to Brazil.  
 b. I saw that Bob, my colleague, was booking a flight to Brazil.

De Vries (2007) demonstrates in great detail that ARCs are invisible (opaque) with respect to their hosts as far as c-command based relations are concerned. In addition, appositives are detachable, and do not affect the truth-conditions of their host: both (19a) and (19b) mean (20), and the presence or absence of the appositional information does not alter that:

- (20) I saw that Bob was booking a flight to Brazil.

Still, there is a difference between those type of parentheticals and examples such as (21):

- (21) Bill – and this so typical – was dating several women at the same time.

That is, ARCs and appositions express information about a particular constituent that is part of the matrix clause, namely *Bob* in (19). Put differently, this constituent is an anchor, and ARCs and appositions are ‘anchored parentheticals’. By contrast, the parenthetical phrase in (21) is not connected to anything specifically in the matrix clause. I will call these parentheticals ‘free’. This rough distinction between free and anchored parentheticals suffices for now, for more fine-tuned distinctions related to matrix-anchoring, backgrounding and parentheticals, I refer to De Vries (2009b).

Turning to amalgams, it seems quite intuitive that the IC expresses something about a particular constituent in the matrix, namely the constituent that is felt as ‘missing’:

- (22) Bill is dating [you’ll never guess how many women] at the same time.

Informally, whatever is intended by *you’ll never guess* expresses something about the understood object of *dating* in the matrix, i.e. it is comparable to ARCs and appositions in this respect.

Recall now from chapter 3, §3.2 in particular, that the IC is distributed in accordance with the category of the content kernel:

- (23) a. Bill is dating [you’ll never guess how many women] at the same time.  
 b. \*Bill is [you’ll never guess how many women] dating at the same time.  
 c. \*Bill [you’ll never guess how many women] is dating at the same time.

This is a glaring contrast with the positional freedom of free parentheticals, which can be inserted in several positions (arguably giving rise to subtle interpretation differences):

- (24) a. Bill – and this is so typical – was dating several women at the same time.  
 b. Bill was dating – and this is so typical – several women at the same time.  
 c. Bill was dating several women – and this is so typical – at the same time.

However, it does seem to fit in with the more restricted behavior of anchored parentheticals. That is, appositional constructions appear to form a constituent together with their anchor: the anchor cannot move and strand the ARC or apposition. It should be noted straight away that the present discussion about

movement does not concern *extraposition* of appositions (for discussion, see De Vries 2009b). I illustrate this for Dutch appositions when we topicalize the anchor (the examples are adapted from De Vries 2009b):

- (25) [Dutch]  
Ik heb Joop, onze buurman, gezien.  
I have Joop our neighbour seen  
'I've seen Joop, our neighbour.'
- (26) \*Joop heb ik —, onze buurman, gezien.  
Joop have I our neighbour seen

Clearly, this is impossible: the only way the anchor *Joop* can be topicalized is by moving anchor and apposition:

- (27) [Joop, onze buurman] heb ik gezien.  
Joop our neighbour have I seen  
'Joop, our neighbour I have seen.'

In the parenthetical analysis pursued in chapter 7, I argue that amalgams involve empty anchors, and that these correspond to the 'missing' constituent in their matrix clauses. Or, to relate this to the sluicing generalization presented in the previous chapters, to a null correlate of the remnant of sluicing.

### 6.1.3 Inherent speaker-orientation

Speaker-orientation is taken to be a defining property of parentheticals in Potts (2002, 2005, 2007), and I will argue here that this is essentially correct. It should be pointed out that the term 'speaker-orientation' itself was introduced in the context of its counterpart, namely 'subject-orientation' in Reinhart (1983) (see also Jackendoff 1972). Reinhart is primarily concerned with constructions of the type that Ross (1973) dubbed 'slifting'. In the slifting construction, a complement clause precedes rather than follows its selecting verb (often a *verbum dicendi*) and the subject. Another common term for this construction is (sentence-final) *comment* clause, and they are often regarded as parentheticals. According to Reinhart (1983) and Corver and Thiersch (2001), such comment clauses are not necessarily speaker-oriented. Unfortunately, the terminology in terms of *orientation* is somewhat misleading. That is, they concern the point of view of what is said in the complement clause, which may be the speaker or the subject of the comment clause, and not the point of view in the comment clause itself. For the present purposes, I will distinguish between a quasi-quotative reading and evidential reading (in agreement with Rooryck 2001). Only the latter can be seen as expressing epistemic modality. I will show later on that Horn-amalgams only allow for this kind of reading.

The following example of a sentence-final comment clause (28) allows for two readings, as indicated by the two paraphrases ('≈'):

- (28) Bill kissed Bea, Bob said.  
 ≈ Bob said: “Bill kissed Bea”.  
 ≈ According to Bob, Bill kissed Bea.

The first paraphrase corresponds to the quasi-quotative reading (here paraphrased as direct speech): the speaker reports what Bob said. In this case, the point of view is the subject of the comment clause, not the speaker. It should be pointed out, however, that the deictic perspective is still the speaker's. The term *quasi-quotative* abstracts away from direct quotation and the kind of quotation that is known as ‘free indirect discourse’ (Banfield 1973, 1982, Reinhart 1983).<sup>4</sup> The relevant distinction is that the assertion that Bill kissed Bea is made by Bob, not the speaker. By contrast, in the second reading, the speaker asserts that Bill kissed Bea, and the comment clause can be understood as additional support for this claim, i.e. the use of the *verbum dicendi* *say* is *evidential* in this reading. As such, the comment clause expresses a form of epistemic modality, reflecting the source of the knowledge that underlies the speaker's assertion. When the comment clause is introduced by *or so*, the quotative (or in Reinhart's terms subject-oriented) reading is directly excluded (Reinhart 1983), which is confirmed by the fact that *or so* cannot be used to introduce the reporting clause in the quotation of direct speech:

- (29) Bill kissed Bea, or so Bob said.  
 ≈ According to Bob, Bill kissed Bea.  
 (30) “I didn't kiss Bea”, (\*or so) Bill said.

Reinhart (1983) and Corver and Thiersch (2001) argue that subject-oriented comment clauses behave differently from their speaker-oriented counterparts with respect to various syntactic relationships. For example, only subject-oriented comment clauses can bind a variable or reflexive in the clause that hosts them (the examples below are based on similar examples in Corver and Thiersch 2001, Rooryck 2001). The impossibility of introducing the comment clauses in (31) and (32) by *or so* provides additional evidence that a speaker-

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<sup>4</sup>The difference between direct quotation and free indirect style (found in narrative contexts) is precisely the deictic perspective, and is directly visible when we change (28), which was purposely construed the way it is, into a sentence that has to mean that Bob kissed Bea. This can be done by a direct quote (ia) or by using free indirect style (ib):

- (i) a. “I kissed Bea”, Bob said.  
 b. He<sub>i</sub> kissed Bea, Bob<sub>i</sub> said.

The deictic perspective of the quote in (ia) is Bob, so the 1<sup>st</sup> person pronoun *I* refers to *Bob* and not to the speaker. By contrast, the deictic perspective in (ib) is the speakers, hence the use of a coreferring 3<sup>rd</sup> person pronoun to express that Bob kissed Bea. Interestingly, the form in (ia) can also be used in free indirect discourse:

- (ii) I kissed Bea, Bob said.

In this case, the deictic perspective is the speaker. Hence, the sentence means that Bob said that the speaker of (ii) kissed Bea.

oriented reading is excluded in these cases:

- (31) They<sub>i</sub> would get fired, (\*or so) everyone<sub>i</sub> expected.  
 (32) ?\*This was the most horrible picture of herself<sub>i</sub>, (\*or so) Bea<sub>i</sub> said.

These data suggest that c-command based relationships can somehow be established. In Ross' slifting proposal, where these examples are derived via movement of the complement clause, such effects are indeed expected and can simply be explained by reconstruction. However, these data are reported to be rather marginal, and seem particularly hard to construe: in (31) it is hard to get the intended bound variable reading (which needs to be established backwards), and for (32) it was reported that the use of a coreferent pronoun (*her*) is considerably better. In other words, the evidence that a quotative comment clause (or: a reporting clause) is syntactically more transparent than its evidential counterpart, is notably scarce. More importantly, regardless of the way *say* is understood (quotative or evidential), the comment clause itself reflects the point of view of the speaker. The relevant distinction then seems to be that only in the evidential reading, the comment clause expresses epistemic modality. I will show below that Horn-amalgams in which the *it*-cleft is embedded under *verba dicendi*, this is the only reading that is possible, corroborating Lakoff's original observation.

In sum, I adhere to the claim that speaker-orientation should be regarded as a hallmark of parentheticals, in agreement with Potts' assumptions of CIs (see also Reis 1995a, 2002 for discussion). Related to the discussion of Potts' distinction above, I will distinguish between what is expressed in the host clause and use '=' if this content is asserted (as was the case in the examples used so far), and the additional speaker-oriented information expressed in parentheticals '←', abstracting away from the terminology specific to his work:

- (33) Bob kissed, as Bea said, many women in his bachelor years.  
       = Bob kissed many women in his bachelor years.  
       ← Bea said that Bob kissed many women in his bachelor years.

Importantly, I will take a narrow view on what 'speaker-orientation' means. Clearly, the quotative and the evidential reading associated with regular comment clauses such as (28), *both* involve the speaker at some level. In terms of Haegeman (2006), discussed in §3.1.3, 'speaker deixis' (SD) as a layer in the CP is always present under both readings. I readdress this in §7.2 in relation to the syntactic configuration I propose in chapter 7.<sup>5</sup> However, I will only refer to the *evidential* (i.e. the modal) reading as 'speaker-oriented', since this is the reading that reveals the speakers *attitude* about what is said, which is in fact a further factorization of anchoring to speaker. Interestingly, Doron (1991)

<sup>5</sup>See also Giorgi (2010), who speaks of (temporal) 'speaker coordinates' and 'C-speaker' in a discussion of indexicality and Double Access Readings (Abusch 1997). Central to these (to my knowledge independent) proposals is the claim that the speaker-anchoring should be represented in syntax.

argues for a similar distinction (albeit in the context of free indirect discourse, which is also discussed in Reinhart 1983, but will be ignored for the present purposes). Crucially, Potts' *as*-parentheticals only allow for this reading, and not for the quasi-quotative reading:

- (34) Bob kissed, as Bea said, many women in his bachelor years.  
 # Bea said: "Bob kissed many women in his bachelor years".  
 ≈ According to Bea, Bob kissed many women in his bachelor years.

Notice that this disambiguates paraphrase of the speaker-oriented content in (33), which in itself allows for a quasi-quotative reading. In what follows, I will use the unavailability of the quasi-quotative reading as a diagnostic for the parenthetical status of the IC.

In the section to come, I will first show that amalgams always express speaker-oriented information. Based on the discussion above, and the assumptions in Potts (2005), I will regard this as evidence that they are parentheticals. I start out by observing that the *it*-cleft in Horn-amalgams is obligatorily part of an intensional context, and generalize this to epistemic modality. I then show that *verba dicendi* only allow evidential readings. Finally, the fact that epithets can be licensed as subjects of the embedding predicate of the IC is argued to be an indication of speaker-orientation *par excellence*.

## 6.2 Inherent speaker-orientation in Horn-amalgams

### 6.2.1 Speaker-orientation via epistemic modality

A clear piece of evidence that Horn-amalgams typically express speaker-oriented information, is that the *it*-cleft that is part of the IC requires an *intensional* context. That Horn-amalgams are subject to such a restriction has been observed by both Van Riemsdijk (2006b,c) and Grosu (2006, 2008), but was already made explicit in the transformational rule that Lakoff (1974) proposed for this type of amalgam, stating that the cleft should be embedded and express a 'hedged assertion' (see also §2.1). I will take the term 'hedge' as expressing a level of uncertainty of the speaker towards what it said; in the original example of Lakoff, this is reflected by the propositional attitude verb *think*. At first sight, the contrast in (35) seems to confirm that the *it*-cleft in a Horn-amalgams needs to be embedded:

- (35) a. It's Bob who Bea married.  
 b. \*Bea married [it's Bob].  
 (36) a. I {think/believe/guess} it's Bob who Bea married.  
 b. Bob married [I {think/believe/guess} it's Bob].

Also the suggestion that the embedding predicate should express a hedge seems to be correct, as the *it*-cleft in Horn-amalgams resists embedding under *factive*

predicates, as the emotives in (37) show:

- (37) a. I {am surprised/am amazed/regret/realize} it's Bob who Bea married.  
 b. \*Bea married [I {am surprised/am amazed/regret/realize} it's Bob].

Thus, not all propositional attitude verbs can embed the *it*-cleft in Horn-amalgams, only *non*-factives are suited for that job. It is however not the case that 'bare' *it*-clefts are impossible in Horn-amalgams: they need not be embedded under a propositional attitude verb if the copula that connects the cleft pivot with the cleft pronoun, is modal:

- (38) a. It {seems/appears} to be a professor that Bob is hitting.  
 b. Bob is hitting [it {seems/appears} to be a professor].

What (38) has in common with an example that involves a propositional attitude verb (36), is that the IC reflects the cognitive relation that the *speaker* bears to what is said. This is more explicit when the cleft is embedded in a predicate such as *think*, but also the IC in (38) reflects the speaker's uncertainty concerning the identity of the object of Bob's hitting. We can generalize the required intensional context of Horn-amalgams in terms of *epistemic* modality.

That this is the correct way to characterize what is expressed by the IC in Horn-amalgams, is corroborated by the observation that modals that can normally be used to express both epistemic and deontic modality, the latter reading is excluded in Horn-amalgams but not in *it*-clefts. The English verbs *must* and *should* are commonly regarded as ambiguous for a deontic (39a) and an epistemic reading (39b):

- (39) Bob {should/must} be reading David Copperfield at the moment,  
 a. ... he has an exam about 19th century literature tomorrow.  
 b. ... he is reading a book and that is the only book he has.

If such modals are used in *it*-clefts, they allow for both of these readings, but this is not the case in the context of a Horn-amalgam:

- (40) a. It {must/should} be David Copperfield that Bob is reading.  
 b. Bill is reading [it {must/should} be David Copperfield].

That is, *must* and *should* can only be interpreted in relation to the knowledge of the speaker about what Bob is reading, and not in relation to a particular circumstance in which reading David Copperfield is desirable. The exclusion of deontic readings in Horn-amalgams is more clearly visible with verbs that are typically associated with such modality. The Dutch verb *horen (te)* ('ought to') is a verb that is strictly deontic (cf. Diepenveen et al. 2006). The following example shows that the use of *horen* is excluded in the amalgam, but not in the regular *it*-cleft:



- (41) [Dutch]
- a. Het hoort een stuk van Rachmaninov te zijn dat een  
it ought a piece of Rachmaninov to be that a  
kandidaat op het concours uitvoert.  
candidate at the competition out.carries  
'It ought to be a piece (of music) of Rachmaninov that a candidate  
performs at the competition.'
  - b. \*Een kandidaat voert op het concours [het hoort een stuk  
A candidate carries at the competition it ought a piece  
van Rachmaninov te zijn] uit.  
of Rachmaninov to be out

The obligatory presence of an epistemically modalized environment in the IC of Horn-amalgams supports the idea that the IC expresses speaker-oriented information, comparable to parentheticals.

### 6.2.2 *Verba dicendi* and epithets in Horn-amalgams

In addition to propositional attitude verbs, also *verba dicendi* (verbs of saying) can be used to embed the *it*-cleft. In English, these are verbs such as *say* and *claim*. As was shown in the discussion about comment clauses above, these verbs can have a quasi-quotative reading and an evidential reading. Consider first an *it*-cleft that is embedded under such a verb:

- (42) Bea said that it was the professor who Bob killed.  
 ≈ Bea said: "It was the professor who Bob killed".  
 ≈ According to Bea, it was the professor who Bob killed.

Similar to the sentence-final comment clause in (28) above, (42) is ambiguous between a quasi-quotative and an evidential reading. The second reading is for instance triggered in a context where the identity of who Bob killed is disputed. In such a context, expressing (42) can be seen as an evidential use *say*: the speaker could do this to support (or weaken) his claim. Consider now a similar embedding environment in a Horn-amalgam:

- (43) Bob killed [Bea said it was the professor].  
 # Bea said: "It was the professor who Bob killed".  
 ≈ According to Bea, it was the professor who Bob killed.

The verb *say* only has the evidential reading in the amalgam, the IC cannot be understood as reported speech. This is a striking parallel with the behavior of *as*-parentheticals illustrated in (34), and can therefore be taken as evidence that the IC is a parenthetical.

A last piece of evidence for the claim that the IC of Horn-amalgams is speaker-oriented, is that *epithets* can be licensed as the subject of the predicate that embeds the *it*-cleft:

- (44) Bob<sub>i</sub> kissed, [the idiot<sub>i</sub> said it was only one other woman].

Epithets, such as *the idiot* and *the bastard*, are widely assumed to express speaker-oriented information (cf. Corazza 2005 and references cited therein). A common way of using an epithet is in apposition, which is generally analyzed as a parenthetical construal (Corazza 2005, Potts 2005, Heringa to appear *inter alia*):

- (45) Bill<sub>i</sub>, the idiot<sub>i</sub>, fell asleep during the concert.

This sentence conveys two messages: that Bill fell asleep during the concert and that Bill is an idiot. The latter is clearly an opinion of the speaker. It is well-known that epithets in embedded contexts (46) are ungrammatical if they corefer with a local antecedent:

- (46) \*Bill<sub>i</sub> said that the idiot<sub>i</sub> was extremely tired.

At first sight, the ungrammaticality of (46) compared to (44) and (45) seems to follow straightforwardly from the fact that R-expressions in parentheticals do not give rise to condition C violations. However, it is not clear that epithets should be seen as R-expressions (as is claimed in for instance Lasnik 1976), nor is their licensing restricted to contexts in which there is no c-commanding coreferential expression. The latter is illustrated in (47) (examples from Dubinsky and Hamilton 1998:687):

- (47) a. John<sub>i</sub> ran over a man (who was) trying to give the idiot<sub>i</sub> directions.  
b. Through an accumulation of slipups, John<sub>i</sub> (inadvertently) led his students to conclude that the idiot<sub>i</sub> couldn't teach.

For this reason (and more), Corazza (2005) argues that epithets are referentially defective and should not be treated on a par with names or referential definite descriptions, but rather as pronouns, in agreement with Jackendoff (1972) (cf. Dubinsky and Hamilton 1998, Aoun and Choueiri 2000). Instead, the ungrammaticality of examples such as (46) is related to *perspective*, and epithets are *antilogophoric* pronouns. Their pronominal status excludes local antecedents for epithets (i.e. those are ruled out by condition B). The presumed antilogophoricity then entails that they cannot have a non-local antecedent that is also the perspective-bearer (for details, see Dubinsky and Hamilton 1998). Put differently, epithets cannot have a *de se* interpretation: *Bill* in (46) cannot say about himself that he is an idiot. The ungrammaticality of this example should then be seen in the context of the contrast in (48) (the example is from Corazza 2005:24, his (63)):

- (48) a. \*According to John, the idiot<sub>i</sub> is married to a genius.  
b. Speaking of John<sub>i</sub>, the idiot<sub>i</sub> is married to a genius.

Thus, (48a) is ruled out because the epithet has a non-local antecedent, *John*, that is also the bearer of the perspective. This yields a *de se* interpretation of the embedded clause, and this is impossible. In Corazza's terms, epithets necessarily express a *de re* attribution. By contrast, the epithet is licensed in (48b), because the adverbial clause is speaker-oriented (comparable to Haegeman 2002, 2003, 2006's central adverbial clauses). Accordingly, the epithet can have the required *de re* interpretation.

The fact that Horn-amalgams allow for an epithet that is coreferential with the subject in the matrix clause (44), now seems to follow straightforwardly from the claim that the IC is inherently speaker-oriented. Still, there is one interesting complication that I should discuss in relation to the central claim I defended in the previous chapter. Under the assumption that the IC is an elliptical *it*-cleft, the epithet should give rise to a condition C violation in the IC:

- (49) Bob<sub>i</sub> kissed [the idiot<sub>i</sub> said it was only one other woman ⟨that Bob<sub>i</sub> kissed⟩].

In fact, this carries over to the cases with regular pronouns as well, considering the acceptability of (50):

- (50) Bob<sub>i</sub> kissed [he<sub>i</sub> said it was only one other woman ⟨that Bob<sub>i</sub> kissed⟩].

However, this should be seen in the context of similar condition C violations that have been observed in ellipsis that Fiengo and May (1994) account for by so-called 'vehicle change'.<sup>6</sup> That is, the reconstructed NP in the ellipsis site can be realized as the pronominal correlate of the R-expression Fiengo and May (1994:276), and under such assumptions, the internal structure of the IC is as in (51):

- (51) Bob<sub>i</sub> kissed [{the idiot<sub>i</sub>/he<sub>i</sub>} said it was only one other woman ⟨that he<sub>i</sub> kissed⟩].

In sum, the obligatory evidential interpretation of *verba dicendi* to embed the *it*-cleft in the IC, and the possibility of epithets as their subject show that the IC expresses speaker-oriented information. These facts narrow down the observation that Horn-amalgams require an intensional context to an obligatory speaker-oriented use of such a context. I close this section by showing that this intensionality requirement extends to TFRs (a construction type I discussed at various points in chapter 3), although those are not necessarily speaker-oriented. In §6.2.4, I argue that this puts Van Riemsdijk's multidominance

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<sup>6</sup>Their classic example is (i):

- (i) Mary introduced John<sub>i</sub> to everyone that he<sub>i</sub> wanted her to ⟨introduce John<sub>i</sub> to⟩.

Also here, *John* in the ellipsis site is clearly c-commanded by a coreferential pronoun, but the example is impeccable.

account, in which the content kernels are syntactically shared by both matrix and IC/TFR, in an untenable position.

### 6.2.3 A note on the obligatory intensionality in TFRs

Under the view that Horn-amalgams should be analysed on a par with TFRs (Van Riemsdijk 2006b,c), it is unsurprising that the intensionality requirement holds for this construction type as well. Consider the contrast between (52) and (53):

- (52) \*Bob sold [what is a Stradivarius] to a museum.  
 (53) a. Bob sold [what he claimed to be a Stradivarius] to a museum.  
       b. Bob sold [what seemed to be a Stradivarius] to a museum.

Such an intensional operator may be provided by *verba dicendi* (53a), or modals (53b). Based on a similar set of data, Grosu (2003) formulates this in terms of a felicity condition on TFRs, his term ‘TN’ stands for transparent nucleus, and refers to what I have called the content kernel:

- (54) **Felicity condition on TFRs** [Grosu (2003:279)]  
 The small clause whose predicate is the TN is felicitous just in case it is in the scope of a TFR-internal intensional operator.

This is especially interesting in the context of the data discussed in chapter 3 that show TFRs can be modified by illocutionary adverbs such as *frankly*. I repeat the example from §3.1.3:

- (55) Bill is [what I {frankly/honestly speaking} wouldn’t exactly call an ideal son in law].

That is, TFRs can express speaker-oriented content, similar to Horn-amalgams. However, Wilder (1998) (based on McCawley 1988) notes that the following TFR is in fact ambiguous for two readings:

- (56) John bought [what he took to be a guitar].  
       ≈ John bought the thing that he thought was a guitar.  
       ≈ John bought a guitar, or so he thought.

Wilder relates the first reading to the interpretation of regular free relatives (FRs). In this reading, *he took to be* restricts the interpretation of the understood definite object of *bought*.<sup>7</sup> The second reading is the ‘transparent’ reading. Here, the object of *bought* is indefinite, and *he took to be* is interpreted as a ‘metalinguistic’ modification of that indefinite object (see McCawley 1988:733).

<sup>7</sup>It should be noted that the construction under this reading is not regarded a TFR to begin with in Van Riemsdijk (2000a, 2006a), i.e. Van Riemsdijk takes the transparency of the predicate as part of the definition of TFRs, and consequently draws the desired parallel with Horn-amalgams.

Put differently, it is interpreted as some comment on the assertion that John bought a guitar: the TFR is speaker-oriented, and closely resembles the speaker-oriented comment clauses discussed in the above (recall that the use of *or so* induces this reading in the case of comment clauses).

We can now see a difference between Horn-amalgams and TFRs: only the first *necessarily* express speaker-oriented information. I show this by a TFR and a Horn-amalgam that have *verba dicendi* as intensional contexts:

- (57) Bob sold [what he claimed to be Stradivarius] to a museum.  
 $\approx$  Bob claimed: “The thing that I sold to the museum was a Stradivarius”.  
 $\approx$  According to Bob, the thing that he sold to the museum was a Stradivarius.
- (58) Bob sold [he claimed it was a Stradivarius] to a museum.  
 $\#$  Bob claimed: “It was a Stradivarius that I sold to the museum”.  
 $\approx$  According to Bob, it was a Stradivarius that he sold to the museum.

Thus, *claim* in (57) is quotative in the FR reading in Wilder’s sense (the first paraphrase), but evidential in the second paraphrase, and only the latter is speaker-oriented. As was shown above, *claim* in the Horn-amalgam can only be evidential (58). Finally, notice that TFRs also allow for epitets as their subjects, coreferent with the matrix subject:

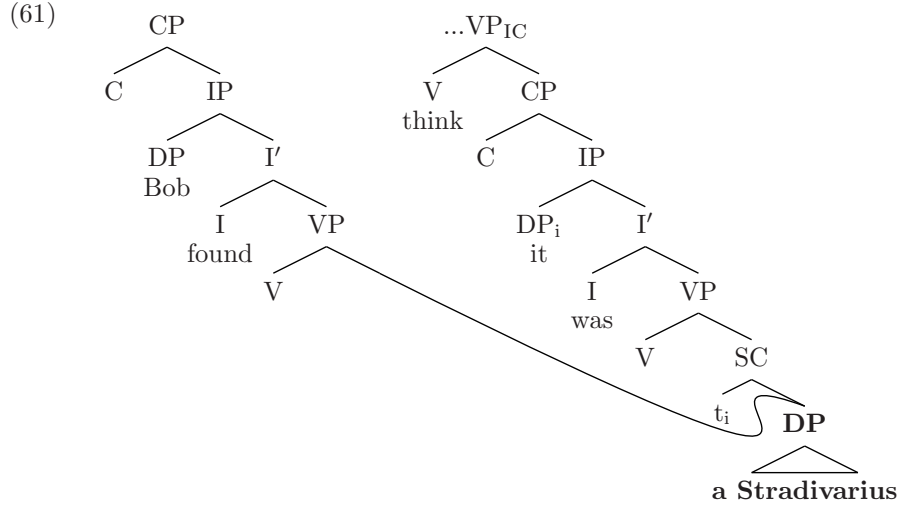
- (59) Bob sold [what the idiot<sub>i</sub> (mistakenly) took to be a Stradivarius] to a museum.  
 $\#$  Bob sold the thing that the idiot took to be a Stradivarius.  
 $\approx$  Bob sold a Stradivarius to a museum, or so the idiot thought.

In such a case, the TFR is necessarily speaker-oriented. It cannot have the FR reading, presumably because this yields a paraphrase in which the epithet corefers with the perspective-bearer. In sum, both Horn-amalgams and TFRs require an intensional context, but only Horn-amalgams are inherently speaker-oriented. Whether it should be concluded that TFRs can be parentheticals, is an issue that needs more careful examination. Their overall transparency for c-command based relations with the matrix (see §3.4) is a serious problem for such a generalization. I leave this issue open for future discussion: the proposal for amalgams in this thesis is not intended to reflect anything about the structure of TFRs.

#### 6.2.4 Trouble ahead for the multidominance theory

The observation that Horn-amalgams and TFRs require an intensional context creates an awkward problem for multidominance analyses that has been addressed in particular in Grosu (2008). For convenience, I repeat the representation of such an analysis below for a Horn-amalgam (60):

(60) Bob found I think it was a Stradivarius.



In this analysis, the content kernel is interpreted in two positions: as the predicate of the small clause (recall that this approach does not assume a full-fledged *it*-cleft in the IC), and as the object of *found* in the matrix. In case of the latter, it is *outside* the scope of the intensional operator that is present in the IC, here *think*.

In the multidominance approach, the Horn-amalgam (60) is the amalgamation of the following independent sentences, where *Stradivarius* is shared:

(62) Bob found **a Stradivarius**. I think it was **a Stradivarius**.

Consequently, this analysis *falsely* predicts that the following inference can be made from the Horn-amalgam:

(63) Bob found [I think it was a Stradivarius].  
 $\nrightarrow$  Bob found a Stradivarius.

This is clearly not how the sentence is understood: the only possible inference that can be made from the Horn-amalgam is as in (64):

(64) Bob found [I think it was a Stradivarius].  
 $\rightarrow$  Bob found something.

A similar argument can be made against a multidominance analysis of TFRs, as this account predicts that similar inferences can be made for those, which is clearly not the case (65):

(65) Bob found what he took to be a Stradivarius.  
 $\nrightarrow$  Bob found a Stradivarius.

Again, this is not a possible inference. The only inference that can be made from (65) is that Bob found *something*, just like what we witnessed for Horn-amalgams above. Notice that this is independent of the kind of reading of the TFR: it is the intensional context, regardless of its orientation, that blocks the interpretation of the content kernel in its associated position in the matrix clause. This is an awkward problem for this analysis, since such a context is obligatorily present in both Horn-amalgams and TFRs. The only way I see how this can be circumvented is by stipulating a special rule that interprets a multiply dominated element only in one of its positions, for instance in the last position it was remerged, presuming this is the IC in the derivation in (61).

However, invoking such a special rule is highly undesirable given the other construction types for which a multidominance account via external remerge has been proposed in the literature, in particular Right Node Raising (RNR) constructions (Van Riemsdijk 1998b, Wilder 1999, 2008, Bachrach and Katzir 2009, Kluck 2009, Kluck and de Vries to appear) and across-the-board *wh*-movement (ATB) constructions (Citko 2005). Take for example the RNR construction (66), where the direct object *a copy of David Copperfield* is associated with both the object position of *read* in the first conjunct and the object position of *burned* in the second conjunct.

(66) Bob read and Bill burned a copy of David Copperfield.

In a multidominance analysis, this constituent is assumed to be shared, i.e. externally remerged in whatever conjunct is assumed to be derived secondly. This solves the problem that the first conjunct in such a construction seems to lack the object. The reason is plain and simple: *read* in the first conjunct selects for an object, and the semantic computation crashes in case the syntactic output does not provide the selected argument (say, for type reasons). However, the multidominance theory correctly predicts that the following inferences can be made from the RNR construction in (67):

(67) Bob read and Bill burned a copy of David Copperfield.  
       → Bob read a copy of David Copperfield.  
       → Bill burned a copy of David Copperfield.

Indeed, the sentence is in fact ambiguous between a reading in which it is same copy of David Copperfield that is read and burned (although this reading is more pressing in the case of a definite object), and a reading where there are two copies (for extensive discussion of the interpretation of shared material in RNR configurations, see Zwarts 1986, Schwabe and von Heusinger 2001). Put differently, creating a rule to avoid that the shared material is interpreted in both positions would diminish the purpose of analyzing the construction in terms of multidominance to begin with.

The interpretation problem of the specific proposals of Van Riemsdijk (1998b, 2000a, 2006b,c) and Guimarães (2004) is in part related to the fact that both these proposals fail to account for the fact that the IC expresses a fundamen-

tally different kind of information than the matrix clause. Both accounts yield multirooted representations as the output of syntax. In the absence of specific interpretation rules, these are simply independent clauses that do not bear any particular relation to each other. Although this straightforwardly accounts for the lack of structural (i.e. c-command based) relations between matrix and IC, there is no reason why one of the roots in an amalgam should be restricted to express speaker-oriented information (contrary to RNR and ATB constructions). In Guimarães (2004) informational ‘behindness’ of the IC is stipulated in the order in which the numerations from which the respective roots are derived are used, but nothing in principle makes the IC inherently express speaker-oriented content. This is precisely what the parenthetical approach in chapter 7 seeks to account for: amalgams do not constitute two parallel messages, but rather an assertion (matrix clause) and a comment that concerns part of that assertion (the IC).

