

UNIVERSITY of CALIFORNIA  
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**SPECIFYING WHO: ON THE STRUCTURE, MEANING, AND  
USE OF SPECIFICATIONAL COPULAR CLAUSES**

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requirements for the degree of  
DOCTOR OF PHILOSOPHY

in  
LINGUISTICS

by  
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## **Abstract**

Specifying Who:

On the Structure, Meaning, and Use of Specificational Copular Clauses

Line Mikkelsen

This dissertation is concerned with a class of copular clauses known as specificational clauses, and its relation to other kinds of copular structures, predicational and equative clauses in particular.

Based on evidence from Danish and English, I argue that specificational clauses involve the same core predication structure as predicational clauses—one which combines a referential and a predicative expression to form a minimal predicational unit—but differ from them in how the predicational core is realized syntactically. Predicational copular clauses represent the canonical realization, where the referential expression is aligned with the most prominent syntactic position, the subject position. Specificational clauses involve an unusual alignment of the predicative expression with subject position. Building on work by Prince (1992) and Birner (1996), I suggest that this unusual alignment is grounded in information structure, and, ultimately, principles of discourse coherence: the alignment of the less referential DP with the subject position serves a discourse connective function by letting material that is relatively familiar in the discourse appear before material that is relatively unfamiliar in the discourse.

I develop an analysis of predicational and specificational clauses that integrates these findings. The central syntactic mechanism that governs the derivation of the

two kinds of clauses is the featural interaction between the two DPs and T, the host of the subject position. Part of this interaction is familiar from non-copular clauses, but characteristic properties of copular clauses, in particular the semantic asymmetry between the two nominals and the lightness of the copula verb itself, conspire to let information structure play a decisive role in determining which of the two DPs raises to subject position.

The analysis provides a basis for understanding the restrictions on the kinds of DPs that can occur as subjects of specificational clauses; only DPs that can denote properties and that allow the specificational clause to perform its connective discourse function can occur in this position. It further clarifies the relation between specificational and predicational clauses, and effectively sets them both apart from equative clauses, which are argued to be fundamentally different.

## Acknowledgements

My interest in copular clauses was sparked when Chris Potts introduced me to Barbara Partee's 2000 paper "Copula inversion puzzles in Russian and English". In retrospect this seems fitting, since the dissertation that eventually emerged out of this interest is deeply indebted to Partee's work on copular clauses and on noun phrase interpretation, and to Chris' active and invaluable engagement with the material as my colleague, office mate, and friend.

The trek from that initial spark to the final dissertation is one that I could not have made without the support, advice, and encouragement that I have received from the members of my committee. My advisor, Jim McCloskey, has been a constant source of inspiration and guidance. I cannot thank him enough. I am grateful to Judith Aissen for teaching me, among many other things, how one can make progress on the difficult cases by carefully probing one's understanding of the "simple" cases. This helped me get unstuck at various points along the way. In the early stages of the dissertation I had the opportunity to meet regularly with Bill Ladusaw, and those meetings provided a unique setting for exploration and free thinking. I only wish more of that material had made it into the dissertation. Donka Farkas generously agreed to serve on my committee when Bill started his sabbatical, and I am tremendously grateful to her for taking on the project with keen interest and for her amazing ability to ask just the right question at the right time. It was one of those questions that brought out the connection between referentiality, information structure and syntactic position that underlies the analysis of specificational clauses in chapter 9.

While my committee has had the most direct influence on this dissertation and on me, we both have benefitted enormously from the entire linguistics community at UCSC; the other faculty members who taught me, the staff who helped me navigate the university, and my fellow students, who were the best companions possible.

I am also grateful to the linguists in the community at large who took an active interest in my work and who helped me understand their work better, especially Daniel Büring, Ljudmila Geist, Anastasia Giannakidou, Dan Hardt, Caroline Heycock, Roger Higgins, Tony Kroch, Maribel Romero, Susan Rothstein, Peter Sells, and Roberto Zamparelli.

I thank the community of Danish linguists who made it possible, and enjoyable, for me to work on Danish while spending most of my time in Santa Cruz. Financial support from Denmark—including a three-year Ph.D. stipend from *Statens Humanistiske Forskningsråd*—has made it possible for me to pursue my interests to a point that I couldn't have imagined when I enrolled at Aarhus University in the Fall of 1992. To my mind this is the best a society can do for its members, and I hope more countries will follow suit.

For help in the eleventh hour I am deeply grateful to Ash Asudeh, Patrick Davidson, Christine Gunlogson, Vera Lee-Schoenfeld, Kyle Rawlins, and Lynsey Wolter.

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This thesis is dedicated to the memory of my mother.

# Chapter 1

## Introduction

This dissertation is concerned with copular clauses, in particular copular clauses of the kind shown in (1.1).

(1.1) The lead actress in the movie is Ingrid Bergman.

In Higgins's (1979) taxonomy of copular clauses these are known as SPECIFICATIONAL clauses, and distinguished from other kinds of copular clause, PREDICATIONAL and EQUATIVE clauses in particular.

(1.2) Ingrid Bergman is the lead actress in that movie. [predicational]

(1.3) She is Ingrid Bergman [equative]

Higgins's work is empirically extremely rich, and has served as the basis for much subsequent work in the area of copular clauses. The taxonomy itself, however, is essentially descriptive, and the main goal of this thesis is to contribute to a better understanding of Higgins' taxonomy in terms of current theories of clause

structure, noun phrase interpretation and information structure.

There are at least two ways in which such theoretical integration advances our understanding. First, it gives a more precise characterization of the different classes of copular clauses, which in turn helps us understand why each of them should have the cluster of behavioral properties that led Higgins to his classification.

Second, it casts new light on the differences between copular clauses and non-copular clauses, by clarifying in what theoretical respects they are similar, and in what respects they are different. This contributes to our understanding of the very special position occupied by copular clauses in natural language.

The dissertation falls into three parts. The first is concerned with the syntactic structure of specificational clauses. One very prominent line of thinking, starting with Williams (1983), is that specificational clauses are inverted predicational structures (Partee (1986), Heggie (1988a,b), Heycock (1994:182–210), Moro (1997), Zamparelli (2000:chapter 5), Adger and Ramchand (2003)). Within this tradition, there have been different proposals as to the nature of the inversion operation. Williams (1983) himself suggested that inversion was the result of a “late, stylistic” rule, possibly located in the phonological component, but most subsequent work has assumed that the movement involved is of a more syntactic nature. One of the core assumptions of this line of work, is that predicational and specificational clauses involve the same copula verb.

In response, there is another body of work that argues that specificational clauses are not (transformationally) related to predicational structures and that

the surface appearance of inversion in examples like (1.1) and (1.2) is illusory (Heycock and Kroch (1999, 2002), Rothstein (2001)). These authors mostly align specificational clauses with equative clauses, such as (1.3), and argue that specificational and equative clauses share a syntactic structure and semantic properties distinct from those of predicational clauses.

The results of the present study supports the first point of view, that specificational clauses are, in a certain sense, the result of inversion around the copula. In particular, I propose a version of Moro's (1997) predicate raising analysis, according to which specificational and predicational clauses share a core predicational structure, but differ in which of the two DPs is realized in subject position.

Support for the predicate raising analysis comes from the semantic composition of these clauses, in particular from the semantic types of the DPs flanking the copula. This evidence is developed in the second part of the thesis (chapters 4–7).

The last part of the thesis is concerned with how specificational clauses are used. I argue that the characteristic information structure associated with specificational clauses can be understood, at least in part, as a result of the unusual alignment of the less referential argument with subject position, together with independently motivated principles of discourse coherence. This paves the way for an analysis, developed in chapter 9, which integrates the findings about the syntactic, semantic, and discourse properties of specificational clauses.

# Part I

## Structure

# Chapter 2

## Predicate Topicalization

### 2.1 Introduction

Heggie (1988a,b) provides a unified analysis of English copula constructions, in which predicational, identificational, equative, and specificational (in her terms ‘pseudo-equative’) clauses are derived from a single underlying structure.<sup>1</sup> What is of interest here is her analysis of specificational clauses and their relation to predicational structures. Heggie proposes that specificational clauses are derived from predicational structures by topicalization of the predicate complement, in conjunction with left-ward movement of the copula. While this analysis provides an elegant and simple account of the basic word order pattern found in predicational and specificational clauses, and also of some of the restrictions on extraction

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<sup>1</sup>Heggie (1988a) extends her analysis to *it*-clefts and pseudo-clefts. Since this dissertation is concerned with non-clefted copular clauses I will not discuss these extensions, but see Hedberg (2000) and den Dikken et al. (2000) for recent relevant discussion.

from specificational clauses, subsequent work has shown quite convincingly that this cannot be the right analysis of specificational clauses in English (Heycock 1994, Rothstein 2001). One of the reasons is that the kind of verb movement assumed in Heggie's analysis is simply not found in English topicalization structures. My errand in this chapter is to examine Heggie's analysis with respect to a language which does have the requisite verb movement, and investigate whether the predicate topicalization analysis can be maintained for specificational clauses in such a language. The language that I will be investigating is Danish, and my conclusion is that Danish has predicate topicalization structures of the sort described by Heggie, but that they are not associated with the class of specificational clauses identified by Higgins. This leaves us with a nice analysis of one class of copular clauses (namely predicational clauses, with or without topicalization), but also without an analysis of specificational clauses, which is our main concern. In the next chapter I discuss some alternative analyses, which, by the criteria presented here, are more plausible candidates for specificational clauses.

The engagement with the predicate topicalization analysis is important not only because it excludes one of the competing analyses, but also because it establishes some basic properties of specificational clauses, in particular that the initial DP is in subject position, and the post-copular DP inside the VP. These are directly relevant for the investigation of the semantics of specificational clauses in part II of the thesis.

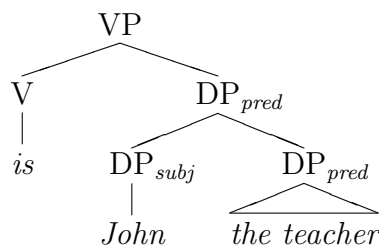
In the remainder of this section I present Heggie's proposal in more detail and briefly review the main argument against it as an analysis of specificational

clauses in English. In section 2.2, I turn to Danish and give evidence that predicate topicalization exists in this language and that Heggie’s analysis of these is consistent with the general properties of topicalization in the language. Section 2.3 makes the central argument that predicate topicalization structures are distinct from specificational structures, drawing on a range of empirical observations. Section 2.4 deals with a potential theoretical objection, and section 2.5 presents some further empirical support.

### 2.1.1 Heggie’s proposal

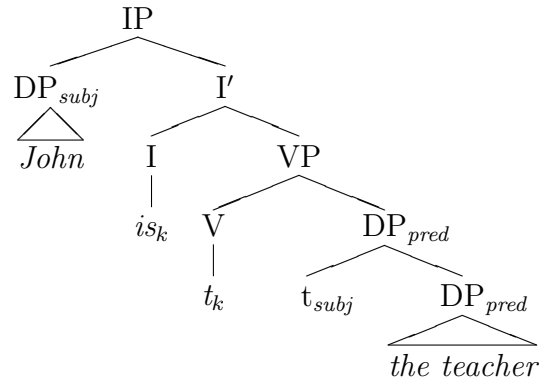
Following Stowell (1978:465–466), Heggie (1988a:23–62) assumes that the copula is a raising verb which takes a small clause complement. The subject of the small clause is left-adjoined to the maximal projection of the small clause predicate, as in Stowell (1983:297–299):

(2.1) Underlying structure:



In a predicational copular clause like *John is the teacher*, the subject of the small clause raises across the copula to the subject position of the main clause (Spec-IP), and the finite verb moves to I:

(2.2) Predicational structure:

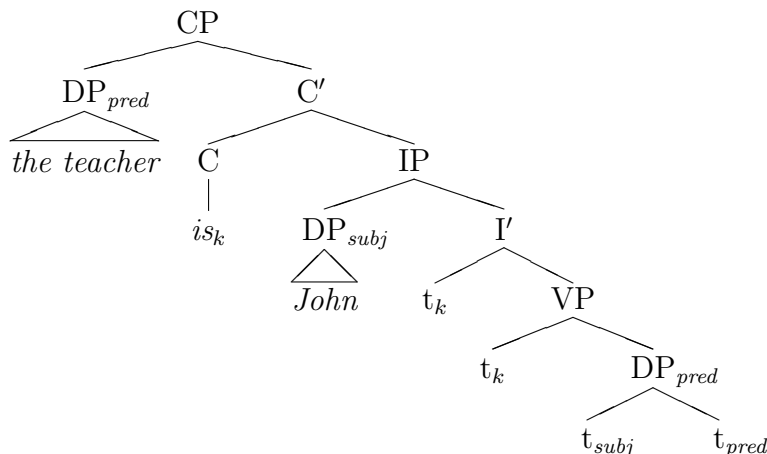


The specificational clause *The teacher is John* is derived from the same underlying structure, but in addition to the subject raising to Spec-IP the predicate DP moves to Spec-CP, because it is the focus (Heggie 1988a:66). This is an instance of ‘topicalization of focus’ in the sense of Gundel (1988:143–150); movement to Spec-CP to signal focus, rather than topic status.<sup>2</sup> Movement of the predicate DP to Spec-CP triggers subject–auxiliary inversion, which Heggie analyzes as movement of the finite verb to C:

---

<sup>2</sup>A couple of terminological notes. I have updated Heggie’s analysis by substituting Spec-CP for COMP and DP for NP. Following Heggie (1988a:67), I use PREDICATE DP to refer to the DP that is not the subject (abbreviated as DP<sub>pred</sub> in the tree diagrams), and PREDICATE TOPICALIZATION to refer to movement of this DP to Spec-CP.

(2.3)    Specificational structure:



This produces the word order associated with specificational clauses (*The teacher is John*). There are three things to note about this analysis, which will be important for what follows. First, that the initial DP is not in subject position, but in Spec-CP. Second, that the initial DP is assumed to be focussed and, third, that the post-copular DP is outside of the VP (in subject position). I argue that all three properties hold of a certain class of copular clauses in Danish, but that neither of them hold of specificational clauses. Before we get to that argument, I briefly review one of the main arguments against predicate topicalization as an analysis of specificational clauses in English.

### 2.1.2 Predicate topicalization in English

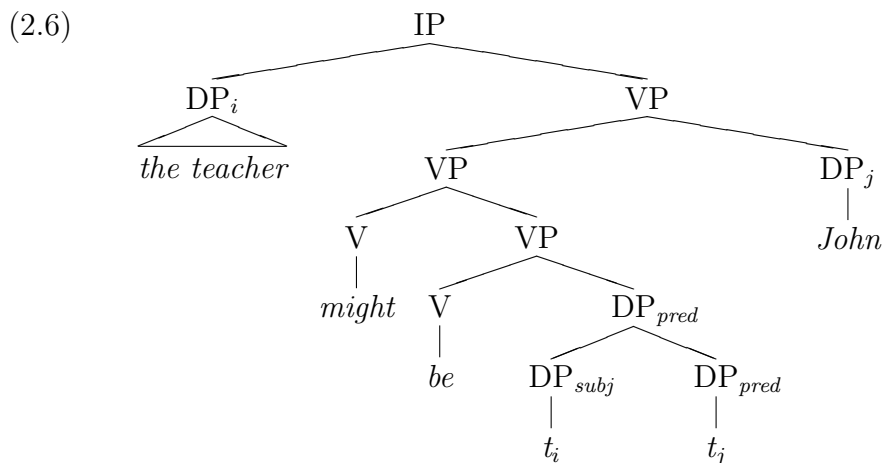
As noted in Heycock (1994:186–189) and Rothstein (2001:259), the predicate topicalization analysis makes a clear prediction about word order: if a specificational clause contains an auxiliary, e.g. a modal, the word order should be as in (2.4)

(see section 2.5.1).

(2.4) \*The teacher might John be.

(2.5) [CP the teacher<sub>j</sub> might<sub>k</sub> [IP John<sub>i</sub> t<sub>k</sub> [VP be t<sub>i</sub> t<sub>j</sub> ]]]

But (2.4) is utterly impossible. The problem is the assumption that DP<sub>2</sub> (*John*) is in Spec-IP, as the structure in (2.5) makes clear. Heggie (1988a,b) does not discuss examples like (2.4), but in order to account for similar problems involving raising structures, she suggests (1988a:138) that there is another structure which is available when both DPs are referential, namely the equative structure in (2.6).



In the equative structure, the matrix subject (*the teacher*) is also the subject of the small clause. The proper name is base-generated as the predicate of the small clause, which is possible because it is a ‘referring predicate’ (p. 104). It moves to a VP-adjoined position, due to being presentational focus (pp. 138–149). This structure, in contrast with the predicate topicalization structure, yields the correct word order when a modal is present (due to the right-adjunction of DP<sub>j</sub>). However, the availability of this structure still does not explain why (2.4) is impossible:

if predicate topicalization is available in English, we expect (2.4) to be possible, in addition to the correct surface order (*The teacher might be John*) associated with the equative structure in (2.6). The problem is deepened by the fact that Danish, which has predicate topicalization structures, allows clauses corresponding to (2.4), so Heggie cannot appeal to any inherent incompatibility between predicate topicalization and the presence of modals or multiple auxiliaries.

As we will see in the second part of the thesis, there are independent problems with assimilating specificational clauses to equatives, since the semantics of specificational clauses differ from that of equative clauses.

## 2.2 Predicate topicalization in Danish

Danish has copular clauses very similar to the English ones motivating Heggie’s analysis. The ones in (2.7) have the word order characteristic of predicational clauses: the name precedes the description, while the ones in (2.8) have the word order characteristic of the specificational construction: the definite description precedes the name.<sup>3</sup>

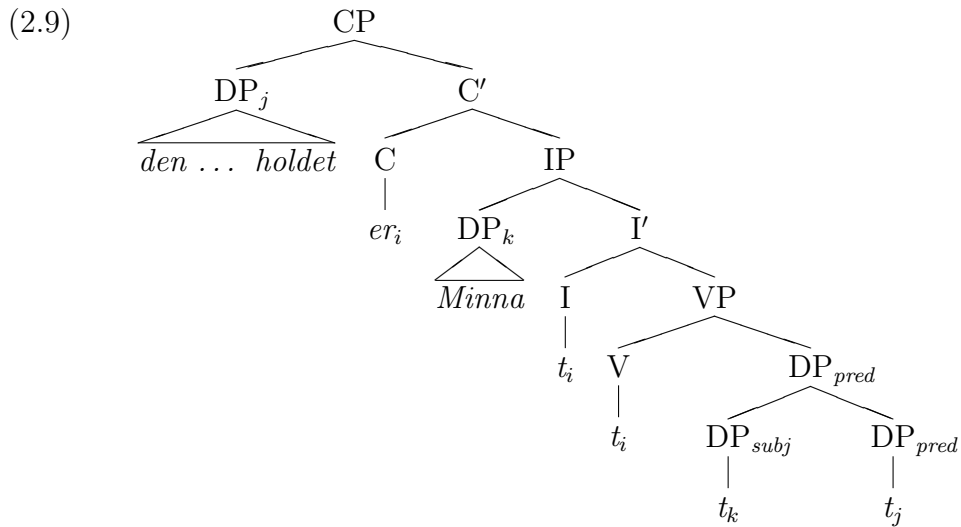
- (2.7) a. Sparky er min nye ven.  
           Sparky is my new friend  
           ‘*Sparky is my new friend.*’
- b. Poul Holm er formand for udvalget.  
           Poul Holm is chairman of committee-DEF  
           ‘*Poul Holm is chairman of the committee.*’

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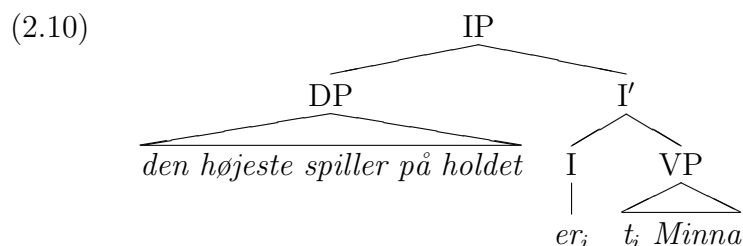
<sup>3</sup>I use the following abbreviations in the glosses of the Danish examples: DEF for definite, ADV for (unglossable) adverbs, SUP for superlative, and REFL for reflexive.

- c. Minna er den højeste spiller på holdet.  
 Minna is the tallest player on team-DEF  
 ‘*Minna is the tallest player on the team.*’
- (2.8) a. Min nye ven er Sparky.  
 my new friend is Sparky  
 ‘*My new friend is Sparky.*’
- b. Formanden for udvalget er Poul Holm.  
 Chairman-DEF for committee-DEF is Poul Holm.  
 ‘*The chairman of the committee is Poul Holm.*’
- c. Den højeste spiller på holdet er Minna.  
 the tallest player on team-DEF is Minna  
 ‘*The tallest player on the team is Minna.*’

Applying Heggie’s predicate topicalization analysis to (2.8c) yields the structure in (2.9), where the predicate DP (*den højeste spiller på holdet* ‘the tallest player on the team’) has moved to Spec-CP. The subject of the small clause (*Minna*) has raised to Spec-IP, and the finite verb has moved to C yielding the verb second order characteristic of Danish and most other Germanic languages (Vikner 1995:39–46):



The central claim that I want to defend here is that whereas (2.9) represents a possible structure for the string in (2.8c)—it accurately represents a predicate topicalization structure—it is not the correct structure for the specificational reading of (2.8c). The specificational reading is associated with a non-topicalized structure where the definite description is in Spec-IP and the name inside the VP:



For now, I put aside the question of how the structure in (2.10) arises, and concentrate on establishing that specificational sentences do not involve topicalization. I return to the possible sources for (2.10) in the next chapter.

Before I give the arguments for structural ambiguity, I show that it is reasonable to assume that predicate topicalization structures of the sort represented in (2.9) exist in Danish, given general properties of the syntax of the language (section 2.2.1) and the pragmatic functions associated with topicalization (section 2.2.2). This also serves as an introduction to some properties of Danish clause structure that will be important in what follows, in particular the verb second property mentioned above.

## 2.2.1 Evidence for predicate topicalization in Danish

It is generally acknowledged that Danish allows almost any constituent type to appear in clause initial position (Diderichsen 1968:185, 190–191; Jensen 1985:47–48; Mikkelsen 1911:574–579).<sup>4</sup> Some representative examples are given in (2.11)–(2.19):

- (2.11) **Hende** havde han genkendt forrige tirsdag. [direct object]  
her had he recognized last Tuesday  
*‘He had recognized her last Tuesday.’*
- (2.12) **Fra hjernen** kom de i hvert fald ikke. [PP complement]  
from brain-DEF came they in any case not.  
*‘They didn’t come from the brain.’*
- (2.13) **Ham** var der aldrig nogen der havde mistanke til. [object of prep]  
him was there never anyone that had suspicion to  
*‘There was never anyone who was suspicious of him.’*
- (2.14) **Slagteren** har du vel givet besked. [indirect object]  
butcher-DEF have you ADV given word  
*‘I take it that you have told the butcher.’*
- (2.15) **At hun også er den frygteligste**, ved han ikke. [CP comp]  
That she also is the terrifying-SUP knows he not  
*‘He doesn’t know that she is also the most terrifying one.’*
- (2.16) **Morsomt** fandt de det ikke. [predicate of a small clause]  
funny found they it not.  
*‘They didn’t find it funny.’*
- (2.17) **Så meget** gentog verden sig vel ikke. [adverbial]  
that much repeated world REFL ADV not  
*‘One wouldn’t think that the world would repeat itself that much.’*

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<sup>4</sup>It is not entirely correct to characterize the position as clause initial, since various connectives (like *men* ‘but’ and *og* ‘and’) and discourse particles (*ja* ‘yes’, *nå* ‘well’) can appear to the left of this position (Diderichsen 1968:184–186).

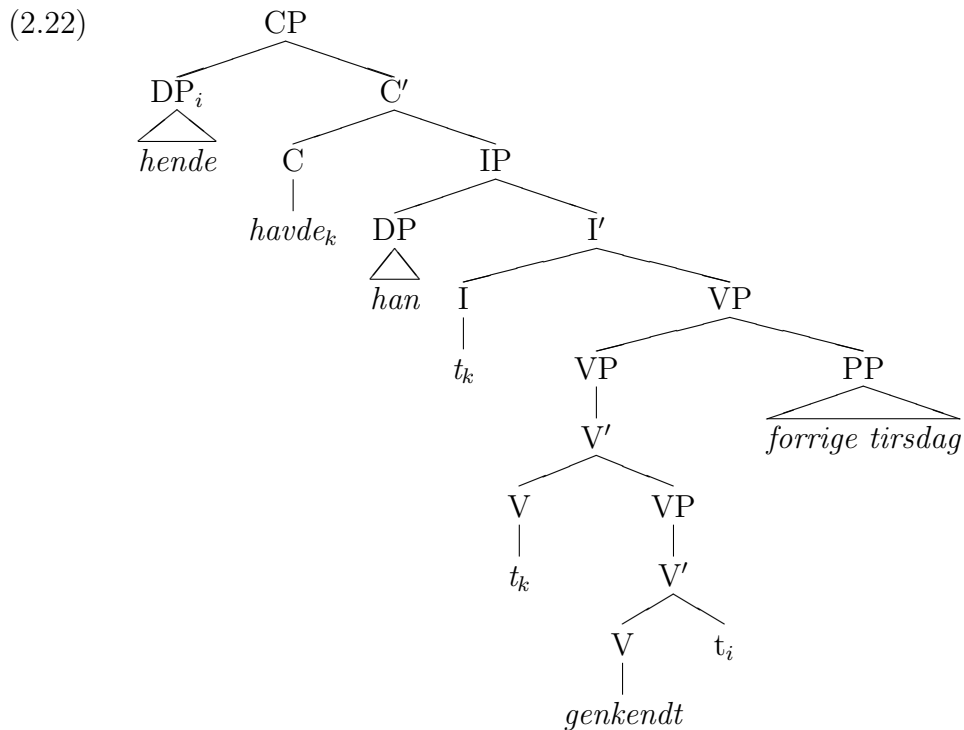
- (2.18) **Sælge gården** ville de under ingen omstændigheder. [non-fin VP]  
 sell farm-DEF would they under no circumstances.  
*'They wouldn't sell the farm under any circumstances.'*
- (2.19) **Fundet nogen løsning** har de endnu ikke. [non-fin VP]  
 found any solution have they yet not.  
*'They haven't found a solution yet.'*

The exceptions are finite verbs and finite VPs, which cannot front to clause-initial position:

- (2.20) \***Kunne** han sove ikke.  
 could he sleep not.  
 (cf. *'He couldn't sleep.'*)
- (2.21) \***Spiser sild** han om morgenen.  
 eats herring he in morning-DEF  
 (cf. *'He eats herring in the morning.'*)

In the tradition of Field Grammar (Diderichsen (1968), Hansen (1970), Heltoft (1986)) the position of the fronted constituent in (2.11)–(2.19) is the so-called ‘fundamentfelt’ (‘foundational field’). In the tradition of Government and Binding Theory (Chomsky 1982) it has been identified as the specifier position of C (Spec-CP), e.g. by Vikner (1999b:86–89), and this is what I will assume here too.

Observe that in all the examples in (2.11)–(2.19) the finite verb appears immediately after the fronted constituent and the subject appears immediately to the right of the finite verb. This word order lends itself naturally to a structural interpretation where the topicalized constituent is in Spec-CP, the finite verb in  $C^0$ , and the subject in Spec-IP, as shown in (2.22), which is the structure associated with (2.11).



This is the analysis defended in Vikner (1995) following earlier work by Hans den Besten, Anders Holmberg, Christer Platzack, and others. As discussed in Schwartz and Vikner (1996:30–46) there are a number of alternative analyses, including Diesing (1990), Reinholtz (1990), and Rögnvaldsson and Thráinsson (1990), where the topicalized constituent and the finite verb are both below the C-projection. Here I follow Vikner et al. in assuming that the topicalized constituent occupies Spec-CP and the finite verb is in C<sup>0</sup>. The arguments I present below could be made, in slightly different forms, under any of the alternative analyses.

In Danish, verb-second order is obligatory in declarative matrix clauses, and possible in some subordinate clauses (see Reinholtz (1990:461–467) and Vikner (1995:124–129) for data and discussion).