### 6.3 The interpretation of Andrews-amalgams

#### 6.3.1 Refining Lakoff’s intuition

Lakoff (1974) states that the IC in Andrews-amalgams has ‘the force of an exclamation’. In this section, I will argue to the contrary, and claim that the special interpretation is due to the embedding environments. The discussion here expands on the discussion in §3.1.3, where I argued that illocutionary force is a pure root phenomenon. However, it is easy to see where Lakoff was coming from, taking into consideration the intuitive parallel between a *wh*-exclamative (68) and an Andrews-amalgam (69):

(68) How (very) many women Bob kissed!

(69) Bob kissed [you’ll never guess how many women].

Both examples express that the number of women Bob kissed is unexpected relative to a particular (contextually given) standard in the eyes of the speaker. The expression of surprise or amazement towards a degree is typically associated with exclamatives, so in that sense the parallel drawn in Lakoff (1974) seems justified. In addition, various people, in particular Nouwen (2005), Katz (2005), Potts and Schwarz (2008) and Castroviejo (2008) have explicitly related such interpretations to expressive, speaker-oriented content, or ‘CI meaning’ in the sense of Potts (2005). The claim that the IC in Andrews-amalgams is a parenthetical then seems to fit nicely with Lakoff’s claim that they involve exclamative force.

However, contrary to (68), Andrews-amalgams always involve embedding. Worse still, the IC cannot be construed out of a (sluiced) root *wh*-exclamative, but necessarily involves an embedding predicate:

(70) \*Bob kissed [how very many women ⟨Bob kissed⟩!].



This touches upon a debate in the recent literature about exclamatives in root and embedded contexts, which I discuss in this section. The aim of this section is to show that there is indeed a parallel between (68) and (69), but that this should not be taken as evidence that the latter is exclamative. Relying on insights in Zanuttini and Portner (2003), d'Avis (2002) and Abels (2004b, 2010), I will relate the particular interpretation of Andrews-amalgams to their embedding verbs in §6.3.2.

### Exclamatives and their interpretation

Exclamatives have traditionally been regarded as a kind of illocutionary force or speech act Searle (1969), Sadock (1974). As is discussed already in §3.1.3 of this thesis, there is no straightforward correlation between (syntactic) clause type and illocutionary force (Gunlogson 2001, Zanuttini and Portner 2003). In fact, Zanuttini and Portner (2003) argue that there is no exclamative clause type: exclamatives (as a speech act) can be derived from *wh*-interrogatives. Consider (71) and (72):

- (71)    a.    How very tall Bea is!
- b.    (Boy,) Did Bea wear a yellow dress!
- (72)    a.    How tall is Bea?
- b.    Did Bea wear a yellow dress?

The formal parallel between exclamatives (71) and interrogatives (72) is reason for Zanuttini and Portner (2003) to derive *wh*-exclamatives as *wh*-interrogatives, rather than to associate exclamatives with a particular clause type (see also Huddleston 1993, Gutiérrez-Rexach 1996, d'Avis 2002, Sæbø 2010). In Zanuttini and Portner's approach, the interpretation of exclamatives is due to the presence of a FACT (factive) operator in the C° and a pragmatic effect they call 'widening' that is associated with it (i.e. the scalar implicature that forces an 'extreme degree' reading typical for exclamatives). I will return to both of these aspects (not to the specific theoretical assumptions in Zanuttini and Portner 2003) in the context of embedded exclamatives below.

In agreement with Kaplan (1999), Rett (2008b), I take exclamation to be a speech act: the function of an exclamative is to express surprise or another attitude on the speaker's behalf, even if this is insincere (see also Searle 1969, Kaplan 1999). I will illustrate this point by what is noted in Rett (2008b:143-4). Based on the observation in Zanuttini and Portner (2003:58) that exclamatives do not necessarily give rise to a sense of surprise or amazement, she argues that an exclamation such as (73) can be used felicitously even in the absence of sincere surprise:

- (73)    Oh, what a nice apartment you have!

That is, the speaker may utter this to someone whose new apartment he visits, also if he normally considers to have great taste for decoration, and is not

sincerely surprised by how nice the apartment looks. In addition, the speaker could actually really dislike the apartment and still utter (73). In both cases, the use of an exclamative does not come from sincere surprise, but is used to be polite. The relevant observation is that (73), precisely because it is exclamative, is perceived as if there is genuine amazement: the addressee will consider it a compliment. In explicitly approaching exclamatives as speech acts, the question whether they can be embedded while preserving their illocutionary force, becomes more pressing. This is important, because Lakoff's assumption that the IC has exclamative force implies the existence of embedded speech acts, contrary to what I have argued in chapter 3 of this thesis. I return to this below.

The interpretation of exclamatives has been argued to involve at least two layers, one of which can be called the 'propositional' (i.e. truth-conditional) layer, and the other expressing some (emotional) attitude with respect to the state of affairs (Kaplan 1999, d'Avis 2002, Potts and Schwarz 2008). The latter is often described in terms of *surprise*, which is in turn closely related to the intuition that the *wh*-phrase expresses an extreme degree of some property (in particular, see Castroviejo 2006, Rett 2008a,b for accounts that explicitly analyse exclamatives as degree constructions). In the case of root exclamatives, the attitude towards the propositional content always belongs to the speaker. Consider (74):

(74) How tall Bea is!

At the propositional level, (74) conveys that Bea is tall. In addition, it expresses that in the eyes of the speaker, the level or degree of being tall is (extremely) high with respect to some scale. Zanuttini and Portner (2003:47) argue that "*exclamatives introduce a conventional scalar implicature to the effect that the proposition they denote lies at the extreme end of some contextually given scale*", and call this effect *widening*, d'Avis (2002) distinguishes between the regular proposition and a 'norm-proposition', and Rett (2008a,b) considers 'evaluativity' to be a restriction on the felicity of exclamatives. The latter relies on the observation that the speaker can only utter surprise about a degree that '*... exceeds a relevant contextual standard*' (Rett 2008a:608). For the present purposes, I will adopt the basic distinction between the basic proposition, i.e. the information that can be inferred from an exclamative that is non-expressive, and the attitude that is expressed in exclamatives:

(75) How tall Bea is!  
       Bea is tall.  
       ← The degree of Bea's tallness exceeds what is expected.

The 'extreme *degree* interpretation' (i.e. the speaker-oriented content) has been captured in various proposals in the literature (Kennedy 2001, Katz 2005, Kennedy 2007, Rett 2008b, *inter alia*). Clearly, this interpretation is what motivated Lakoff to ascribe exclamative force to Andrews-amalgams. I will

elaborate on Rett (2008b)'s notion of EXCEED to capture the interpretation in Andrews-amalgams. However, I will not relate this meaning to illocutionary force, but to the embedding environment that hosts the *wh*-element in the IC.

**The problem of the factivity argument and the presumed embeddability of exclamatives**

As is pointed out above, it is generally agreed that (root) exclamatives do not assert their propositional, non-expressive content. In the literature, it has been proposed that this content is *presupposed* (Grimshaw 1979, Zanuttini and Portner 2003), a view that has recently be defended in Abels (2010), or alternatively that exclamatives denote *facts* rather than propositions (the distinction being that truth is not predicable of facts, unlike propositions, see Ginzburg and Sag 2001, Castroviejo 2006). Grimshaw (1979) (relying on observations in Kiparsky and Kiparsky 1970, Elliot 1974) suggests that exclamatives involve a factive presupposition. In the presuppositional account, this is tightly related to the observation that exclamatives are incompatible with 'speaker ignorance' (77), and can only be embedded under *factive* predicates such as emotives (78) (the use of *very* disambiguates the reading of the embedded clauses, the interrogative reading is excluded):

- (76) How (very) tall Bea is!  
       >> Bea is tall.
- (77) \*{I don't know/I wonder} how very tall Bea is.
- (78) It's {amazing/surprising} how very tall Bea is.

I will make no specific assumptions on the denotation of the propositional content of root *wh*-exclamatives. For the present purposes, Villalba (2008:24)'s basic formulation suffices to describe the two relevant layers of information in root exclamatives:

- (79) **Propositional content conditions on exclamatives**
  - a. speaker expresses the proposition that *p* in the utterance of T, and
  - b. expressing that *p*, the speaker predicates an emotional attitude towards a certain state of affairs or degree.

However, the non-trivial implication of using embeddability under *amaze* and *surprise* as a test to identify exclamatives, is that the embedded clause is taken to be an exclamation. As Castroviejo (2006) notes, in both cases indeed express an attitude towards a state of affairs or degree, but only in (76) it is a (non-verbal) speech act. As such, it *always* expresses the attitude of the speaker. In the embedded cases (especially the ones described in d'Avis 2002, Abels 2004b, 2010, Sæbø 2010), this can be disputed. After all, in (80), the speaker's attitude is asserted and not exclaimed, and in (81) the attitude is of the matrix subject *Bill*, and not the speaker:

- (80) It's surprising how very tall Bea is.  
 (81) Bill was amazed how very tall Bea is.

That is, in (81) speaker reports Bill's surprisal towards Bea's degree of tallness, it does not (necessarily) express surprisal or any emotional attitude on the speaker's part, and does not function as an exclamative speech act. This is in line with what I have argued in §3.1.3: a principled distinction needs to be made between clause type and illocutionary force. Since the latter is inherently a root phenomenon, there is no such thing as an embedded exclamation.

This creates a problem for theories that use embedding under certain predicates as a diagnostic for exclamatives (i.e. the factivity test, used specifically in Grimshaw 1979). In the more recent literature, it has been argued convincingly that the 'exclamative feel' associated with (80) and (81) follows from their embedding predicates, and not from the presumed exclamative complement clause (Huddleston 1993, Lahiri 2002, d'Avis 2002) and Abels (2004b). As I discuss below, the interpretive effect in Andrews-amalgams must be explained in a similar fashion.

#### **Embedded interrogatives and the expression of amazement**

The view that the embedded cases differ from root exclamatives is supported by the fact that the first allow more kinds of *wh*-phrases than the latter. Recall that root *wh*-exclamatives have alternatively been described as a type degree constructions (Castroviejo 2006, Rett 2008a,b). This captures the facts in (82), where the *wh*-phrases do not range over degrees, which is not easily explained in the interrogative approach (Elliot 1974, Grimshaw 1979, Zanuttini and Portner 2003). The data are from Castroviejo (2008:5):

- (82) a. How tall Bill is!  
       b. #Who I saw at that party!  
       c. #What I found in my room!  
       d. #Where you went on vacation!
- (83) It's amazing...  
       a. ... how (very) tall Bill is.  
       b. ... who I saw at that party.  
       c. ... what I found in my room.  
       d. ... where you went on vacation.

This then suggests that more types of *wh*-exclamatives are possible in embedded contexts than there are in root contexts, a somewhat embarrassing consequence of approaches that assimilate root exclamatives to interrogatives (for this point, see also Lahiri 2002's seminal work on embedded questions). Still, examples such as (83) express an emotional attitude towards the main proposition similar to root *wh*-exclamatives, and this requires additional explanation if we do not take the embedded clause to be exclamative.

Both d'Avis (2002) and Abels (2004b) argue that the particular interpreta-

tion is due to the semantics of predicates like *be amazed/be surprised at*. The complement clause itself should not be regarded as *wh*-exclamative, but as a *wh*-interrogative. This relies on observations in Heim (1994), and is tightly related to what the holder of the attitude has to know, i.e. the answer to the *wh*-question. This can be explained if we compare (84) to (85):

- (84) It surprised Bea who Bob dated.
- (85) Bea knows who Bob dated.

In (85), Bea has to know who Bob dated, as well as who he didn't, this is known as 'strong exhaustivity' (Groenendijk and Stokhof 1982, 1984). As Heim observes, this is not the case in *wh*-complements of *surprise*-predicates: in (84) Bea only has to know who Bob has dated, i.e. the weakly exhaustive answer to the question who Bob has dated. This is corroborated by the fact that the following example is well-formed (see also Heim 1994, Sharvit 2002):

- (86) It surprised Bea who Bob dated, but it didn't surprise her who he didn't.

d'Avis (2002) then proposes that there is a norm proposition (such as 'Bob dated Jane') that must contradict this weak exhaustive answer, otherwise there would be no surprise. In addition, this answer cannot correspond to an empty set: Bea cannot be surprised at who Bob dated if there is no person that he dated. Notice that this is not true of *know*-predicates, (86) can be true even if Bob has not dated anybody and Bea knows that. In d'Avis' terms, the *wh*-phrase must be *instantiated*.<sup>8</sup> In the Avis-Abels approach to data such as (84), then, the exclamative interpretation is due to the predicate (Abels 2004a calls such predicates 'exclamative' predicates but treats the embedded clause as a question, abstracting away from the issue of embedded exclamation).

In sum, there is reason to believe that *wh*-clauses embedded under particular predicates give rise to an interpretive effect *reminiscent* of exclamatives, but this is due to the semantics of these predicate and not related to the speech act exclamation. Extending this to Andrews-amalgams, this means that I assume the IC to involve a sluiced interrogative CP, and not an embedded exclamative

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<sup>8</sup>A detailed discussion of how the semantics of the embedding predicates can be derived in relation to the semantics of questions is beyond the scope of this thesis, but see Beck and Rullman (1999), Abels (2004b), Castroviejo (2006). Interestingly, Abels (2004b) derives the impossibility of embedding polar questions in surprise-predicates based on these assumptions, relying on the observation that these predicates give rise to presuppositions: the answer cannot be an empty set (d'Avis' instantiation requirement). As a consequence, Grimshaw (1979)'s observation of the contrast in (77)-(78) above, can be explained by a systematic presupposition failure in (ib):

- (i) a. Bea wondered whether Bob ever got married.
- b. \*Bea was amazed whether Bob ever got married.

That is, this is not due to the selectional properties of the respective predicates, but due to their presupposition: (ib) is then unusable (Abels 2004b:210) rather than ungrammatical.

(something that was already tacitly assumed in the previous chapter). This will account for the observation that Andrews-amalgams may give rise to surprise-readings, but do not necessarily involve such an interpretation.

### 6.3.2 Speaker-orientation in Andrews-amalgams: DIVERGE

In this section, I will discuss the role of embedding predicates in Andrews-amalgams on a par with the ‘embedded exclamatives’ addressed above. Partially relying on observations in d’Avis (2002), Rett (2008b) and Sæbø (2010), I will argue that Lakoff’s intuition can be reduced to the use of particular embedding predicates that give rise to a reading in which the *wh*-phrase (i.e. the content kernel in amalgams) is understood as *diverging* from a particular (given) standard. Although this potentially involves surprise, this is not necessarily so: this reading may alternatively give rise to what I will call a ‘pejorative’ meaning. Importantly, DIVERGE expresses something on behalf of the speaker: the IC in Andrews-amalgams is speaker-oriented.

#### Divergence from a contextual standard in Andrews-amalgams

The ‘embedded exclamatives’ discussed in the above typically *surprise*-predicates. Interestingly, those are not typically what we see in Andrews-amalgams, although they are certainly possible:

- (87) Bob dated [you’d be {surprised/amazed} how many women].

However, based on the original data in Lakoff (1974), it can already be observed that the predicates that embed the sluiced *wh*-clause in the IC of Andrews-amalgams do not necessarily involve such predicates. In fact, the examples discussed so far mostly involve complex predicates. (88) offers a non-exhaustive list of such predicates based on the familiar English examples in Lakoff (1974):

- (88) John invited [{you’ll never guess/you can imagine/God only knows/you can guess} how many people] to his party.

Interestingly, these complex predicates are already discussed (although not in much detail) in Grimshaw (1979:298-9). In her analysis, such predicates are able to take exclamative complements. This is explicitly disputed in Huddleston (1993:175), who argues that constructions such as (89) should be regarded as interrogatives and not exclamatives:

- (89) You won’t believe who Ed has married.

This is thus in a similar spirit as the Avis-Abels view discussed above, albeit that Huddleston (1993) offers no formal semantic account. For the present purposes, I will take these complex predicates as having a similar effect as surprise-predicates: they push the interpretation of the *wh*-complement they embed either below or above a given standard. This is what I will call the *diverge* reading (DIVERGE), appealing to the intuition that the number of people

in (88) is either higher or lower than what is expected in the context in which it is uttered.

Let me start out by the basic idea underlying DIVERGE. I will do so in the context of proposals in Sæbø (2010) and Rett (2008b) (in particular the latter). Since both are explicitly concerned with *how*-exclamatives, I start out with an example with a gradable *wh*-phrase in a root exclamative, an embedded context and amalgamated context. The expressive interpretation of the root exclamative is informally described as in (90) (for convenience, I assume the propositional content to be presupposed):

- (90)    How tall Bea is!  
            $\gg$  Bea is tall.  
            $\leftarrow$  The degree of Bea's tallness exceeds what is normally expected.

If such a *how*-exclamative is embedded under *know*, the result is ambiguous (I abstract away from the multiple ambiguities addressed in Sæbø 2010) for at least the following two readings, corresponding to Grimshaw's original insight of an 'interrogative' (PRECISE) and 'exclamative' (EXCEED or PRECISE/EXCEED) reading (Rett 2008b:192-3):

- (91)    Bill knows how tall Bea is.  
           a.    PRECISE  
               Bea's length is  $d$  and Bill knows Bea's length is  $d$ .  
           b.    EXCEED  
               Bea's length is  $d$ ,  $d > s_{\text{tall}}$ , and Bill knows Bea's length  $> s_{\text{tall}}$ .  
           c.    PRECISE/EXCEED  
               Bea's length is  $d$ ,  $d > s_{\text{tall}}$ , and Bill knows Bea's length is  $d$  and  $> s_{\text{tall}}$ .

The essential ingredient of EXCEED readings is the standard  $s$ , relative to which the degree  $d$  is evaluated. Rett does not make explicit whether Grimshaw's exclamative reading corresponds to EXCEED or PRECISE/EXCEED. I take the latter to be the correct one, because in this reading, Bill doesn't only know that Bea's length exceeds whatever is taken as the standard, he also knows the length. Therefore, he also knows the 'distance' between  $s_{\text{tall}}$  and  $d$ . The factor *surprise* is hard to account for in the absence of awareness of the distance between the actual degree and the standard it exceeds (see also Katz 2005, Sæbø 2010 for a formalization of this intuition). In what follows, the term EXCEED will then correspond to Rett's PRECISE/EXCEED, juxtaposed to a reading I call BELOW.

Consider an example that is embedded in the complex predicate *will never guess*. The embedded context can have the precise reading, although the exceed reading is strongly preferred due to the meaning of this particular predicate (compare (92) to *Bill guessed how tall Bea is*):

- (92) You'll never guess how tall Bea is.
- a. Bea's length is  $d$  and you will never guess Bea's length is  $d$ .
  - b. Bea's length is  $d$ ,  $d > s_{\text{tall}}$ , and you will never guess Bea's length is  $d$  and  $> s_{\text{tall}}$ .

Interestingly, the precise reading is absent in the amalgam:

- (93) Bea is [you'll never guess how tall].
- a. #Bea's length is  $d$  and you will never guess Bea's length is  $d$ .
  - b. Bea's length is  $d$ ,  $d > s_{\text{tall}}$ , and you will never guess Bea's length is  $d > s_{\text{tall}}$ .

Based on these examples, it seems tempting to adopt Rett's characterizations.<sup>9</sup> However, Andrews-amalgams do not necessarily involve content kernels that range over degrees, similar to what was observed in the above for *wh*-complements of *surprise*-predicates, nor is the interpretation necessarily to the positive extreme of the scale. To start out with the latter, the embedded context in (94) shows that a predicate like *will never guess* may also induce a reading in which the reading of the *wh*-phrase is *below* the contextual standard corresponding to whatever that *wh*-phrase ranges over (here a number):

- (94) You'll never guess how many women Bob invited to his party.  
 (95) Bob invited [you'll never guess how many women to his party].

Both examples can mean that the number ( $n$ ) of women Bob invited to his party women invited to party (*wip*) exceeds the contextually salient standard,

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<sup>9</sup>Rett (2008b) is limited to a discussion of the classical opposition between embedding under *know* and *wonder* predicates (for extensive discussion, see in particular Berman 1991, Heim 1994, Lahiri 2002). Rett then implements EXCEED (her EXCEED/PRECISE) in a Karttunen (1977)-style semantics of *know* based on Heim (1994), i.e. as a function from sets of propositions to sets of individuals  $\langle\langle s, t \rangle, t \rangle, \langle e, t \rangle\rangle$ , as in (i):

- (i)  $\llbracket \text{know} \rrbracket(w)(q)(x) = 1$  iff  $x$  believes  $\lambda w' [q(w') = q(w)]$  in  $w$   
 where  $x$  an individual,  $q$  a question  $\in D_{\langle\langle s, t \rangle, t \rangle}$  and  $w$  the world of evaluation.
- (ii) Bill knows how tall Bea is.  
 $\lambda w. \text{believes}(w)(\text{Bill},$   
 $\lambda w' [\lambda p \exists d [p(w') \ \& \ p = \lambda w''. \text{tall}(w'')(Bea, d) \ \& \ d > s_{\text{tall}}]]$   
 $= \lambda p \exists d [p(w) \ \& \ = \lambda w''. \text{tall}(w'')(Bea, d) \ \& \ d > s_{\text{tall}}]]]$

This way, the semantics of the *wh*-clause is possibly evaluative. Although a similar formalization of DIVERGE in the semantics of questions would be desirable for Andrews-amalgams, the shape it has in (ii) faces two immediate problems. First, the embedding in Andrews-amalgams yielding DIVERGE is typically associated with complex predicates that are not clearly (or, clearly not) *know*-predicates (i.e. complexes involving modalized forms of *believe*, *guess* and *imagine*). Second, Rett's account is ultimately aimed at a degree-based semantics for (root)-exclamatives. As such, (i)-(ii) would fail to account for the intuition that diverge interpretations can occur with *wh*-phrases that do not range over gradable predicates, see also Sæbø (2010). An formal question-based semantics of the IC in Andrews-amalgams lies, mainly for these considerations, outside the scope of the present work.



as well as that it is below that standard:

- (96) You'll never guess how many women Bob invited to his party.
- a. EXCEED  
The number of women that Bob invited is  $n$ , and  $n > s_{wip}$ , and you will never guess that Bob invited  $n$ , and  $n > s_{wip}$
  - b. BELOW  
The number of women that Bob invited is  $n$ , and  $n < s_{wip}$ , and you will never guess that Bob invited  $n$ , and  $n < s_{wip}$

So, in addition to EXCEED, embedding the complex predicate *will never guess* allows for a reading where whatever the *wh*-phrase ranges over (as we will see, this goes beyond degree and number) is understood at the negative side of  $s$ . The availability of this reading is not particular to amalgams: DIVERGE seems to be directly related to the meaning of the embedding environment that is used to embed the *wh*-clause. We can now rephrase the relevant reading as diverging from a particular standard. I will call this reading DIVERGE, which is characterized informally as in (97), expanding on EXCEED in Rett's proposal:

- (97) DIVERGE  
Let  $x$  be the degree, property or individual a *wh*-phrase ranges over, and  $s_x$  be a contextually salient standard on which  $x$  is evaluated. In a context  $C$ ,  $x \neq s_x$ .

In what follows, I will not further distinguish between BELOW and EXCEED and assume that the relevant amalgams discussed below simply involve DIVERGE. Admittedly, some predicates appear to disfavor BELOW, such as *surprising* in (98), and the use of intensifiers such as *very* can ban this interpretation altogether, thereby disambiguating at least for those readings:

- (98) It's surprising how (very) many women Bob invited to his party.
- a. The number of women that Bob invited is  $n$ , and  $n > s_{wip}$ , and you will never guess that Bob invited  $n$ , and  $n > s_{wip}$
  - b. #The number of women that Bob invited is  $n$ , and  $n < s_{wip}$ , and you will never guess that Bob invited  $n$ , and  $n < s_{wip}$

Then, complex predicate *can imagine* seems to facilitate BELOW (the use of intensifiers would ban this reading immediately, but this is not relevant to the point here). Consider (99):

- (99) You can imagine how many women Bob invited to his party,...
- a. ... hundreds, he's such a casanova!
  - b. ... almost no women at all, he's such a misogynist!

At this point, it is interesting to compare (99) to the root *wh*-exclamative in (100):

- (100) How many women Bob invited to his party!  
 a. ... hundreds, he's such a casanova!  
 b. #... almost no women at all, he's such a misogynist!

Clearly, (root) exclamations can only have an EXCEED interpretation (or involve WIDENING in Zanuttini and Portner 2003's sense), further corroborating that exclamative force is not maintained under embedding. The interpretive effect that we find in Andrews-amalgams is then not due to exclamative force (independent of how this is derived), but to how the embedding predicate that is used, operates on the *wh*-phrase (d'Avis 2002).

Importantly, DIVERGE as formulated in (97), is not restricted to *wh*-phrases that range over degrees, unlike Rett's EXCEED readings for root *wh*-exclamatives. As is illustrated in particular in the data in Huddleston (1993), and as can be observed in many of the Andrews-amalgams that have illustrated this thesis so far, the *wh*-phrase in the relevant contexts can range over individuals or non-gradable properties as well. Consider first (101) and (102):

- (101) a. You wouldn't believe who Bob married.  
 b. Bob married [you wouldn't believe who].  
 (102) \*Who Bob married!

Intuitively, the embedded example (101a) as well as the amalgam in (101b) have both readings associated with DIVERGE, but it is not easy to formulate the standard in these cases. That is, whereas gradable concepts such as *tall* or *numbers of women invited to parties* clearly correspond to some scale on which a standard *s* is pinpointed, it is not directly clear on what grounds who is evaluated. Still, it is clear that *who* in (101) is interpreted relative to an expectation that is part of the common ground. Consider the paraphrases of the interpretation of (101) in (103):

- (103) a. You wouldn't believe who Bob married.  
 b. Bob married [you wouldn't believe who].  
 ≈ The person who Bob married is not conform our expectations given what we know about Bob. (= DIVERGE)

Thus, also cases like this involve a DIVERGE interpretation, i.e. diverging from a particular type of person that the speaker has in mind. For instance, the speaker knows Bob as an atheistic, free-spirited man, and Bob married a traditional, religious woman. For expository reasons, I will use examples with gradable *wh*-phrases in the remainder of this section.

Based on the above, I submit that the *wh*-complement in Andrews-amalgams is (an embedded) interrogative clause, and its 'exclamative feel' is related to the predicate in which they are embedded. This is in agreement with d'Avis (2002:9), who states that '*... different matrix predicates can refer to different aspects of the meaning of their wh-complement.*' This is no different than what I have assumed in the previous chapter, because sluicing in Andrews-amalgams

was approached on a par with sluicing in embedded *wh*-interrogatives. I conclude this section by demonstrating how DIVERGE, and not ‘exclamativity’ contributes to the interpretation of Andrews-amalgams, and that this is again strictly speaker-oriented.

**Obligatory speaker-orientation: reinforced surprisal or pejorativity via DIVERGE**

Recall from the above that amalgams with complex predicates such as *would never believe*, *can imagine* and *will never guess* always give rise to DIVERGE: the *wh*-phrase is evaluated relative to a particular standard and this standard is understood not to be met in one way or the other. Crucially, this evaluation reflects an attitude of the speaker. At first sight, this seems somewhat counterintuitive, as these amalgams typically have *you* as their subject. I will argue that this use of *you* is impersonal, and claim more generally that the IC subjects are means of reinforcing the intended DIVERGE interpretation.

First, I already observed that Rett’s PRECISE reading is not available in Andrews-amalgams, but it is which is in regular embedded contexts with similar embedding predicates. I repeat the relevant examples for convenience:

- (104) You’ll never guess how tall Bea is.  
 a. Bea’s length is  $d$  and you will never guess Bea’s length is  $d$ .  
 b. Bea’s length is  $d$ ,  $d \neq s_{\text{tall}}$ , and you will never guess Bea’s length is  $d$  and  $\neq s_{\text{tall}}$ .
- (105) Bea is [you’ll never guess how tall].  
 a. #Bea’s length is  $d$  and you will never guess Bea’s length is  $d$ .  
 b. Bea’s length is  $d$ ,  $d \neq s_{\text{tall}}$ , and you will never guess Bea’s length is  $d \neq s_{\text{tall}}$ .

The two readings that are available in (104) are associated with two different interpretations of *you*: PRECISE is only available when *you* corresponds to the specific addressee in the context in which (104) is uttered. By contrast, in the EXCEED interpretation, *you* is an impersonal pronoun: it expresses a generic meaning, a rhetorical use to which I return to below.

This point can be demonstrated more clearly by similar Dutch examples (where for ease of representation ‘wk’ stands for *women kissed*). Importantly, the Dutch referential 2SG personal pronoun *jij* (‘you’) is only possible in the literal, PRECISE reading of the embedded example (106), i.e. a DIVERGE interpretation is not possible in this case:

- (106) [Dutch]  
 Jij            zult nooit raden hoeveel    vrouwen Bob gekust heeft.  
 you.PERS will never guess how.many women   Bob kissed has  
 ‘You will never guess how many women Bob kissed.’  
 a. The number of women Bob kissed is  $n$  and you will never guess  $n$ .

- b. #The number of women that Bob kissed is  $n$ , and  $n \neq s_{wk}$ , and you will never guess that Bob kissed  $n$ , and  $n \neq s_{wk}$

By contrast, DIVERGE is the only reading that is possible in case the impersonal form *je* ('you') is used:

- (107) Je zult nooit raden hoeveel vrouwen Bob gekust heeft.  
 you.IMPERS will never guess how.many women Bob kissed has  
 'You will never guess how many women Bob kissed.'  
 a. #The number of women Bob kissed is  $n$  and you will never guess  $n$ .  
 b. The number of women that Bob kissed is  $n$ , and  $n \neq s_{wk}$ , and you will never guess that Bob kissed  $n$ , and  $n \neq s_{wk}$

The use of the referential pronoun *jij* is excluded altogether in the context of an Andrews-amalgam (108), and this is then what explains the absence of the PRECISE reading in amalgams:

- (108) Bob heeft [{\*jij/ je} zult nooit raden hoeveel  
 Bob has you.PERS you.IMPERS will never guess how.many  
 vrouwen] gekust.  
 women kissed  
 'Bob kissed you'll never guess how many women.'  
 a. #The number of women Bob kissed is  $n$  and you will never guess  $n$ .  
 b. The number of women that Bob kissed is  $n$ , and  $n \neq s_{wk}$ , and you will never guess that Bob kissed  $n$ , and  $n \neq s_{wk}$

The impersonal *you* is best described in terms of quantification (or 'quasi-universal quantification in Cinque 1988's sense): it reads as *anyone*, or as *no one* in the presence of a negator as in these cases, not as referring to the specific addressee.

In this context, it is important to see that the attitude that is expressed via DIVERGE belongs to the speaker. That is, the evaluation of the number of women kissed by Bob as diverging from a contextual standard is understood as the speaker's:

- (109) Bob kissed [you'll never guess how many women].  
 ← The number of women that Bob kissed is  $n$ , and  $n \neq s_{wk}$

In fact, examples such as these not only give rise to DIVERGE, but may in addition reflect an opinion of the speaker. More specifically, the use of complex predicates in amalgams potentially gives rise to a sense of disapproval on the side of the speaker: it is a means to express *pejorativity*. The use of the impersonal *you* can then be seen as a way of reinforcing the (possibly pejorative) opinion of the speaker. In the words of Laberge and Sankoff (1979:429): 'The

*discursive effect of inserting an unspecified agent into a hypothetical situation seems to function to elevate her statement to the plane of conventional wisdom – thereby, perhaps, rendering it more difficult to challenge.*' On a final note, we can clearly see that Andrews-amalgams with 2<sup>nd</sup> person pronoun subjects can be modified by the illocutionary adverb *frankly* (see also the discussion in §3.1.3):

- (110) Bob kissed [frankly, you'll never guess who].