One other issue deserves mention here: in subject-initial clauses V2 is ‘invisible’ because movement of the subject from Spec-IP to Spec-CP together with movement of the finite verb from  $I^0$  to  $C^0$  does not change word order (it is string vacuous). Vikner (1995) maintains that there is movement to the C-domain in all matrix clauses, including subject-initial ones, but others (including Travis (1991) and Zwart (1997)) propose that in subject-initial matrix clauses the subject and the finite verb stay inside the IP (or the highest projection below CP if IP is expanded into multiple projections). In what follows I adopt this latter proposal, since it makes the contrast between predicate topicalization structures and specificational clauses (which I argue are subject initial) very clear. It also anticipates the syntactic analysis of specificational clauses that I propose in the final part of the thesis. In section 2.4 I show that the arguments I present for distinguishing these structures do not depend on this assumption, but are also valid under a CP analysis of subject-initial matrix clauses.

The predicate topicalization analysis that Heggie proposed for specificational copular clauses fits naturally into this general pattern of fronting to Spec-CP. Compare the structures in (2.9) and (2.22): in both, the complement has fronted to Spec-CP. Moreover, a corpus search reveals that complements to the copula in predicational copular constructions are routinely fronted:<sup>5</sup>

(2.23) **Skyfrit** var det ikke. [AP complement]  
 cloudless was it not  
 ‘*It wasn’t a clear sky.*’

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<sup>5</sup>The corpus is the so-called DK87–90 corpus, consisting of 4 million words of contemporary written Danish (equal parts newspaper, magazine, and fiction writing).

- (2.24) **Længere** var vores kontrakter ikke. [AP complement]  
 longer were our contracts not  
 ‘*Our contracts weren’t longer than that.*’
- (2.25) **I køkkenet** er de sjældent. [PP complement]  
 in kitchen-DEF are they rarely  
 ‘*They are rarely in the kitchen.*’
- (2.26) **Væk** var hun. [adverbial]  
 away was she  
 ‘*Off she went.*’
- (2.27) **Præst** ville han være. [nominal complement]  
 priest would he be  
 ‘*He wanted to be a priest.*’

It thus seems reasonable to assume that predicate topicalization structures, of the sort described by Heggie, exist in Danish.

### 2.2.2 The pragmatic functions of predicate topicalization

Heggie (1988a:66) proposes that movement of the predicate DP to Spec-CP is an instance of focus movement in the sense that movement of the predicate DP to Spec-CP serves to mark this constituent as focussed. If the Danish examples in (2.10) and (2.23)–(2.27) are really instances of predicate topicalization in Heggie’s sense, we expect these to exhibit focus on the fronted constituent.

We saw above that Danish allows almost any constituent to fill Spec-CP. Descriptive grammars also give evidence that there is no unique pragmatic function associated with this position (Diderichsen 1968:192, Hansen 1966:83–90). Which constituent of the sentence is placed in the foundational field (Spec-CP) depends

on both discourse factors (e.g. providing a smooth connection with what went before) and what one might call “communicative perspective” (which aspects of the message the speaker wishes to emphasize or deemphasize). Though being placed in this position cannot in general be identified with a single pragmatic function, it is clear that topics (in roughly the sense of Gundel (1988:32–44)) can be placed here, but focussed constituents may also occupy the position.<sup>6</sup> (As in English, topic and focus can also be expressed by prosody alone without any dislocation.) This dual role of Spec-CP with respect to information structure is echoed in Gundel’s distinction between TOPICALIZATION OF FOCUS and TOPICALIZATION OF TOPIC (Gundel 1988:141–152). Gundel argues that there are two discourse functions of ‘topicalization’, where topicalization is understood as movement to a left-peripheral position in the clause. One is to mark the fronted constituent as a topic. This is what she calls topicalization of topic, and she argues that it is closely related to topic left-dislocation constructions with resumption ((*As for*) *John, she called him.* (Gundel 1988:143, ex. (16a))). The other is to mark the fronted constituent as focus, and this, she argues, is closely related with *it*-clefting (*It was John that she called* (Gundel 1988:143, ex. (17a))). Something like Gundel’s distinction is also found in more recent work by Rizzi (1997), where it is suggested that the CP domain be split up into a Focus Phrase and one or more Topic Phrases. There seems to be little evidence for this extra structure in Danish, so I will not adopt Rizzi’s syntactic proposals here.<sup>7</sup>

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<sup>6</sup>Furthermore it is assumed that, all other things being equal, the position is occupied by the subject, which indicates that grammatical function also has a role to play, albeit a secondary one. (See section 2.4 for discussion of subject-initial matrix clauses.)

<sup>7</sup>The evidence for or against a more articulated CP domain in Danish is partly obscured by

It is at least consistent with this general picture that structures like (2.9) involve focus on the fronted constituent, in accordance with Heggie’s claim that predicate topicalization is focus movement. It has often been suggested that there is more than one type of focus. Kiss (1998) distinguishes INFORMATION FOCUS, which merely serves to mark a piece of the expression as conveying new, or non-presupposed, information, and IDENTIFICATIONAL FOCUS, which expresses exhaustive identification and/or contrast among a set of alternatives. Heggie is not explicit about the type of focus involved in predicate topicalization, but it seems reasonably clear that the inversions in (2.23)–(2.27) express that the fronted constituent stands in a relation of contrast either with a set of contextually relevant predicates or with an expectation raised in the preceding text, which makes it most similar to Kiss’ identificational focus. Thus (2.24) occurs in the following passage,

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verb-second: if there were multiple XP projections above IP, hosting topic and focus constituents in their specifiers, there would also be multiple head positions available for the finite verb to move to. However, the stark ungrammaticality of clauses like (2.28) provides grounds for some scepticism about the availability of a Topic Phrase and a Focus Phrase above IP in Danish.

- (2.28) \*Peter så bilen ikke.  
 Peter saw car-DEF not  
 (intended interpretation: ‘As for Peter, it was the car that he didn’t see.’)

The string in (2.28) represents an attempt at making the subject (*Peter*) the topic and the direct object (*bilen* ‘the car’) the focus. Assuming that negation is left adjoined to VP (Vikner 1995:40) and that the finite verb moves to the highest head position, the string would receive the following analysis under Rizzi’s proposal:

- (2.29) [TOPP Peter<sub>i</sub> så<sub>k</sub> [FOCP bilen<sub>j</sub> t<sub>k</sub> [IP t<sub>i</sub> t<sub>k</sub> [VP ikke [VP t<sub>k</sub> t<sub>j</sub>]]]]]

The ungrammaticality of (2.28) is at least preliminary evidence against adopting the more articulated structure for the CP domain for Danish. It is of course possible that both projections are present, but that they cannot both have lexical material in their specifier position. This would also account for the ungrammaticality of (2.28), but only at the expense of introducing another puzzle, namely why both positions cannot be filled simultaneously.

where the length of the contract is being contrasted with the time needed to reach a decision:

- (2.30) I løbet af mindre end to år skulle vi nå dertil, at vi  
In course-DEF of less than two years should we reach there that we  
kunne sige, om det kunne lade sig gøre, for **længere** var vores  
could say whether it could let REFL be-done, for longer were our  
kontrakter ikke.  
contracts not.  
*‘In less than two years we had to reach a point where we could say  
whether it could be done, for that’s how long our contracts were.’*

And (2.23), where the adjectival predicate *skyfrit* (‘cloudless’) is fronted, is denying the expectation of a clear sky set up by the preceding clause:

- (2.31) Solen var på himlen, men skyfrit var det ikke.  
sun-DEF was on sky-DEF, but cloudless was it not.  
*‘The sun was out, but there were clouds.’*

These contrastive effects are somewhat complicated by the fact that topicalization of focus is often accompanied by negation (examples (2.12), (2.15), (2.16), (2.17), (2.19), (2.23), and (2.24)). I will not attempt to characterize the pragmatic effect of predicate topicalization any further, but simply note that my claim that the Danish examples in (2.9) and (2.23)–(2.27) are instances of predicate topicalization expressing (identificational) focus on the fronted predicate is at least consistent with the traditional understanding of topicalization and verb-second order in Danish.

It is time to return to the main task of this chapter, which is to show that despite predicate topicalization being attested in Danish, it is not the correct analysis of specificational clauses.

## 2.3 Predicate Topicalization vs. Specification

There is considerable evidence that the string in (2.32) is structurally ambiguous between the predicate topicalization structure in (2.32a) and the non-topicalized specificational structure in (2.32b) (see also (2.9) and (2.10) above).

- (2.32) Den højeste spiller på holdet er Minna.  
the tallest player on team-DEF is Minna
- a. [CP [den højeste spiller på holdet]<sub>j</sub> er<sub>i</sub> [IP Minna<sub>k</sub> t<sub>i</sub> [VP t<sub>i</sub> t<sub>k</sub> t<sub>j</sub>]]]
- b. [IP [den højeste spiller på holdet]<sub>j</sub> er<sub>i</sub> [VP t<sub>i</sub> Minna<sub>k</sub> t<sub>i</sub> t<sub>j</sub>]]

The different structures are associated with slightly different meanings, though the difference is hard to convey in idiomatic English. Intuitively, the specificational structure identifies the tallest player on the team as Minna (and not someone else) whereas the predicate topicalization structure ascribes to Minna the property of being the tallest player (and not some other property). This meaning difference is not truth-conditional, but seems to reside in the realm of information structure and discourse felicity. Anticipating the discussion in the last part of the thesis (chapters 8 and 9), we can say that in a specificational structure the post-copular element is focus and the initial DP topic, whereas predicate topicalization structures are characterized by the initial DP being focus.

For now, I simply translate the specificational structures with the corresponding English specificational clause:

- (2.33) Den højeste spiller på holdet er Minna. [specificational reading]  
the tallest player on team-DEF is Minna  
*‘The tallest player on the team is Minna.’*

and the predicate topicalization structures with the corresponding (non-topicalized) predicational clause:

- (2.34) Den højeste spiller på holdet er Minna. [predicational reading]  
 the tallest player on team-DEF is Minna  
 ‘*Minna is the tallest player on the team.*’

Evidence for the structural ambiguity of (2.32) comes from the position of negation (section 2.3.1), the morphological form of pronouns (2.3.2), the distribution of reflexive pronouns (2.3.3), and the distribution of negative polarity items (2.3.4).

### 2.3.1 Negation

Danish is an SVO language, in which sentential negation marks the left edge of VP (Vikner 1995:40).<sup>8</sup> In matrix clauses the finite verb moves out of the VP to yield the characteristic verb second order, while non-finite verb forms stay inside the VP (see section 2.2.1). In subject-initial matrix clauses, the negation word *ikke* (not) therefore occurs to the right of the finite verb, but to the left of any non-finite verb forms, as in (2.35).

- (2.35) Jeg har<sub>i</sub> **ikke** [VP t<sub>i</sub> set den.]  
 I have not seen it

Any other positioning of negation in such clauses—including clause-final position—is impossible:

- (2.36) \*Jeg har<sub>i</sub> [VP t<sub>i</sub> set den **ikke**.]  
 I have seen it not

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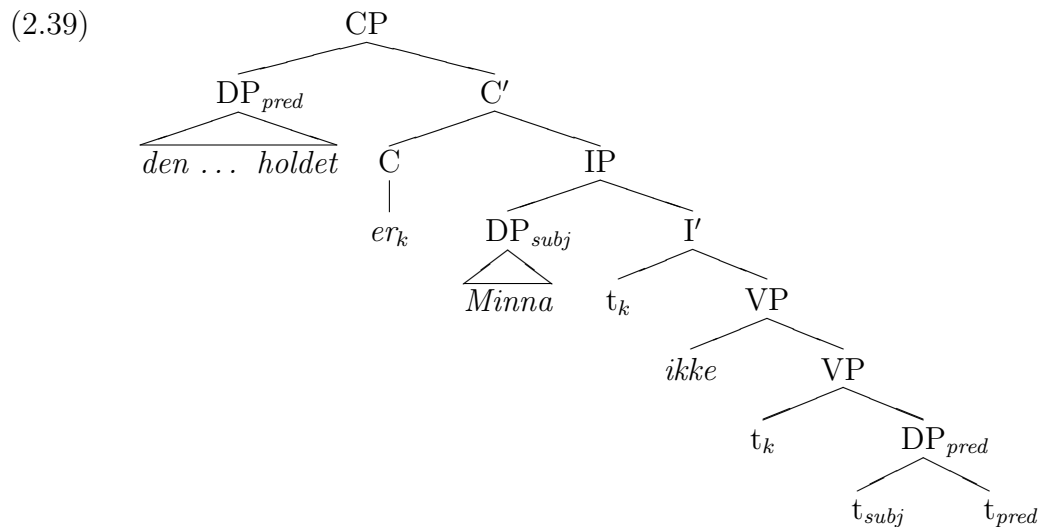
<sup>8</sup>For detailed discussion of the categorical status of *ikke* (‘not’) see Christensen (2003).

Jespersen (1924:153, fn. 2) notes that there are in fact two ways of negating the kind of copular sentence that we are interested in here (see also Byskov (1927:252–253)). One, shown in (2.38), has negation in its expected position, immediately to the right of the finite verb. The other has negation in clause-final position, as in (2.37).

(2.37) Den højeste spiller på holdet er **ikke** Minna.  
 the tallest player on team-DEF is not Minna  
 ‘The tallest player on the team isn’t Minna.’

(2.38) Den højeste spiller på holdet er Minna **ikke**.  
 the tallest player on team-DEF is Minna not  
 ‘Minna isn’t the tallest player on the team.’

Given what we know about the structural position of negation, the clause-final position of negation in (2.38) indicates that this is not an ordinary subject-initial clause. My proposal is that it is in fact a predicate topicalization structure in the sense defined by Heggie:



The surface order is derived by raising of the subject of the small clause (*Minna*) to Spec-IP, topicalization of the predicate complement (*den højeste spiller på holdet*) to Spec-CP, and movement of the finite verb to C (via I). Since every element of the VP has moved out of the VP, the negation is left in clause-final position. This is not a word order unique to topicalization in copular clauses. The same pattern is found with topicalization of VP internal constituents in non-copular clauses, as the examples in (2.40)–(2.42) (repeated from section 2.2.1) show:

(2.40) **Fra hjernen** kom de i hvert fald **ikke**.  
 from brain-DEF came they in any case not.  
 ‘They didn’t come from the brain.’

(2.41) **Morsomt** fandt de det **ikke**.  
 funny found they it not.  
 ‘They didn’t find it funny.’