The use of certain kinds of 3<sup>rd</sup> person subjects fits in with this observation: DIVERGE can be reinforced by the use of *taboo* words as subjects:

- (111) Bob kissed [(only) God knows how many women].  
 #The number of women Bob kissed is  $n$  and God is the only one who knows  $n$  (= PRECISE)  
 $\approx$  The number of women that Bob kissed is  $n$ , and  $n \neq s_{wk}$  (= DIVERGE)

Words such as *God* and *the devil* are only taboo when they are not interpreted literally (for extensive discussion and overview of various taboo terms, see Napoli and Hoeksema 2009 and the references therein). In their use as taboo words, *God* and *the devil* are understood as *intensifiers* of the utterance. That is, regular embedding under *only God knows* allows for a literal reading, which does not yield a DIVERGE reading. DIVERGE is available, and is triggered when *God* (as a taboo word) is used as an intensifier:

- (112) Only God knows how many women Bob kissed.  
 $\approx$  The number of women Bob kissed is  $n$  and God is the only one who knows  $n$  (= PRECISE)  
 $\approx$  The number of women that Bob kissed is  $n$ , and  $n \neq s_{wk}$  (= DIVERGE)

By contrast, an Andrews-amalgam with *God* as the IC subject (111) can *only* be understood in the speaker-oriented way represented here: it cannot literally mean that (only) God knows how many women Bob kissed. Interestingly, the embedding predicate of this construction type is restricted to the (factive) verb *know*. That is, it seems pragmatically odd to have *God* as the subject of the IC with complex predicates such as *will never guess* and *can imagine*:

- (113) a. #Bob kissed [God will never guess how many women].  
 b. #Bob kissed [God can imagine how many women].

However, this seems to be due to the meaning of *God* in both its literal and taboo use. Apparently, it is impossible to use *God* as the subject in non-factive embedding environments in general:

- (114) a. #God guessed/imagined that Ben was remorseful.

- b. #God didn't know that Ben kissed other women while he was married.

It is probably for this reason that *God* is considered a taboo word to begin with: it can be used as intensifier precisely because God is traditionally seen as omniscient. The crucial observation here is that the literal meaning of taboo words is unavailable in amalgams. In their obligatory taboo-interpretation they express speaker-oriented meaning:

- (115) Bob kissed [God knows how many women].  
 ← The number of women that Bob kissed is  $n$ , and  $n \neq s_{wk}$

Also in this case, the number of women is more likely to exceed than to be below the contextual standard  $s$ . However, as (116) demonstrates, this is due to the embedding predicate and its subject, and not a meaning that is related to the Andrews-amalgam itself:

- (116) Bob kissed [you can imagine how many women].  
 ← The number of women that Bob kissed is  $n$ , and  $n \neq s_{wk}$

Similarly to what was shown above for regular embedding contexts, (116) could mean that Bob kissed only very few women. In fact, this specific complex predicate does not involve surprisal at all, but rather reflects a particular, possibly pejorative attitude of the speaker regarding the (in his/her eyes abnormal) number of women that Bob kissed.

Summing up, I have demonstrated that Andrews-amalgams do not yield exclamations, although their interpretive effect is deceptively reminiscent of the meaning of true *wh*-exclamatives. I have argued that the interpretation of the Andrews-cases is due to the embedding predicates that host the sluiced CP: these give rise to the DIVERGE interpretation of the (sluiced) *wh*-CP in the IC. This interpretation involves an evaluation relative to a contextually salient standard on the side of the speaker. Based on the findings in this section, this can be generalized for both Horn- and Andrews-amalgams: both express speaker-oriented information. Taking this together with the root phenomena of the IC, and its syntactic opacity towards the matrix clause, it is safe to conclude that amalgams are parenthetical constructions. Before I proceed to a syntactic account of these in the context of the syntactic theory discussed in chapter 7, I discuss a commonly used construction type that is highly reminiscent of Andrews-amalgams, namely *you-know-what*.

### 6.3.3 You know what is *not* an amalgam?

In chapter 3 (§3.2) it was observed that the IC cannot occur in the sentence-initial position. Examples such as (117) are discussed in Grosu (2006, 2008) and appear to be an exception to that generalization:

- (117) [You know who] wants to kill me.

In this section, I show that *you-know-who* and *you-know-what*, i.e. the *you-know-wh* construction behaves different in many more respects, and should not be regarded as an instance of amalgamation, but rather as an idiomatic expression. This part is a slightly adapted version of Kluck (2010).

To refresh our memory about the exceptional status of (117), I illustrated the relevant contrast with respect to the ban on the sentence-initial position by Dutch data such as (118). I illustrated this by Dutch data, because the intended amalgamated reading goes together with main clause order (VO and V2) (without the bracketing, the English (117) allows for a normal embedded reading of the *wh*-CP):

- (118) [Dutch]
- a. \*[Je raadt nooit hoeveel vrouwen] hebben Bill gekust terwijl  
you guess never how.many women have Bill kissed while  
hij getrouwd was.  
he married was.
  - b. [Je- weet- wel- wie] heeft Bill gekust terwijl hij getrouwd was.  
you know AFF who has Bill kissed while he married was  
'You-know-who kissed Bill while he was married.'

Recall that this is not related to subjecthood, but seems to be a linear restriction on amalgams (the same holds for the IC in Horn-amalgams as well). Apparently, *you-know-wh* constructions are not subject to this restriction.

Another distributional difference concerns the possibility of occurring in the post-copular position of existential constructions. This is a position strictly available for indefinite DPs. Consider the contrast in (119):

- (119) a. There is [<sub>DP</sub> a [<sub>NP</sub> you-know-what]] hidden in my basement.  
b. \*There is [<sub>DP</sub> a [you'll never guess what]] hidden in my basement.

Apparently, *you-know-what* can function as an NP inside the required indefinite DP in these cases. Once we change the embedding predicate, this is impossible. This observation is further corroborated by the data in (120), where it is shown that *you-know-what* can generally function as an NP inside a DP, contrary to regular Andrews-amalgams:

- (120) a. Bob saw [<sub>DP</sub> a big fat [<sub>NP</sub> you-know-what]] crawling in his soup.  
b. \*Bob saw [<sub>DP</sub> a big fat [you'll never guess what]] crawling in his soup.

Interestingly, the exceptional distributional behavior that we have seen, is restricted to combinations of exactly *you*, *know* and the bare (i.e. non D-linked) *wh*-words *who* and *what*:

- (121) a. \*[You know which professor] wants to kill me.  
b. \*There is [<sub>DP</sub> a [you can imagine which animal]] hidden in my

basement.

Something more can be said about the Dutch variant of the *you-know-wh* construction. In the Dutch variant the use of the affirmative particle *wel* is strongly preferred. Interestingly, it is possible to leave out the *wh*-constituent altogether (122b), this gives rise to the form *je-weet-wel*, which can mean either ‘you-know-who’ or ‘you-know-what’.

- (122) [Dutch]
- a. [Je- weet- wel- wie] heeft Bob een klap in zijn gezicht gegeven.  
you know AFF who has Bob a slap in his face given  
‘You-know-who gave Bob a slap in the face.’
  - b. [Je- weet- wel] heeft Bob een klap in zijn gezicht gegeven.  
you know AFF has Bob a slap in his face given  
‘You-know-who gave Bob a slap in the face.’

Comparable to the English facts above, the expression *je-weet-wel* can be used as NPs. As such, they occur with default (common, non-neuter) gender and they can obtain plural morphology, as expected if they are used as NPs:

- (123)
- a. De/ \*het [je- weet- wel] ligt verstopt in de onderste  
ART.CG ART.NEUT you know AFF lies hidden in the bottom  
lade.  
drawer  
‘The you-know-what is hidden in the bottom drawer.’
  - b. Alle [je- weet- wel-s] liggen verstopt in de onderste lade.  
all you know AFF-PL lies hidden in the bottom drawer  
‘All you-know-whats are hidden in the bottom drawer.’

In fact, *je-weet-wel* can replace complete adjectival phrases and predicates in Dutch:

- (124)
- a. een [je- weet- wel- (wat- voor)] kater  
a you know AFF kind of tomcat  
‘a you-know-what-kind-of tomcat’
  - b. Ik ben [je- weet- wel- (wat)].  
I am you know AFF what  
‘I am you-know-what.’

Also in these cases, the form without the *wh*-phrases is preferred. All in all, these data suggest that *you-know-wh* constructions can be used in contexts where ICs of Andrews-amalgams cannot appear: in sentence-initial position, in the post-copular position of existential constructions, and inside DPs. Rather, it seems that they can be used in the place of any XP, i.e. much more freely than ICs can be used. The fact that their internal parts cannot be altered with respect to their subject, embedding verb and *wh*-constituent suggests that *you-know-wh* constructions are frozen, idiomatic expressions and not root clauses.



The latter is in turn supported by the lack of root phenomena in *you-know-wh* constructions. Recall from chapter 3 (§3.1.3) that amalgams can have independent illocutionary force:

- (125) a. Bob bought – [can you imagine how many presents?] – to surprise his wife.  
[ASSERT/QUESTION]  
b. Bob bought – [guess how many presents!] – to surprise his wife.  
[ASSERT/ORDER]

This is not true of the *you-know-wh* construction, as is illustrated in (126):

- (126) a. #[Do you know who?] is scared of spiders.  
b. #There's a lot of [do you know what?] in her basement.  
c. #Bea saw [DP a big fat [do you know what?]] crawling in Bob's soup.

The same can be observed for modification by illocutionary adverbs such as *frankly*:

- (127) Bob kissed [frankly, you'll never guess who].  
(128) \*Bob kissed frankly, you-know-who.

The absence of root phenomena is not expected if these constructions are true sentence amalgams, but it is expected if they are regarded as idioms.

A final remark concerns the interpretation of *you-know-wh* constructions. Compare (130) to an Andrews-amalgam (129):

- (129) The professor kissed [you'll never guess who] at the party.  
≈ The person who the professor kissed differs from our expectations given what we know about Bob. (= DIVERGE)  
(130) The professor kissed [you-know-who] at the party.  
≈ The professor kissed someone and you and I know exactly who it is.  
#The person who the professor kissed differs from our expectations given what we know about Bob.

The *you-know-who* construction does not give rise to the DIVERGE interpretation that I discussed in the previous section. Rather, the *you-know-wh* construction is a phrase that can be used to avoid the literal mentioning of what is actually meant in the context. This can be desirable in the context of secrecy, taboo topics, conspiracy or gossip. Recall also the Dutch examples in (124). Here, (124a) directly triggers an interpretation related to the sexual functioning of the cat (i.e. it being neutered). In a somewhat similar spirit, (124b) can be used to refer to taboo and/or private predicates such as having a period, being pregnant, or having a hangover. The general interpretation of *you-know-*

*wh* constructions can thus informally be paraphrased as: ‘*the thing/property of which you and I know what it is, but that we shouldn’t discuss explicitly in this particular domain of discourse*’. This immediately explains why the use of these phrases is restricted to the embedding predicate *know* and the subject *you*.

In conclusion, these idiomatic constructions that look like Andrews-amalgams, differ fundamentally from sentence amalgamation. Hence, they require a different analysis than what I have proposed so far and what I am about to discuss for amalgams in the chapter to come. Although the origin (i.e. the possible grammaticalization) of this construction lies beyond the scope of the present work, let me point out that their properties are quite similar to some of Kajita (1977)’s ‘reanalysis’ data discussed in chapter 2, such as *a far from simple matter*. These data motivated both the multidominance approach in Van Riemsdijk (2001) and the layered derivation approach in Zwart (2006) that were in turn suggested for amalgams. Consider (131):

- (131) [Dutch]  
 een [verre- van- eenvoudig]-e kwestie  
 a far from simple-SG.CG matter  
 ‘a far-from-simple matter’

The contrast between (132) and (133) corroborates the idea that these are idiomatic forms as well:

- (132) Q: Was het tentamen eenvoudig?  
           was the exam simple  
           ‘Was the exam simple?’  
 A: Nee, verre- van.  
      no far from  
      ‘No, far from (simple).’
- (133) Q: Is dit de Kerkstraat?  
           is this the church.street  
           ‘Is this Church Street?’  
 A: \*Nee, ver van.  
      no far from  
      *int.* ‘No, this is far (away) from the Church Street.’

It seems thus very plausible that these are similarly idiomatic expressions, which can be accounted for straightforwardly in terms of layered derivations in Zwart (2006)’s sense, and *not* in terms of independent roots (Van Riemsdijk 2000b, 2001), or parentheticals (i.e. the present proposal for amalgams). I leave the possibilities of such an account for idioms open for further investigation.

## 6.4 Summary

This chapter dealt with the relation between the matrix and the IC. Based on the earlier observation that the matrix does not c-command into the IC, I hypothesized that amalgams are a kind of parentheticals. Opacity effects, in addition to truth-conditional and structural independence and inherent speaker-orientation were taken to be characteristics of parentheticals. Hereby, I provided a more fine-tuned characterization of the intuition that the IC in amalgams expresses a fundamentally different type of information than the matrix does.

Starting out with Horn-amalgams, I provided substantial evidence for the claim that their ICs are inherently speaker-oriented. The most striking evidence for this was in fact found in cases that used a 3<sup>rd</sup> person subject and a *verbum dicendi* as embedding context for the *it*-cleft: these verbs can only be interpreted as evidentials in the IC. The alternative reporting, or *quasi*-quotative reading is excluded. Overall, it was not difficult to detect obligatory speaker-oriented meaning in these amalgams:

### **Horn-amalgams are parentheticals**

- the IC obligatorily involves epistemic modality expressed by propositional attitude verbs;
- in the absence of such embedding verbs, the copula of the *it*-cleft itself must be a modal that yields an epistemic reading;
- *verba dicendi* can only be interpreted in an evidential manner;
- subject epithets are licensed in the IC, which can corefer with the matrix subject.

Interestingly, the majority of these observations extended to transparent free relatives (TFRs) as well, although this was found to be optional. The obligatory speaker-orientation of the IC in Horn-amalgams turned out to be a serious problem for the multidominance approach to amalgams. The problem is that the content kernel appears to be interpreted in the scope of the intensional operator that is presumably involved in the (embedding) context of the *it*-cleft. This limits the inferences that can be made based on an amalgam to the effect that the content kernel is not understood as part of the matrix clause, contrary to what the multidominance approach predicts. I discussed this as a highly undesirable consequence of this approach for amalgams, especially seeing that this interpretive aspect is required in other contexts that have argued to involve multidominance, i.e. right node raising (RNR) and across-the-board (ATB) configurations.

It proved somewhat more complicated to pinpoint the speaker-oriented nature of Andrews-amalgams. I started out by discussing the intuition that these amalgams have something in common with *wh*-exclamatives. I argued against Lakoff's claim that they yield an exclamation, in line with the earlier case against embedded speech acts. Alternatively, I suggested an analysis in which the particular meaning is related to how the embedding verbs that are used

in Andrews-amalgams (i.e. particular complexes such as *will never guess* and *can imagine*) operate on the meaning of their *wh*-complements. I called their interpretive effect DIVERGE, which is reminiscent of the interpretation of root *wh*-exclamatives. This was informally characterized in terms of an evaluation of the *wh*-complement relative to a particular contextual standard. The use of *you* as IC subject turned out to be strictly the impersonal *you*. In addition, words such as *God* and *the devil* can only be understood in their non-literal, taboo meaning. These facts provided additional support for the speaker-oriented character of Andrews-amalgams. I closed this chapter with a brief discussion of a type of constructions that look very much like Andrews-amalgams, but display different structural and interpretive behavior: *you-know-wh* constructions. Seeing that those not behave like the IC of amalgams with respect to root phenomena or their distribution, I set these apart from the present object of inquiry:

**Andrews-amalgams are parentheticals**

- they necessarily trigger a reading in which the *wh*-complement in the IC is understood as diverging from a given standard (DIVERGE);
- DIVERGE is due to the speaker, *not* the subject that is used in the IC and possibly gives rise to pejorativity;
- this is shown by the fact that *you* can only be understood in its use as impersonal pronoun, which was further corroborated by Dutch facts;
- *you-know-wh* looks like an amalgam but is in fact an idiom.

So, we do not only have syntactic evidence in favor of a parenthetical approach: the interpretation of amalgams clearly suggests that the matrix and the IC express different kinds of information. All we then need to complete the analysis of amalgams, is a way to derive parentheticals in syntax.

## CHAPTER 7

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### Amalgams as sluiced parentheticals with null correlates

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The data discussed in the previous chapter strongly indicate that the IC and the matrix do not constitute parallel or equivalent messages: the IC inherently expresses speaker-oriented information, and this information concerns the content kernel. Taking this together with the syntactic opacity and the root phenomena witnessed in chapter 3 and sluicing approach defended in chapters 4 and 5, we arrive at the following conclusion: the IC is a parenthetical with internal sluicing. The sluicing approach unified the two types of amalgams and reduced the apparent transparency effects in amalgams to internal reconstruction of the content kernel. This leaves us with the question what kind of parentheticals are involved in amalgams, and how their properties can be derived in syntax. The latter question underlies the assumption that parentheticals must be represented in syntax to begin with. Based on both conceptual and empirical grounds, I will argue that this is indeed desirable. The central claim of this last chapter is that amalgams are anchored parentheticals. More precisely, the anchor is the null correlate of the sluicing remnant, i.e. the content kernel. As it turns out, the correspondence between the content kernel and the distribution of the IC is regulated by the licensing condition on sluicing. The proposal brings together the sluicing approach with a parenthetical analysis of amalgams and ultimately solves Lakoff's puzzle.

I start out in §7.1 by making a plea for a theory that integrates parentheticals at the level of syntax, in line with recent scholarship. Elaborating on in particular De Vries (2007, to appear) and Koster (1999, 2000a), I will propose an analysis of amalgams in terms of specifying parentheticals in §7.2. How this relates to sluicing and the licensing conditions on sluicing are important as-

pects of the discussion. I close this final section by relating the proposal back to Lakoff's puzzle, focusing in particular on how the distributional properties observed in chapter 3 follow from the analysis. §7.4 briefly discusses a few aspects of amalgams that were topic to chapter 3 in the context of the proposed analysis, and highlights some new issues that arise from it.

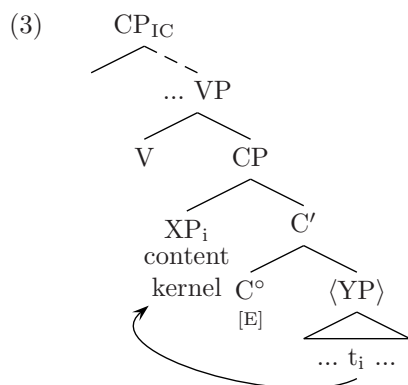
## 7.1 Parentheticals in grammatical theory

### 7.1.1 *Status quo*: towards a parenthetical account

Let me first give an outline of where things stand at this moment. We have established amalgams are sluicing configurations and that the IC, which contains the ellipsis site, is a parenthetical. The present chapter aims at reconciling these insights. Recall that the internal structure of the IC is taken to be a full-fledged clause that embeds a sluiced CP:

- (1) Bob kissed [<sub>IC</sub> you'll never guess [<sub>CP</sub> who ⟨Bob kissed⟩]].
- (2) Bob kissed [<sub>IC</sub> I think [<sub>CP</sub> it was Bea ⟨that Bob kissed⟩]].

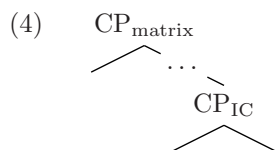
The underlying structure of the sluiced CP in the IC can be represented as follows, abstracting away from the differences between the level at which sluicing applies in Horn- and Andrews-amalgams:



The content kernel undergoes A'-movement (focus, *wh* or both), and an E-feature is licensed at some C°, triggering ellipsis of its complement. What remains to be answered is 1. how the parenthetical higher CP (which I for convenience labelled 'IC') should be connected to its host, 2. how the lack of structural relations between them can be accounted for, and 3. how the distributional properties of the IC can be explained.

In what follows, I propose an analysis in which parentheticals are represented at the level of syntax (i.e. *contra* the so-called radical orphanage approach that I briefly discuss first). For reasons of space, I will not represent the

internal structure of the IC unless necessary for the points made. Instead, the representation of the IC will be collapsed under ‘CP<sub>IC</sub>’, and we will be concerned only with what happens in the position of the dots in the provisional representation of an amalgam in (4):



There is a clear opposition in the literature when it comes to the (level of) representation of parentheticals. Roughly put, we can distinguish between theories that assume no syntactic connection between the parenthetical and its host whatsoever, and those that assume a specialized syntax for parentheticals. The first is also known as the orphanage approach and finds its roots in Safir (1986), and more recently in Haegeman (1991, 2003, 2006, 2009). The second type of approach goes back to the work of McCawley (1982, 1987), and has been developed within minimalist syntax in De Vries (2007, to appear). On both conceptual and empirical grounds, I will argue in favor of the latter.

### 7.1.2 Radical independency: the orphanage approach

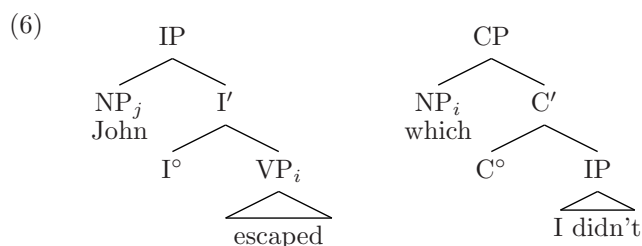
The idea that parentheticals are unattached, or better, ‘orphan’ constituents in syntax goes back to at least Safir (1986), who proposed it for parentheticals and appositive relative clauses (ARCs). Based on Haegeman (1991) I refer to this as the ‘radical orphanage’ approach to parenthetical construal. I will illustrate this approach based on the representations and discussion in Fabb (1990), Burton-Roberts (1999) (ARCs), Peterson (1999) (various parentheticals) and Haegeman (1991, 2009) (peripheral adverbials).<sup>1</sup>

Based on the well-known observation that ARCs display fundamentally different properties than restrictive relative clauses (RRCs), Safir (1986) proposes that ARCs are not attached to a sentence until LF’. LF’ is a level beyond Logical Form (LF), ‘... *in which ‘extra’ arguments or constituents may be attached to independently grammatical sentences*’ (Safir 1986:672). The difference between ARCs and RRCs is then related to the level at which the relative pronoun is coindexed with the relative head. Under his assumptions, these have different indices at LF – this explains why ARCs do not display weak crossover (WCO) effects, for instance. Reindexation at LF’ of the relative pronoun is, however, mandatory to match the nonrestrictive head. In addition, the ARC is ‘attached’ to the sentence at LF’. The absence of c-command effects in ARCs then follows from the representation at LF, where the relative pronoun is not

<sup>1</sup>Haegeman (2009) is a reprint of Haegeman (1991). Since I had no access to the original paper, direct citations are from Haegeman (2009).

coindexed with the relative head, and where there is no attachment (for discussion of this, see also Haegeman 1991). A similar idea is pursued in Fabb (1990), who also assumes an additional level of representation ('X-structure'). Relevant for the present purposes is then the representation of the ARC in (5) as (6) (Fabb 1990:61, his (27)):

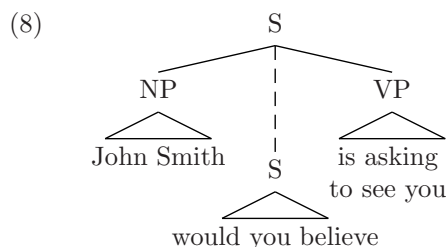
(5) John escaped, which I didn't.



In fact, Fabb (1990) takes the obligatory coindexation of relative pronoun and relative head as the *only* relationship between the ARC and its head (under standard assumptions, the head is external, i.e. part of the host sentence). Fabb further observes that ARCs are not c-commanded by their matrix sentences (i.e. based on similar facts as I discussed above), and argues accordingly that ARCs and their relative heads are not part of the same syntactic representation: the relative CP in (5) is an 'orphan' the sense of Haegeman (1991), which I discuss below.

Peterson (1999) distinguishes more explicitly between subordination (hypotaxis) and non-subordination (parataxis), but adopts a narrow definition of the latter. That is, both are syntagmatic relationships and belong to syntax. However, parentheticals (which he generalizes to 'juxtaposition') are classified as *non*-syntagmatic relationships: a parenthetical and the sentence in which it occurs are only ordered linearly, they do not constitute a hierarchy. Unfortunately, his representation (8) (Peterson 1999:237, his (21)) does not reflect this at all:

(7) John Smith, would you believe, is asking to see you.



The dashed line in this representation does not correspond to a syntactic relation between the parenthetical and the host, but aims to indicate a semantic relationship between the two. I will argue below that this is precisely the prob-



lem of the radical orphanage approach: in the absence of any syntactic relation between a parenthetical and its host, such a semantic relation cannot be derived compositionally, at least not under standard assumptions of grammar. This also explains why various proposals of this type involve additional levels of representation.

Haegeman (1991, 2003, 2006, 2009) is probably the most well-known implementation of the radical orphanage approach. Her primary interest is the distinction between what she calls ‘peripheral’ and ‘central’ adverbial clauses (examples are from Haegeman 2009:331, her (1a) and (2a)):

- (9) a. John studied mathematics in Cambridge, while his son is studying physics in Oxford.  
b. John always works best when his children are asleep.

Peripheral adverbials differ from central adverbials with respect to scope, binding effects, the licensing of parasitic gaps and embeddability (see also Haegeman 2003, 2006 for similar differences with conditional clauses). Whereas the latter allow for c-command based relationships with the matrix sentence, the first do not. I illustrate this by the contrast with regard to condition C effects (Haegeman 2009:333, her (6), indices mine) in (10a) (a peripheral adverbial clause) and (10b) (a central adverbial clause):

- (10) a. John<sub>i</sub> studies mathematics in Cambridge, while John<sub>i</sub>’s wife is studying physics in Oxford.  
b. ?\*John<sub>i</sub> always works best while John<sub>i</sub>’s children are asleep.

In earlier work (Haegeman and Wekker 1984), the independence of peripheral adverbial clauses is accounted for by attaching them to  $S''$ , in which position they are not c-commanded by elements in  $S$  or  $S'$ . However, since this cannot be reconciled with the present-day assumptions about X-bar theory, she proposes an orphanage approach that is heavily inspired by Safir (1986). The representation of (10a) now simply looks as follows, comparable to (8) above:

- (11)
- |   |  |
|---|--|
|  |  |
| John studied<br>mathematics in Cambridge  | while his son<br>is studying physics in Oxford                                       |

Haegeman’s idea of complete independence at the syntactic level is even more rigorous than in Safir (1986): abstracting away from the indexation procedure and attachment rules in Safir’s theory of parentheticals, Haegeman (1991) proposes no attachment whatsoever and dispenses with the additional level of LF. This is probably the ‘radical’ aspect of the proposal: orphan constituents are tolerated at all levels of syntactic representation Haegeman (2009:341). This creates an immediate problem for interpretation: although parentheticals are indeed structurally and truth-conditionally independent from their hosting sen-

tences, it is not the case that their interpretation is completely unrelated to the content of their host. Haegeman argues that the interpretation of orphan constituents (i.e. parentheticals in the broadest sense) is when they are contextualized: in uttering a orphan constituents, principles of Relevance in the sense of Sperber and Wilson (1986) must be obeyed (see also Blakemore 1990/1991, 2006 for discussion).

Another obvious issue that arises is how orphan constituents are linearized relative to their hosts. This is a general issue, which becomes pressing in cases in which these constituents seem to affect the word order of their ‘hosts’. In fact, Haegeman et al. (2009) discuss this in relation to the German data in (12) (Haegeman et al. 2009:356, their (14)):

- (12) [German]
- a. Während Paul in Italien ist, wird Maria an ihrer Dissertation  
while Paul in Italy is will Mary on her dissertation  
arbeiten.  
work  
‘While Paul is in Italy, Mary willl work on her dissertation.’
  - b. Während Paul Hausmann sein wird, wird Maria arbeiten.  
while Paul househusband be will will Mary work  
‘Whereas Paul will be a househusband, Mary will work.’

The order in the sentence with the central adverbial (12a) is expected: the adverbial clause appears in the first position, followed by the finite verb because of V2, and the subject follows the verb (presumably it stays in SpecIP because SpecCP is occupied). However, under the assumption that the peripheral adverbial (12b) is not structurally related to the main clause, we expect the order of the latter to be unaffected (i.e. *Maria wird arbeiten*), but this is not the case. Haegeman et al. (2009) point out that the issue is more general: there are adverbials that can occur either in the Vorfeld (which would give rise to the patterns in (13a)) or in the Vor-Vorfeld (13b), such as *am Rande bemerkt* (‘by the way’), their (17a,b):

- (13) a. Am Rande bemerkt bin ich etwas enttäuscht von dir.  
at.the edge remarked am I somewhat disappointed of you  
b. Am Rande bemerkt, ich bin etwas enttäuscht von dir.  
at.the edge remarked I am somewhat disappointed of you  
‘By the way, I’m rather disappointed in you.’

Other adverbial expressions cannot appear in the Vorfeld at all, but are arguably restricted to a position in the Vor-Vorfeld (for related discussion, see Espinal 1991, Ackema and Neeleman 2004, d’Avis 2004). For Haegeman (2009), this is reason to distinguish between non-integrated and integrated adverbials. It is not clear to me how this can be reconciled with the radical orphanage approach at all, if we want to maintain that (12b) is a parenthetical. After all, the notions ‘Vorfeld’ and ‘Vor-Vorfeld’ are rather puzzling in an approach that

doesn't assume a position of the parenthetical related to the structure of the host (even the term 'host' would seem inappropriate in the radical orphanage approach).

Summarizing, the (radical) orphanage approach accounts for the structural independence of parentheticals (i.e. their syntactic opacity) by teasing them apart from their 'host' expression in syntax. However, this non-syntactic approach yields two non-trivial issues: 1. parentheticals are meaningful and must at some point be interpreted in the context of the utterance in which they are pronounced, and 2. parentheticals are linearly integrated with their hosts (possibly affecting the order of the latter). In other words, parentheticals play a role at the interfaces, and this role is hard (if not impossible) to explain if they are not represented in syntax, the output of which is conventionally seen as the input of these interfaces.

### 7.1.3 Parenthetical-inclusion as a primitive in grammar

The interface issues faced by the radical orphanage approach discussed above suggest that parentheticals must be represented at syntax, and that their structural independence must be explained there. The idea to represent parentheticals at syntax finds its roots in Ross (1973), Emonds (1979), McCawley (1982, 1987). In the absence of any special way to integrate parentheticals in their host structures, the most plausible way to integrate parentheticals is via adjunction (an idea that is pursued in Corver and Thiersch 2001). The problem of a generalized adjunction approach for parentheticals is simple: we then expect parentheticals to pattern with regular adverbial clauses, and this is not the case. This point is made in Espinal (1991), Ackema and Neeleman (2004) and De Vries (2007, to appear), on varying empirical grounds. The crucial difference is the syntactic opacity of parentheticals discussed in §6.1.1 above ((5)-(7)). Contrary to parentheticals, adverbial clauses are generally accessible for c-command based relationships. For instance, a pronoun inside an adverbial clause can be bound by a matrix clause quantifier and R-expressions give rise to condition C effects with coreferring matrix pronouns (the data are from De Vries 2007, his (29b) and (39b)):

- (14) a. Everybody<sub>i</sub> is somebody because he<sub>i</sub> is a child of his<sub>i</sub> parents.  
 b. \*She<sub>i</sub> hit Hank because Jane<sub>i</sub> hated him.