(2.42) **Fundet nogen løsning** har de endnu **ikke**.  
 found any solution have they yet not.  
 ‘They haven’t found a solution yet.’

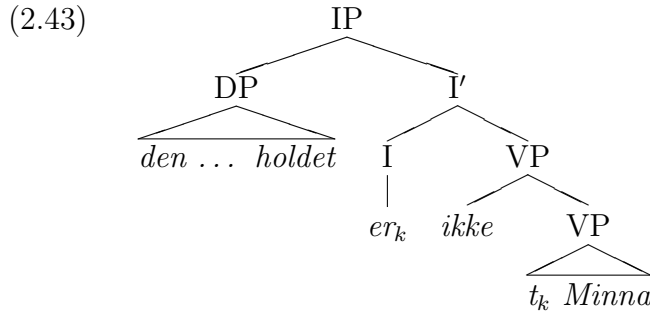
In (2.40) a PP complement of the verb has been fronted, and since the VP contains no other complements or non-finite verb forms, the negation is left in clause-final position. In (2.41) topicalization interacts with object shift to produce the negation-final order. In clauses with no non-finite verb forms, a weak (unstressed) object pronoun shifts to the left of negation and other so-called medial adverbs (Holmberg 1986).<sup>9</sup> Thus in (2.41) the weak object pronoun *det* (‘it’) has shifted to

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<sup>9</sup>A medial adverb is one that in the absence of  $\bar{A}$ -movement “follows the subject but precedes the [non-pronominal; LM] complement of the verb” (Vikner 1995:40). Examples of adverbials that can occur in this position include *aldrig* ‘never’, *allerede* ‘already’, *endnu* ‘yet’, *i hvert fald* ‘in any case’, *måske* ‘perhaps’, *ofte* ‘often’, *overhovedet* ‘at all’, *sikkert* ‘probably’, and *stadig* ‘still’. These can co-occur with each other and with negation (the latter is illustrated in (2.40) and (2.42)).

the left of *ikke*, the secondary predicate *morsomt* ('funny') has moved to Spec-CP, and the verb *fantt* ('found') has moved to C, leaving the negation in clause-final position. In (2.42), the finite verb has moved out of the VP to C and the lower part of the VP has fronted, leaving the VP-adjoined negation in a rightmost position.

The first negation of (2.32), given in (2.37) above, has *ikke* in its canonical non-final position. I propose that this is a specificational clause with the surface structure in (2.43).<sup>10</sup>



In contrast with (2.39), there is no topicalization in (2.43).<sup>11</sup> The definite description is in subject position and the proper name inside the verb phrase. The finite verb has moved to I, and the negation (*ikke*) appears between the finite verb and the proper name.

One might wonder whether *ikke Minna* ('not Minna') in (2.37) could be an instance of CONSTITUENT NEGATION (in the sense of Klima (1964:303–308)), rather than SENTENCE NEGATION, as assumed in the structure in (2.43).<sup>12</sup> If

<sup>10</sup>At this point my concern is with establishing certain properties of the surface structure of specificational clauses, in particular the position of the initial DP. I return to the question of how these structures are derived (and where the subject DP is base-generated) in chapter 9.

<sup>11</sup>Depending on one's understanding of verb second, there may well be subsequent movement of the subject DP to Spec-CP and of I to C; see section 2.4 for discussion.

<sup>12</sup>I thank Peter Sells (p. c., October 8, 2001) for drawing my attention to this possibility.

it were, we could not infer from the position of negation to the existence of the structure in (2.43). There are at least three reasons to reject this alternative hypothesis, leaving the reasoning behind (2.43) intact.

First, it is possible to separate the negation from the name by insertion of a modal verb, without any change in meaning (except that conventionally associated with the modal):

- (2.44) Den højeste spiller på holdet kan **ikke** være **Minna**.  
 the tallest player on team-DEF can not be Minna  
 ‘The tallest player on the team can’t be Minna.’

This would be surprising if *ikke* was a constituent negation of *Minna*, insofar as constituent negation involves adjunction of the negation to the negated constituent (McCawley 1998:613). On the other hand, it is entirely consistent with *ikke* being a sentence negation adjoined to the VP, since *ikke* appears between the finite verb, which has moved out of the VP (to I<sup>0</sup>), and the non-finite verb, which has not moved, but appears in its base-position inside the (lowest) VP.

Second, (2.37) allows only a non-negative tag question, which is one of the criteria for sentence negation proposed by Klima (1964:263–270):

- (2.45) Den højeste spiller på holdet er **ikke** Minna, er det (\***ikke**)?  
 the tallest player on team-DEF is not Minna, is it (not)  
 ‘The tallest player on the team isn’t Minna, is it?’

Third, examples like that in (2.46), which plausibly involve constituent negation, are at least marginally acceptable, but only if the negated constituent is followed by a phrase like *men Fanny* (‘but Fanny’), as the contrast with (2.47) shows:

- (2.46) ?Den højeste spiller på holdet må være **ikke** Minna, men Fanny.  
 the tallest player on team-DEF must be not Minna, but Fanny  
 ‘*The tallest player on the team must be not Minna, but Fanny.*’
- (2.47) \*Den højeste spiller på holdet må være **ikke** Minna.  
 the tallest player on team-DEF must be not Minna

The fact that (2.37) is perfect without any *men*-phrase indicates that it is not an instance of constituent negation. It seems safe to conclude that in (2.37), as well as in (2.44) and (2.45), *ikke* expresses sentence negation, and is in its canonical VP-adjoined position. This conclusion is further supported by the fact that medial adverbs like *stadig* (‘still’), which are standardly assumed to occur at the left edge of the VP alongside negation (see fn. 9), pattern with *ikke* in (2.38) and (2.37), as shown in (2.48) and (2.49).

- (2.48) Den højeste spiller på holdet er Minna **stadig**. [predicate top]  
 the tallest player on team is Minna still  
 ‘*Minna is still the tallest player on the team.*’
- (2.49) Den højeste spiller på holdet er **stadig** Minna. [specification]  
 the tallest player on team is still Minna  
 ‘*The tallest player on the team is still Minna.*’

Having set aside an alternative analysis in terms of constituent negation, we can return to the comparison of (2.38)/(2.39) with (2.37)/(2.43). The structural difference between the two is associated with a meaning difference, albeit not a truth-conditional one. In the predicate topicalization structure the negation targets the topicalized predicate, and (2.38) is naturally followed with a continuation offering an alternative to (not) being the tallest player on the team, such as (2.50), which is also predicational.

- (2.50) ... selv om hun er over en meter og firs.  
 ... even if she is over one meter and eighty  
 ‘... *though she is over six feet.*’

In contrast, the negation of the specificational structure targets the final DP, and a natural continuation of (2.37) is (2.51), which identifies the tallest player on the team as someone else, namely Fanny.<sup>13</sup>

- (2.51) ... det er Fanny.  
 ... it is Fanny

We can understand this difference as a result of negation invariably targeting the focus and the fact (observed above) that focus falls on the initial DP in predicate topicalization structures, but on the final DP in specificational structures.

In what follows I use the position of negation to distinguish the two readings: clause-final negation indicates predicate topicalization, whereas non-final negation indicates a specificational structure. The next piece of evidence in favor of the two structures is morphological in nature and comes from the distribution of pronominal forms.

### 2.3.2 Pronominal form

Apart from the genitive, case is no longer marked on lexical DPs in Danish. Like English, Danish has retained an overt distinction in some of the personal pronouns between “nominative” and “accusative” forms. For instance, the third person feminine pronoun has a nominative form *hun* (‘she’) and an accusative

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<sup>13</sup>I argue in chapter 7 that (2.51) is itself a specificational clause, one whose subject is anaphoric.

form *hende* ('her'). The nominative form is only used when the pronoun occurs in subject position of a finite clause. The accusative form is used in all other positions, except the ones requiring genitive (see Diderichsen (1968:51), Jensen (1994), and Ørsnes (2002:334) for data and discussion; the default nature of the accusative form plays an important role in the analysis of copular clauses I propose in the final part of the dissertation). Thus we have nominative *hun* in (2.52a), but accusative *hende* in (2.52b).

- (2.52) a. {Hun / \*hende} er over en meter og firs.  
           she / her is over one meter and eighty  
           '*She's over six feet tall.*'
- b. Jeg har ikke set {\*hun / hende}.  
           I have not seen she / her  
           '*I haven't seen her.*'

In a predicate topicalization structure like (2.39) the postcopular DP is in subject position. If we replace the proper name with a personal pronoun, we expect the pronoun to be in the nominative form (*hun*). The example in (2.53) bears out this expectation. (The clause-final position of the negation (*ikke*) is assurance that we are dealing with a predicate topicalization structure.)

- (2.53) Den højeste spiller på holdet er {**hun** / \*hende} **ikke**. [pred. top.]  
           the tallest player on team-DEF is {she / her} not  
           '*She isn't the tallest player on the team.*'

The same pattern is found wherever a non-subject is topicalized, including topicalization of a direct object (2.54) and topicalization of a non-finite VP (2.55) (see also the examples in (2.12), (2.14), (2.15), (2.16), and (2.18) above).

- (2.54) Hende havde {han / \*ham} genkendt forrige tirsdag.  
 her had {he / him} recognized last Tuesday  
*'He had recognized her last Tuesday.'*
- (2.55) Fundet nogen løsning har {de / \*dem} endnu ikke.  
 found any solution have {they / them} yet not.  
*'They haven't found a solution yet.'*

In the non-topicalized structure proposed for specificational clauses in (2.43) above, the post-verbal DP is not in subject position, but inside the verb phrase. We expect a personal pronoun to show accusative in this position (on analogy with (2.52b)). The example in (2.56), where negation is in its canonical, non-final position, shows this to be correct.

- (2.56) Den højeste spiller på holdet er **ikke** {\*hun / **hende**}.  
 the tallest player on team-DEF is not { she / her }

The pronoun facts are exactly as expected under the two structures posited above, but receive no natural account if specificational structures are predicate topicalization structures, as argued by Heggie.

### 2.3.3 Reflexives

Danish has a third person reflexive possessive pronoun *sin* which must be bound by, roughly, a clause mate subject (Diderichsen 1968:55–58; Vikner 1985:23), as the examples in (2.57) illustrate:<sup>14</sup>

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<sup>14</sup>I use numerical indices to indicate coreference to avoid confusion with the alphabetical indices used to indicate movement chains. The examples in (2.57b-c) and (2.63) are ungrammatical under any indexing.

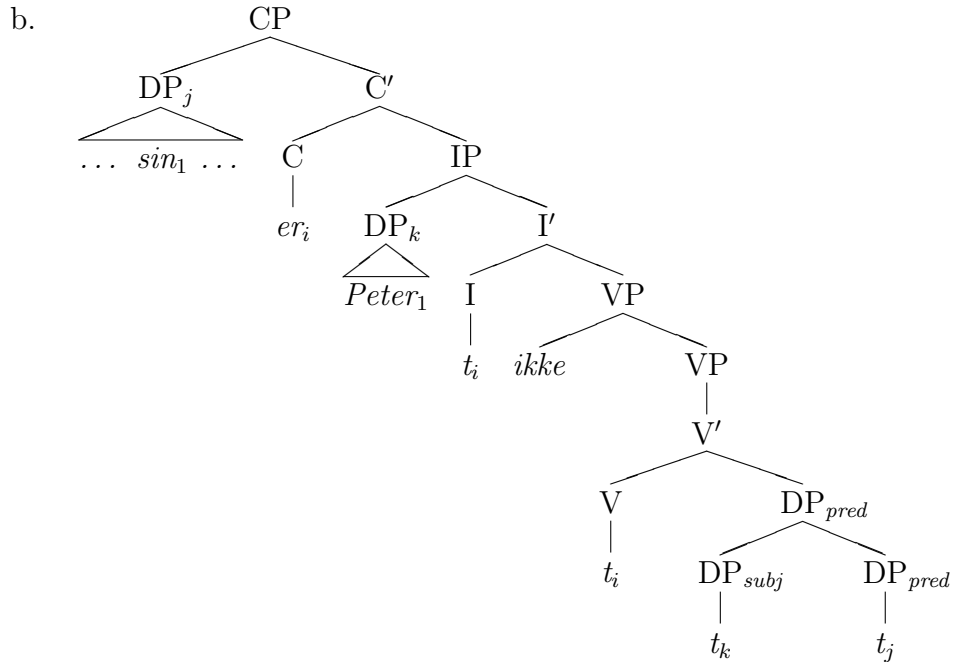
- (2.57) a. Peter<sub>1</sub> har savnet sin<sub>1</sub> hund.  
 Peter has missed REFL dog  
*'Peter<sub>1</sub> has been missing his<sub>1</sub> dog.'*
- b. \*Sin<sub>1</sub> hund har savnet Peter<sub>1</sub>.  
 REFL dog has missed Peter  
 (Intended reading: *'His<sub>1</sub> dog has been missing Peter<sub>1</sub>.'*)
- c. \*Peter<sub>1</sub> tror sin<sub>1</sub> hund sover.  
 Peter thinks REFL dog sleeps  
 (Intended reading: *Peter<sub>1</sub> thinks his<sub>1</sub> dog is sleeping.'*)

In a canonical (non-topicalized) predicational copular sentence the subject DP can bind a reflexive in the predicate complement:

- (2.58) Peter<sub>1</sub> er ikke den største beundrer af sin<sub>1</sub> nabos havekunst.  
 Peter is not the greatest admirer of REFL neighbor's garden-art  
*'Peter<sub>1</sub> isn't the greatest admirer of his<sub>1</sub> neighbor's garden art.'*

Perhaps surprisingly, binding is also possible when the predicate complement containing the reflexive is fronted to Spec-CP, as in the inverted predicational sentence in (2.59) (the clause-final position of negation shows that the predicate complement has left the VP, identifying the sentence as a predicate topicalization structure).

- (2.59) a. Den største beundrer af sin<sub>1</sub> nabos havekunst er Peter<sub>1</sub> **ikke**.  
 the greatest admirer of REFL neighbor's garden-art is Peter not  
*'Peter<sub>1</sub> isn't the greatest admirer of his<sub>1</sub> neighbor's garden art.'*



Similarly, topicalization of direct objects, indirect objects, and PP adverbials containing subject-bound reflexives is allowed (the example in (2.61) is from Diderichsen (1968:56)):

(2.60) Sin<sub>1</sub> mor savner han<sub>1</sub> altid.  
 REFL mother misses he always  
 ‘He<sub>1</sub> is always missing his<sub>1</sub> mother.’