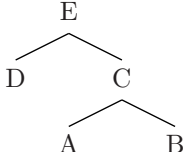
Another contrast can be observed in the parenthetical use of adverbs such as *honestly*. *Honestly* can either modify the speech act (similar to *frankly*), or an event (presumably as an adjunct of VP). Only in case of the latter, it can undergo *wh*-movement in the matrix clause. The example is from Ackema and Neeleman (2004), their (12) (who adapt it from Espinal 1991):

- (15) a. John explained the problem honestly.  
 b. How honestly did John explain the problem?

- (16) a. Beth is, honestly, my worst neighbour.  
 b. \*How honestly is Beth your worst neighbour?

So, the simple adjunction approach (such as Corver and Thiersch 2001) wrongly predicts accessibility of parentheticals for structural operations in and relations with their hosts. This seems to leave us with one option: if we want parentheticals to be represented in syntax, we need special means to do so.

Espinal (1991), Ackema and Neeleman (2004) and De Vries (2007, to appear) have proposed various syntactic manners to represent parentheticals in syntax. Since my account for amalgams relies on the latter, the present discussion is limited to De Vries' idea.<sup>2</sup> Central to his proposal is that nonsubordination is a primitive in grammar, i.e. there is a fundamental distinction between hypotaxis and parataxis. The basic operation to build syntactic objects in Minimalist theory is Merge, which by definition creates a syntactic hierarchy:

- (17) a. Merge(A, B) → C  
 Merge(C, D) → E  
 b.
- 
- ```

graph TD
  E --- D
  E --- C
  C --- A
  C --- B
  
```

That is, when two objects (A and B) are combined, they are included in the output (C). The relation between the output and the input objects is conventionally defined in terms of *dominance*. Thus, subordination is the direct consequence of Merge itself. To account for nonsubordination then, we can think of another type of including objects: a type of Merge that does not yield dominance. In this manner, both hypotaxis (the familiar subordination that represented in terms of dominance) and parataxis (basically, nonsubordination) can both be represented at the level of syntax, as desired.

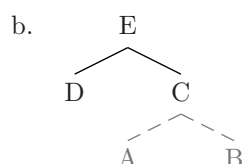
For this, De Vries invokes a second type of Merge, namely *par*-Merge.<sup>3</sup> Contrary to regular Merge, objects that are combined via application of *par*-Merge are not 'dominance-included' in the output object. Instead, we could think of

<sup>2</sup>Espinal (1991) proposes a multidimensional system in which parentheticals constitute independent phrase markers, i.e. multiple roots, that are part of different syntactic 'planes'. This seems similar to the orphanage approach illustrated above, but contrary to Haegeman's proposal, the independent phrase markers (i.e. the host and a parenthetical) intersect in the linear dimension. Linearization in her view is then syntactic. Ackema and Neeleman (2004) explain the syntactic invisibility of parentheticals as a difference between insertion in terminal and nonterminal nodes (Neeleman and van de Koot 2002). Parentheticals are then an example of the latter: the insertion of nonterminal nodes is not subject to the restrictions on feature matching that holds for the insertion of terminal nodes (i.e. Chomsky 1995's Inclusiveness).

<sup>3</sup>It should be noted that *par*-Merge is called 'b-Merge' in De Vries (2007), in relation to the notion 'behindance', which was part of multidimensional representations in De Vries (2003, 2008).

them as being ‘parenthetical-included’ (henceforth *par*-included). Differently put, we can distinguish between syntactic hierarchy and paratactic hierarchy. The merit of such a proposal is the following: since *c*-command is defined in terms of *dominance*, we can now relate the absence of *c*-command-based relationships to a different kind of inclusion. This is illustrated in (18), where the grey material indicates that the object is *par*-included:

- (18) a. *par*-Merge (A, B) → C  
Merge (C, D) → E

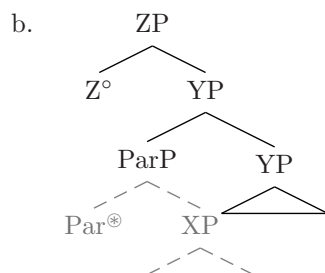


The difference between (17) and (18) in terms of *c*-command relations is then that D *c*-commands A and B only when A and B are dominance-included, i.e. in (17). By contrast, in (18), D does *not* *c*-command A and B. The traditional understanding of *c*-command can be maintained for this and can be formulated such that it explicitly refers to the type of inclusion, such as in (19) (based on De Vries to appear, who discusses it in more formal terms):

- (19) A *c*-commands B iff there is an X such that
- i. A and X are merge-mates, and
  - ii. B = X, or B is dominance-included in X.

The question is then when *par*-Merge is triggered. It seems most plausible that *par*-Merge is triggered by a particular head, and not by a ‘parenthetical’ XP. Firstly, as is pointed out in De Vries (2007, to appear), if *par*-Merge were to apply to a given parenthetical XP and the projection of the host, this would yield invisibility within the host itself, i.e. everything that is included in the host at that point becomes invisible with respect to the output object, and to subsequently to the remainder of the host. Second, it can be argued on both empirical and conceptual grounds that a given XP is not in itself parenthetical, but rather becomes parenthetical by virtue of its merger with a particular functional head, say ‘Par’. For instance, the adverbial phrase *honestly* is not parenthetical by definition, it is an AdvP that *becomes* parenthetical when its containing projection merges with a Par, which results in a parenthetical projection ParP. I will speculate about possible selectional properties of this head below. Thus, *par*-Merge is triggered by a specialized head Par (which I mark with ‘⊗’) and creates a paratactic hierarchy as represented below:

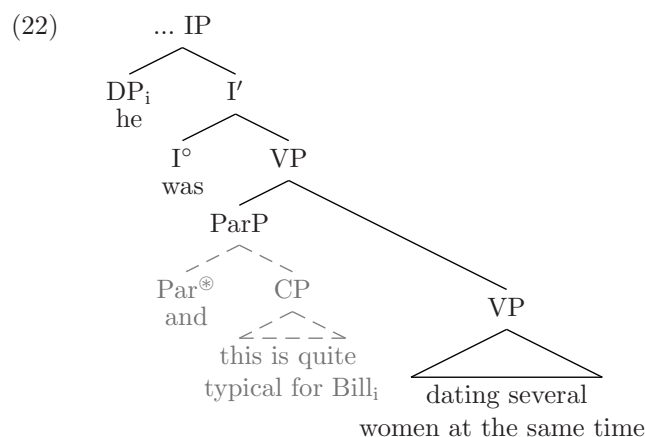
- (20) a. *par*-Merge (Par, XP) → ParP  
 Merge (ParP, YP) → YP  
 Merge (Z, YP) → ZP



Thus, ParP does not dominate its input objects Par and XP. As a consequence, Z c-commands YP (and possible elements dominance-included in YP), but not XP. This is because the latter is not dominance-included in ParP. To illustrate this more concretely, consider (21):

- (21) He<sub>i</sub> was – and this is quite typical for Bill<sub>i</sub> – dating several women at the same time.

The parenthetical clause in this case contains an R-expression that corefers with a pronoun that linearly precedes it in its host, but there is no condition C effect. This can now be accounted for straightforwardly by the application of *par*-Merge triggered by Par: the resulting object ParP does not dominate its input objects (Par and CP here). As a consequence, the subject pronoun *he* does not c-command the R-expression *Bill* because the latter is part of the *par*-included CP. ParP is regularly merged via adjunction here, in this case to VP. The resulting derivation is represented as follows:



The analysis I propose below is an implementation of this idea: this way we can similarly account for the opacity of the IC observed in chapter 3. However, we are not quite there yet. As already suggested above, amalgams bear resemblance to *anchored* parentheticals such as ARCs and appositions. I address this extensively below, elaborating on ideas about (zero) specification, parallel construal and parentheses in Koster (1999, 2000a) and De Vries (2007, to appear). The next section discusses how the idea that the IC is a parenthetical can be reconciled with the sluicing approach in an analysis of amalgams.

I will proceed in a couple of steps, starting out by an extension of Par to cover anchored parentheticals in §7.2. This relates to Koster's 'colon phrase', which has been proposed for parallel construal in the broadest sense. I elaborate on the properties of Par as a functional head, tentatively suggesting we can account for speaker-orientation and the expression of non-restrictive information as inherent properties of ParPs at the level of syntax. This will allow us to distinguish between restrictive and parenthetical parallel construal. §7.3 is the implementation of these ideas in an analysis of amalgams as anchored parentheticals. An important aspect of the proposal is then how it relates the notion 'anchor' to the idea that amalgams are sluicing configurations with *null* correlates.

## 7.2 Anchoring, specification and the nature of Par

### 7.2.1 Parallel construal and the valency of Par

The derivation of the parenthetical (22) in the previous section underlies the assumption that the head Par is *monovalent*. That is, it takes a complement XP, and the application of *par*-Merge on (Par, XP) yields ParP which is regularly merged as an adjunct of some projection in the host:



Clearly, this cannot account for the properties of anchored parentheticals such as appositions (i.e. NAs and ARCs): in those cases we need the parenthetical to be related to its anchor. The first reason for this was already pointed out in the above: an apposition forms a constituent together with its anchor, such that the anchor cannot move and strand the apposition. Potts (2005:104) generalizes this explicitly in terms of obligatory *immediate adjacency*, the examples in (24) are his (4.28a) and (4.29a):

- (24) a. \*We spoke with Lance before the race, the famous cyclist, about

- the weather.
- b. \*We spoke with Lance before the race, who is a famous cyclist, about the weather.

The ungrammaticality of these examples shows that a parenthetical analysis of appositions requires something else than the configuration presented for free parentheticals above: appositives cannot be freely adjoined in their hosts.

A second reason why anchored parentheticals require another analysis than free parentheticals concerns their interpretation: the information expressed by ARCs and appositions concerns the anchor. Consider (25):

- (25) a. I kissed Bill, Bea's former husband.  
b. I kissed Bill, who is Bea's former husband.

The appositive information (*who is*) *Bea's former husband* adds information to *Bill* and not to the proposition expressed by the sentence as a whole. Put differently, appositive information *specifies* the anchor. This holds similarly for amalgams: the particular interpretations discussed in the previous chapter specify the meaning of the 'missing' matrix constituent. I return to this in relation to sluicing in §7.3.<sup>4</sup> In order to account for this, De Vries (2007, to appear) suggests an analysis of appositives in terms of 'specifying coordination'. An analysis of appositives in terms of coordination goes back to at least Kraak and Klooster (1968), and the notion 'specifying' in this context finds its roots in work of Koster (1999, 2000a) (and earlier lecture notes), and Rijkhoek (1998). Koster (1999, 2000a) introduces the 'colon phrase' to account for parallel construal in the broadest sense:

- (26) **Colon Phrase** (Koster 2000a:21)  
[<sub>XP</sub> [: XP]]

Koster applies this to an example that involves asyndetic specification, namely equatives such as (27), which go back to Ross (1969):

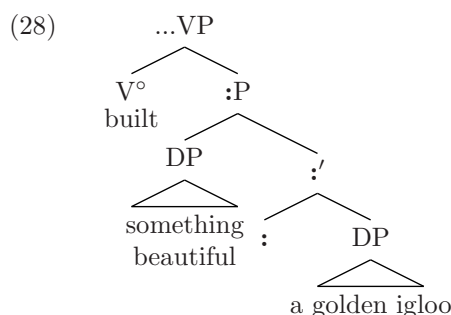
- (27) John built something beautiful: a golden igloo.

In this particular case, the equative *a golden igloo* is immediately adjacent to its anchor *something beautiful*. The analysis as parallel construal that involves a colon phrase then looks as follows:

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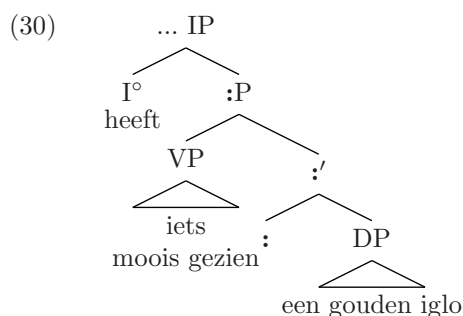
<sup>4</sup>For the present purposes, I will use the term 'specification' in the broadest sense and not elaborate on more fine-tuned distinctions that can be made for the relation between anchor and parenthetical. For a classification of the kinds of specificational meaning in appositions (in Dutch), see Heringa and de Vries (2008).





In Koster's view, the colon head is no more than a Boolean operator: i.e. a coordinator (possibly null) in the widest sense. It functions such that the complement it takes is understood as *adding* information (in this case properties) to the XP in the specifier. I will call this XP the 'subject' or the 'anchor' (depending on what is discussed) to avoid confusion with the somewhat unfortunate name 'specifier'. Koster's colon phrase is not restricted to these adjacent cases: it may also take a larger constituent that contains the anchor, such as the Dutch case in (29) (Koster 2000a:21, his (68a)):

- (29) Jan heeft iets moois gebouwd, een gouden iglo. [Dutch]  
 Jan has something beautiful built a golden igloo  
 'Jan built something beautiful: a golden igloo.'



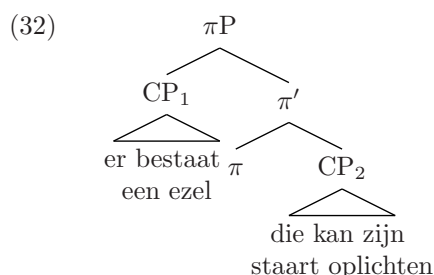
Despite of its original characterization in the context of coordination, the arguments of a colon phrase are thus *not* restricted by the well-known Law of Coordination of Likes (the LCL, which was originally formulated in Williams 1981). Ultimately, this allows Koster to account for extraposition without assuming rightward movement, which is desirable for various reasons that I will not be concerned with here. The account for extraposition in these terms is based on work on Dutch extraposition in Kaan (1992), and is discussed (and modified) extensively in De Vries (2006b, to appear) (see also Kluck and de Vries to appear in relation to RNR constructions). In addition, the colon phrase has been implemented in Rijkhoek (1998) for resultative degree phrases, Den Dikken

(2009) for clefts, and, interestingly, for V2 relatives discussed in chapter 3 of this thesis.

Both Gärtner (2001) and Zwart (2005) propose a paratactic analysis for V2 relatives, syntactically setting them apart from regular relatives. In fact, Gärtner (2001) proposes a structure with paratactic head ( $\pi$ ), that takes the matrix in the specifier, and the V2 relative as its complement. This places V2 relatives in the domain of coordination, which straightforwardly account for both the V2 property and the obligatory ‘extraposed’ position of the V2 relative. Importantly, under their respective accounts, the relation between the coordinated clauses is taken to be *specificational*: the relative specifies a property of its antecedent, comparable to the equative above. Zwart (2005) draws the parallel with specifying coordination more explicitly, as Dutch V2 relatives can be introduced by the coordinator *en* (‘and’) (Zwart 2005’s example, gloss and translation are mine):

- (31) Er bestaat een ezel, en die kan zijn staart oplichten.  
 there exists a donkey and that can his tail lift  
 ‘There is a donkey that can lift its tail.’

This is then represented as follows in their approaches:

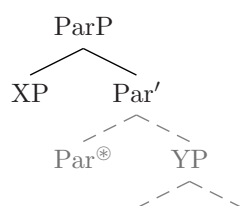


The interesting part of their analysis is that the anchor here is the entire matrix clause. As a consequence, the highest projection is in fact  $\pi$ P, which seems no more than a notational variant of either :P or CoP. The obligatory ‘extraposed’ position that was addressed in chapter 3 (§3.1) now comes for free. Thus, V2 relatives are *not* relatives, despite their appearances. Consequently, these cases do not involve ‘embedded’ V2.<sup>5</sup>

<sup>5</sup>An obvious question is then why they seem to be disguised as relative clauses, i.e. why they seem to be introduced by relative operators. Gärtner (2001), Ebert et al. (2007) and Zwart (2005) show convincingly that these pronouns are (weak) demonstratives and not relative pronouns. This is corroborated by the fact that *wh*-relativizers (*wo* and *waar* in German and Dutch respectively, corresponding to the English *where*), cannot be used in V2 contexts. These data are adapted from Gärtner (2001:136) and Ebert et al. (2007:417), (ib) is mine (*continued on the next page*):

The basic configuration provided by the colon phrase in (30) seems to be precisely what we need for anchored parentheticals: we can now think of Par as potentially *bivalent*, i.e. taking both a subject (the anchor) and a complement (which specifies the anchor):

(33) Bivalent Par



The configuration is similar to (30): XP and YP need not be of the same category and YP specifies XP. So, this allows us distinguish between free and anchored parentheticals in terms of valency of the Par head. In case Par is monovalent it only takes a complement (the parenthetical XP), the resulting ParP adjoins to the host. By contrast, a bivalent Par takes a subject (the anchor) and a complement (the parenthetical XP). The analysis that I propose in §7.3 below involves a bivalent Par head. Contrary to appositives, I argue the anchor in amalgams to be empty. More specifically, it is occupied by the null correlate, and the IC specifies the variable associated with the null correlate.

Before I proceed to amalgams, I will briefly discuss some basic properties of Par, and explain why anchored parentheticals cannot simply be dealt with

- 
- (i) [Dutch]
- a. Noorwegen is zo'n land, {\*waar/ daar} kost een glas wijn je een vermogen.  
Norway is such.a country where there costs a glass wine you a fortune.  
'Norway is such a country where a glass of wine costs a fortune.'
  - b. Noorwegen is een land {waar/ \*daar} een glas wijn je een vermogen kost.  
Norway is a country where there a glas wine you a fortune costs.  
'Norway is a country where a glass of wine costs a fortune.'
- (ii) [German]
- a. Es gibt Länder, {\*wo/ da} kostet das Bier ein Vermögen.  
there exist countries where there costs the beer a fortune
  - b. Es gibt Länder, {wo/ \*da} das Bier ein Vermögen kostet.  
there exist countries where there the beer a fortune costs  
'There are countries where the beer costs a fortune.'

Instead, the V2 'relatives' (ia) and (iia) require the *d*-pronouns *da* (German) and *daar* (Dutch), which are excluded in regular relative clauses (ib) and (iib). For more discussion, I refer to the references cited here.

in terms of Koster's colon phrase. This is obviously related to the syntactic opacity that needs to be guaranteed in an analysis of anchored parentheticals in general. In addition, I speculate briefly about speaker-orientation as a selectional requirement of Par, which will in turn set regular (or: restrictive) parallel construal apart from *parenthetical* parallel construal, which has the (bivalent) Par as its head.

### 7.2.2 Restrictive *versus* parenthetical parallel construal

Koster's colon phrase can be seen as a basic configuration in which parallel construal can be represented in the *broadest* sense. In fact, Koster sees it as one of the two basic ways phrase structure is organized, the other basic way being 'primary' phrase structure. The empirical domain for which the configuration was originally invoked ranges from basic coordination to the equatives discussed above, as well as relative clauses (extraposed or not) and (Dutch) complement clauses. I will not elaborate on the details of all of these construction types (see Koster 1999, 2000a, De Vries 2010b for discussion). The relevant aspect that these constructions seem to share is that whatever is understood to be the subject of the colon phrase, is *specified* by the complement. For the equative repeated in (34), this is intuitively very straightforward:

- (34) John built something beautiful: a golden igloo.

That is, a *golden igloo* specifies the meaning of *something beautiful*. This can also be observed for the Dutch example below, a regular instance of relative clause extraposition (see De Vries 2002, 2006b, to appear for detailed discussion):

- (35) [Dutch]  
 Bob heeft een vrouw gekust die zijn oma had kunnen zijn.  
 Bob has a woman kissed who his grandma had can be  
 'Bob kissed a woman that could have been his grandma.'

I will therefore take specification to be a basic ingredient of the relevant subclass of constructions that can be analysed in terms of parallel construal.

However, the notion 'colon' and its presumed status as some kind of general *coordinative* operator requires some more refinement. That is, in order to distinguish these examples from specification in anchored parentheticals (such as appositives and amalgams), it is useful to look at their respective properties. First, we can easily see that the complements in (34) and (35) must be accessible for the constituent they specify. Consider (36) and (37):

- (36) a. \*He<sub>i</sub> cited someone interesting: the professor<sub>i</sub>.  
 b. He<sub>i</sub> cited someone interesting: himself<sub>i</sub>.

- (37) Iedere man<sub>i</sub> heeft wel eens iemand gekust die zijn<sub>i</sub> oma had [Dutch]  
 every man has AFF once someone kissed who his grandma had  
 kunnen zijn.  
 can be  
 ‘Every man has kissed someone who could have been his grandma at  
 some point.’

In a Kosterian approach, the following constituents in (36)-(37) are the complements of the colon head: *the professor*, *himself* and the relative clause *die zijn oma had kunnen zijn* (‘who could have been his grandma’) in the Dutch example. These data show clearly that these constituents are accessible for c-command-based relations with elements of the matrix clause, as they give rise to condition C effects, and allow for variable binding (anaphoric or by a quantifier). So, this is evidence that the complement in regular parallel construal is c-commanded by elements higher up in the structure. Clearly, this is not what we want for anchored parentheticals (including amalgams), as the various examples of appositives, amalgams and other parentheticals discussed so far are opaque with respect to the rest of the matrix. This is precisely why *par*-Merge was invoked in the first place.

Another difference is the way in which the complement specifies the meaning of the anchor. Although (34)-(36) all add more specific information to the anchor, this information in itself is restrictive. This is most obvious in the case of the relative clause: this is a regular restrictive relative clause (RRC). The relevant contrast is with the (non-extraposed) appositive relative clause (ARC) below:

- (38) Bob heeft zijn bazin, die zijn oma had kunnen zijn, gekust.  
 Bob has his boss-FEM who his grandma had can be kissed  
 ‘Bob kissed his boss, who could have been his grandma.’

Here, the meaning of the definite head NP *zijn bazin* (‘his boss’) is not, and cannot be restricted by the relative clause. Taking this further, for (35) to be true, it must hold that the person who Bob kissed is old enough to be his grandma. This is not the case in (38), which only requires the person who Bob kissed to be his boss: the ARC does not affect the truth-conditions of the matrix. Finally, the ARC expresses a different kind of information than the (assertive) matrix, namely an opinion of the speaker. I return to speaker-orientation in §7.2.3 below. We can conclude that a distinction is needed between parallel construal that adds restrictive information and the kind of parallel construal that adds non-restrictive, speaker-oriented content to the anchor. I suggest that in case of the latter, the functional head that relates the specifying XP to its anchor, is the bivalent *Par* head. The opacity of the complement with respect to anything higher up in the structure, including the anchor (the subject of *Par*), is the direct consequence of *par*-Merge (as desired). This then allows us

to distinguish between restrictive parallel construal and *parenthetical* parallel construal, which can at least be related to a coordinative head and a parenthetical head respectively.

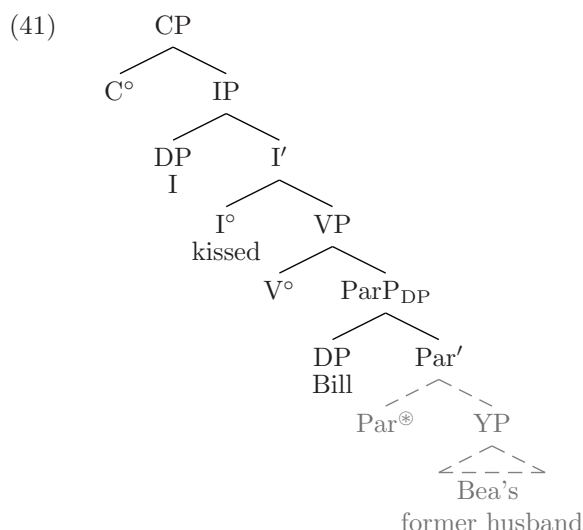
Finally, something needs to be said about how the projections of these heads (i.e. :, Par and possibly other coordinative heads) are integrated in the matrix they are part of. In line with Munn (1987, 1993), Johannessen (1998) and others, I assume that the resulting projections (*eg.* ParP, CoP and :P) are categorially *underspecified* and inherit their categorial features from their specifiers. Hypothetically, then, a DP in the specifier of ParP gives rise to a ParP that can be used in the position of a DP, an AP in the subject yields a ParP that can be used in the position of an attributive, *et cetera*. I will illustrate this below for appositions. Notice that Koster's use of the colon phrase in (30) in the above necessarily relies on the same assumption: the colon phrase comes in the place of a VP and not a DP. In turn, there is nothing in principle that requires Par to select 'likes' as its arguments: like :P, ParP is not constrained by the LCL. However, taking into consideration the fundamental differences between regular parallel construal and anchored parentheticals, the question arises whether we should regard Par as a type of *coordinative* head.

Recall that Koster (2000a) explicitly refers to the colon phrase in these terms. In fact, various facts in his account are explained in terms of violations of the well-known Coordinate Structure Constraint (CSC) (Ross 1967). I illustrate this for a regular relative clause, which is also taken to be an instance of parallel construal in Koster (2000a):

- (39) \*Iemand heeft Bob gekust — die zijn oma had kunnen zijn.  
           someone has Bob kissed who his grandma had can be

Assuming that the relative and its head NP are respectively the subject and the complement of a :P, the ungrammaticality of (39) follows straightforwardly as a violation of the CSC. Let us then turn to a clear candidate for an analysis in terms of parenthetical parallel construal: nominal appositions (NAs). The representation of (40) in these terms is then (41):

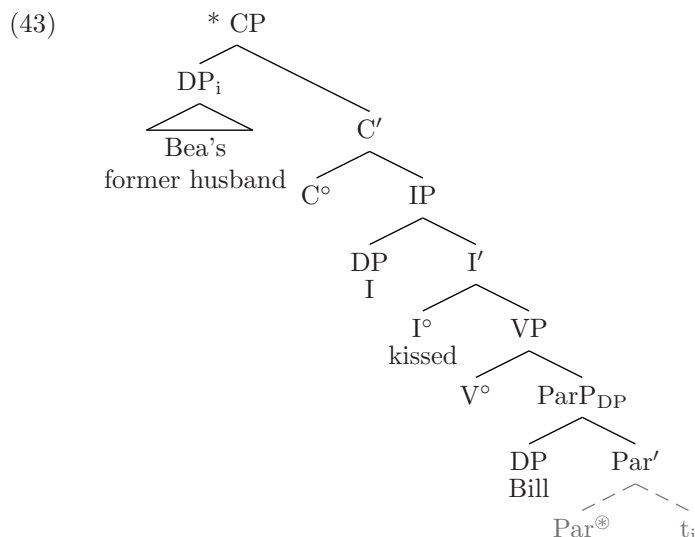
- (40) I kissed Bill, Bea's husband.



It should be noted that this is just a simplified representation that serves to illustrate the point made below. For extensive discussion about the internal structure of ARCs I refer to De Vries (to appear) and Cardoso and de Vries (2010), and for appositions to O'Connor (2008) and Heringa (to appear). Under such assumptions both the structural independence of the appositive (its 'invisibility') and its specifying meaning with respect to its anchor are accounted for. By assuming *Par* to be a *coordinator*, it would follow that the anchor cannot move while stranding the appositive: this gives rise to a violation of the CSC. Something more can be said about the reverse, i.e. moving the appositive while stranding the anchor as in (42):

(42) \*Bea's former husband, I kissed Bill, —

This can similarly be explained as a violation of the CSC, but it additionally follows from the fact that under the assumption of *par-Merge*, the appositive DP cannot be moved into the matrix. Put in conventional terms, a moved appositive DP cannot c-command its trace because the latter is *par*-included and not dominance-included:



Thus: the fact that we cannot move out of a constituent that is the complement of Par can be explained independently from the CSC. This could mean that we need not define Par as a coordinator. Alternatively, we can see the colon and Par as distinct types of heads, the first giving rise to restrictive parallel construal (*viz.* coordination) and the second to parenthetical parallel construal. Obviously, more study is needed on the differences (and parallels) between anchored parentheticals in general and familiar coordinated structures to sustain such a claim. Since the particular properties of coordinative heads are not part of the present work, I will leave the matter open. Below, I speculate about at least one distinguishing property of Par, namely the idea that speaker orientation is a selectional requirement of Par itself.

### 7.2.3 Anchoring to speaker as a selectional restriction of Par

One of the major findings of this chapter was that the IC is always understood as expressing speaker-oriented information. Although it seems quite straightforward that a syntactic head called ‘Par’ is somehow related to what kind of meaning can be expressed by its complement, there is nothing in principle that rules out examples such as (45):

- (44) a. \*Bob hit [it was a professor in Linguistics yesterday].  
 b. \*Bob hit [I regret it was a professor in Linguistics yesterday].

Above, I suggested that bivalent ParP should be seen as a configuration for parallel construal in which the anchor and the complement do not have an equal status in terms of information structure. This can be seen when we contrast amalgams with examples that have been analysed in terms of (versions) of Koster’s colon phrase, namely extraposition of a RRC:



- (45) Bob hit [<sub>P</sub> someone yesterday [<sub>′</sub> : [who is a professor in Linguistics]]].  
 = Bob hit someone yesterday and the person that Bob hit is a professor in Linguistics.

Again, the representation here corresponds to Koster (2000a)'s original proposal, and abstracts away from how it is implemented precisely in De Vries (2002, 2006b, to appear). The parallel is straightforward: the relative clause adds information to the head. However, as I discussed in the previous section, the added information is restrictive, and as such, it is part of the assertion made in the main clause. This is different from what we have seen in what is expressed in amalgams. For the moment, I abstract away from the missing matrix constituent and represent the information it expresses in approximation ( $\cong$ ):

- (46) Bob hit [<sub>ParP</sub> [<sub>DP</sub> *e* [I think it was a professor in Linguistics]]] yesterday.  
 $\cong$  Bob hit someone yesterday.  
 $\leftarrow$  The person that Bob hit yesterday was a professor in Linguistics.

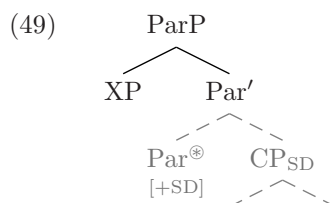
More specifically, whereas (45) constitutes a single (but complex) assertion, sentences containing parentheticals express two different messages. As was shown in chapter 6, parentheticals typically express speaker-oriented information, which is *not* asserted (Potts 2005 and the discussion in the previous chapter). The question is thus how we can further define the properties of Par such that the cases in (44) are ruled out. For this, I propose that Par can impose selectional requirements on its complement. Concretely, the complement of Par must be [+SD], where 'SD' relates to 'Speaker Deixis' (SD) as briefly discussed in chapter 3 (§3.1.3). This is inspired by Haegeman (2006), who in turn adopts the term from Tenny (2000). Speaker Deixis can be seen as the highest projection of the CP, which anchors its content (i.e. the proposition it expresses) directly to the speaker. For proposals in a similar spirit, see McCloskey (2006) (in terms of a 'double' CP) De Cuba (2007) (in the shape of an operator in a separate layer on top of CP, *cP*). Crucially, the presence of SD is what distinguishes factive from non-factive complement CPs, and this is then what accounts for the contrast between (47) and (48) (see also Haegeman 2006:1664 for similar data):

- (47) \*I regret that {frankly/unfortunately}, Bill is not the best candidate for the job.  
 (48) I think that {frankly/unfortunately}, Bill is not the best candidate for the job.

The additional layer in the CP is thus associated with *non*-factivity of the complement clause (*contra* the traditional assumption that factivity yields extra structure, see Kiparsky and Kiparsky 1970, Zanuttini and Portner 2003) and anchors the proposition to the speaker.