(2.61) Sit<sub>1</sub> fædreland skylder man<sub>1</sub> alt, hvad man kan udrette.  
 REFL home-country owes one everything what one can accomplish  
 ‘One<sub>1</sub> owes to one<sub>1</sub>’s home country (to do) everything one can do.’

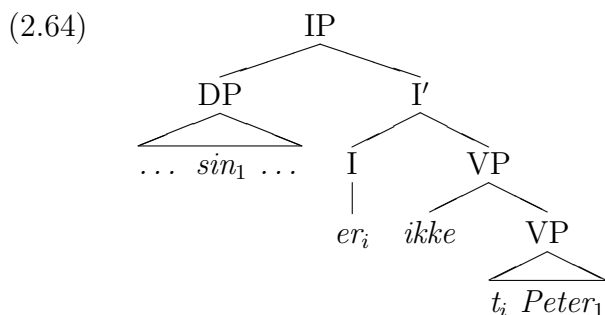
(2.62) På sin<sub>1</sub> fødselsdag tog hun<sub>1</sub> i Tivoli.  
 on REFL birthday went she in Tivoli  
 ‘On her<sub>1</sub> birthday she<sub>1</sub> went to Tivoli Gardens.’

The grammaticality of these together with that of (2.59a) indicates that  $\bar{A}$ -movement of the constituent containing the reflexive to a position outside the c-command domain of its antecedent does not bleed reflexive binding in Danish.

In contrast, binding is not possible in the specificational sentence in (2.63).

- (2.63) \*Den største beundrer af  $sin_1$  nabos havekunst er **ikke** Peter<sub>1</sub>.  
 the greatest admirer of REFL neighbor's garden-art is not Peter

Under the structure for specificational sentences proposed above, the phrase containing the reflexive in (2.63) is in Spec-IP and the intended binder for the reflexive (*Peter*) is inside the VP:



This is not a licit binding configuration, since the intended binder is not in subject position. In fact, that position is occupied by the DP containing the reflexive, which means that at no point in the derivation is the intended binder in the requisite position. Under the present proposal we can thus understand the contrast between (2.59) and (2.63) in terms of the different positions of the intended binder. In the former it is in subject position, and hence able to bind the reflexive. In the latter it is not, and the reflexive goes unbound. Under the predicate topicalization analysis of specificational clauses the contrast between (2.59) and (2.63) remains mysterious.

### 2.3.4 Negative Polarity Items

Danish has a negative polarity item (NPI) *nogen* which is similar to English *any*.<sup>15</sup>

As an NPI, *nogen* can occur inside an object phrase in a negated clause, as in (2.65), but not inside a subject phrase, as in (2.66).

(2.65) Peter har ikke **nogen** hund.  
Peter has not any dog  
'Peter doesn't have a dog.'

(2.66) a. \***Nogen** hund er ikke forsvundet.  
any dog is not disappeared  
(intended meaning: 'No dog has disappeared.')

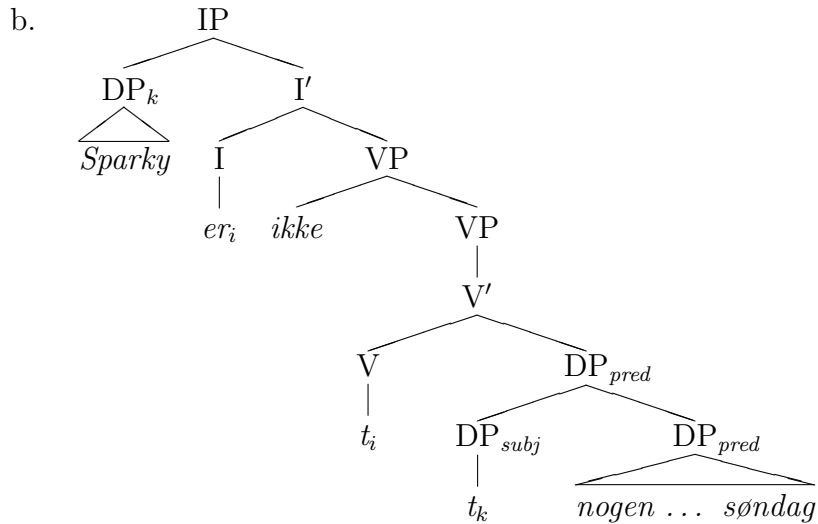
b. \***Nogen** ulykke kommer sjældent alene.  
any accident comes rarely alone.  
(intended meaning: 'An accident rarely happens in isolation.')

In syntactic analyses of NPI licensing in English, the lack of NPIs in subject position is often attributed to a requirement that an NPI be c-commanded by negation at surface structure (see Heycock and Kroch (1999:366), den Dikken et al. (2000:50) and references cited there). If surface c-command is the relevant condition, it is expected that *nogen* can occur in the predicate complement of a negated, non-topicalized predicational copular sentence, since the VP-internal predicate complement is c-commanded by the VP-adjoined negation at surface structure:

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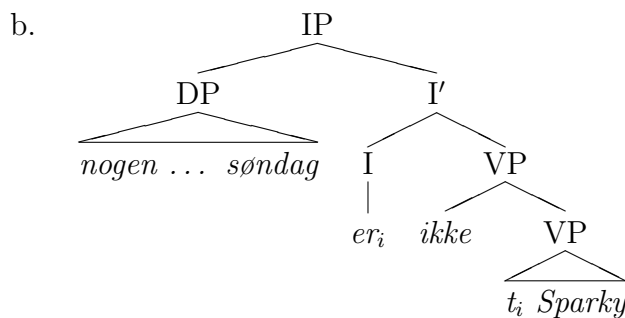
<sup>15</sup>Danish *nogen* differs from English *any* in that *nogen* cannot be used as a 'free choice item' (Sæbø 2000:6–8, Vikner 1999a:38–40). This eliminates an alternative analysis of the data presented below; one that treats *nogen* as a free choice item. This is relevant because the licensing conditions on free choice items are generally thought to be different than the licensing conditions on NPIs (Giannakidou 2001). The basic properties of NPI *nogen* are discussed in Jensen (2001b,a), but she does not consider NPI licensing without surface c-command, a phenomenon which is important to my argument here.

- (2.67) a. Sparky er ikke **nogen** stor tilhænger af bilfri søndag.  
 Sparky is not any great fan of car-free Sunday  
 ‘Sparky is not a great fan of car-free Sundays.’



Under the analysis of specificational sentences proposed here, it is further expected that *nogen* cannot appear in the initial phrase of a specificational sentence, since this phrase is in Spec-IP at surface structure and hence not c-commanded by the VP-adjoined negation. This expectation is borne out:

- (2.68) a. \***Nogen** stor tilhænger af bilfri søndag er ikke Sparky.  
 any great fan of car-free Sunday is not Sparky



The ungrammaticality of (2.68a) parallels that of (2.66a–b): in all three, the NPI occurs in subject position (Spec-IP) where it is not c-commanded by negation.<sup>16</sup>

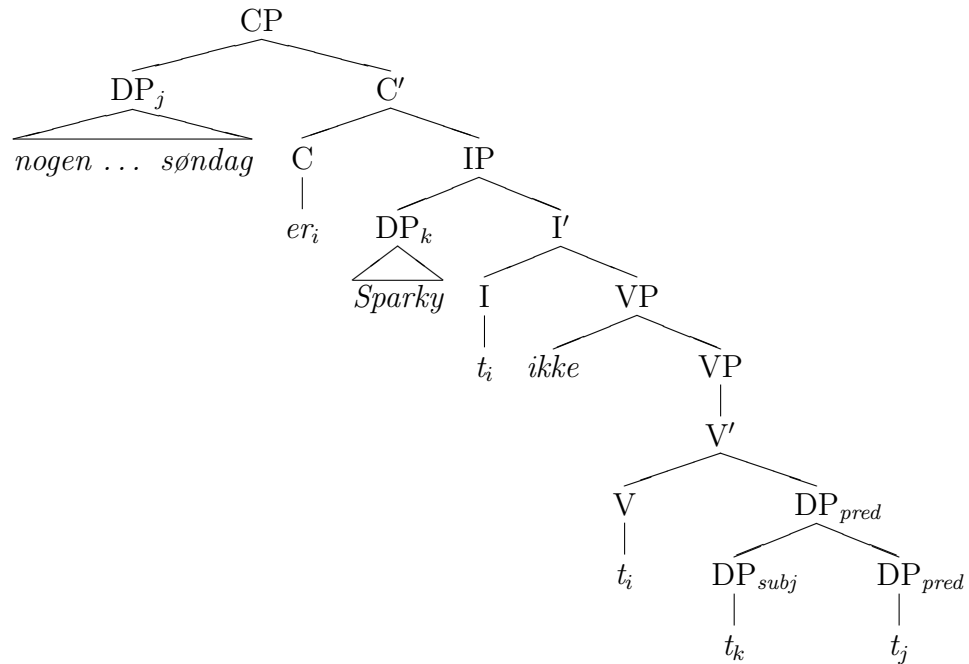
There are exceptions, however, to the requirement that negation c-command the NPI at surface structure. In particular, the NPI is also licensed when topicalization brings the NPI outside the c-command domain of negation at surface structure, as in the predicate topicalization structure in (2.70).

- (2.69) **Nogen** stor tilhænger af bilfri søndag er Sparky ikke.  
any great fan of car-free Sunday is Sparky not  
'*Sparky is not a great fan of car-free Sundays.*'

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<sup>16</sup>There are factors other than lack of c-command by negation that might conspire to make NPI *nogen* unavailable in subject position. Like English *any*, *nogen* is semantically indefinite (Giannakidou 1998:231–235). In general, the availability of indefinites in subject position is rather limited in Danish (Mikkelsen 2002a), so perhaps the examples in (2.68) and (2.66) are bad because they involve an indefinite subject. This might be true for a case like (2.66a) where the corresponding sentence with the regular indefinite article *en* ('a') is also ungrammatical. However, this explanation does not extend easily to the example in (2.66b) where substituting *nogen* ('any') with *en* ('a') does result in a grammatical sentence, albeit one that can only be interpreted as a generic claim about accidents. Similarly, exchanging *en* for *nogen* in (2.68) improves the sentences considerably, though it is still quite odd. (In chapter 8 I suggest that this oddness is due to a conflict between a pragmatic requirement that the initial DP of a specificational clause be a topic and the fact that most indefinites make poor topics.) Investigating the interaction of these factors with the c-command requirement on NPI licensing would take us too far afield, so I leave the matter here.

(2.70)



Some attested examples of topicalized NPIs are given in (2.71) – (2.73). The example in (2.71) involves topicalization out of a PP, and the licenser is the negative quantifier *ingen af dem* ('none of them') appearing in subject position.

- (2.71) Deres definitioner på spam er dog temmelig forskellige og **nogen** Their definitions of spam are though rather different and any helt præcis definition af spam, var der **ingen** af dem der ville completely precise definition of spam was there no-one of them there would ud med. out with.  
*'However, their definitions of spam are rather different and none of them were willing to give any exact definition of spam.'*  
(<http://www.joyzone.dk/sw200.asp>, 06/02/03)

In (2.72) and (2.73) the licenser is the sentence negation *ikke* and the NPI is contained in a topicalized predicative DP (like (2.69), these are predicate topicalization structures in Heggie's sense).

- (2.72) Så **nogen** helt let opgave bliver det heller **ikke** at bestride denne  
 so any entirely easy task becomes it also not to perform this  
 post fremover.  
 post in-future  
 ‘*So it will also not be any easy task to perform the duties of this position  
 in the future.*’  
 (<http://www.erhvervsastrologi.dk/analyser/nyrup2.htm>, 06/02/03.)
- (2.73) Hvorledes så Battling Nelson ud? **Nogen** skønhed var han **ikke**.  
 how saw Battling Nelson out? any beauty was he not.  
 ‘*How did Battling Nelson look? He wasn’t any beauty.*’  
 (<http://www.geocities.com/Colosseum/Track/4980/meetingsdk.htm>,  
 06/02/03)

Thus, we see that in Danish  $\bar{A}$ -movement does not invariably bleed NPI licensing. This is perhaps not usually the case; Heycock and Kroch (1999:366) and den Dikken et al. (2000:50) observe that it is false of many English constructions. However, as pointed out to me by Chris Potts (p.c. 09/12/01), such licensing is attested in English for a limited class of cases, namely those involving CP-topicalization (for discussion, see Giannakidou (1998:231–242) and de Swart (1998)):<sup>17</sup>

- (2.74) That Harvey shot **anyone**, they cannot prove.

<sup>17</sup>It appears that English differs from Danish in allowing topicalization of an NPI only if embedded inside a topicalized CP (as in (2.74)), whereas Danish allows the NPI to head a topicalized DP (see (2.69)–(2.73)). Giannakidou (1998:235–242) argues that DPs headed by an NPI like English *any* cannot serve as a topic, because such NPIs are dependent existentials and dependent existentials cannot be topics. Following this line of thought the difference between Danish and English with respect to topicalization of non-embedded NPIs might be related to a difference in the discourse function of topicalization in the two languages: as discussed in section 2.2.1 topicalization (movement to Spec-CP) can be used to mark the moved constituent as either focus or topic in Danish. If the topicalized NPIs in (2.69)–(2.73) are instances of topicalization of focus, as suggested here, there is no conflict with Giannakidou’s position. To substantiate this suggestion more work on the discourse function of topicalization and the interpretive effects of topicalizing NPIs is needed.

There are various ways of formulating the licensing requirement on NPIs such that it allows for examples like (2.69)–(2.74). In particular, we could follow Giannakidou (1998:235–239), and other earlier work, in assuming that the c-command requirement is imposed not at surface structure, but at the level of LF. If we further assume that topicalized constituents are reconstructed to the position they were topicalized from for interpretation at LF (in accordance with the observation that topicalization does not affect truth-conditional aspects of meaning), we can account for the grammaticality of (2.69)–(2.73): the NPIs are licensed by virtue of reconstruction of  $\bar{A}$ -movement bringing them within the c-command domain of their licenser at LF.