I suggest that Par requires its complement to be [+SD]. This then means

that only CPs that involve the relevant projection are suitable candidates for merger with *Par*:



This rules out amalgams containing factive embedding predicates. Moreover, the obligatory presence of SD in the IC explains the speaker-oriented readings of some puzzling cases discussed above. Recall that the subject of the embedding predicates need not be the speaker, as we saw in the case of *verba dicendi* in Horn-amalgams in §6.2. These cases allow only for an evidential reading, and therefore still express speaker-oriented information. We witnessed something similar for Andrews-amalgams in §6.3: the common 2<sup>nd</sup> person subject *you* is always understood as an impersonal pronoun, and *God* as a subject forces its taboo reading. Clearly, the projection of SD is not a stipulation for parenthetical clauses exclusively. In fact, (48) shows that embedded CPs may project this layer as well. This relates to the discussion in §3.1.3, but it raises the question to which extent these adverbs can really serve as a diagnostic for the root status of CPs. I will leave this matter open, as I have shown the IC to display various other root properties.<sup>6</sup>

Summing up, in this section I argued for an analysis of anchored parentheticals in terms of a bivalent *ParP*, a configuration for parenthetical parallel construal. Crucially, the complement of *Par* specifies whatever *Par* takes as its subject. This relies heavily on insights in Koster (2000a) about generalized parallel construal, but extends it to account for the difference between restrictive and non-restrictive, speaker-oriented (i.e. parenthetical) parallel construal. *Par* is seen as a specialized functional head that triggers *par*-Merge and that selects for a [+SD] complement clause. As a consequence, complements of *Par* are restricted to those that express speaker-oriented information and they are rendered invisible for elements that are merged higher up in the structure.

All that is needed now, is to relate anchored parentheticals to sluicing configurations. In the section to come, I demonstrate that the connection between the two is not far-fetched at all. Firstly, the relation between the correlate and the remnant of sluicing is clearly specificational. Second, sluicing with overt correlates is not restricted to coordinated or subsequent clauses, it is also found in anchored parentheticals, i.e. an overt correlate may be specified by a sluiced

<sup>6</sup>It should be noted that based on the simplified representations of appositives, it seems we face an immediate problem if SD is to be seen as a layer of the CP. However, there is reason to believe that even nominal appositions in fact involve a complete clausal structure (see Heringa to appear).

parenthetical. I then argue for an analysis in which the IC is a specification of a *null* correlate. Ultimately, the null correlate is what gives rise to the amalgamated structure: due to its function as an anchor for what is expressed by the parenthetical IC, the position of the IC is always immediate adjacent to the empty XP in the matrix.

### 7.3 Sluiced parentheticals with null correlates

#### 7.3.1 Sluicing as specificational construal

Recall from chapter 4 that there is a restriction on what can function as the correlate of the sluicing remnant in regular sluicing. In line with Chung et al. (1995), Romero (1998), Merchant (2001) and others, I have generalized this as the necessity to produce a variable, either via  $\exists$ -type shifting or via Schwarzschildian F-closure. This variable plays a fundamental role in the licensing of ellipsis, i.e. in the entailment relations that are required by e-GIVENNESS. On a par with Chung et al. (1995)'s proposal for sprouting, I suggested that the requested variable in amalgams is due to a null correlate. In the context of the anchored parentheticals, the IC is then a parenthetical that specifies this variable.

Let us first evaluate the restrictions on overt correlates of sluicing in the context of anchoring and specification above. Intuitively, there is an asymmetry between the correlate in the antecedent and the remnant in the sluice. The asymmetry is tightly related to the presence of a variable in the antecedent: the remnant either seeks to specify or specifies that variable. Informally put, a regular *wh*-question seeks to identify (or: specify the value for) the  $x$  such that Bea is dating  $x$ , and a regular *it*-cleft configuration identifies such a value. This parallel between *it*-clefts and *wh*-questions is well-known (Katz and Postal 1964, Chomsky 1972b, Declerck 1988): both yield an existence presupposition (see also chapter 4). Consider (50) and (51):<sup>7</sup>

- (50) Who is Bea dating?  
        $\gg \exists x.$ Bea is dating  $x$
- (51) It's Bob that Bea is dating.  
        $\gg \exists x.$ Bea is dating  $x$

---

<sup>7</sup>The presuppositional nature of *wh*-questions is however topic to debate in the literature, considering (i):

- (i) Q: Who is Bea dating?  
       A: No one.

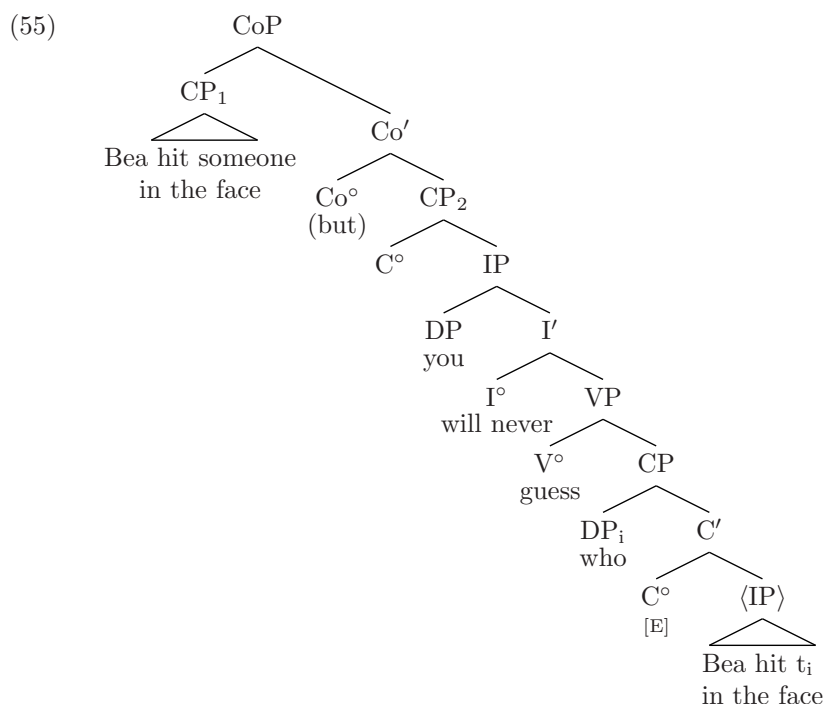
However, as is argued in Karttunen and Peters (1976), such cancellation cannot be done by speaker who utters the question, i.e. it is particular to QA-pairs where Q and A are uttered by *different* speakers. Cancellation by the same speaker automatically gives rise to a contradiction. For this reason, I take this issue to be orthogonal to the analysis of amalgams presented here.

Abstracting away from how the semantics of specification should be formalized, we can paraphrase the interpretation of sluicing configurations with overt correlates as follows:

- (52) Bea is dating someone. You'll never guess who.  
 $\approx$  There is an  $x$  such that Bea is dating  $x$ , and you'll never guess the identity of  $x$  such that Bea is dating  $x$ .
- (53) Bea is dating someone. I think it's Bob.  
 $\approx$  There is an  $x$  such that Bea is dating  $x$ , and I think the identity of  $x$  such that Bea is dating  $x$  is Bob.

Thus, the relation between the correlate and the remnant in sluicing can be informally characterized in terms of specification. This suggests that we may even approach regular sluicing configurations in terms of specifying coordination, i.e. on a par Gärtner (2001, 2002b) and Zwart (2005) for V2 relatives (and the account of extraposition based on the colon phrase in De Vries 2007, to appear). Although the clauses in (52)-(53) are not conjoined by an overt coordinator, it has been observed that sluicing can be licensed in these paratactic configurations as well, granted that the sluice is adjacent to its antecedent (Ross 1969, Merchant 2001, Schwabe 2003). The following tentative representation of regular sluicing subsumes these cases under sluicing in coordination, assuming that these particular paratactic cases are instances of asyndetic coordination:

- (54) Bea hit someone in the face. You'll never guess who.



Such an account of sluicing in coordination captures the specificational relation between the sluice and its antecedent at the level of syntax. Abstracting away from how this can be implemented exactly, it seems that a more fine-tuned analysis of the configuration in which sluicing takes place, fits in nicely with the PF-approach to sluicing.

Interestingly, sluicing with *overt* correlates is not restricted to (asyndetic) coordinative contexts. As was already observed (albeit on a side note) in Lakoff (1974), parentheticals can be sluiced as well. That is, (56) is a ‘sluiced parenthetical’:

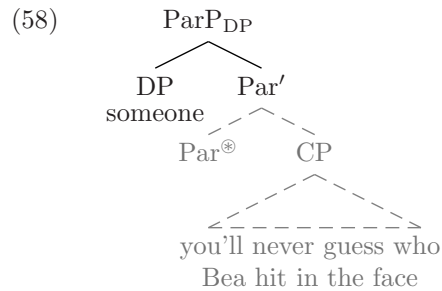
(56) Bea hit someone – you’ll never guess who – in the face.

The presence of the overt correlate (*someone*) of the sluicing remnant (*who*) appears to be the only thing that distinguishes (56) from the familiar amalgam in (57):

(57) Bea hit [you’ll never guess who] in the face.

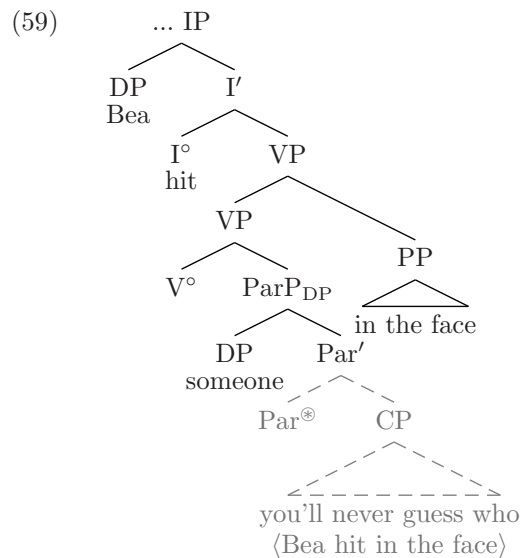
The parenthetical in (56) specifies the meaning of *someone*, and adds to it the same kind of speaker-oriented interpretation that was discussed for Andrews-amalgams in chapter 6 (i.e. DIVERGE). In the context of the discussion about anchored parentheticals and the bivalent ParP, the parenthetical and its anchor can be derived as in (58). This representation is to be taken as the precursor

of what I propose below for amalgams:



Notice that the CP complement of Par is in fact a full-fledged clause at this point. For expository reasons, the internal structure is simplified and will be represented in more detail when discussing amalgams. In (58), it is assumed that the CP involves an E-feature at C° that will leave the IP material *Bea hit in the face* (including the trace of the remnant *who*) unpronounced at PF provided that e-GIVENNESS is met. Obviously, this is not the case at this point, as there is no antecedent to the ellipsis site. In addition, e-GIVENNESS is formulated as an interface condition, and does not play a role until the complete structure is spelled out, i.e. when the clause that hosts the ParP is sent out to the interfaces.

Taking into account the categorial underspecification of ParP as discussed in §7.2.2, (58) is in fact no more than a complex DP that can be used as desired in the matrix (i.e. the host of the parenthetical). So, the representation of a sluiced parenthetical such as (56) is (59):



Ellipsis in the parenthetical is licensed under the same conditions as it is in the regular case: e-GIVENNESS must be met (for details, see chapter 4). I repeat the condition for convenience in (60):

- (60) **e-GIVENNESS** [Merchant2001:31]  
 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).

Clearly, both the regular sluice in (54) as the sluiced parenthetical meet e-GIVENNESS, as the necessary entailment relations between antecedent and ellipsis site hold:

- (61)  $IP'_A = \text{F-clo}(IP_A) = \exists x. \text{Bea hit } x \text{ in the face}$   
 $IP'_E = \text{F-clo}(IP_E) = \exists x. \text{Bea hit } x \text{ in the face}$

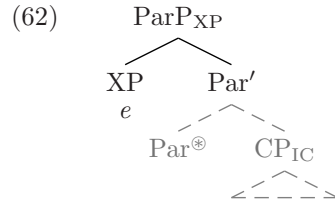
Thus, sluiced parentheticals can be analysed in terms of a bivalent ParP that takes the correlate as its subject, and the parenthetical, which contains the ellipsis site, as its complement. We are now only a small step away from deriving amalgams.

### 7.3.2 Amalgams as specifications of a null correlate

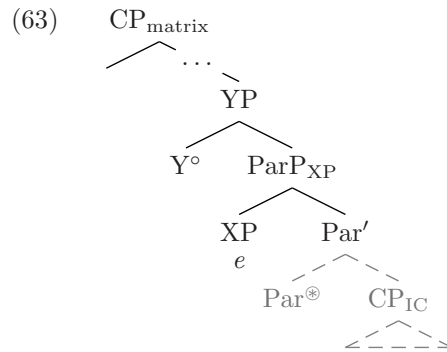
In the sluicing approach that I defended in chapter 4 (in particular §4.4), we identified the missing matrix constituent in amalgams as the missing correlate of the sluicing remnant in the IC. In agreement with observations in Chung et al. (1995), Romero (1998) and others, it was generalized that the correlate in sluicing must provide a variable in the antecedent, for instance by an indefinite DP. I then suggested that the variable in amalgams is due to an empty position in the matrix clause. In the context of the discussion above, we can now further define amalgams as sluiced parentheticals with *null* correlates. Put differently, instead of specifying a variable related to an (indefinite or focused) overt anchor, the IC in amalgams is a sluiced parenthetical that specifies the meaning of a variable that is due to an empty position.

#### Deriving the simple case

The analysis for amalgams as sluiced parentheticals with null correlates then involves a bivalent ParP, which takes the IC as its complement and an empty XP as its subject. This globally looks as follows:



Similarly to the sluiced parentheticals illustrated above, the ParP as a whole can be used as an XP in the matrix, for instance as the complement of some Y that selects for XP:



Strictly speaking, there is no ‘missing matrix *constituent*’ under these assumptions. After all, the relevant position is occupied by a ParP, a complex XP which *contains* an empty position that is specified by the IC. In turn, the matrix is the antecedent for ellipsis in the IC. Let me illustrate this first for (64), repeated from the previous section:

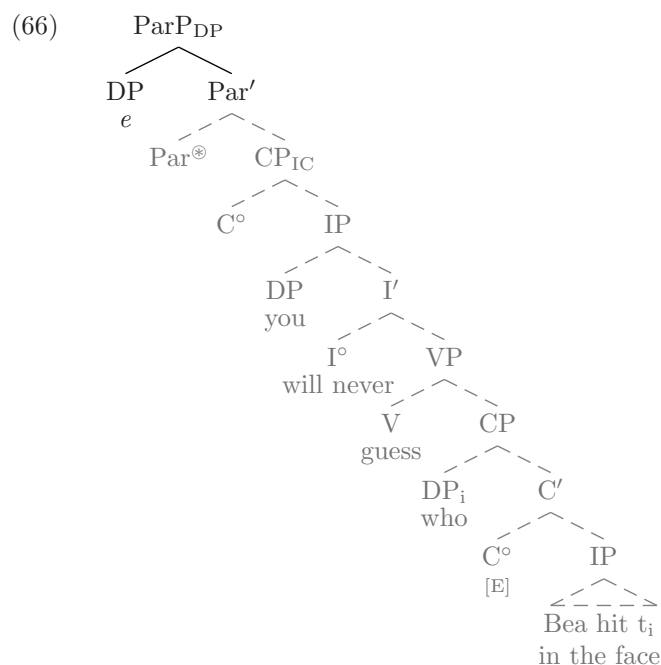
(64) Bea hit [you’ll never guess who] in the face.

Based on the facts described in chapter 3, and the PF-approach to sluicing defended in chapter 4, we know that the IC is in fact the full-fledged root clause in (65):

(65) You’ll never guess who Bea hit in the face.

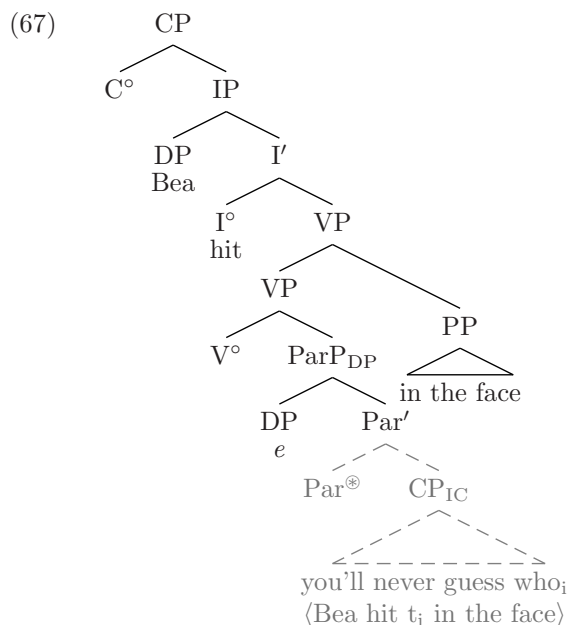
This clause embeds an interrogative *wh*-CP that contains an E-feature at C°. Other than that, there is nothing special about the derivation of the IC. Assuming that it is subsequently merged as the complement of a (bivalent) Par, *par*-Merge applies. As a consequence, the IC is *par*-included instead of dominance-included. This means it is not c-commanded by any material that is merged later on in the derivation, including the subject of the ParP (see (19) in §7.1.3), i.e. the empty anchor:





At this point, we have a complex ParP. Since I assumed the empty category to be a DP here, the whole can be used as a DP in the matrix. Similarly, if the empty anchor is of another category XP, it can be distributed in agreement with that category. This seems to require a stipulation, but as I will show in §7.3.3 below, the category of the empty XP is regulated by the licensing condition on ellipsis.

Assuming that the ParP here is a complexly derived DP, we can continue the derivation of the Andrews-amalgam by building the matrix clause in which ParP is a constituent (in this simple case an object of the main verb *hit*). For ease of representation, the structure of the CP in (66) is collapsed in (67):



Recall that the embedded CP in the IC hosts an E-feature. Provided that the licensing condition on ellipsis is met, this feature renders its complement IP unpronounced (here indicated by the familiar brackets  $\langle \dots \rangle$ ) when the structure is spelled out. Clearly, e-GIVENNESS is met in (67), as the required mutual entailment relation between antecedent (the matrix, (68a)) and the ellipsis site (the IP internal to the IC, (68b)) hold:

- (68)
- a. Bea hit  $e^x$  in the face  
 $IP'_A = \text{F-clo}(IP_A) = \exists x. \text{Bea hit } x \text{ in the face}$
  - b. Bea hit  $t^x$  in the face  
 $IP'_E = \text{F-clo}(IP_E) = \exists x. \text{Bea hit } x \text{ in the face}$

It should be stressed that the opacity of the IC as the consequence of *par*-Merge does not get in the way of licensing of sluicing in the IC. After all, nothing in our present assumptions about the licensing of ellipsis depends on c-command between antecedent and ellipsis site. In fact, in what follows, I will show how the interplay of our assumptions about sluicing and the parenthetical approach pursued here allows us to derive the opacity and reconstruction effects in amalgams.

### Deriving opacity and reconstruction effects in amalgams

I have argued that the opacity effects witnessed in chapter 3, in addition to the observation that the IC necessarily expresses speaker-oriented information, constitute evidence that amalgams involve a paratactic hierarchy between matrix and IC. Assuming that the IC is merged as the complement of *Par*, no

element of the matrix clause c-commands it: the IC is invisible with respect to the matrix. Put differently, elements of the matrix c-command ParP and the empty anchor, but not Par and its complement CP.

Concrete examples that should now follow straightforwardly are then for instance the Horn-amalgam in (69):

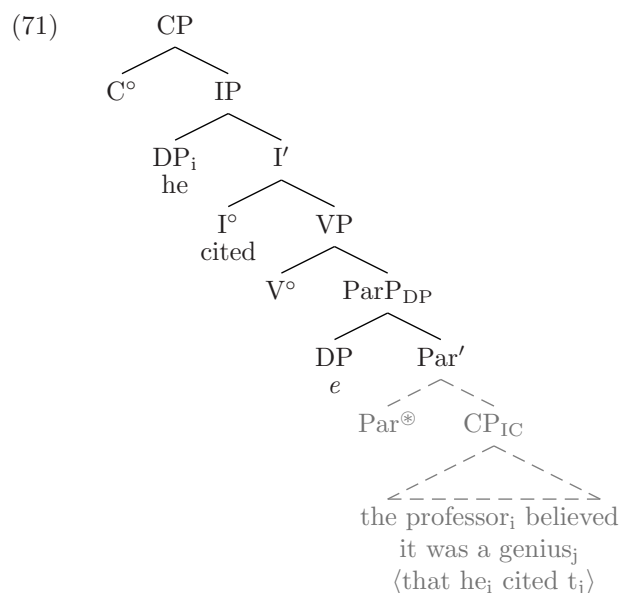
(69) He<sub>i</sub> cited, [the professor<sub>i</sub> believed it was a genius].

Here, an R-expression in the IC corefers with a matrix pronoun, yet no condition C effect arises. However, a similar R-expression as the content kernel of an amalgam *does* give rise to ungrammaticality:

(70) \*He<sub>i</sub> cited [I think it was the professor<sub>i</sub>].

Let me illustrate how this apparent opposition can be derived in the present analysis. For both (69) and (70) the object of *cited* is not an empty DP, but it is the complex ParP in which the empty anchor occupies the specifier, and the IC is its complement. Recall that the respective ICs underlie full-fledged *it*-clefts, for which I assumed a raising analysis. Crucially, focus on the cleft pivot is what triggers its movement out of the cleft clause (a regular restrictive relative clause, see §4.3). In the context of this raising analysis, I assumed the highest C° to contain an E-feature (which I dubbed E<sub>RC</sub>). Sluicing in these cases is thus ellipsis of the lower CP (CP<sub>2</sub>) that is the complement of the C° containing the E-feature. For ease of representation, I will not include the details of the internal structure of the *it*-cleft, as these have been discussed at length in chapter 4.

The absence of a condition C effect in (69) now follows simply from the parenthetical analysis of the IC. This is illustrated in (71):

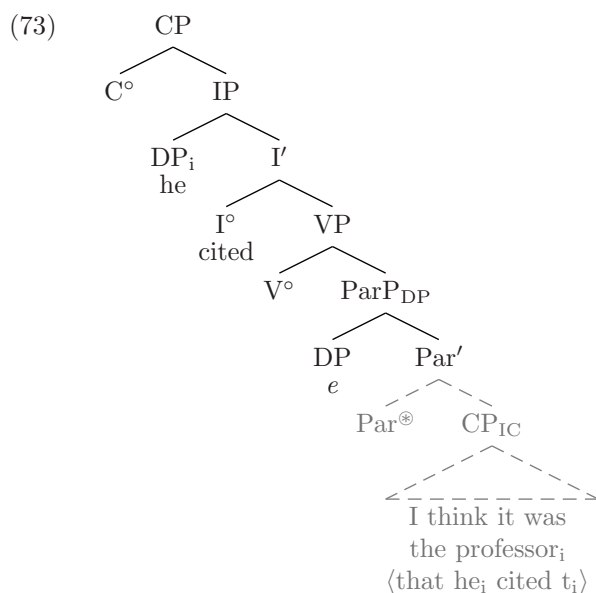


Because the IC is not dominance-included but *par*-included, elements higher up in the structure do not c-command it. This includes the coreferring pronoun *he* in the matrix.

Despite its appearances, the condition C effect in (70) is not due to the matrix pronoun and the R-expression in the IC. Instead, the effect is due to the reduced *it*-cleft that is part of the IC:

(72) \*I think it was the professor<sub>i</sub> that he<sub>i</sub> cited.

After all, in the raising analysis that I proposed for cleft clauses in reduced *it*-clefts in chapter 4, the cleft-pivot has A'-moved out of the ellipsis site. In its base position inside the cleft clause, it is c-commanded by the coreferring pronoun *he*, and this is what gives rise to the contrast between (69) and (70). The IC of (70) is thus completely opaque and bears no different relation to the matrix than the IC in (69):



In sum, while the parenthetical analysis of the IC predicts straightforwardly that no c-command-based relations can be established between matrix and IC, the PF-approach to sluicing captures the apparent *status aparte* of the content kernel: the remnant in the IC displays reconstruction effects with its base position in the ellipsis site.

### Case matching on the content kernel

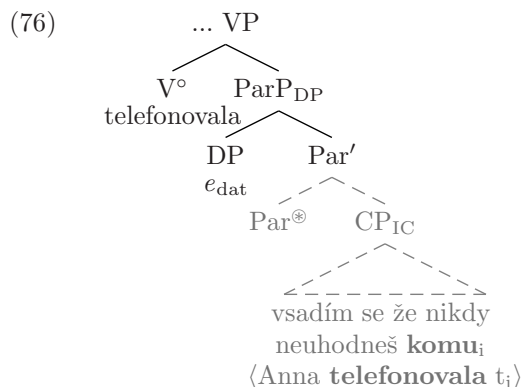
The assumptions regarding the categorial underspecification of the ParP discussed in §7.2.2 are important for deriving the case facts in amalgams. That is, in case ParP is used in a position where case is assigned, the case that is assigned to the ParP is expected to transfer to its specifier (Munn 1993, Johannessen 1998). This implies that in case of amalgams, matrix case is transferred to the empty DP in the specifier of the ParP. As it turns out, this is a desirable consequence of the analysis pursued here.

Recall from §5.2 in the previous chapter that there is evidence that case marking on the content kernel is assigned in the IC and not by the matrix, contrary to what would be predicted in the multidominance theory of amalgams. In the present analysis, the dative associated with the *matrix* verb *telefonovala* in the Czech Andrews-amalgam (74) and the accusative of *skotose* in the Greek Horn-amalgam (75), is assigned to a null DP. The examples are repeated from chapter 5, §5.2:

- (74) [Czech]  
 Včera Anna telefonovala [ParP [DP *e<sub>dat</sub>*] vsadím se, že nikdy  
 yesterday Anna phoned bet:1SG REFL that never  
 neuhodneš komu].  
 guess:2SG who:DAT  
 ‘Yesterday Anna phoned I bet you’ll never guess who.’
- (75) [Greek]  
 O Janis skotose, [ParP [DP *e<sub>acc</sub>*] pistevo itan o  
 the John killed believe.1SG was the.NOM  
 kathijitis].  
 professor.NOM  
 ‘John killed I believe it was the professor.’

This explains in particular the pattern that we observed for Horn-amalgams: the accusative associated with the matrix verb is not realized because it is assigned to a null DP, and case on the content kernel is the default case assigned by the copula. For Andrews-amalgams, the case assigner of the *wh*-DP is the verb *telefonovala* which is contained in the ellipsis site.

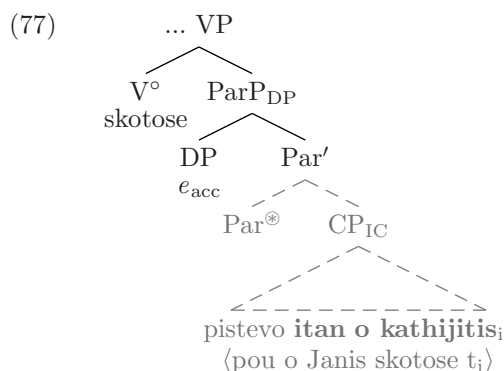
Let me illustrate this for both examples. The representation in (76) illustrates how case is assigned in the Czech Andrews-case (74):



Here, the relevant case assigner and the resulting case marking are boldfaced. Recall from chapter 5 and the discussion throughout chapters 2 and 3 that the multidominance analysis (as proposed in Van Riemsdijk 2000b, 2006b,c, Guimarães 2004) would in fact predict strict case matching (in both Andrews- and Horn-amalgams). However, matching under their assumptions is necessitated by a derivation that involves sharing of the relevant constituent. Presumably, structures can only share a constituent if this constituent is assigned the same case in its respective positions in matrix and IC. In the sluicing approach, strict case matching follows straightforwardly as case is assigned in the ellipsis site of the IC.

As for Horn-amalgams, we did in fact not expect case matching on the

content kernel. In this case, the content kernel was analysed as the (focused) head of a relative clause (the cleft clause). We then expected the case facts to pattern with relative clauses (see §5.2). This expectation was borne out empirically based on German and Greek facts. It also follows directly when we assume the case of the main verb of the matrix clause to be assigned to the ParP (and transferred subsequently to its specifier):



Thus, in *both* types of amalgams the content kernel obtains case in the IC.

In sum, I have argued that amalgams are parentheticals that specify an empty anchor XP in the matrix clause. I have analysed these as arguments of a parenthetical head Par, which triggers *par*-Merge. As a result, the parenthetical (the IC) is not c-commanded by elements of the matrix, including the empty anchor. The resulting projection ParP inherits its categorial features from its specifier (the empty XP), and can be used accordingly in the matrix clause. Various aspects of amalgams are accounted for under an analysis that brings together sluicing and specification, while accounting for the opacity and speaker-orientation of the IC. Although the integration of the IC in the matrix is explained by our assumption about the relation between the ParP and its specifier, this is not sufficient for solving Lakoff's puzzle, as nothing has been said yet about the relation between the empty position and the category of the content kernel. In §7.3.3 I show that this is regulated by e-GIVENNESS.

### 7.3.3 Matching the content kernel with the empty anchor

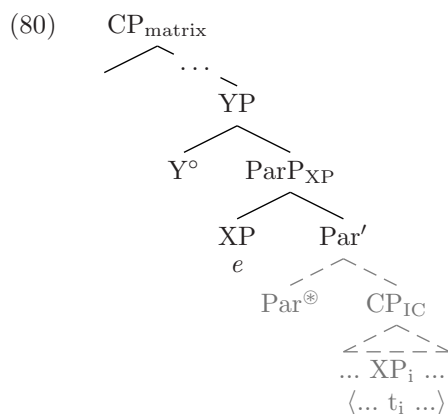
Recall that in §3.2, it was observed that amalgams are distributed along with the category of their content kernel. The content kernel in turn has the category of whatever is perceived as 'missing' in the matrix clause. This expanded on what this thesis started out with, namely Lakoff's puzzle. In the analysis above, the latter is an empty anchor which is specified by the IC, and the content kernel is the remnant of sluicing. Under these assumptions, we can straightforwardly account for the distribution of the ParP in the matrix, because it obtains the categorial features from its empty specifier. That is, a ParP that has an empty DP sitting in its specifier cannot occur in the position where a DP cannot

occur. However, nothing in the configuration itself relates the category of the anchor to the content kernel in the IC. This could be a problem, since there clearly is a correspondence between the two:

(78) \*Bob got a [frankly, you wouldn't believe [<sub>DP</sub> what]] car.

(79) Bob got a [frankly, you wouldn't believe [<sub>DegP</sub> how [<sub>AP</sub> expensive]]] car.

That is, an IC with a DP content kernel is not allowed in an attributive position, while a AP content kernel is licensed here (here subsumed in a DegP, I return to this in detail below). It seems that we are compelled to stipulate some (categorical) correspondence between the empty anchor and the content kernel in order to ban ICs with a *wh*-XP content kernel in positions that do not license that particular XP:



I will show that we do not need to take such measures, but that cases such as (78) are ruled because they fail to meet e-GIVENNESS. That is: the licensing condition on ellipsis regulates the correspondence between the null correlate and the remnant.

Let me first illustrate that we can derive the hairy case with an IC in attributive position at all. Recall from chapter 5 (§5.1) that these cases constitute an LBC violation. As a result, the underlying structure of the IC is necessarily an island-violating sentence:

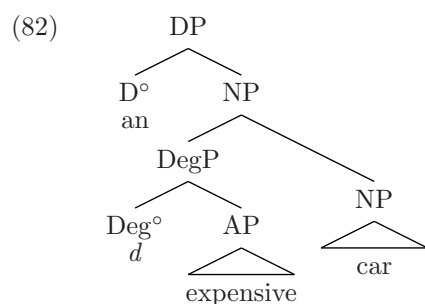
(81) \*You will never guess how expensive Bob got a \_ car.

Taking into account the theories about island repair in sluicing that were discussed at length in §5.4.3, I will not be concerned with the island violations involved in the derivation of attributive sluices in amalgams.

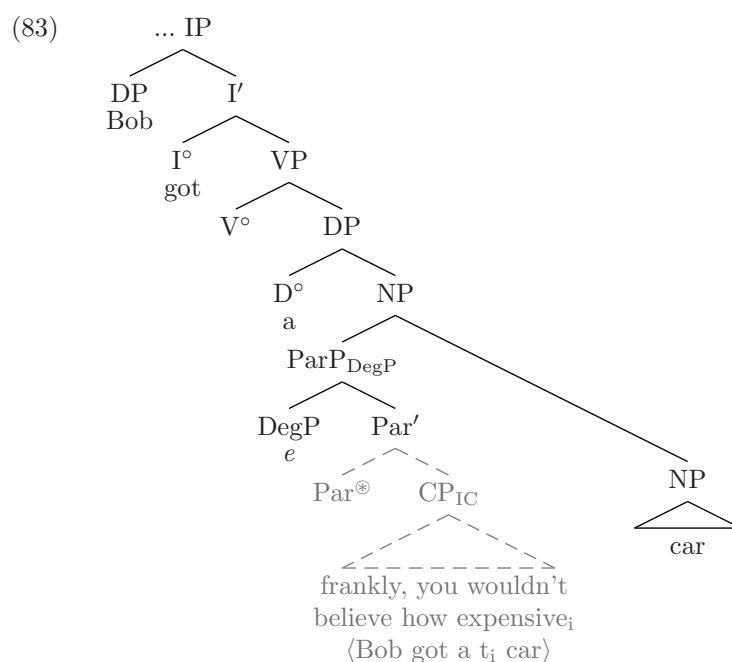
Recall that Corver (1990, 1997)'s extended adjectival projection was assumed to account for the relevant *wh*-movement in these examples (see Kennedy and Merchant 2000, Merchant 2001 and §5.1.3 of this thesis). In addition, I will take attributive DegPs to be left-adjoined to the NP they modify, in line with



Kennedy and Merchant (2000) who adopt Svenonius (1992). A DP that is modified with a gradable adjective then looks as follows:



Let us then turn to the amalgam in (79). Under the present assumptions, the ParP can only be selected in an attributive position if the empty anchor is a DegP. This gives us the following representation:



However, nothing in the configuration itself seems to rule out an IC with a DP content kernel: the assumed selectional requirement of the matrix only restricts the category of the empty anchor, and is not related to anything internal to the IC. So, how can we explain the obligatory matching between the anchor and what is expressed in the IC?

Let us first consider the licensing of ellipsis in (79). The antecedent of the ellipsis site contains a variable for a property P, which is due to the empty

DegP that is the anchor of the ParP ( $e^P$ ). The antecedent is then as in (84):

- (84) Bob got a  $[_{\text{DegP}} e^P]$  car.  
 $\approx$  Bob got a car with a particular property.

Notice that this case is in itself a grammatical sentence, contrary to examples that involve a ParP in argument position:

- (85) \*Bea hit  $[_{\text{DP}} e^x]$  in the face.

That is, the slot that the matrix provides to host the ParP is optional. I return to this in relation to (non-)detachability of the IC in §7.4. Abstracting away from this for the moment, this yields the following IPs as antecedent (the matrix) and ellipsis site (IC) respectively:

- (86)  $\text{IP}_A = \text{Bob got a } e^P \text{ car}$   
 $\text{IP}_E = \text{Bob got a } t^P \text{ car}$

In  $\text{IP}_E$ , *expensive* is F-marked. In agreement with Merchant (2001), I assume that F-marking (the  $[+F]$  feature) on AP percolates to its containing DegP, in fact similar to how F-marking on a noun percolates to DP. The F-closure of the IP is obtained by abstracting over properties, resulting in (87):

- (87)  $\text{IP}_E = \text{Bob got a } t^P \text{ car}$   
 $\text{IP}'_E = \text{F-clo}(\text{IP}_E) = \exists P[\text{Bob got a } P\text{-car}]$

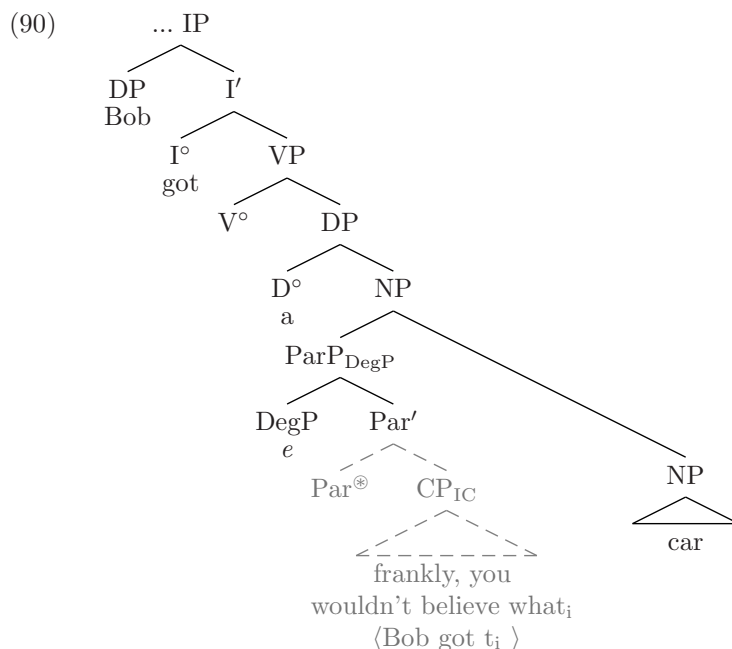
As pointed out above, the presence of an empty DegP in the antecedent yields a free variable  $e^P$ , a variable that ranges over the meaning of gradable adjectives. The F-closure of the antecedent clause is then (88):

- (88)  $\text{IP}_A = \text{Bob got a } e^P \text{ car}$   
 $\text{IP}'_A = \text{F-clo}(\text{IP}_A) = \exists P[\text{Bob got a } P\text{-car}]$

So, the entailment relations between the antecedent IP and the ellipsis site hold, as required by e-GIVENNESS, and therefore (79) is licensed.

We can now explain straightforwardly why (78) is ruled out: e-GIVENNESS is not met. I repeat the example and illustrate its syntactic derivation for convenience:

- (89) \*Bob got a [you can imagine what] car.



In this case, F-closure of the sluiced IP and the matrix are as in (91):

- (91)
- a.  $IP_E = \text{Bob got } t^x$   
 $IP'_E = \text{F-clo}(IP_E) = \exists x. \text{Bob got } x$
  - b.  $IP_A = \text{Bob got a } e^P \text{ car}$   
 $IP'_A = \text{F-clo}(IP_A) = \exists P[\text{Bob got a P-car}]$

Obviously,  $\text{F-clo}(IP_E)$  does not entail  $\text{F-clo}(IP_A)$ : that Bob got something does not entail he got a car with a particular property. Hence the sentence is ruled out.<sup>8</sup> In other words, the apparent matching between the empty anchor and the content kernel simply falls out of the sluicing approach that is central to

<sup>8</sup>Interestingly, Merchant (2001:179) is compelled to conclude differently for regular sluicing, because of (i) (his (49)):

- (i) She bought a car, but I don't know how big a car  $\langle$ she bought $\rangle$ .

After all, the F-marked constituent in  $IP_A$  is *a car*, and the required entailments do not hold similar to (91) above:

- (ii)  $IP'_A = \text{F-clo}(IP_A) = \exists x. \text{Bob got } x$   
 $IP'_E = \text{F-clo}(IP_E) = \exists P[\text{she got a P-car}]$

It seems to me that this can be solved by assuming a silent (optional) DegP in the antecedent clause. That is, intuitively, the correlate of the *wh*-phrase is not *a car*, but some property of *a car*. Fitting this in with the claims made in the section to come, these cases could in fact be reanalysed in terms of sprouting rather than sluicing in the narrow sense. I will leave this open for future research. For detailed discussion of this issue, I refer to Merchant (2001:177ff) and Kennedy (2007).

this thesis: it is regulated by e-GIVENNESS, the licensing condition on sluicing in the IC.

In conclusion, the observed correspondence between the content kernel and the position in which the IC occurs in the matrix clause can be reduced to a correspondence between the remnant of sluicing in the IC and its correlate. In an analysis of amalgams as sluiced parentheticals with null correlates, the relation between the correlate and the remnant is taken care of by the required entailment relations that must hold between the antecedent and the ellipsis site. This is then the final key in solving Lakoff's puzzle.

I end this chapter by discussing the proposed analysis in relation to a few (novel and familiar) empirical observations. Some of these are explained directly by the theory of amalgams presented here, others provide new questions that still need further study. First, I address the (non-)detachability of the IC. This is necessary, because the analysis of amalgams as (anchored) parentheticals in itself does not predict the well-formedness of the matrix clause to depend on the presence of the IC. Second, I discuss a couple of movement facts (most of which go back to chapter 3), with a special focus on English HNPS and Dutch extraposition. Finally, I reflect on some peculiar properties of sluiced parentheticals in general.

## 7.4 Beyond Lakoff's puzzle

### 7.4.1 (Non)-detachability of the IC

As was already hinted at in the previous section, the present analysis allows us to see why the IC, unlike free parentheticals (92) or sluiced parentheticals with overt anchors (93), cannot (generally) be detached from its host (94):

- (92) a. Bob – isn't he a genius? – studies mathematics in Cambridge.  
b. Bob studies mathematics in Cambridge.
- (93) a. Bea hit someone – {you'll never guess who/I think it was the professor} – in the face.  
b. Bea hit someone in the face.
- (94) a. Bea hit {you'll never guess who/I think it was the professor} in the face.  
b. \*Bea hit in the face.

In this section I demonstrate that this is basically the difference between sprouting and sluicing in amalgams. That is, the ParP in amalgams is only detachable if it is used in an optional position in the matrix, i.e. as constituent that is not necessary for the computation of the meaning of the matrix itself.

This is for instance the case when the IC modifies an implicit argument of a verb. I illustrate this with the verb *serve* (*someone*) (*something*), adapted from chapter 4 (§4.2.2):

- (95) Bea served the guests (a very expensive wine).

The sluice in (96) shows that if the correlate corresponds to optional argument in the antecedent, it can be left out. In that case, the type of sluicing involved is what Chung et al. (1995) have called ‘sprouting’. I represent this including the variable they associate with the empty slot, in this case corresponding to an individual ( $e^x$ ):

- (96) Bea served the guests {something/ $e^x$ }, but I don’t know what.

Suppose now that the IC occurs in the position of such an optional argument. In the analysis proposed here, this looks as follows:

- (97) Bea served the guests [<sub>ParP</sub> [<sub>DP</sub>  $e^x$ ] [{you’ll never guess how many beers/I think it was a rather expensive wine}]] last night.

The variable introduced by the empty position is the subject of the ParP, and specified by the IC. The whole constitutes a ParP that is used as an argument in the matrix. As expected, the matrix is perfectly acceptable in the absence of the IC. After all, the relevant position that is occupied by ParP in (97) is optional. If there is no ParP, this position is simply not realized in the matrix. Hence, there is no vacant argument position in (98b):

- (98) a. Bea served the guests {you’ll never guess how many beers/I think it was a rather expensive wine}] last night.  
b. Bea served the guests last night.

However, in case the ParP is used instead of an obligatory argument, such as the object of the verb *hit*, detaching the parenthetical leaves an empty slot in the structure, and the meaning of the matrix cannot be derived independently from what is specified as its value in the IC:

- (99) a. Bea hit [<sub>ParP</sub> [<sub>DP</sub>  $e^x$ ] [you’ll never guess who]] in the face.  
b. Bea hit [<sub>ParP</sub> [<sub>DP</sub>  $e^x$ ] [I think it was the professor]] in the face.

- (100) \*Bea hit in the face.

Put differently, the ungrammaticality of (100) is related to the ungrammaticality of the regular sluice in (101):

- (101) \*Bill hit at the party, but I don’t know who.

It is important to recall at this point that the variable that is specified by the IC is due to a null XP (i.e. the null correlate) in the ParP, and not to an empty position in the matrix itself. That is, the position is filled by the ParP that contains the null XP, as was discussed extensively in the previous section. Thus, the  $\exists$ -type shifting that is applied for e-GIVENness here and in §4.4 (in particular §4.4.2) for cases such as (99), to does not imply that the antecedent clauses may contain empty slots.

Summing up, whether the IC is detachable or not corresponds directly to the more familiar contrast between regular sluicing and sprouting, further corroborating the analysis proposed in this thesis. Clearly, these factors do not play a role in sluiced parentheticals with *overt* anchors, and other anchored parentheticals such as the appositives that were briefly discussed above.

#### 7.4.2 What can move and what cannot in amalgams

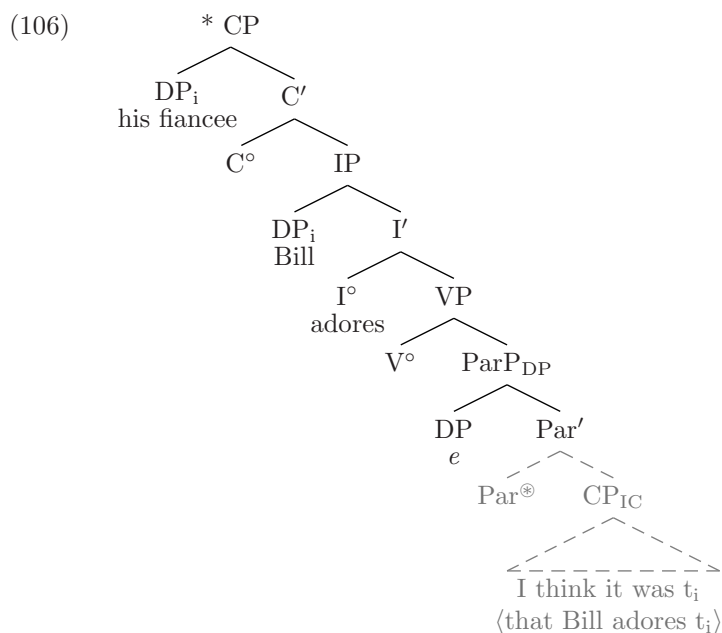
The analysis presented throughout this chapter makes a couple of predictions regarding movement. This section discusses a variety of data related to movement, starting out with the observation that nothing can move out of the IC. In addition, I show that the ParP can be scrambled across adverbs in Dutch, which is consistent with our theory. Finally, I revisit the extraposition facts discussed in chapter 3. These facts follow from the analysis to a great extent, but leave us with an interesting puzzle for Dutch.

##### No movement out of the IC

Recall from chapter 3 (§3.4.1 in particular) that the content kernel can be topicalized within the IC, but not into the matrix. The examples are repeated in (102)-(105):

- (102) \**His fiancée*, Bill adores [I think it was \_].
- (103) \**Which girl*, Bill adores [you can't imagine \_].
- (104) Bob kissed... [*how many girls*, you can't even begin to imagine \_!] at the party.
- (105) [Dutch]  
 Bob heeft [*Bea* dacht ik dat het was \_] ten huwelijk gevraagd.  
 Bob has Bea thought I that it was to marriage asked  
 'Bob proposed to Bea I thought it was.'

Topicalization is expected if the IC is not analyzed as a subordinated clause, but rather taken to be an independent root. Taken together with the other root phenomena observed in the IC (i.e. illocutionary force, V2, *et cetera*), these facts were argued to be highly problematic for most of the theories about amalgams, except the multidominance analyses proposed in Van Riemsdijk (2000b, 2006b,c) and Guimarães (2004). However, I noted back then that the multidominance theory correctly predicts the grammaticality of (104)-(105), but it fails to rule out similar movement of the content kernel into the matrix. By contrast, the present analysis correctly predicts that we cannot move the content kernel (or anything else, for that matter) out of the IC. As was illustrated above for similar movement of an apposition, movement (out) of the IC into the matrix would leave trace that is not c-commanded by the moved constituent:



This representation shows that elements in the matrix do not c-command the IC, because the latter is only *par*-included in the matrix. As a consequence, nothing can move out of the IC in amalgams. Topicalization of the same constituent *internal* to the IC is possible, granted that it does not violate other constraints on movement, because this would involve movement into a c-commanding position (i.e. into the specifier of the highest CP of the IC).

#### ParP as a whole can be moved: OV and the scrambling order in Dutch

Since we take the ParP to inherit the categorial features of the XP that occupies its specifier, we expect ParP<sub>DP</sub> to be able to move just like any other DP. Under the assumption that the position of nominal objects in Dutch is derived (see §3.2.1), the ParP as a whole must have moved even in the regular case in Dutch:

- (107) [Dutch]  
 Bob heeft gisteren [ParP [DP e] [ik dacht dat het Bea was]]  
 Bob has yesterday I thought that it Bea was  
 gezien —.  
 seen  
 ‘Bob saw I thought it was Bea yesterday.’

It may then seem unsurprising that scrambling across adverbs with this type of complex object is possible as well:

- (108) Bob heeft [<sub>ParP</sub> [<sub>DP</sub> *e*] [*ik dacht dat het Bea was*]] – gisteren  
 Bob has I thought that it Bea was yesterday  
 gezien —.  
 seen  
 'Bob saw I thought it was Bea yesterday.'

The scrambling facts are quite interesting in the light of the assumption that the ParP involves the specification of an empty DP. Whereas scrambling of definite objects can occur freely (and is even strongly preferred in the case of pronouns) in Dutch, scrambling of indefinite objects is more restricted:

- (109) a. Bob heeft {Bea/ het meisje} gisteren gezien.  
 Bob has Bea the girl yesterday seen  
 'Bob has seen Bea/the girl yesterday.'  
 b. Bob heeft {??iemand/ ?een meisje} gisteren gezien.  
 Bob has someone a girl yesterday seen  
 'Bob has seen someone/a girl yesterday.'

In fact, we expect the ParP in Dutch amalgams to behave like an indefinite DP with respect to scrambling. The scrambling of indefinite objects is well-known to force a specific or referential readings (see for instance de Hoop 1992, van der Does and de Hoop 1998, who derive this via type-shifting operations). That is, the only reading that is possible for *een meisje* ('a girl') in (109b) is the referential or specific reading. The relative ease with which the ParP in the Horn-amalgam above can occur in scrambled position seems to be related to the meaning of the *it*-cleft discussed in chapter 4 (see §4.3). I generalized in line with Hedberg (1990) that the cleft pivot is necessarily referential. Apparently, this facilitates scrambling of the ParP in Horn-amalgams.

Interestingly, there is a slight contrast between the Horn-amalgam with the scrambling order in Dutch, and a similar Andrews-amalgam (110a):

- (110) a. ?Bob heeft [*je raadt nooit wie*] gisteren geslagen.  
 Bob has you guess never who yesterday hit  
 b. Bob heeft gisteren [*je raadt nooit wie*] geslagen.  
 Bob has yesterday you guess never who hit  
 'Bob hit you'll never guess who yesterday.'

The contrast here is very likely due to a semantic difference regarding the level of specification in Horn- and Andrews-amalgams respectively. That is, specification of the empty anchor in Horn-amalgams is directly associated with the referential reading of the cleft pivot. Arguably, this does not similarly hold for Andrews-amalgams: although the IC similarly specifies the meaning of the empty anchor, it does not identify a specific referent. This seems tightly connected with the semantics of the *wh*-phrase and the interrogative status of the IC in Andrews-amalgams, which lies beyond the scope of the present work.



**Revisiting the extraposition facts**

In chapter 3 (§3.2.2) a difference was observed between English and Dutch when it comes to extraposition of the IC. That is, contrary to English, the IC in Dutch cannot be extraposed. This is surprising if we take the IC to be some special kind of relative clause, as relative clause extraposition is equally common in Dutch and English. In the analysis proposed here, what moves in these cases is the ParP, which bears the categorial features of its specifier, i.e. the empty DP. The rightward movement of the IC thus amounts to HNPS, which is generally disallowed in Dutch:

- (111) [Dutch]  
 \*Bob kan zich — nog goed herinneren [<sub>DP</sub> het meisje met de lange  
 Bob can REFL still well remember the girl with the long  
 rode haren].  
 ginger hair  
*int.* ‘Bob can remember the girl with ginger hair only too well.’
- (112) \*Bob kan zich — nog goed herinneren [<sub>ParP</sub> [<sub>DP</sub> *e*] [ik geloof dat  
 Bob can REFL still well remember I believe that  
 het Bea was]].  
 it Bea was  
*int.* ‘Bob can remember I think it was Bea only too well.’
- (113) \*Bob kan zich — nog maar al te goed herinneren [<sub>ParP</sub> [<sub>DP</sub> *e*] [je  
 Bob can REFL still only all too good remember you  
 raadt wel welk meisje]].  
 know AFF which girl  
*int.* ‘Bob can remember you can guess which girl only too well.’

It is therefore not surprising that English amalgams allow for the IC to be extraposed: the parenthetical is linearly integrated in the matrix at the level of the empty DP. As a consequence, the complex is prosodically sufficiently heavy for it to shift rightward:

- (114) Bill was kissing — in the corridor [<sub>ParP</sub> [<sub>DP</sub> *e*] [I think it was a student  
 with blond hair]].
- (115) Bill invited — to his party [<sub>ParP</sub> [<sub>DP</sub> *e*] [you’ll never guess how many  
 weird-looking people]].

Thus, this difference between Dutch and English amalgams is precisely what is expected in the present analysis. It should be stressed that the restriction that rules out the Dutch cases does not imply anything about the moveability of these complex arguments.

However, there are some extraposition facts that do not seem to follow straightforwardly. Recall from chapter 4 and 5 that both English and Dutch allow for PP cleft pivots in regular *it*-clefts. In these cases, the cleft clauses are obligatorily introduced by the complementizer (rather than a relativizer).

These were cases such as (116) for English, and (117) for Dutch:

- (116) a. ?I think it's with Bea that Bob wants to dance.  
 b. ✓I think it's Bea that Bob wants to dance with.
- (117) [Dutch]  
 a. ?Ik geloof dat het met Bea was dat Bob wilde dansen.  
     I believe that it with Bea was that Bob wanted dance  
 b. ✓Ik geloof dat het Bea was met wie Bob wilde dansen.  
     I believe that it Bea was with who Bob wanted dance  
     'I believe it was Bea that Bob wanted to dance with.'

The informants for both Dutch and English indicated that PP cleft pivots are stylistically very marked, i.e. there is a strong preference for the counterparts with nominal cleft pivots. As pointed out in chapter 5 (see §5.3.3 in particular), Horn-amalgams with PP cleft pivots (118)-(119) are similarly marked as their corresponding *it*-clefts in (116) and (117):

- (118) a. ?Bob wants to dance [I think it's with Bea].  
 b. ✓Bob wants to dance with [I think it's Bea].
- (119) [Dutch]  
 a. ?Bob wilde [ik geloof dat het met Bea was] dansen.  
     Bob wanted I believe that it with Bea was dance  
 b. Bob wilde met [ik geloof dat het Bea was] dansen.  
     Bob wanted with I believe that it Bea was dance  
     'Bob wanted to dance with I think it was Bea.'

Under the present assumptions, these cases involve a ParP that used in the position of a PP. Therefore, we expect the distribution of the ParP to be similar to how a regular PP can be distributed.<sup>9</sup> In English, PPs cannot be extraposed:

- (120) a. Bob danced with Bea yesterday.  
 b. \*Bob danced \_ yesterday with Bea.

The ungrammaticality of (121) thus seems to follow neatly from our analysis:

- (121) \*Bob danced \_ yesterday [I think it was with Bea].

However, in Dutch PPs *can* be extraposed in the regular case:

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<sup>9</sup>I abstract away from analyses of these sentences that would involve CP extraposition *out of* the ParP, i.e. the extraposition of the IC itself. Although both English and Dutch allow for CP extraposition (of relative clauses, for instance), we do not expect this kind of extraposition in amalgams to be possible in the context of the ban on extraction out of ParP observed above.

- (122) [Dutch]  
 Bob heeft gisteren – gedanst met Bea.  
 Bob has yesterday danced with Bea  
 ‘Bob danced with Bea yesterday.’

From this, we expect that the ParP in a Dutch Horn-amalgam with a PP cleft pivot can be extraposed as well, but this does not appear to be the case:

- (123) ?\*Bob heeft gisteren – gedanst [ik geloof dat het met Bea was].  
 Bob has yesterday danced I believe that it with Bea was  
*int.* ‘Bob danced I believe it was with Bea yesterday.’

We can think of at least two different factors that contribute to the unexpected contrast between (122) and (123). The first relates to the marginality of *it*-cleft with PP pivots discussed earlier in chapter 4 and 5, and here. This is independent from the analysis. The second factor is more speculative, and relates the marginality of the extraposed ParP in (123) to the extraposed PP that contains a ParP in (124), and to an extraposed ParP with an overt PP in its specifier, i.e. a sluiced parenthetical (125):

- (124) Bob heeft gisteren – gedanst [PP met [ik geloof dat het Bea  
 Bob has yesterday danced with I believe that it Bea  
 was]].  
 was  
 ‘Bob danced I with I believe it was Bea yesterday.’
- (125) Bob heeft gisteren – gedanst [ParP [PP met iemand – [ik geloof  
 Bob has yesterday danced with someone I believe  
 dat het Bea was]]].  
 that it Bea was  
 ‘Bob danced with someone – I believe it was Bea – yesterday.’

In this case, the extraposed material is directly identifiable as a category that is allowed in this position, and the ParP (here a DP) contained in it does not decrease the acceptability of the example. In addition, having a nominal cleft pivot renders this sentence perfectly acceptable. The English counterparts, however, do not improve when we use a nominal cleft pivot in the parenthetical and extrapose its containing PP:

- (126) \*Bob danced – yesterday [PP with [I think it was Bea]].  
 (127) \*Bob danced – yesterday [ParP [PP with someone – [I think it was Bea]]].

This is expected, because of the ban on PP extraposition in English. This suggests that the Dutch case in (123), already marked because of the PP cleft pivot, is further complicated for reasons of processing: PP extraposition seems to require the extraposed PP to be introduced by an overt preposition. If this

is indeed the case, we are compelled assume that HNPS and extraposition are different processes in order to account for the English facts in the beginning of this section. This would fit in with observations in Culicover and Rochemont (1990), Rochemont and Culicover (1990) and Baltin (2006), but clearly requires further scrutiny.

### 7.4.3 Quirks of sluicing in parentheticals

The present proposal puts amalgams in the empirical domain of parentheticals. More specifically, I related amalgams to 'sluiced parentheticals', which were already noticed in Lakoff (1974)'s original paper. These are examples such as (128):

- (128) John invited a number of people – you'll never guess how many – to his party.

I observed that similar parentheticals can be construed with reduced (i.e. sluiced) *it*-clefts, i.e. comparable to Horn-amalgams:

- (129) John invited someone strange – I think it was his old high school teacher – to his party.

Unlike amalgams, sluiced parentheticals have an overt correlate in the matrix clause. As a consequence, they can be detached without rendering their host ungrammatical.

There are two puzzling aspects of sluicing in amalgams that I have ignored so far, but that appear to be properties of sluicing (or maybe ellipsis in general) in the class of parentheticals as a whole. First, the antecedent of the ellipsis site can be scattered around the ellipsis site. This can be seen in the representations in the previous sections. Second, ellipsis is obligatory. Possibly, these aspects are related. For reasons of word order, I will address these aspects for Dutch Andrews-amalgams and comparable sluiced parentheticals. It should be pointed out that the observations extend to Horn-amalgams and their counterpart sluiced parentheticals (129) as well. To start out with scattered antecedents, consider the examples below:

- (130) [Dutch]  
 Bob heeft [je kunt wel raden welke professor (Bob in het gezicht  
 Bob has you can AFF guess which professor Bob in the face  
 geslagen heeft)] in het gezicht geslagen.  
 hit has in the face hit  
 'Bob hit you can guess which professor in the face.'

- (131) Bob heeft iemand – je kunt wel raden wie (Bob in het gezicht  
 Bob has someone you can AFF guess who Bob in the face  
 geslagen heeft) – in het gezicht geslagen.  
 hit has in the face hit  
 ‘Bob hit someone – you can imagine who – in the face.’

Clearly, part of the antecedent of what is elided in the parentheticals follows rather than precedes the ellipsis site. At first sight, it may seem peculiar for the antecedent need not to *precede* the ellipsis site, but something similar has been observed in Lobeck (1995:54) in regular sluicing as well, namely in case of sluicing in a fronted adverbial clause:

- (132) Even though Mary’s not sure [who (is speaking tonight)], she thinks someone interesting is speaking tonight.

The difference is then that in sluiced parentheticals, the antecedent can be scattered around the ellipsis site, depending on the position of the parenthetical. Taken at face value, these facts present us an interesting challenge for the theory of sluicing in general, in particular with regard to ordering and spellout of structures containing ellipsis sites preceding their antecedents.

The obligatoriness of sluicing in amalgams was already noticed in Grosu (2006). Clearly, the overt realization of the material in the ellipsis site gives rise to ungrammaticality:

- (133) \*Bob heeft [je kunt wel raden wie in het gezicht geslagen] in het  
 Bob has you can AFF guess who in the face hit in the  
 gezicht geslagen.  
 face hit

This is striking, because ellipsis is generally be taken to be optional. That is, the phonological realization of candidates for ellipsis does not necessarily give rise to ungrammaticality, as the following sentences are both acceptable. More specifically, to the extent that there is a contrast between (134a) and (134b), this is due to a general *preference* to not pronounce redundant material, and not to (un)grammaticality:

- (134) a. Bob heeft iemand geslagen, maar ik zou niet weten wie hij  
 Bob has someone hit but I would not know who he  
 geslagen heeft.  
 hit has  
 ‘Bob hit someone, but I wouldn’t know who he hit.’  
 b. ✓ Bob heeft iemand geslagen, maar ik zou niet weten wie.  
 Bob has someone hit but I would not know who  
 Bob hit someone, but I wouldn’t know who.

The only environment in which sluicing is obligatory, is when movement of the remnant out of the ellipsis site crosses an island boundary. This is unsurprising

given the assumptions in §5.4.3: not deleting the relevant material leaves a \*-trace of the remant, which causes the derivation to crash at PF:

- (135) a. \*Bea is getrouwd met iemand die een Slavische taal  
           Bea is married with someone who a Slavic language  
           spreekt, maar ik weet niet welke taal ze met iemand  
           speaks but I know not which language she with someone  
           getrouwd is die – spreekt.  
           married is who speaks  
       b. Bea is getrouwd met iemand die een Slavische taal  
           Bea is married with someone who a Slavic language  
           spreekt, maar ik weet niet welke.  
           speaks but I know not which  
           ‘Bea got married to someone who speaks a Slavic language, but  
           I don’t know which.’

Clearly, the amalgams illustrated above do not constitute such island violations: the obligatoriness of ellipsis is thus independent from this. Importantly, ellipsis in such sluiced parentheticals is obligatory as well, and appears to be similarly independent of island contexts:

- (136) \*Bob heeft iemand – je kunt wel raden wie Bob in het gezicht  
           Bob has someone you can AFF guess who Bob in the face  
           geslagen heeft – in het gezicht geslagen.  
           hit has in the face hit  
       (137) \*Bea is getrouwd met iemand die [je raadt nooit welke taal  
           Bea is married with someone who you guess never which language  
           Bea getrouwd is die spreekt] spreekt.  
           Bea married is who speaks speaks.