If specificational sentences were inverted predicational structures we would expect (2.68a) to be well-formed, contrary to fact. The ungrammaticality of (2.68a) further shows that if the definite description occupies a VP-internal position at some point in the derivation—as in the analyses of Moro (1997) and Heycock and Kroch (1999) discussed in the next chapter—this is not relevant for NPI licensing. More generally, it seems that there is never reconstruction of A-movement for the purposes of NPI licensing in Danish (subjects in passive and unaccusative constructions cannot be headed by NPIs). This reconstruction asymmetry leads to minimal pairs like that in (2.75):

- (2.75) a. \*Nogen hund blev ikke fundet.  
           any dog became not found  
           (Intended meaning: ‘*Any dogs weren’t found.*’)

- b. Nogen hund blev **der** ikke fundet.  
 any dog became there not found  
 ‘*There weren’t any dogs found.*’

(2.75a) is a regular passive, where the DP containing the NPI has A-moved from a VP-internal position to the subject position. We can understand the ungrammaticality of this example as due to the lack of reconstruction of A-movement for the purposes of NPI licensing: without this the NPI is outside the c-command domain of its licensor (the VP-adjoined negation) at the level of structure where the licensing requirement is checked (LF). In (2.75b) the constituent containing the NPI has been topicalized and the expletive *der* appears in the subject position (immediately to the left of the finite verb). This indicates that the topicalized constituent has not passed through Spec-IP on its way to Spec-CP, rather it has moved directly from its VP-internal position to Spec-CP. Reconstruction of this  $\bar{A}$ -movement at LF thus brings the topicalized constituent inside the VP and inside the c-command domain to the licensor *ikke*, accounting for the grammaticality of (2.75b).

## 2.4 Taking stock

We have now reached the following understanding:

- Danish has predicate topicalization structures, where the initial DP is a focussed predicate (in Spec-CP) and the post-copula DP the subject (in Spec-IP).

- Danish also has specificational structures, which may look just like predicate topicalization structures, but where the initial DP is in fact the subject (occupying Spec-IP) and the post-copula DP is inside the verb phrase.
- Therefore, specificational clauses cannot be analyzed as predicate topicalization structures (contra Heggie (1988a,b)).

Before considering some further empirical consequences of this understanding of specificational structures, I want to address a theoretical issue. In the arguments given above I have been assuming that specificational clauses are just IPs, whereas predicate topicalization structures are CPs. As mentioned in section 2.2.1, the analysis of subject-initial clauses as ‘smaller’ than subject-non-initial clauses is controversial. In particular, Vikner (1995) and Schwartz and Vikner (1996) argue that there is no difference between subject-initial V2-clauses and subject-non-initial V2-clauses with respect to the size of the projection or the position of the finite verb: all matrix clauses are CPs (or at least larger than IP and of the same size) and the finite verb always leaves IP in V2 clauses. The rest of this section is devoted to showing that the validity of the arguments presented against a topicalization analysis of specificational clauses does not depend crucially on the assumption that subject-initial clauses are smaller than CP. All four arguments go through under a uniform CP analysis like that defended by Vikner (1995) and Schwartz and Vikner (1996). In general terms, the reason that the arguments are not affected by the IP/CP controversy is that they probe the position of the initial DP prior to  $\bar{A}$ -movement, and the IP/CP controversy hinges on whether there is

obligatory  $\bar{A}$ -movement of the DP in Spec-IP in subject initial clauses. The answer to that question has no bearing on the issue of which DP is in the Spec-IP position to begin with, which is, in my analysis, what distinguishes predicate topicalization structures from specificational structures.

**Negation** We saw above that specificational clauses differ from predicate topicalization structures with respect to the position of negation: in specificational structures negation appears before the post-copular DP, in predicate topicalization structures negation appears after that same DP. The reason negation appears before the final DP in a specificational structure is that negation is left-adjoined to VP and the final DP is inside the VP. This structural configuration is unaffected by any movement of the subject and finite verb. The CP analysis of subject-initial clauses therefore predicts the exact same word order as the IP analysis assumed above, including the relative order of negation and the final DP, and maintains the contrast with predicate topicalization structures (2.77):

(2.76) Specificational clause:

a. CP analysis:

$$[\text{CP} [\text{DP den højest e spiller}]_i \text{ er}_j [\text{IP } t_i t_j [\text{VP ikke } [\text{VP } t_j \text{ Minna}]]]]$$

the tallest player is not Minna

b. IP analysis:

$$[\text{IP} [\text{DP den højest e spiller}] \text{ er}_j [\text{VP ikke } [\text{VP } t_j \text{ Minna}]]]$$

the tallest player is not Minna

(2.77) Predicate topicalization structure:

$$[\text{CP} [\text{DP den højest e spiller}]_i \text{ er}_j [\text{IP Minna}_k t_j [\text{VP ikke } [\text{VP } t_j t_k t_i]]]]$$

the tallest player is Minna not

**Pronominal form** The second argument for distinguishing specificational clauses from predicate topicalization structures came from the form of personal pronouns: if we replace the name *Minna* with a pronoun it has to appear in the nominative form *hun* ('she') in a predicate topicalization structure, but in the accusative form *hende* ('her') in a specificational structure. This was taken as evidence that the second DP is in subject position in the former construction, but inside the VP in the latter. As shown in (2.78), this last conclusion (that the second DP is inside the VP in a specificational structure) is compatible with either an IP or a CP analysis of these clauses. What matters is that the final DP is not the subject in these structures, and nothing about the position of the actual subject (Spec-IP or Spec-CP) or how far the verb moves ( $I^0$  or  $C^0$ ) will affect this:

(2.78) Specificational clause:

- a. CP analysis:  
 [CP [DP den højeste spiller]<sub>i</sub> er<sub>j</sub> [IP t<sub>i</sub> t<sub>j</sub> [VP ikke [VP t<sub>j</sub> hende]]]]  
 the tallest player is not her
- b. IP analysis:  
 [IP [DP den højeste spiller] er<sub>j</sub> [VP ikke [VP t<sub>j</sub> hende]]]  
 the tallest player is not her

(2.79) Predicate topicalization structure:

[CP [DP den højeste spiller]<sub>i</sub> er<sub>j</sub> [IP hun<sub>k</sub> t<sub>j</sub> [VP ikke [VP t<sub>j</sub> t<sub>k</sub> t<sub>i</sub>]]]]  
 the tallest player is she not

**Reflexives** The third piece of evidence that specificational clauses are not predicate topicalization structures came from the distribution of the possessive reflexive *sin*. This element must be bound by a clause-mate subject, and therefore cannot

itself occur in subject position. Since specificational clauses are subject-initial clauses the initial DP cannot contain the reflexive. In a predicate topicalization structure the initial DP is a topicalized predicate and can contain a reflexive possessive that is bound by the subject. Movement of the subject DP to Spec-CP will not enable a reflexive pronoun inside it to be bound, since this movement does not change the fact that the reflexive is contained inside the subject DP and therefore cannot be bound by it. We thus expect reflexives to be impossible in the initial DP of a specificational clause under either an IP analysis or a CP analysis.

**Negative Polarity Items** Finally, I argued that the distribution of the negative polarity item *nogen* ('any') favors a structural distinction between specificational clauses and predicate topicalization. The NPI is grammatical in initial position in predicate topicalization structures, but not in specificational clauses. I argued that this pattern was the result of a licensing requirement on NPIs, namely that they be c-commanded by an appropriate licenser at LF (such as sentence negation) and the fact that there is reconstruction of  $\bar{A}$ -movement, but not A-movement, for the purposes of this licensing. What we need to consider here is whether further movement of the subject of a specificational clause to Spec-CP changes the licensing possibilities. The answer is clearly "no". Imagine that the subject has moved from Spec-IP to Spec-CP. Reconstructing  $\bar{A}$ -movement would put the subject back in Spec-IP at LF, however this is not low enough to be inside the c-command domain of the VP-adjoined negation, and we correctly predict that the NPI should be impossible. Further reconstruction into the VP would be

reconstruction of A-movement, which does not feed NPI licensing.

**Summary** The point of the discussion above is to show that proposed structural distinction between specificational clauses and predicate topicalization is not dependent on specific theoretical assumptions about the analysis of subject-initial clauses with verb second order. The arguments presented in the previous section are valid under an IP analysis of the sort advocated in Travis (1991) and Zwart (1997), as well as a CP analysis of the sort advocated by Vikner (1995), Schwartz and Vikner (1996) and many others. I continue to assume the IP structure in what follows.

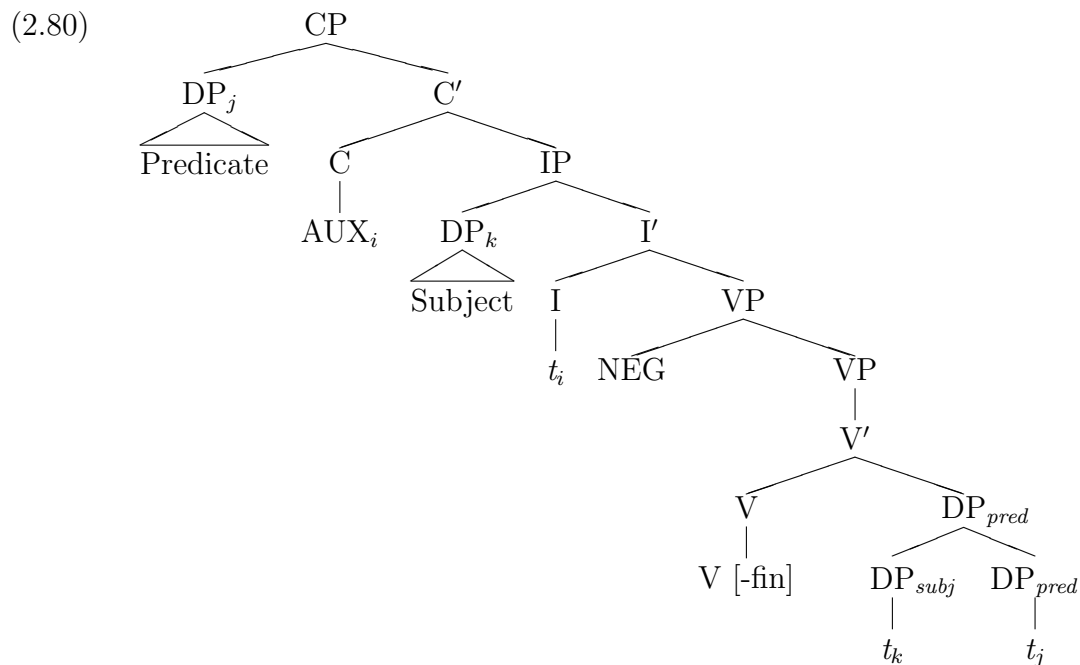
## 2.5 Further evidence

Below I present further evidence, from copular clauses containing auxiliaries, polar question formation, and embedding, to solidify the structural distinction between specificational and predicate topicalization structures proposed in the earlier sections of this chapter.

### 2.5.1 Word order

The predicate topicalization structure and the specificational structure predict different word orders in copula clauses containing an auxiliary verb, since only the finite verb moves (to I/C), while the non-finite verb stays inside the VP. In a predicate topicalization structure the DP complement of the non-finite verb has

moved to Spec-CP, and we expect the non-finite verb to appear clause-finally, as shown schematically in (2.80).



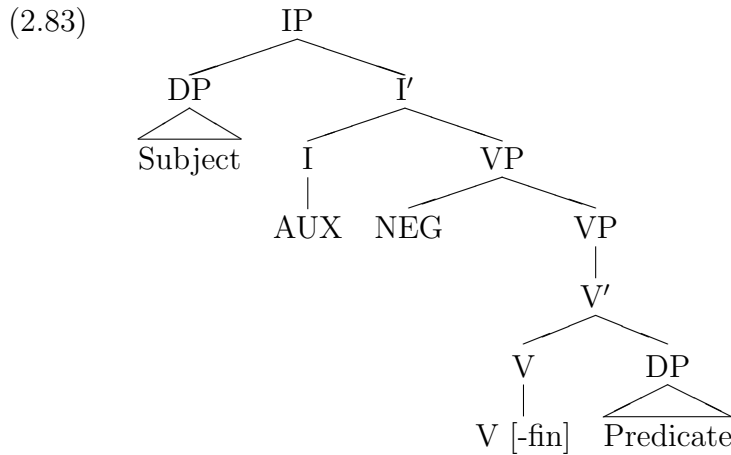
This word order is exactly what we find in predicate topicalization structures (2.81) as well as in VP-topicalization structures with multiple auxiliaries (2.82).

(2.81) Den højeste spiller på holdet kan Minna da ikke være.  
 The tallest player on team-DEF can Minna ADV not be  
 ‘Minna can’t possibly be the tallest player on the team.’

(2.82) Spille klaver har han aldrig kunnet.  
 play piano has he never been-able  
 ‘He’s never been very good at playing the piano.’

In a specificational structure like (2.83) the non-finite verb is followed by its in situ DP complement, correctly predicting the word order in (2.84).<sup>18</sup>

<sup>18</sup>Note that further movement of the subject (to Spec-CP) and the finite verb (to C<sup>0</sup>), as assumed by Vikner (1995) and others, would not result in any change of word order.



- (2.84) Den højeste spiller på holdet kan ikke være Minna.  
 The tallest player on team-DEF can not be Minna  
 ‘The tallest player on the team can’t be Minna.’

This is a place where we can see the effects of verb second very clearly. Recall from the discussion of English in 2.1.2 above, that the word-for-word correspondent of (2.81) is ungrammatical in English (this is the basis for Heycock and Rothstein’s dismissal of the predicate topicalization analysis for English). The closest we get to Heggie’s predicate topicalization structure in English is the topicalized construction in (2.85) without V2:

- (2.85) [Minna might be among the tallest players, but ...] The tallest player on the team, she surely can’t be.

Since English has specificational clauses like (2.86) this reinforces the conclusion that predicate topicalization (whether it is accompanied by movement of the finite verb or not) cannot be the right analysis of specificational clauses.

- (2.86) The tallest player can’t be Minna.

This is also a good place to establish a connection with Higgins' work. Until now, I have simply assumed without argument that what I have isolated as specificational clauses in Danish are in fact examples of the construction of the same name that Higgins was concerned with. Is there anything that entitles us to say that it is examples like (2.86) and (2.84) that belong in Higgins' category of specificational clauses, as opposed to examples like (2.85) and (2.81)? I think there is, but since Higgins does not provide structures for any of the plain (i.e. non-clefted) copular clauses that he discusses, the evidence is hard to point to. One clear indication, though, is his discussion of the example in (2.87) (his ex. (167), p. 271).