I leave these issues, and what they may eventually mean for the theory of sluicing in general, open for future investigation. The fact that these aspects are found in sluicing in parentheticals as well, provides additional evidence for the claim that amalgams are a species of sluiced parentheticals.

## 7.5 Summary

This final chapter aimed at uniting the idea that amalgams are parentheticals with the sluicing approach defended in chapter 4 and 5. I first discussed two opposed theories of parentheticals: basically one that does not connect parentheticals to their hosting sentences in syntax (orphanage), and one that integrates them in the syntax. I argued in favor of the latter type of approach, and adopted De Vries’ idea that paratactic hierarchies are a primitive of grammar, and are derived via *par*-Merge. This type of Merge is triggered by a particular functional head, *Par*<sup>o</sup>. Taking into account that amalgams behave like anchored

parentheticals such as appositives, I proposed an analysis that implements a bivalent Par. The central property of this configuration (the bivalent ParP) is that its arguments stand in a specifying relation to each other: the parenthetical XP (the complement) specifies the meaning of the anchor (the subject). The notion ‘specification’ fits in with the intuition that the IC specifies the meaning of some left out constituent of the matrix. In addition, it relates to the more established characterization of sluicing and *it*-cleft as specificational species. The essential ingredients of the proposal are the following:

**Amalgams as anchored parentheticals**

- the ‘missing’ matrix constituent is an empty anchor XP which is specified by the IC;
- this relation is established in a bivalent ParP configuration;
- the bivalent ParP is a configuration for parenthetical parallel construal, the non-restrictive counterpart of Koster’s colon phrase;
- the Par head triggers *par*-Merge, which creates a paratactic hierarchy and renders the IC opaque for elements in the matrix;
- Par only takes [+SD] complements, which necessitates the speaker-oriented interpretation of the IC in amalgams.

I then discussed sluicing in the context of specification, and speculated briefly about an analysis in terms of specifying coordination for regular (coordinative) sluices. This was just a stepping stone towards the observation that sluicing can freely apply in parentheticals as well. The only difference between amalgams and sluiced parentheticals, is the presence of an overt correlate in the latter. Amalgams were then identified as sluiced parentheticals with *null* correlates, which I analysed in terms of a bivalent ParP.

Finally, I accounted for the correspondence between the content kernel and the position of the IC in the matrix, which was essentially Lakoff’s puzzle. I claimed that this is regulated by conditions on sluicing and need not be stipulated as a syntactic condition of some sort. In addition, the distribution facts witnessed in the beginning of this work follow straightforwardly from the analysis:

**Solving Lakoff’s puzzle**

- ParP is categorially underspecified and takes the category of the anchor;
- the empty anchor is the null correlate of the remnant of sluicing in the IC ;
- the null correlate corresponds to a variable which is bound via  $\exists$ -type shifting under e-GIVENNESS;
- the correspondence between content kernel and the null correlate is mediated by e-GIVENNESS, the licensing condition on sluicing.

In the last part of the chapter, I (re)addressed some aspects of amalgams in the context of the theory in terms of sluiced parentheticals. It was demonstrated

that the (non)-detachability of the IC is related to the use of ParP in implicit or obligatory positions in the matrix, on a par with sprouting versus sluicing. In addition, the movement facts follow to a great extent. Finally, some interesting parallels between sluiced parentheticals and amalgams were discussed, raising new questions regarding the theory of sluicing and parentheticals. All in all, approaching amalgams as a sluicing configuration has proved to be a good match with the parenthetical analysis pursued here.



## CHAPTER 8

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### Conclusions and outlook

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#### Central theses

This work presents a novel analysis of syntactic amalgams (Lakoff 1974), a construction type in which two clauses appear to be entwined. (1) is called an Andrews-amalgam, and (2) a Horn-amalgam:

- (1) John invited [you'll never guess how many people] to his party.
- (2) John is going to, [I think it's Chicago] on Sunday.

In both cases, the matrix clause seems to be missing a constituent, and in the position of these missing constituents, clause-like material appears. I refer to this material as the 'interrupting clause' (IC). The intriguing question that amalgams put forward is related to the distribution of the IC, which seems to depend on the category of what I called the 'content kernel' (here *how many people* and *Chicago* respectively). The main goal is to provide a syntactic account for these constructions, and to provide an answer to what I formulated as 'Lakoff's puzzle':

- (3) **Lakoff's puzzle**  
*How can we derive the fact that in sentence amalgams the IC has the inner makeup of a clause, while its distribution in the matrix depends on the category of the content kernel, which in turn corresponds to a missing constituent in the matrix?*

The analysis presented in this work is based on a thorough empirical investigation that is mostly oriented on, but not limited to Germanic languages.

The main empirical finding regarding the status of the IC is that it constitutes a *root clause*. This root clause, with notable exception of the content kernel, appears to be opaque with respect to the matrix clause, suggesting that elements of the latter do not c-command into the first. In order to derive the IC as an independent clause, I have assumed the full structure of the IC to be present at the level of syntax. This entails that there is material internal to the IC that is left unpronounced in the amalgam.

The first central thesis I defend is that amalgams are *sluicing* configurations. This is based on various striking empirical parallels between amalgams and more familiar examples of sluicing. Importantly, this approach allows us to reduce the exceptional status of the content kernel to a *reconstruction* effect. The latter is due to A'-movement of the content kernel out of the ellipsis site. Similarly to regular sluicing, this is interrogative *wh*-movement in Andrews-amalgams. As for Horn-amalgams, I argue that the movement of the content kernel, being a cleft pivot, is due to focus. This is part of a more general theory of *it*-clefts and *it*-cleft reduction for which I defend a raising analysis that involves a layered CP. The difference between regular sluicing and sluicing in amalgams is the lack of an overt correlate of the sluicing remnant in the latter: amalgams involve *null* correlates. Such a null correlate is what is understood as the 'missing' constituent in the matrix clause.

The second central thesis of this work is that the IC is a special kind of root clause, namely a *parenthetical* clause. This claim is not only sustained by the empirical finding that the IC is opaque for structural dependencies with respect to the matrix clause. Also, it is corroborated by the fact that the IC inherently expresses speaker-oriented information. I adopt and defend an analysis that represents parentheticals in syntax. For this, a structure-building operation is employed that creates a paratactic hierarchy: *par*-Merge. This is triggered by  $\text{Par}^\circ$ , a head that projects a parenthetical phrase. Crucially, the input objects of this operation are not dominated by the output object. The fact that matrix elements do not c-command into parentheticals follows directly if parentheticals are integrated into their hosts via *par*-Merge. A parallel is drawn between amalgams and anchored parentheticals such as appositives, which is the foundation for an analysis in terms of parenthetical parallel construal. In this configuration, the parenthetical specifies the content of the anchor. I argue that such an analysis applies to sluicing configurations more generally, as the relation between the correlate and the sluicing remnant is clearly specificational. Amalgams are then analyzed as sluiced parentheticals with null correlates.

The proposal for amalgams as sluiced parentheticals is eventually the key in solving Lakoff's puzzle. That is, the correspondence between the category of the missing matrix constituent and the category of the content kernel is reduced to a relation between the null correlate and the sluicing remnant in the IC. This relation is ultimately regulated by e-GIVENness, the licensing

condition on ellipsis: the matrix clause of an amalgam, including the null correlate, must entail the ellipsis site internal to the IC and *vice versa*. Therefore, the present work not only provides a unified account of sentence amalgams. It also expands on the PF-theory of sluicing, by extending its domain to include sluicing in parentheticals.

## Summary

### Chapter 1

In the introduction of this thesis, I described the original examples of amalgamation as discussed in Lakoff (1974), and provided an informal, pre-theoretical characterization of their properties. Based on this, I formulated the main question of this thesis, and laid out the basic steps taken in the investigation.

### Chapter 2

I first addressed three basic syntactic approaches to amalgams that have been suggested in the literature. In the relative clause approach, defended in fundamentally different ways by Tsubomoto and Whitman (2000) and Grosu (2006, 2008), the IC is analysed on a par with relative clauses. Tsubomoto and Whitman generalize the IC to a conventional (restrictive) relative clause, whereas Grosu's account shows striking parallels with what he proposes for Free Relatives in Grosu (2003). In both, the presence of an empty external head is assumed, which is related to the content kernel. The main empirical prediction of the idea that the IC is a type of relative clause, is that it is a *subordinate* clause. This not only implies that the matrix c-commands into the IC, but also that the IC should not display particular properties that are exclusively associated with root clauses, such as V2 and topicalization.

This is in opposition with the multidominance approach to amalgams, as proposed more or less independently by Van Riemsdijk (1998b, 2006b,c) and Guimarães (2004). The implicit parallel between Transparent Free Relatives (TFRs) and Horn-amalgams that underlies Grosu's proposal is drawn explicitly by Van Riemsdijk. In his account, both TFRs and Horn-amalgams consist of two independent roots which syntactically share the content kernel. Sharing is established via external remerge of this constituent. Under these assumptions, the IC is expected to display root phenomena. In addition, the multidominance approach predicts that the matrix clause does not c-command into the IC, with the exception of the shared constituent. This yields the rather interesting prediction that the content kernel, but no other elements in the IC can entertain c-command-based relationships with the matrix.

Finally, Zwart (2006) claims that Horn-amalgams and similar constructions should be regarded as outputs of previous derivations. Under such assumptions, the IC of an amalgam is derived at a previous stage, and is part of the numeration from which the matrix is built. In this approach, the IC does not

function as a clause to begin with. Due to the general integrity of the output of previous derivations, the IC is syntactically opaque.

### Chapter 3

The dichotomy in the literature about the subordinate versus non-subordinate status of the IC was taken up in chapter 3, and formed a leading question about the identity of the IC in relation to the matrix. I started out by providing abundant evidence that the IC is a root clause, using V2, *pro*-drop, illocutionary force and eventually topicalization in the IC as diagnostic tools. For instance, it was found that the IC is consistently V2 in languages that have V2 in main, but not in embedded clauses (i.e. Dutch and German). Other indications of the root status of the IC were the possibility to topicalize within the IC, modification by speaker-oriented (or ‘high’) adverbs such as *frankly*, and the ability to carry independent illocutionary force. In relation to the latter I explicitly argued for a distinction between clause type and speech-act/illocution.

Next, I focused on the distribution of the IC. For this, I took as a starting point Grosu’s generalization that content kernels are multicategorical and that the IC is distributed in accordance with the category of the content kernel. I used the Dutch Nachfeld (associated with clausal complements), extraposition and HNPS in Dutch and English to further examine the distribution of the IC. As it turns out, this generalization globally holds. For instance, the IC does not appear in the Nachfeld in Dutch, the canonical position of Dutch clausal complements. Furthermore, ICs with DP content kernels can be extraposed in English, but not in Dutch. This is in agreement with the fact that English allows for HNPS, and Dutch does not. However, we were also faced with a couple of new puzzles that do not follow from this generalization and need closer examination. First, contrary to Andrews-amalgams, Horn-amalgams cannot have AP content kernels. Second, the IC in both types cannot appear in the sentence-initial position. Finally, there seems to be crosslinguistic variation with respect to content kernels that are associated with PPs. These issues are topic to further discussion in later chapters.

The analyses that have been proposed for amalgams were briefly evaluated in the context of these findings. The root properties of the ICs make an analysis in terms of (regular or free) relative clauses or layered derivations hard to maintain: both imply subordination of the IC. By contrast, root phenomena were expected in the multirooted multidominance approach. An important consequence of the latter theory is that it predicts the IC, with the exception of the shared content kernel, *not* to be c-commanded by elements of the matrix clause.

The final part of this chapter was then a substantial study of c-command-based relations in amalgams. In order to detect the presence of c-command, I studied binding, condition B and C effects, NPI licensing and idiom chunks. The data showed an interesting difference between the content kernel and the IC, which suggests that the IC *modulo* the content kernel is not accessible for

c-command-based relations. At this point, the multidominance/multirooted approach as defended by Van Riemsdijk (2006b,c) and Guimarães (2004) seemed very attractive. However, despite of the fact that the predictions of such an approach are borne out in a surprisingly consistent fashion, I emphasized that the transparency of the content kernel is not necessarily the consequence of sharing in amalgams. That is, the accessibility of the content kernel in amalgams can alternatively be taken as a reflection of how the IC is structured internally.

## Chapter 4

Taking the main observation of chapter 3 that the IC in amalgams constitutes a root clause further, this chapter (as well as chapter 5) was focused entirely on the internal structure of the IC. Clearly, a part of this root clause is not pronounced. In the case of Andrews-amalgams, only an embedding predicate with a *wh*-DP surfaces, in Horn-amalgams a copular construction with *it*. The remainder of the structure is the target of ellipsis, for which I have defended a PF-approach inspired by Merchant (2001). Under such assumptions, ellipsis is licensed by a syntactic feature (the E-feature) on a head, which basically instructs PF to not pronounce its complement. Ellipsis is constrained by e-GIVENNESS: XP can be elided if XP is given (Schwarzschild 1999). The main goal of this chapter was to implement such an idea to the IC in amalgams, and to generalize the type of ellipsis to sluicing.

I started out by defending and elaborating on the first implication of this hypothesis, namely that the IC is a full-fledged clause. This entails that the CPs that are selected by the embedding predicates that are contained in the IC, are present at level of syntax. The content kernel of an Andrews-amalgam is then a *wh*-phrase that is part of an interrogative clause, and the content kernel of a Horn-amalgam is the cleft pivot of an *it*-cleft. For both cases I have argued that the content kernel is base-generated inside a lower IP, which is (or is contained in) the target of ellipsis. That is, the underlying structure of the IC involves a complete clause in which has undergone sluicing:

- (4) John invited [you'll never guess how many people ⟨John invited to his party⟩] to his party.
- (5) John is going to, [I think it's Chicago ⟨that John is going to⟩] on Sunday.

The parallel between regular sluicing in Andrews-amalgams seems rather obvious: the IC is an embedded *wh*-interrogative. I showed that Andrews-amalgams show the same restrictions in the COMP-domain, and that they allow for particular subvariants of sluicing, *viz.* sprouting and swiping. The assumption that Horn-amalgams involve a full-fledged *it*-cleft (including an elided cleft clause) requires more explanation. The main argument for this analysis is the observation that cleft pivots are always focused, similarly to the content kernel of amalgams and *wh*-remnants in regular sluicing. In addition, the mysterious restriction witnessed in the previous chapter on quantified (NPI and generalized

QPs) and predicative content kernels follows straightforwardly, as these follow from the referentiality condition on cleft pivots in *it*-clefts.

Elaborating on the predominant idea that the cleft clause is a restrictive relative clause, I have defended a *raising* analysis for these. This raising analysis involves a layered CP, relative movement is into SpecCP<sub>2</sub>, and the additional movement out of DP<sub>rel</sub> of the relative head is into SpecCP<sub>1</sub>. Importantly, the trigger for the movement of the cleft pivot (the relative head) is *focus* on a higher C<sup>o</sup> head (C<sub>1</sub><sup>o</sup>). This triggers movement of the relative [+F] head into SpecCP<sub>1</sub>. The inherent focus on the cleft pivot is also a main figure in the licensing of ellipsis proposed for Horn-amalgams, which I formulated as E<sub>RC</sub>. This E-feature is specified for a (weak) relative feature and a strong focus feature [*urel*, *uF\**]. The strong feature is checked locally on C<sub>1</sub><sup>o</sup>, a head that is [+F] and eventually triggers the movement of the relative head out of DP<sub>rel</sub>. E<sub>RC</sub> is then responsible for the deletion of CP<sub>2</sub>, and it is licensed if the relative has a focused head. This enables us to generalize sluicing to both types of amalgams: Merchant's E<sub>S</sub> feature on a C<sup>o</sup>-head licenses ellipsis of the IP in Andrews-amalgams, and E<sub>RC</sub> on C<sub>1</sub><sup>o</sup> similarly licenses ellipsis of CP<sub>2</sub> in Horn-amalgams. Thus, sluicing can be generalized to A'-movement contexts and may apply to a layer of the CP instead of IP in case the E-feature is licensed at a higher C<sup>o</sup> head.

In the last part of this chapter, I elaborated on a peculiarity of sluicing in amalgams. Whereas the remnants of regular sluices correspond to some correlate XP in the antecedent, amalgams lack such a constituent. I have argued that this gives rise to a variable in the matrix, and that e-GIVENNESS can be met via  $\exists$ -type shifting of this variable. Consequently, Andrews-amalgams cannot have *wh*-remnants that require a F-marked correlate, which I demonstrated to be a correct prediction. I have argued that the missing matrix constituent is a *null* correlate of the sluicing remnant in the IC and that  $\exists$ -type shifting of the null correlate allows us to calculate the entailment relations between antecedent and ellipsis site. As a consequence, sluicing in amalgams is thus subject to e-GIVENNESS, like regular sluicing. In implementing this idea, I not only unified the internal structures of the ICs in Andrews- and Horn-amalgams, I also broadened the domain of sluicing configurations in the context of a layered CP, in line with recent advances in theories on sluicing (in particular Van Craenenbroeck 2010b).

## Chapter 5

The sluicing approach makes a couple of interesting predictions for amalgams, which were topic to chapter 5. In this chapter, I focused on four well-known structural properties of sluicing that we now expect to find in amalgams. Three of those properties corroborate the view that the remnant has undergone A'-movement out of the ellipsis site: reconstruction effects, case-matching on the remnant *wh*-DP and variation related to the (un)availability of P-stranding. The latter two properties are formulated as 'form-identity generalizations' in

Merchant (2001). These contrast sharply with the observation that sluicing, unlike other forms of ellipsis such as VP-ellipsis and gapping, is *not* sensitive to island-conditions.

The evidence that the content kernel has A'-moved out of an ellipsis site, on a par with the remnant of regular sluicing, is convincing. First, the content kernel can be reconstructed in its base position, which can be shown by binding and condition B/C effects. This supports the idea that the content kernel has undergone A'-movement. Second, the content kernel in Andrews-amalgams bears the case that is associated with its selecting verb in the sluiced IP, whereas the content kernel in Horn-amalgams patterns with cleft-pivots and relative clauses, and obtains default case associated with the copula. This is precisely what we expect. Importantly, the sluicing approach relieves us from invoking special syntactic means such as 'external remerge' (i.e. the multidominance account of amalgams) to account for the 'transparency' effects observed in chapter 3: all these facts can be accounted for via reconstruction in the ellipsis site.

The patterns related to the P-stranding generalization appeared to be more problematic. However, the deviations of the expected pattern based on the P-stranding generalization all resonate in regular sluicing: some pied-piping languages allow for stranding under sluicing, and those languages allow for the corresponding pattern in Andrews-amalgams as well. More concretely put, pied-piping of the preposition in Andrews-amalgams gives rise to a pattern with a PP content kernel. By contrast, stranding in Andrews-amalgams gives rise to a DP content kernel and forces the presence of an antecedent preposition in the matrix of Andrews-amalgams. The P-stranding generalization is orthogonal to the patterns that we expect for Horn-amalgams, since deletion targets the relative CP including the preposition, whether pied-piped or stranded. The patterns observed correspond to intuitions about PP cleft pivots, which showed speaker-variation as well as cross-linguistic variation. Interestingly, the *it*-cleft pattern could be used as an explanation for the deviations that were found for the P-stranding generalization, in line with recent developments in the literature about P-stranding under sluicing (eg. Rodrigues et al. 2009, van Craenenbroeck 2010a). Finally, I discussed the widely held view that differences in island-repair under ellipsis are related to \*-traces. In this view, the acceptability of island-violating sluicing is explained because the \*-traces are all contained in the ellipsis site. Ellipsis can thus 'repair' offensive structures as long as the relevant traces are part of the ellipsis site.

## Chapter 6

So far, the investigation was predominantly focused on the internal structure of the IC. In this chapter, I returned to the relation between the matrix and the IC. What we know based on chapter 3 is that the IC behaves like a root clause, and that elements of the matrix clause do not c-command into the IC. Based on this, I hypothesized that amalgams are a kind of *parentheticals*. Opacity effects, in addition to truth-conditional and structural independence and in-

herent speaker-orientation were taken to be characteristics of parentheticals. The goal of this chapter was to provide a more fine-tuned characterization of the intuition that the IC in amalgams expresses a fundamentally different type of information than the matrix does.

I demonstrated in various ways that the ICs of Horn-amalgams are inherently speaker-oriented. For instance, the IC obligatorily involves epistemic modality, which is often expressed by propositional attitude verbs. In the absence of such embedding verbs, the copula of the *it*-cleft itself must be a modal that yields an *epistemic* reading. Another interesting piece of evidence for the parenthetical hypothesis was found in cases involving a 3<sup>rd</sup> person subject and a *verbum dicendi* as embedding context for the *it*-cleft: these verbs can only be interpreted as evidentials in the IC. The alternative reporting, or *quasi*-quotative reading is excluded.

I argued the obligatory speaker-orientation of the IC in Horn-amalgams to be a serious problem for the multidominance approach to amalgams. The problem is that the content kernel is interpreted in the scope of the intensional operator that is part of the (embedding) context of the *it*-cleft. This affects the inferences that can be made from amalgams. Informally put, the content kernel is not understood as part of the matrix clause, whereas the multidominance approach predicts that it is. I discussed this as a highly undesirable consequence of the multidominance approach for amalgams, especially since this interpretive aspect is required in other contexts that have been argued to involve multidominance.

It proved somewhat more complicated to pinpoint the speaker-oriented nature of Andrews-amalgams. I started out by discussing the intuition that these amalgams have something in common with *wh*-exclamatives. I argued against Lakoff's claim that they yield exclamations, in line with the earlier case against embedded speech acts in chapter 3. Alternatively, I suggested an analysis in which the particular meaning is related to how the embedding verbs that are used in Andrews-amalgams (i.e. particular complexes such as *will never guess* and *can imagine*) operate on the meaning of their *wh*-complements. I called their interpretive effect DIVERGE, which is reminiscent of the interpretation of root *wh*-exclamatives. This was informally characterized in terms of an evaluation of the *wh*-complement relative to a particular contextual standard. The use of *you* as IC subject turned out to be strictly the impersonal *you*. In addition, words such as *God* and *the devil* can only be understood in their non-literal, taboo meaning. These facts provided additional support for the speaker-oriented character of Andrews-amalgams.

I closed this chapter with a brief discussion of a type of constructions that look very much like Andrews-amalgams, but display different structural and interpretive behavior: *you-know-wh* constructions. Seeing that those do not behave like the IC of amalgams with respect to root phenomena or their distribution, I set these apart from the present object of inquiry, speculating that they are grammaticalized forms.



## Chapter 7

This final chapter aimed at uniting the idea that amalgams are parentheticals with the sluicing approach defended in chapter 4 and 5. I first discussed two opposed theories of parentheticals: basically one that does not connect parentheticals to their hosting sentences in syntax (*orphanage*), and one that integrates them in the syntax. I argued in favor of the latter type of approach, and adopted De Vries' idea that paratactic hierarchies are a primitive of grammar, and are derived via *par*-Merge. This type of Merge is triggered by a particular functional head: Par. Taking into account that amalgams behave like anchored parentheticals such as appositives, I proposed an analysis that implements a bivalent Par. The central property of this configuration (the bivalent ParP) is that its arguments stand in a specifying relation to each other: the parenthetical XP (the complement) specifies the meaning of the anchor (the subject). The notion 'specification' fits in with the intuition that the IC specifies the meaning of some left out constituent of the matrix. In addition, it relates to the more established characterization of sluicing and *it*-cleft as specificational species.

Concretely, the proposal for amalgams as anchored parentheticals is as follows. What was earlier described as the 'missing' matrix constituent can be seen as an empty *anchor* XP which is specified by the IC. Inspired by Koster (1999, 2000a), I suggested an analysis in terms of a *bivalent* ParP configuration. More specifically, *parenthetical parallel construal* can be seen as the non-restrictive counterpart of Koster's colon phrase. The presence of Par<sup>o</sup> triggers *par*-Merge. As a result, a paratactic hierarchy is created, rendering the IC inaccessible for elements in the matrix clause. On a speculative note, I suggested that Par only takes [+SD] complements, where SD stands for 'Speaker Deixis'. This can be seen as a feature of the highest layer of the CP (see also Haegeman 2006) so that complements of Par are limited to those expressing speaker-oriented content.

I then discussed sluicing in the context of specification, and speculated briefly about an analysis in terms of specifying coordination for regular (coordinative) sluices. This was just a stepping stone towards the observation that sluicing can freely apply in parentheticals as well. The only difference between amalgams and sluiced parentheticals is the presence of an overt correlate in the latter. Amalgams were then redefined as sluiced parentheticals with *null* correlates, which I analysed in terms of a bivalent ParP.

Combining this with the sluicing approach ultimately allowed us to derive the correspondence between the content kernel and the position of the IC in the matrix, i.e. to solve Lakoff's puzzle. I showed that the correspondence is regulated by conditions on sluicing and need not be stipulated as a syntactic condition of some sort. First, ParP is categorially underspecified and takes the category of the anchor. The empty anchor is the null correlate of the remnant of sluicing in the IC, which gives rise to a variable which is bound via  $\exists$ -type shifting under e-GIVENness. As a consequence, the correspondence be-

tween content kernel and the null correlate is mediated by e-GIVENness, the licensing condition on sluicing.

## Avenues for future research

Obviously, the theoretical and the empirical scope of this dissertation are limited. For this reason, it is inevitable that a couple of issues were left open. In addition, the analysis of amalgams in terms of sluiced parentheticals raises new topics for the respective theories of ellipsis and parenthesis.

Central to the sluicing approach to amalgams is the idea that sluicing may target a layer of the CP rather than the IP/TP. Taking this further, we can hypothesize that sluicing *in general* targets a layer of the CP, granted that the language overtly moves *wh*-elements into SpecCP (and not into a focus position, as has been argued for Hungarian and Hindi). I discussed this briefly as a potential solution for certain puzzles in the COMP-domain in Dutch, a language that allows for more than one complementizer to show up in embedded *wh*-interrogatives, but not in sluiced *wh*-interrogatives. In chapter 4, I only mentioned Slovenian Wackernagel clitics in addition to the Dutch facts, but the generalization that no non-operator material can appear in COMP under sluicing (Merchant 2001:62) is supported by (many) more data. The evidence includes the lack of complementizer agreement in various Germanic languages (Luxemburgish and Bavarian), and the impossibility of realizing complementizers related to subject extraction under sluicing in Danish (*der*) and Norwegian (*som*), although this is obligatory in *wh*-interrogatives. These data are very puzzling in the standard theory of sluicing, but can be seen in a new light taking into consideration a more fine-tuned analysis of the COMP-domain itself.

In chapter 6, I provided a detailed description of the interpretive effect of sentence amalgamation. I generalized that the IC strictly expresses speaker-oriented information. Since this empirical generalization was merely used to sustain the analysis of amalgams in terms of parentheticals, I was not concerned with what it eventually entails for an analysis in (formal) semantic or pragmatic terms. For instance, I redefined Lakoff's intuition that Andrews-amalgams involve exclamative force to an interpretive effect I named DIVERGE. This was suggested to be an effect of the kind of complex predicates we typically find in Andrews-amalgams, such as *will never guess* or *can imagine* on the interpretation of the *wh*-phrase. Clearly, this requires further examination, starting with the semantics of the main verbs in these predicates and how their meaning is affected by modals and/or negators.

In the analysis I presented for parentheticals, I speculated on possible selectional requirements of  $\text{Par}^\circ$ , suggesting it only takes [+SD] complements. The underlying assumption here is that so-called 'anchoring to speaker' or 'speaker-orientation' are represented in syntax, arguably as a feature of the highest  $\text{C}^\circ$ . A direct implication of this idea is that parentheticals always project a CP, which obviously needs further empirical and theoretical support.

Finally, the analysis of amalgams as a special type of sluiced parentheticals implies that ellipsis sites may be partially followed by their antecedents more generally, i.e. the antecedent can be *scattered around* the ellipsis site. This raises a broader question about the ordering of pronounced and non-pronounced material at PF. A related question concerns another observation that was left unexplained in this work, namely that sluicing in amalgams is obligatory. Based on a small set of data, I have shown that this is independent of island-violations, which is the only factor that renders sluicing in regular coordinative configurations obligatory. Nevertheless, it seems plausible that there is a correlation between the presence of a scattered antecedent and the obligatoriness of ellipsis in elliptical *parentheticals* in general, considering the fact that sluicing in non-amalgamated parentheticals is similarly obligatory once the antecedent does not fully precede the ellipsis site.



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## Samenvatting in het Nederlands

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In dit proefschrift presenteer ik een nieuwe analyse van een type constructie waarin twee zinnen met elkaar verweven lijken te zijn. Deze constructies zijn voor het eerst beschreven in Lakoff (1974) en werden door hem ‘syntactic amalgams’ genoemd, oftewel ‘zinsverstrengelingen’. Voor de doeleinden van deze samenvatting zal ik overwegend de Engelse term ‘amalgams’ gebruiken. Voorbeelden van amalgams zijn de Nederlandse data in (1) en (2):

- (1) Bea heeft [je raadt nooit hoeveel taartjes] gebakken.
- (2) Bob woont in [ik geloof dat het Groningen is].

Lakoff noemt het type in (1) een ‘Andrews-amalgam’ en het type in (2) een ‘Horn-amalgam’. Na het verschijnen van Lakoff’s artikel is er relatief weinig aandacht besteed aan deze constructies. Dat is opmerkelijk, want deze grammaticale uitingen hebben een zeer ongebruikelijke vorm: er lijkt een onderdeel van de hoofdzinnen te ontbreken, en op de positie van deze onderdelen verschijnt een andere zin. Het laatste heb ik pre-theoretisch de ‘interrumperende zin’ genoemd (in het boek afgekort tot ‘IC’ voor ‘interrupting clause’), hier steeds aangegeven met vierkante haakjes. De IC bevat een constituent die inhoudelijk verband houdt met het ontbrekende onderdeel in de hoofdzin (wat ik ook wel ‘matrix(zin)’ noem): we interpreteren (*een aantal*) *taartjes* als object van *gebakken* in (1), en *Groningen* heeft iets te maken met hoe de plaatsbepaling ingeleid door *in* in (2) begrepen wordt. Deze constituenten noem ik ‘content kernels’ (inhoudskernen). Ook de ICs lijken incompleet te zijn: werkwoorden zoals *raden* (1) en *geloven* (2) selecteren normaliter zinscomplementen, maar wat aan de oppervlakte verschijnt, zijn de (in deze gevallen nominale) content kernels.

In het Nederlands kunnen we vrij makkelijk zien dat de IC *niet* gedistribueerd wordt alsof het een zin is. De volgende voorbeeldparen laten zien dat nominale complementen in een Nederlandse hoofdzin in het middenveld moeten staan (3), terwijl zinscomplementen in het achterveld thuishoren (4):

- (3) a. Ik kan me [<sub>DP</sub> de film] nog goed herinneren.  
 b. \*Ik kan me [<sub>CP</sub> welke film Bea gezien heeft] nog goed herinneren.
- (4) a. \*Ik kan me nog goed herinneren [<sub>DP</sub> de film].  
 b. Ik kan me herinneren nog goed [<sub>CP</sub> welke film Bea gezien heeft].

Als de IC een soort deelzin is (i.e. vergelijkbaar met een zinscomplement), zouden we verwachten dat het patroon in (4) ook in amalgams opduikt, maar dit is niet het geval:

- (5) a. Bob kan zich [ik geloof dat het Bea was] nog erg goed herinneren.  
 b. \*Bob kan zich nog erg goed herinneren [ik geloof dat het Bea was].

Dit patroon doet vermoeden dat de distributie van de IC samenhangt met de categorie van de content kernel, wat verder bevestigd wordt door de mogelijkheid van de Nederlandse Andrews-amalgam in (6):

- (6) Bob heeft een [je raadt nooit hoe dure] auto gekocht.

In dit geval zien we dat een IC met een adjectivale content kernel (*duur*) op de plek kan verschijnen waar normaalgesproken attributieve adjectieven kunnen staan (i.e. tussen het lidwoord en het nomen). Sterker nog, de content kernel krijgt zelfs de inflectie (-e) die geassocieerd wordt met deze positie.

Deze kleine verzameling data vormt de basis voor de hoofdvraag van dit onderzoek:

#### **Lakoffs raadsel**

*Hoe kunnen we afleiden dat de IC in amalgams intern als een zin opgebouwd is, terwijl zijn distributie correspondeert met de categorie van de content kernel, die op zijn buurt weer overeenkomt met een ontbrekende constituent in de matrixzin?*

De analyse die ik voorstel in dit proefschrift is gestoeld op een grondig empirisch onderzoek naar de structurele eigenschappen van amalgams. Hoewel dit laatste voor het grootste gedeelte gericht is op Germaanse talen (Engels, Nederlands, Duits en Fries), bespreek ik op sommige punten ook talen uit andere families, zoals bijvoorbeeld Russisch, Grieks en Spaans.

Ondanks de geringe aandacht die amalgams in de literatuur gekregen hebben, is het niet zo dat er sinds het paper van Lakoff helemaal niets over beweerd is. In hoofdstuk 2 van dit proefschrift bespreek ik een drietal benaderingen die gesuggereerd zijn in de literatuur. In het eerste idee, verdedigd door zowel Tsubomoto and Whitman (2000) als Grosu (2006, 2008), wordt de IC in amalgams geanalyseerd als een *relatiefzin*. Wat amalgams speciaal maakt is dat het ‘hoofd’ van de relatiefzin (ook wel de ‘pivot’ genoemd) intern in plaats van extern is, zoals normaalgesproken het geval is in het Nederlands en Engels. Een belangrijke consequentie van deze analyse is dat de IC ondergeschikt (‘gesubordineerd’) is aan de matrix. Op basis hiervan verwachten we onder andere dat

elementen van de hoofdzin de IC kunnen c-commanderen, en dat er dus relaties tussen matrix en IC kunnen bestaan die c-command vereisen, zoals het binden van pronomina door kwantoren. Een compleet ander idee wordt gepresenteerd in het werk van Van Riemsdijk (1998b, 2006b,c) voor met name Horn-amalgams en Guimarães (2004) voor Andrews-amalgams. In hun idee bestaan amalgams uit twee onafhankelijke hoofdzinnen, die op de content kernel na geen relatie met elkaar hebben. De content kernel zelf neemt een *status aparte* in: hij is onderdeel van zowel de matrix als de IC. In deze theorie wordt de content kernel *gedeeld* door de twee zinnen, een proces dat mogelijk is door materiaal dat deel uitmaakt van de ene root opnieuw te mergen (samen te voegen) met een element uit een andere root. Dit wordt ook wel de *multidominantie*-theorie genoemd. De syntactische output van zinsverstrengelingen bevatten in het werk van Van Riemsdijk en Guimarães steeds meerdere roots. In tegenstelling tot de relatiefzinbenadering voorspelt deze theorie juist dat elementen van de matrix de IC *niet* c-commanderen, met uitzondering van de gedeelde constituent. De laatste theorie die ik kort bespreek is van Zwart (2006, 2009), die een variant van Horn-amalgams analyseert als zogenaamde ‘gelaagde derivaties’. In dit idee is de IC de output van een eerdere derivatie, en wordt gebruikt als een XP in de matrix, bijvoorbeeld als DP of AP. Er is één voorspelling die expliciet geformuleerd wordt in deze theorie over zinsverstrengeling: de IC is opaak voor verdere syntactische operaties. Dit betekent concreet dat er niets uit de IC verplaatst kan worden in de derivatie van de amalgam.

Een eerste vraag die dus beantwoord dient te worden, heeft betrekking op de status van de IC: is dit een hoofdzin, een bijzin of überhaupt geen zin? Deze deelvraag wordt uitgebreid behandeld in de eerste helft van hoofdstuk 3 van dit proefschrift. Ik bespreek een aantal kenmerken van amalgams die erop duiden dat de IC een hoofdzin is. Zo is de woordvolgorde van de IC in Nederlandse en Duitse amalgams bijvoorbeeld altijd V2 (Verb Second), een eigenschap die we in deze talen alleen in hoofdzinnen zien. Daarnaast kan de IC ingeleid worden door zinsadverbia die de illocutie modifieren, zoals het Engelse *frankly*. Dit soort adverbia zijn uitgesloten in ondergeschikte zinnen. Tenslotte zien we dat de IC een onafhankelijke illocutie kan zijn: het kan bijvoorbeeld een vraag of exclamatie uitdrukken terwijl de matrix declaratief is. Dit beeld is duidelijk in strijd met de relatiefzinbenadering, maar lijkt te kloppen met de multidominantietheorie voor amalgams.

Om een volledig beeld te krijgen van de relatie tussen de matrix en de IC, ga ik in de tweede helft van hoofdstuk 3 in op een aantal structurele afhankelijkheden die samenhangen met de aanwezigheid van c-command, zoals de binding van (reflexieve) pronomina en het licentiëren van negatief polaire items (NPIs). De multidominantietheorie schept de interessante verwachting dat elementen van de matrix zulke relaties wel met de content kernel kunnen aangaan, maar niet met andere elementen in de IC. Deze voorspelling (naast de respectievelijke voorspellingen van de andere twee theorieën die in hoofdstuk 2 worden besproken) wordt uitgebreid getoetst. De resultaten zijn opvallend consistent

met wat de multidominantietheorie zou voorspellen voor zinsverstrengelingen: de IC *modulo* de content kernel lijkt niet ge-c-commandeerd te worden door elementen van de matrix. De bijzondere positie van de content kernel is moeilijk te verenigen met de relatiefzinbenadering, en ook de gelaagde derivatie analyse is niet toereikend, omdat we hier totale opaciteit van de IC zouden verwachten, en geen gedeeltelijke transparantie. Toch moeten de bevonden patronen niet als *bewijs* voor de multidominantietheorie gezien worden. Het is immers denkbaar dat een andere analyse deze feiten ook zou voorspellen, zonder dat we daarvoor gedeelde constituenten en meerdere roots in de derivatie van amalgams hoeven aan te nemen.

Tot nu toe hebben we vooral gekeken naar de (on)afhankelijkheid van de IC ten opzichte van de matrix, maar niet naar de interne structuur van de IC. Vooral in Andrews-amalgams is het duidelijk dat de IC niet compleet is: *je raadt nooit hoeveel taartjes* in (1) is op zichzelf (dat wil zeggen zonder verdere talige context) geen grammaticale zin. In hoofdstuk 4 ga ik verder in op de interne structuur van de IC, en formuleer ik een hypothese waarin deze *sluicing* heeft ondergaan, een vorm van ellipsis die in conventionele opvattingen tot reductie van de IP/TP leidt. Een regulier voorbeeld van sluicing is (7), waarbij de vishaakjes het gedeelde materiaal omgeven:

- (7) Bea heeft taartjes gebakken. Je raadt nooit hoeveel taartjes ⟨Bea heeft gebakken⟩.

De parallel met de IC in Andrews-amalgams is duidelijk: het is zeer aannemelijk dat de IC sluicing heeft ondergaan. Dat maakt dat (1) onderliggend dus eigenlijk is zoals in (8):

- (8) Bea heeft [je raadt nooit hoeveel taartjes ⟨Bea heeft gebakken⟩] gebakken.

Hier is sprake van een ingebedde *wh*-vraagzin waarin alles dat volgt op de *wh*-constituent gedeleerd wordt. Voor deze vorm van ellipsis neem ik een PF-theorie aan (geïnspireerd door het invloedrijke werk van Merchant 2001 over sluicing constructies). In deze benadering wordt aangenomen dat het gedeleerde materiaal aanwezig is op het niveau van de syntaxis: de *wh*-constituent verplaatst van zijn basispositie naar SpecCP, en het hoofd van die projectie ( $C^\circ$ ) bevat een grammaticaal kenmerk (een E-feature) dat ervoor zorgt dat zijn complement niet fonologisch gerealiseerd wordt. Zonder verdere aannames gaat het bij het ‘sluicing E-feature’ ( $E_S$ ) om het niet uitspreken van de IP/TP. In de theorie van Merchant (2001) is het het weglaten van de IP/TP middels een E-feature in de syntaxis onderhevig aan een licentiëringsconditie: *e-GIVENNESS*. Deze conditie stelt kortweg dat XP alleen weggelaten mag worden als XP gegeven is (‘given’) in de linguïstische context. In (7) is ‘Bea heeft taartjes gebakken’ gegeven, bijvoorbeeld. In Merchants termen: de antecedent-IP en de te deleren IP impliceren elkaar, en dit is een voorwaarde voor ellipsis. Het feit dat het vraagwoord (de *wh*-constituent) in sluicing-constructies altijd gefocust is, speelt een

belangrijke rol bij het vaststellen wat er als gegeven geldt in de constructie (gebaseerd op de theorieën over focus en GIVENNESS in Schwarzschild 1999).

Ik beargumenteer vervolgens dat het ook voor Horn-amalgams aannemelijk is dat er meer materiaal in de IC aanwezig is dan dat er hoorbaar is. De koppelwerkwoordconstructie van het type dat we zien, namelijk *ik geloof dat het Groningen is* wordt normaliter ook wel een *cleftconstructie* genoemd. In deze constructie wordt de gefocuste cleftconstituent (hier *Groningen*) altijd gevolgd door een relatiefzin (de ‘cleftzin’). Dit wordt geïllustreerd in (9):

- (9) Ik geloof dat het Groningen is waar Bob woont.

Vergelijkbaar met Andrews-amalgams kunnen we daarom stellen dat de IC in Horn-amalgams een vorm van ellipsis heeft ondergaan, in dit geval van de cleftzin:

- (10) Bob woont in [ik geloof dat het Groningen is ⟨waar Bob woont⟩].

In de analyse die ik voorstel, generaliseer ik dat beide typen amalgams *sluicing* ondergaan. In beide gevallen is er sprake van verplaatsing uit het te deleren materiaal, en een E-feature op een C°-hoofd. In Andrews-amalgams is dit de bekende *wh*-verplaatsing naar SpecCP. Voor Horn-amalgams bepleit ik een raising-analyse waarin de cleftconstituent (in de voorbeelden hier *Groningen*) verplaatsing ondergaat uit de cleftzin. Dit is vergelijkbaar met de raising-analyse voor restrictieve relatiefzinnen zoals voorgesteld is door onder andere Bianchi (1999). Een belangrijk voordeel van zo’n analyse is dat de bekende reconstructie-effecten in zowel relatiefzinnen als cleftconstructies direct volgen uit de aanwezigheid van een spoor. Voortbordurend op Bianchi’s analyse stel ik een afleiding van cleftzinnen voor in een gelaagde CP (zie ook Rizzi 1997). In deze analyse ondergaat de cleftpivot twee verplaatsingen: eerst verplaatst de relatief-DP naar SpecCP<sub>2</sub>. Deze verplaatsing wordt getriggerd door een relatiefkenmerk [+REL] op C<sub>2</sub>°. Ik stel dan voor dat de cleftconstituent nog een tweede verplaatsing ondergaat, namelijk vanuit de relatief-DP naar SpecCP<sub>1</sub>, de specificieerderspositie van een hogere laag van de CP. De reden voor deze verplaatsing is *focus*: cleftconstituenten zijn altijd gefocust. Het C°-hoofd van deze laag (C<sub>1</sub>°) heeft niet alleen een sterk focuskenmerk ([+F]), maar ook een E-feature dat ik E<sub>RC</sub> heb genoemd. De aanwezigheid van dit E-feature zorgt voor de deletie van CP<sub>2</sub>. Concreet is dit de relatiefzin waaruit het gefocuste hoofd (in cleftconstructies dus de cleftconstituent) verplaatst is.

In normale gevallen van sluicing heeft de zogenaamde ‘remnant’ in de antecedentzin (de *wh*-constituent in Andrews-amalgams, en de cleftconstituent in Horn-amalgams) een ‘correlaat’. Zo is het correlaat van *wie* in (11) *iemand*:

- (11) a. Bea heeft iemand gekust. Je kunt wel raden wie ⟨Bea gekust heeft⟩.  
b. Bea heeft iemand gekust. Ik geloof dat het Bob was ⟨die Bea gekust heeft⟩.

Er is dus één duidelijk verschil tussen sluicing in de gebruikelijke zin en sluicing in amalgams: in geval van het laatste ontbreekt het correlaat. Dit correlaat is wat eerder gedacht werd als de ontbrekende matrixconstituent. Vergelijk nu (11) met (12):

- (12) a. Bea heeft [je kunt wel raden wie ⟨Bea gekust heeft⟩] gekust.  
 b. Bea heeft [ik geloof dat het Bob was ⟨die Bea gekust heeft⟩] gekust.

Dit werpt de vraag op of e-GIVENness als licentiëringsconditie voor sluicing ook in amalgams van toepassing kan zijn. Ik laat zien dat het ontbreken van een zichtbaar correlaat geen probleem is voor een implementatie van Merchant's benadering. Hiervoor generaliseer ik dat sluicing-correlaten een variabele moeten produceren (zie Chung et al. 1995). Dit sluit bijvoorbeeld definiëte en universeel gekwantificeerde correlaten uit. Belangrijker is dat een variabele ook tot stand zou kunnen komen door de aanwezigheid van een leeg ('null') element in de structuur, zoals ook wordt aangenomen voor *sprouting* (een bepaald subtype van sluicing). Amalgams zijn dan dus sluicing-configuraties met lege correlaten. De rol van het lege correlaat en de positie van de IC wordt verder besproken in hoofdstuk 7.

In dit voorstel zijn de content kernels van amalgams dus eigenlijk A'-verplaatste remnants van deletie. Uit deze analyse volgt een aantal voorspellingen, die in hoofdstuk 5 empirisch getoetst worden. De belangrijkste voorspelling is gerelateerd aan iets dat we in feite al in hoofdstuk 3 gezien hebben, namelijk dat de remnants van sluicing *reconstructie-effecten* vertonen. Zo verwachten we bijvoorbeeld dat reflexieve pronomina zoals het Nederlandse *zichzelf* gebonden kunnen worden binnen de IC, vergelijkbaar met hoe deze gebonden kunnen worden in de context van normale A'-verplaatsing. Ik laat zien dat dit inderdaad het geval is. Sterker nog, dit zijn precies de data die eerder in hoofdstuk 3 leken te bevestigen wat de multidominantiebenadering voorspelt, alleen zien we hier dat de c-command relatie niet tussen matrix en IC hoeft te zijn, maar intern gelegd kan worden in de IC via reconstructie van de A'-verplaatste remnant en zijn spoor.

Maar we vinden ook andere kenmerken van sluicing-configuraties terug in amalgams. Het is bekend dat sluicing ongevoelig is voor eilandcondities: de *wh*-constituent kan uit een eiland verplaatst worden zonder dat dit leidt tot ongrammaticaliteit, zoals normaalgesproken het geval is bij verplaatsing uit eilanden. Deze patronen vinden we inderdaad terug in amalgams, wat ik laat zien voor onder meer relatiefzineilanden, complexe-NP-eilanden en zogenaamde 'Left Branch'-extracties. De ongevoeligheid voor eilanden is een aspect waarin sluicing van veel andere soorten ellipsis verschilt. Dit heeft aanleiding gegeven tot discussie in de literatuur. Ik bespreek een analyse waarin dit verschil gerelateerd wordt aan de positie van de sporen van de A'-verplaatste constituent (in amalgams de *wh*-constituent en de cleftconstituent). Het idee is dan dat ellipsis van een XP eilanden kan repareren, mits alle sporen van deze verplaatsing deel zijn van de gedeleerde XP. Tenslotte is het werk van Merchant (2001) voor een

belangrijk deel gericht op twee zogenaamde ‘vorm-identiteitsgeneralisaties’ in sluicingconstructies. Deze generalisaties worden als bewijs opgevoerd voor de aanname dat sluicing deletie is van syntactisch aanwezige structuur (de PF-theorie). De eerste generalisatie betreft casus-toekenning. Sluicing in het Duits en andere talen die rijke morfologische paradigma’s voor casus hebben, laten een patroon zien waarin de remnant en zijn correlaat dezelfde casus hebben. Dit volgt direct uit de PF-benadering. De tweede generalisatie heeft betrekking op de aanwezigheid van een prepositie in de zin die sluicing ondergaat. Er lijkt een sterk verband te bestaan tussen de mogelijkheid van het ‘stranden’ (het laten staan) van preposities in A'-verplaatsing en het al of niet verschijnen van een prepositie bij de remnant: als een taal stranding toelaat, mag de prepositie weggelaten worden. Dit volgt meteen uit Merchant's analyse: een gestrande prepositie is dan deel van de gedeleerde TP, en een verplaatste ('pied-piped') prepositie is zichtbaar omdat hij meeverplaatst met de remnant. Ik laat zien dat amalgams zich over het algemeen gedragen zoals verwacht: in het geval van stranding moet de prepositie deel uit maken van de matrix, in geval van pied-piping staat hij bij de remnant in de IC. Toch blijkt de P-stranding-generalisatie in lang niet alle talen even overtuigend van toepassing te zijn. Voor een aantal talen, waaronder het Braziliaans Portugees, is in de literatuur opgemerkt dat de prepositie weggelaten kan worden in sluicing-constructies, terwijl deze niet gestrand kan worden bij gewone A'-verplaatsing. Ik laat zien dat precies deze talen ook afwijken voor wat betreft de verwachtingen met PP-content kernels in amalgams. Ik bespreek een aantal oplossingen die er zijn gesuggereerd voor het probleem met de P-stranding-generalisatie, in het bijzonder het voorstel dat de talen die het afwijkende patroon laten zien twee mogelijke onderliggende structuren hebben (zie onder andere Van Craenenbroeck 2010a). In deze oplossing wordt gesteld dat sluicing in sommige talen mogelijk de deletie van een cleftzin is. De relevante prepositie is dan wel meeverplaatst met de DP, maar de positie waar hij staat is dan deel van de gedeleerde XP. Al met al geven de sluicing-hypothese en de aangenomen PF-theorie voor sluicing-constructies de juiste voorspellingen voor de interne structuur van de IC in amalgams.

In de sluicing-benadering die ik voorstel is de IC dus een zin waarin IP-deletie plaatsvindt. Het antecedent van deze deletie is de matrix IP. Op basis van de bevindingen in hoofdstuk 3 weten we dat de IC een hoofdzin is, maar dit is geen antwoord op de vraag hoe deze zich verhoudt tot de matrix. Om een beter beeld te krijgen van het soort relatie tussen de twee zinnen, ga ik in hoofdstuk 6 eerst dieper in op de intuïtie dat de matrix en de IC geen gelijkwaardige boodschappen uitdrukken. Pre-theoretisch zou je kunnen zeggen dat de matrix iets *stelt*, terwijl de IC iets *subjectiefs* over het gestelde toevoegt aan de uiting als geheel. Ik formuleer dit als een hypothese dat de IC inherent ‘spreker-georiënteerd’ is. Naast syntactische opaciteit (De Vries 2007) en semantische onafhankelijkheid (Potts 2002, 2005), is *spreker-oriëntatie* een eigenschap die vaak met de bredere klasse ‘parentheses’ wordt geassocieerd (zie onder andere Reinhart 1983, Potts 2002, 2005). Voor ik aantoon dat deze hypo-



these over amalgams klopt, maak ik eerst onderscheid tussen vrije en geankerde parentheses. Amalgams behoren tot de laatste soort, net als appositieve constructies (apposities en appositieve relatiefzinnen): een geankerde parentheses drukt iets uit over een specifiek onderdeel van de matrixzin. In het geval van amalgams heeft de IC betrekking op wat we als de ontbrekende matrixconstituent begrijpen, ofwel het lege sluicing-correlaat. Het onderscheid tussen vrije en geankerde parentheses is vooral belangrijk in de syntactische analyse die ik voorstel in hoofdstuk 7.

Aan de hand van tal van voorbeelden van zowel Andrews- als Horn-amalgams laat ik zien dat de IC inderdaad puur spreker-georiënteerde informatie uitdrukt. Een belangrijk voorbeeld hiervan is de verplichte aanwezigheid van een intensionele context in Horn-amalgams. Dat wil zeggen, de cleftzin in de IC moet in zo'n context staan, anders is de Horn-amalgam ongrammaticaal:

- (13) \*Bob woont in [het is Groningen].

Deze context wordt in de voorbeelden die ik tot nu toe gebruikt heb verschaft door inbedding in propositionele predikaten, zoals *geloven* (10) en *denken*, maar het is ook mogelijk om de cleftzin zelf met behulp van een modaal predikaat te construeren. Deze observaties vormen een groot struikelblok voor de multidominantiëtheorie over amalgams. Immers, volgens die theorie maakt *Groningen* in voorbeeld (10) deel uit van zowel matrix als IC. Zonder verdere bijzondere aannames leest de matrix dan als *Bob woont in Groningen*. Het probleem is dat de enige inferentie die we kunnen maken op basis van deze amalgams is dat Bob *ergens* woont, en dat de spreker gelooft dat het Groningen is, maar niet dat Bob in Groningen woont.

Met betrekking tot Andrews-amalgams ga ik in op de stelling van Lakoff dat de interpretatie van de IC iets met exclamaties te maken heeft. Er lijkt inderdaad een gelijkenis tussen Andrews-amalgams en *wh*-exclamatieven: in beide gevallen is er sprake van verbazing met betrekking (tot de graad van) de *wh*-constituent. Vergelijk bijvoorbeeld (1) met (14):

- (14) Hoeveel taartjes heeft Bea wel niet gebakken!

In beide gevallen lijkt de hoeveelheid taartjes die door Bea gebakken zijn af te wijken van een bepaalde contextuele norm. In het geval van een reguliere exclamatie is die afwijking een overstijging, in amalgams is dat echter niet noodzakelijk het geval. Daarnaast hebben we in amalgams altijd te maken met maken met ingebedde *wh*-zinnen, en er is reden om aan te nemen dat een exclamatie (als illocutie) geen exclamatie meer is zodra er sprake is van inbedding. Op basis van onder meer d'Avis (2002) en Abels (2010) stel ik dat de gelijkenis tussen amalgams en exclamaties dus bedriegelijk is: het betekenis-effect (dat ik DIVERGENTIE noem) dat tot stand komt in amalgams houdt direct verband met de (complexe) predikaten waar de gesluicede *wh*-vraagzin in vervat zit (zoals *nooit raden* en *zich wel kunnen voorstellen*). Ondanks het feit dat deze predikaten geregeld *je* als subject hebben in amalgams, laat ik zien dat dit een



generiek gebruik is. Een ander soort subjecten dat de voorkeur lijken te hebben in Andrews-amalgams zijn zogenaamde taboewoorden als *God* en *de du(i)vel*. Hierbij kan opgemerkt worden dat deze woorden in amalgams alleen in deze en niet in de letterlijke zin geïnterpreteerd kunnen worden. In beide gevallen wordt het subject dus gebruikt om de uiting kracht bij te zetten, wat als een vorm van spreker-oriëntatie gezien kan worden.

Voor wat de interpretatie betreft is het dus zeer aannemelijk dat we amalgams (dat wil zeggen, hun IC's) als een soort parentheses moeten classificeren. Dit geldt echter ook voor wat we tot nu toe gezien hebben van de structurele relatie tussen de matrix en de IC: de IC wordt niet ge-c-commandeerd door elementen van de matrix: hij is syntactisch volledig opaak. In de context van mijn voorstel over de interne structuur van de IC betekent dit dat amalgams parentheses bevatten die sluicing hebben ondergaan. In het laatste hoofdstuk van de dissertatie bespreek ik een manier waarop we de sluicing-benadering kunnen verenigen met het idee dat amalgams parentheses zijn. Allereerst ga ik in op de vraag welke plaats parentheses in het algemeen in de grammaticatheorie innemen, of meer specifiek, of een parenthese deel uit maakt van de representatie van de zin waarin hij voorkomt (de gastzin of matrixzin). Er bestaan grofweg twee soorten analyses van parentheses in de syntactische theorie. De eerste stelt dat parentheses op het niveau van de syntaxis geen deel uitmaken van hun gastzin (de 'orphanage'-benadering van parentheses, zie ook Safir 1986, Haegeman 1991, Burton-Roberts 1999). Uit zo'n theorie volgt direct dat parentheses niet ge-c-commandeerd worden door hun gastzinnen, wat op zichzelf een wenselijke voorspelling is gezien de opaciteit van parentheses die we ook in amalgams hebben teruggevonden. Empirisch wordt dit standpunt bemoeilijkt door zowel geankerde parentheses als vrije parentheses die invloed lijken te hebben op de woordvolgorde van de gastzin (bijvoorbeeld door onverwachte V2-gerelateerde inversie in de gastzin). Het probleem is echter meer algemeen: aangenomen dat de output van de syntactische component de input vormt voor de fonologische en interpretatieve componenten (het zogenaamde Y-model) kunnen we op basis van deze theorie überhaupt geen uitspraak doen over de plaatsing van de parenthese, noch over de wijze waarop we deze relatief aan zijn gastzin interpreteren.

Om die reden pleit ik voor een benadering waarin het parenthetisch materiaal deel uitmaakt van de afleiding en representatie van zijn gastzin. Om te verklaren waarom parentheses niet gesubordineerd lijken te zijn, kunnen we aannemen dat het invoegen van parenthetisch materiaal op een speciale manier gebeurt. In de gebruikelijke opvatting leidt de operatie Merge direct tot een hiërarchie: als A en B samengevoegd worden, noemen we het nieuw ontstane object bijvoorbeeld C, en C domineert A en B (en A en B worden ook wel 'zusters' genoemd). Dominantie kan gezien worden als basisrelatie in de structurele notie c-command: A c-commandeert alles wat haar zuster domineert. Het is duidelijk dat we parenthetisch materiaal niet op deze manier kunnen invoegen: elementen die hoger in de structuur komen, zouden de parenthese

c-commanderen. Om te bewerkstelligen dat parenthetisch materiaal wel deel uit maakt van, maar niet ondergeschikt is aan de gastzin, stelt De Vries (2007, to appear) dat dit materiaal via een ander type Merge ingevoegd wordt, namelijk *par*-Merge. Het triggeren van dit type Merge wordt toegeschreven aan een hoofd ( $\text{Par}^\circ$ ), en (vrije) parentheses kunnen nu als geadjungeerde  $\text{ParP}$ 's geanalyseerd worden. In tegenstelling tot reguliere Merge worden de objecten die samengevoegd door *par*-Merge niet gedomineerd door het output object, en elementen die daarna ingevoegd worden c-commanderen deze objecten diens-tengevolge ook niet. Dit geeft ons een basis voor de afleiding van amalgams als parentheses: we kunnen de IC (een gesluicde CP) met de matrix integreren terwijl zijn syntactische opaciteit gewaarborgd is.

In het laatste deel van hoofdstuk 7 ga ik in op de status van de IC als *geankerde* parenthese: de IC drukt iets uit over een deel van de matrix, en in amalgams is dat het lege correlaat van de sluicing remnant in de IC. Globaal gezegd kunnen we stellen dat de informatie van de geankerde parenthese het anker nader bepaalt (ofwel: *specificeert*). Op basis van Koster (1999, 2000a) bespreek ik een algemene configuratie voor specificerende constructies, de zogenaamde 'colon phrase'. In deze parallelle configuratie staan de twee argumenten van het colon-hoofd ':' (in Koster's opvatting een coördinator in de breedste zin) in een specificerende relatie tot elkaar. Een voorbeeld is (15):

- (15) Bea bakt [<sub>IP</sub> [<sub>DP</sub> iets lekkers] [<sub>:</sub> [<sub>DP</sub> een appeltaartje]]].

Dit in acht nemend stel ik allereerst voor dat we ook sluicing-configuraties (zowel met *wh*-vraagzinnen als gereduceerde cleftzinnen) kunnen zien als specificerende configuraties: het tweede conjunct specificeert het (indefinite) correlaat in het eerste conjunct. Het is van hieruit nog maar een kleine stap naar een volledige afleiding van amalgams. Het is duidelijk dat er onderscheid gemaakt moet worden tussen het soort parallelle constructies in Koster (1999, 2000a) en geankerde parentheses: in het laatste geval zijn er geen structurele relaties mogelijk tussen anker en parenthese (zoals binding door kwantoren). Ik stel daarom een tweede type parallelle configuratie voor: de *parenthetische* parallelle configuratie, met als hoofd  $\text{Par}^\circ$ . Ik pas dit eerst toe op een gesluicde parenthese als in (16a):

- (16) a. Bob heeft [<sub>ParP</sub> [<sub>DP</sub> iemand] – [<sub>Par</sub> [<sub>CP</sub> je raadt nooit wie (in het gezicht geslagen)]]] – in het gezicht geslagen.  
 b. Bob heeft [<sub>ParP</sub> [<sub>DP</sub> *e*] [<sub>Par</sub> [<sub>CP</sub> je raadt nooit wie (in het gezicht geslagen)]]] in het gezicht geslagen.

In de afleiding van deze zin is de parenthese *je raadt nooit wie* het complement van  $\text{Par}^\circ$ , en kunnen we het correlaat *iemand* als het subject van deze projectie zien. Amalgams zijn dan soortgelijke parentheses, maar hier is sprake van een leeg (syntactisch *null*) correlaat.

Tenslotte laat ik zien dat we Lakoff's raadsel nu kunnen oplossen. In principe bevat mijn analyse geen aparte regel die bepaalt dat er een correspondentie

moet zijn tussen de categorie van het lege correlaat in de subjectspositie van de ParP en de categorie van de content kernel in de IC. De vraag is dan of we op basis van het voorstel een ongrammaticale Andrews-amalgam als (17) wel kunnen uitsluiten:

- (17) \*Bob heeft een  $[_{ParP} [_{AP} e] [_{Par} [_{CP} je\ raadt\ nooit\ [_{CP} [_{DP} wat] \langle Bob\ gekocht\ heeft \rangle}]]]]$  auto gekocht.

In dit voorbeeld verschijnt de IC in een attributieve positie: de lege constituent moet daarom een AP zijn (een categorie die een eigenschap uitdrukt). De content kernel *wat* is een DP. Ik laat zien dat we geen stipulatie nodig hebben om dit soort voorbeelden uit te sluiten. Het is immers duidelijk dat in (17) het te deleren materiaal ('Bob heeft iets gekocht') in de IC het antecedent ('Bob heeft een auto met een bepaalde eigenschap gekocht') *niet* impliceert. Dit betekent dat de schijnbare relatie die er bestaat tussen de categorie van het lege correlaat en de categorie van de content kernel (de sluicing remnant) in amalgams wordt gereguleerd door e-GIVENness, de licentiëringsconditie op sluicing.



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## Curriculum Vitae

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Marlies Kluck was born on March 12<sup>th</sup>, 1980 in 's-Gravenhage, the Netherlands. She completed her secondary education (Sorghvliet Gymnasium, 's-Gravenhage) in 1998. She started her university degree with the General Language and Culture programme at Utrecht University, and completed the Propaedeutic exam in 2000. She continued her studies combining General Linguistics with Philosophy, and finished her MA degree in General Linguistics (specialization *Language and Language Structure*, focused on conceptual semantics) at Utrecht University in 2005. She was a visiting student at the University of Bologna, Italy to work on the topic of her MA thesis. From 2006 to 2010 she worked as a PhD researcher at the Center for Language and Cognition Groningen (CLCG), University of Groningen. During this period, she spent a semester at the Massachusetts Institute of Technology (MIT, Cambridge) as a visiting PhD student. This dissertation is the result of her PhD research. Marlies Kluck is currently employed as a postdoctoral researcher at the University of Groningen.