(2.87) The winner could have been the loser.

(2.88) Vinderen kunne have været taberen.  
winner-DEF could have been loser-DEF

As I will discuss in more detail the second part of the thesis, this example has several different readings, one of which Higgins identifies as specificational. The word order in (2.87), as well as in its Danish counterpart in (2.88), is clearly the one resulting from the non-topicalized structure in (2.83), and not the one arising from the topicalized structure (2.80). (The latter is in fact ungrammatical in English, as Heycock and Rothstein have pointed out.) It is also clear from Higgins' detailed discussion of copular questions and their answers that he considers specificational clauses to be subject initial (1979:226–233).

## 2.5.2 Polar questions

A second prediction is that specificational clauses should differ from predicate topicalization structures with respect to the formation of polar questions, in particular that specificational clauses allow polar question formation, while predicate topicalization structures do not. This prediction relies on the assumption that polar questions involve movement of a null question operator to Spec-CP (Chomsky 1977, Vikner 1995:49). This movement is accompanied by movement of the finite verb to  $C^0$ . Since the question operator has no overt manifestation, this yields the appearance of verb-initial order:

- (2.89) Kan han spille klaver?  
can he play piano  
*'Can he play the piano?'*

In predicate topicalization structures Spec-CP is occupied by the fronted predicate and there is no position available for the question operator. This lets us understand the impossibility of (2.90):

- (2.90) \*Er den højeste spiller på holdet Minna ikke?  
Is the tallest player on team-DEF Minna not

In contrast, we expect polar question formation to be possible in specificational structures since Spec-CP is free to be occupied by the question operator. This prediction is borne out by the example in (2.91).

- (2.91) Er den højeste spiller på holdet ikke Minna?  
Is the tallest player on team-DEF not Minna  
*'Isn't the tallest player on the team Minna?'*

It might seem that this is a case where a CP analysis of specificational clauses would go wrong: if these involve movement of the subject to Spec-CP, we expect polar question formation to be impossible, according to the reasoning applied to predicate topicalization structures above. This conflict is illusory. Polar questions are not subject-initial, they are verb initial. Hence the CP analysis of subject-initial matrix clauses does not predict that the subject should be in Spec-CP in (2.91), because (2.91) is not subject initial. In more derivational terms, one could say that movement of an operator (or anything else) to Spec-CP takes priority over movement of the subject to that position.<sup>19</sup>

### 2.5.3 Embedding

Finally, the structural ambiguity argued for above provides an understanding of a set of contrasts observed in embedded contexts. In most Germanic languages, including Danish, topicalization is more limited in embedded clauses than in matrix clauses, as discussed in Iatridou and Kroch (1992), Gundel (1988:150–152), Zwart (1997:234–235), and Vikner (1995:70–72). These authors identify five embedded contexts where topicalization is impossible, or at least strongly dispreferred: complement clauses of so-called ‘non-bridge’ verbs, adjunct clauses, sentential subjects, irrealis complements, and the antecedent clause of a conditional construction. Under the structural ambiguity hypothesis defended here, we expect predicate topicalization structures to be uniformly bad in these environments, and

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<sup>19</sup>What is important in accounting for the contrast between (2.90) and (2.91) is that there is no articulated C-projection in Danish that would provide separate landing sites for the topicalized constituent and the interrogative operator (see fn. (7)).

specificational structures to be good unless other factors conspire to make them bad. Controlling for such factors, this is exactly what we find.

**Complements of non-bridge verbs** There is a class of verbs, called non-bridge verbs, that do not allow topicalization in their complement clause (Vikner (1995:71–72) provides a list of some of these verbs in Danish and German). As illustrated in (2.92), *bevise* (‘prove’) is a non-bridge verb: (2.92b) lacks topicalization in the embedded clause and is fine, whereas (2.92a) involves topicalization and is degraded.

- (2.92) a. ??Holmes beviste at disse penge havde Moriarty ikke stjålet.  
Holmes proved that this money had Moriarty not stolen  
(adapted from Vikner (1995:71, ex. (16a)))
- b. Holmes beviste at Moriarty ikke havde stjålet disse penge.  
Holmes proved that Moriarty not had stolen this money  
‘*Holmes proved that Moriarty hadn’t stolen this money.*’  
(adapted from Vikner (1995:71, ex. (15a)))

There is no verb movement in embedded clauses without topicalization (Vikner 1995:67–8), hence the finite verb appears to the right of negation in (2.92b). In (2.92a) the finite verb appears between the topicalized constituent and the subject. Placing the verb in a lower head position e.g. between the subject *Moriarty* and the negation (in  $I^0$ ) or after the negation (in  $V^0$ ) does not improve the sentence. Based on (2.92) we expect that specificational copular sentences can embed under *bevise*, since these do not involve topicalization, whereas inverted predicational structures cannot, since these involve topicalization. These expectations are met, as (2.93) shows.

- (2.93) Holmes beviste at ...  
 Holmes proved that ...
- a. ??den bedste spiller på holdet er Minna **ikke**.  
 the best player on team-DEF is Minna not
- b. den bedste spiller på holdet **ikke** er Minna.  
 the best player on team-DEF not is Minna

The clause-final position of negation in (2.93a) indicates that this is an inverted predicational structure (i.e., the predicate complement has been topicalized). The non-final position of negation in (2.93b) indicates that this is a specificational structure, which we have seen does not involve topicalization. The examples in (2.93) are entirely parallel to the examples in (2.92): there is no verb movement in the embedded specificational clause in (2.93a) and the embedded predicate topicalization structure in (2.93b) is bad under any placement of the finite verb.

**Adjunct clauses** Adjunct clauses do not allow topicalization either, and we thus expect predicate topicalization structures to be impossible in adjunct clauses and specificational ones to be possible (other things being equal). This is indeed what we find:

- (2.94) \*De gjorde det selvom den bedste spiller på holdet er Minna ikke.  
 they did it even-though the best player on team-DEF is Minna not.
- (2.95) De gjorde det selvom den bedste spiller på holdet ikke er Minna.  
 they did it even-though the best player on team-DEF not is Minna.  
 ‘*They did it even though the best player on the team is not Minna.*’

As in (2.92) and (2.93), the embedded topicalization structure is impossible no matter where the finite verb appears.

**Sentential subjects** Topicalization is also not allowed in sentential subjects, predicting correctly that predicate topicalization structures cannot occur as sentential subjects, while specificational clauses can:

(2.96) \*At den bedste spiller er Minna ikke betyder ikke noget i denne  
 that the best player is Minna not means not anything in this  
 sammenhæng.  
 connection

(2.97) At den bedste spiller ikke er Minna betyder ikke noget i denne  
 that the best player not is Minna means not anything in this  
 sammenhæng.  
 connection  
*‘That the best player isn’t Minna doesn’t mean anything in this connection.’*

As above, (2.96) is ungrammatical under any placement of the finite verb of the embedded clause.

**Irrealis complements** Topicalization is also excluded in irrealis complement clauses, that is in complements to verbs like *ønske* (‘wish’) and *vil* (‘want’). As expected, predicate topicalization structures are impossible in this context (2.98a), while specificational clauses are fine (2.98b).

- (2.98) Jeg ville ønske at ...  
 I would wish that ...
- a. \*den højeste spiller på holdet var Minna ikke.  
 the tallest player on team-DEF was Minna not
  - b. den højeste spiller på holdet ikke var Minna.  
 the tallest player on team-DEF not was Minna  
*‘the tallest player on the team wasn’t Minna.’*

Again, the ungrammaticality of predicate topicalization in this context does not depend on the position of the finite verb. No repositioning of the copula in (2.98a) will make the sentence grammatical.

**Antecedent of conditional** Finally, topicalization is impossible in the antecedent clause of a conditional construction. Thus we find that specificational clauses can function as the antecedent of a conditional, but predicate topicalization structures cannot:

(2.99) \*Hvis den højeste spiller er Minna ikke, så må kontrakten skrives  
if the tallest player is Minna not, then must contract-DEF be-written  
om.  
again.

(2.100) Hvis den højeste spiller ikke er Minna, så må kontrakten skrives  
if the tallest player not is Minna, then must contract-DEF be-written  
om.  
again.  
*'If the tallest player isn't Minna, then the contract must be rewritten.'*

This contrast is maintained under any alternative placement of the finite verb in (2.99).

**Problems for the CP-analysis?** One might wonder how these contrasts are accounted for under Vikner's CP analysis. In fact the CP analysis says nothing about these, because these are embedded clauses and the CP analysis only claims that all **matrix** clauses are CPs. Under Vikner's analysis embedded specificational clauses are just IPs where no verb movement has taken place, accounting for the fact that the finite verb follows the VP-adjoined negation.

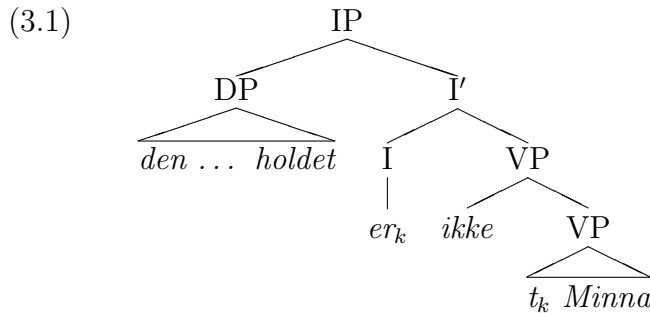
## 2.6 Conclusion

Though predicate topicalization is attested in Danish, it is not the correct analysis of specificational clauses. Rather, specificational clauses are ordinary subject-initial clauses. In section 2.3 I presented evidence for these claims based on the placement of negation, the morphological form of personal pronouns, and the distribution of reflexives and negative polarity items. In section 2.4 I showed that my interpretation of this evidence (that it favors a structural distinction between predicate topicalization structures and specificational structures) does not depend on analyzing the latter as IPs. The arguments can be replicated under a CP-analysis of specificational clauses of the sort defended in Vikner (1995) and Schwartz and Vikner (1996). In the final section I showed that the structural distinction drawn between predicate topicalization structures and specificational structures makes a number of correct predictions in the domains of word order, polar question formation, and embedding.

## Chapter 3

# Alternative structures for specificational clauses

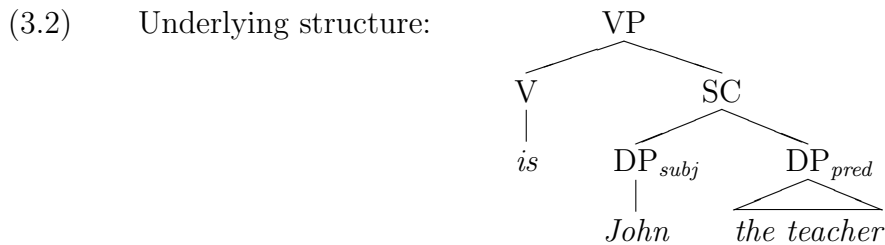
Since Heggie's dissertation there have been a number of alternative proposals about the structure of specificational clauses. I discuss three of the most prominent ones below. One is another inversion analysis, in the sense laid out in the introduction, and the other two are non-inversion analyses. Though the analyses differ in this and other respects all three converge on the surface structure for specificational clauses arrived at in the previous chapter, and repeated here as (3.1).



This means that none of the evidence discussed in the previous chapter will distinguish between them, and that all three are live candidates for the analysis of specificational clauses. At the end of this chapter I suggest that they can be distinguished on semantic grounds, specifically by the semantic type they assume for the subject DP.

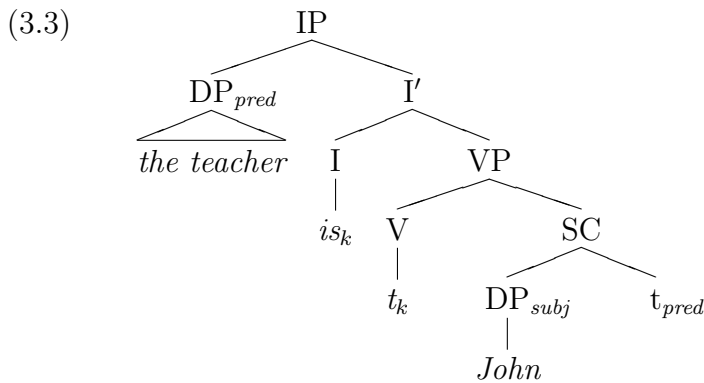
### 3.1 Predicate raising

Like Heggie, Moro (1997) proposes that predicational and specificational copular sentences (CANONICAL and INVERSE copular sentences in his terminology) are derived from the same deep structure, namely the one in (3.2).<sup>1</sup>



<sup>1</sup>Moro (1997:52–58) leaves it open whether the small clause, labeled SC in the tree in (3.2), is an adjunction structure, as in Stowell (1983) and Heggie (1988a), or projected by a functional head, as in Bowers (1993). The representation in (3.2) is intended to be neutral between the two. I include the subscripts on the DPs to facilitate comparison with Heggie’s analysis.

On Moro's analysis, the difference between predicational and specificational clauses is not whether topicalization takes place, but rather which element raises to subject position. In a predicational clause it is  $DP_{subj}$ , just as in Heggie's analysis, but in specificational clauses it is crucially  $DP_{pred}$  that moves to Spec-IP (hence the term 'predicate raising'), and  $DP_{subj}$  stays in its base-generated, VP-internal position (Moro 1997:35, ex. 43b):



This analysis provides a simple and elegant account of the difference in word order between the two types of copular clauses. Moreover, the structure proposed for specificational clauses is fully compatible with the data presented in the previous chapter, since the initial DP is in subject position and the second DP inside the VP (compare (3.3) with the structure in (3.1)).

Moro extends his analysis to existential constructions, to raising constructions with *seem*, and to unaccusative constructions in Italian. These extensions do not concern us directly here, but they show the potential scope of his central idea, which is that a predicative DP may, under certain circumstances, move to subject position.

It is exactly this part of Moro's proposal that has generated the most controversy. Rothstein (2001:250–259) argues against it on theoretical grounds, since in the theory of predication that she develops it is impossible for a semantic predicate to occupy the subject position. Heycock (1998) and Heycock and Kroch (1999) argue against it on empirical grounds, observing that it fails to account for some basic restrictions on what kinds of DPs can occur in the subject position of specificational clauses, indefinite DPs like *a doctor* being their case in point:

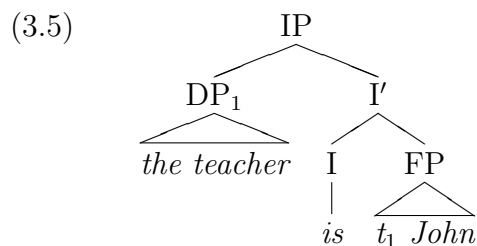
- (3.4)    a.    John is a doctor.  
          b.    #A doctor is John.

In contrast, other researchers have argued that the predicate raising analysis provides a new way of understanding certain cross-linguistic differences in the realization of specificational clauses (Pereltsvaig 2001, Adger and Ramchand 2003), as well as word order variation in complex DPs (den Dikken 1998).

In the final part of the dissertation I argue that the infelicity of bare indefinites in the subject position of specificational clauses is, in fact, not an argument against the predicate raising analysis, but an argument for taking into account the information-theoretic properties of specificational clauses, which, together with well-known conditions on indefinites, conspire to make examples like (3.4b) infelicitous.

## 3.2 Subject raising from symmetric small clause

Heycock and Kroch (1999) (H&K) argue that specificational clauses do not involve inversion, either in the form of predicate topicalization (as proposed by Heggie (1988a,b)), or in the form of predicate raising, as advanced by Moro (1997). Instead, H&K propose that specificational clauses are a subtype of equative clause. Syntactically, equative clauses involve a special kind of small clause which differs from ordinary, Stowell-type small clauses in that the two elements of the small clause are not distinguished as subject and predicate. Instead the small clause is headed by a null functional head, which I label F:<sup>2</sup>



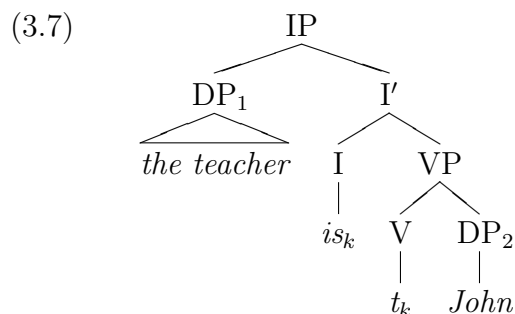
The small clause is symmetric in the sense that the two elements are of the same syntactic category and of the same semantic type (in this example type  $\langle e \rangle$ ). The equative semantics is located not in the copula, but in the null functional head of the small clause. Like Moro's predicate raising analysis, this structure is essentially isomorphic to the IP structure for specificational clauses argued for above (see (3.1)). The initial DP is in subject position, and the final DP is inside the VP. This means that none of the syntactic facts reviewed above (placement

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<sup>2</sup>Heycock and Kroch (1999) are not explicit about the internal structure of FP, not about the details of the larger syntactic structure of specificational clauses. The schematic representation in (3.5) is based on their discussion on the top half of page 382.



specificational clauses a subtype of equative clauses (p. c., November 21, 2002). She rejects, however, a small clause analysis of these, since in her theory a small clause must have one predicative element. Instead she proposes that specificational (and equative) clauses have a structure which looks just like the structure of ordinary transitive clauses: DP<sub>1</sub> is in Spec-IP and DP<sub>2</sub> is sister of V (Rothstein 2001:240–241) (related proposals are made for Hebrew in Rapoport (1987), for Spanish in Sánchez and Camacho (1993), and for Welsh in Zaring (1996)):



Despite the similarity in surface structure, Rothstein argues that specificational clauses lack many of the properties associated with transitive clauses (hence the scare quotes in the title of this section). In particular, the copula does not assign theta roles or Case. Instead, DP<sub>1</sub> is licensed as the subject of predication, consistent with the general theory of predication developed by Rothstein. DP<sub>2</sub> is licensed by a version of Partee’s (1987) IDENT type-shifter which is modified to fit the event-based semantic framework that Rothstein develops her theory in (see 4.4 for details).

As with the other two proposals, the structure proposed by Rothstein agrees with the key aspects of the specificational structure in (3.1): the initial DP is in subject position and the post-copular DP is inside the VP.

### 3.4 Conclusions

All three alternatives outlined above, as well as Heggie's equative structure in (2.6), are broadly consistent with the surface structure in (3.1). In particular, they all have the initial DP in subject position, and the final DP inside the VP, which is exactly what the Danish data presented above showed us to be the case. This data will therefore not distinguish among these alternative analyses. I have not been able to identify any further syntactic evidence that distinguish between them. One potential source of evidence is the possibility of extraction of and from the two DPs, since this is an area where the three analysis make different predictions (see Moro (1997:25–30, 45–52), Heycock and Kroch (1999:370–371, 376–378), and Rothstein (2001:259–263)). However, I have not been able to draw any firm conclusions from the extraction facts reported in the literature. The data are difficult and the judgments are variable at best. It seems to me that a better understanding of the general restrictions on extraction out of DP is needed to carry out this investigation. Instead, I will take the different claims about the semantic types of the DP arguments as the key to evaluating these analyses. The analysis proposed by Heycock and Kroch (1999) and Rothstein (2001) both hold that the subject DP is referential (type  $\langle e \rangle$ ), whereas the predicate raising analysis holds that this DP is predicative (type  $\langle e, t \rangle$ ), since it is raised from a predicative position. In the next part of the thesis I give detailed evidence that favors the type assignment associated with the predicate raising analysis over the other two. Consistent with this, I will present in the final part of the dissertation

an analysis of specificational clauses that involves predicate raising, and which builds on Moro's proposal. My analysis also builds on Heycock and Kroch's work, in particular their insistence that information structure should be given central consideration in developing the analysis (this is most prominent in their 2002 proposal). Finally, I take from Rothstein's work the idea that the copula is not involved in case or theta-role assignment. The former, in particular, plays a crucial role in the analysis I develop in chapter 9.

## Part II

# Meaning

# Chapter 4

## Decomposing specificational clauses

### 4.1 Synopsis

This and the following three chapters present an extended investigation of the compositional semantics of specificational clauses. Following the strategy advocated in Partee (2000), I focus the empirical investigation on determining the semantic contributions of the expressions flanking the copula, rather than focusing on the copula itself. The motivation is methodological: there are very few linguistic tests that one can perform on the copula itself (it is a unique lexical item), while there are many more that can be applied to the rather wide range of expressions that may flank the copula (the ones that I will be drawing most heavily on are pronominalization and ellipsis).

Rather than looking just at specificational clauses, I will be comparing them with the other three kinds of copular clauses distinguished by Higgins (1979:chapter 5). Not only is this necessary to understand what is distinctive about specificational clauses, it also serves as a first step towards a formal semantic taxonomy of copular clauses. Higgins distinguished four kinds of copular clauses (what he calls identity clauses are often called equatives in the linguistic literature; I will use the two terms interchangeably):

(4.1)	CLAUSE TYPE	EXAMPLE
	Predicational	<i>Susan is a doctor.</i>
	Specificational	<i>The winner is Susan.</i>
	Identity (Equative)	<i>She is Susan.</i>
	Identificational	<i>That is Susan. / That woman is Susan.</i>

Setting aside Identificational clauses, the results of my investigation are summarized in the table in (4.2):<sup>1</sup>

(4.2)	CLAUSE TYPE	SUBJECT	COMPLEMENT
	Predicational	$\langle e \rangle$	$\langle e, t \rangle$
	Specificational	$\langle e, t \rangle$	$\langle e \rangle$
	Identity/Equative	$\langle e \rangle$	$\langle e \rangle$

This table embodies the following claims. First, that specificational clauses are semantically distinct from both predicational and equative clauses. This means

<sup>1</sup>This is exactly the type-distribution proposed in recent work by Ljudmila Geist on Russian copular clauses (Geist 2002, 2003). The evidence she offers is quite different from the evidence I present here, which makes the convergence even more encouraging.

that we cannot collapse any of the three categories with each other, and in particular that we cannot analyze specificational clauses as equative, contra Heycock and Kroch (1999), nor as predicational, contra Rothstein (2001). Second, that specificational clauses are unique in having a non-referential subject. Equatives and predicational clauses both have referential (type  $\langle e \rangle$ ) subjects, but differ in the type of their predicate complement. I argue (in part III of the thesis) that the non-referentiality of specificational subjects is key to understanding the tight discourse conditions on the use of specificational clauses. Third, that predicational and specificational clauses, but not equatives, can be composed with a semantically inert copula. Predicational and specificational clauses both involve one referential and one predicative element, and the two can combine by function application to form a propositional object.<sup>2</sup> In equatives, however, the subject and predicate complement are both referential and therefore cannot combine directly. Here the copula must provide the semantic glue.

As for Higgins' identificational class, I argue that this class is not semantically uniform, but split into two subclasses which I call `TRUNCATED CLEFTS` and `DEMONSTRATIVE EQUATIVE`. As shown in (4.3), truncated clefts have the type-distribution of specificational clauses, whereas demonstrative equatives pattern with identity clauses:

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<sup>2</sup>Talking about propositions in the context of the extensional types in (4.2) is slightly incongruous. I will clarify this in the discussion below (4.4).

(4.3)	CLAUSE TYPE	EXAMPLES	SUBJECT	COMPLEMENT
	Truncated cleft	<i>That is Susan</i>	$\langle e, t \rangle$	$\langle e \rangle$
	Dem. equative	<i>That woman is Susan</i>	$\langle e \rangle$	$\langle e \rangle$

If this is correct, it suggests a revision of Higgins' taxonomy on semantic grounds, namely to eliminate the identificational class in favor of the three-way classification in (4.4).

(4.4)	CLAUSE TYPE	SUBJECT	COMPLEMENT
	<b>Predicational</b>	$\langle e \rangle$	$\langle e, t \rangle$
	<b>Specificational</b> (Including Truncated clefts)	$\langle e, t \rangle$	$\langle e \rangle$
	<b>Identity</b> (Including Demonstrative equatives)	$\langle e \rangle$	$\langle e \rangle$

This is essentially my proposal. In presenting it in this strict type-theoretic way I am abstracting away from several important aspects of the interpretation of copular clauses. I found that this was necessary to be able to articulate a concrete proposal. On the other hand, this should not be taken to imply that this is all there is to the meaning of these clauses. There are at least four aspects of the interpretation that are not reflected in the tables above.

- **The meaning of the copula** As presented above, there is no explicit proposal for the meaning of the copula. This is partly a reflection of my investigative strategy, which is to move the focus away from the copula and onto its arguments, partly a reflection of the fact that I have not yet

presented my syntactic analysis. Naturally, within a compositional semantic framework, the semantic analysis of the expressions flanking the copula has consequences for the semantic analysis of the copula itself, so I will suggest a meaning for the copula itself, but the evidence for it will be indirect. The meaning that I assign to the copula is also influenced by the details of the syntactic analysis that I develop in the final part of the thesis, in particular the proposal that specificational and predicational copular clauses involve a core predication unit, projected by a functional head, in addition to the functional structure associated with the copula itself. Since I have not presented the syntactic proposal yet, I abstract away from these syntactic issues in this and the following three chapters and speak, informally, about the contribution of the copula (the syntactic proposal is presented in chapter 9 and the semantic interpretation of the resulting structures is sketched in section 9.3).

- **Intensionality** The semantic proposal above is presented in purely extensional terms. This is partly for consistency with Partee's (1987) theory of noun phrase interpretation, which is one of my central background assumptions (see section 4.2), partly for simplicity. Explicit representation of intensionality is necessary for investigating the interaction between modality and the different kinds of copular clauses, but I will not be concerned with these issues here (see Groenendijk et al. (1996a,b), Büring (1998), and Aloni (2001) for relevant discussion). As pointed out to me by Chris Potts, there

is a way of incorporating intensionality in a minimal way by redefining  $\langle t \rangle$  as the type of propositions, such that the domain of type  $\langle t \rangle$  is the power set of the set of possible worlds (see van Benthem (1991:156–167) for details). This has the desirable effect that clauses denote propositions, rather than truth values (the more standard domain of type  $\langle t \rangle$ ), and that predicative expressions denote properties rather than functions from individuals to truth values.<sup>3</sup> I will assume this redefinition of type  $\langle t \rangle$  in what follows, and use the terms property-denoting and predicative interchangeably.

- **Information structure** Many researchers have noted that information structure (in roughly the sense of Vallduví (1992) and Lambrecht (1994)) plays an important role in distinguishing the different kinds of copular clauses. It has been argued that specificational clauses have a fixed information structure; the subject is topic and the predicate complement is focus, whereas the information structure of other kinds of copular clauses, predicational clauses in particular, is not fixed in the same way. I discuss the topic–focus structure of specificational clauses in detail in the final part of the dissertation, but I bring it up here because some of the data that I draw on below (to establish the semantic type of the predicate complement) also seems sensitive to focus structure. While my ultimate goal is to provide an integrated analysis of these clauses that takes account of both

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<sup>3</sup>This means that I am treating properties as functions from individuals to functions from worlds to truth values, rather than functions from worlds to functions from individuals to truth values. While the latter is the more standard type for property denotations, the former allows property denotations to combine straightforwardly with type  $\langle e \rangle$  denotation (by function application). See Carpenter (1997:426) for discussion.

type-theoretic and informational aspects their meaning, I found it useful to attempt to separate the two when carrying out the investigation. It should be recognized, though, that complete separation is not always feasible.

- **Epistemological aspects of reference** Another factor that appears to play a central role in how copular clauses are used and interpreted, but which is not reflected in the type-theoretic characterization above, is the discourse participants' knowledge of the individuals described and mentioned in the copular clauses. This can be brought out by considering the possible interpretations of the example in (4.5) (inspired by Groenendijk et al. (1996a:205)).

(4.5) The culprit might be Alfred, but then again the culprit might not be Alfred.

This could be uttered, by someone who knows who Alfred is, to express that she doesn't know whether Alfred committed the crime. But it could also be uttered by someone who knows who committed the crime, but doesn't know who Alfred is, to express that she doesn't know the name of the culprit. That ambiguity is not readily expressible in my type-theoretic semantic analysis. The best we can do is to say that the first scenario involves a specificational reading (property-denoting subject, referential predicate complement), while the second involves an identity reading (subject and predicate complement are both referential). However, there is clearly something unsatisfying about this, since we end up saying that *Alfred* is referential in both utterance

situations, when intuitively the name is used in two quite different ways in the two scenarios.<sup>4</sup> Following Higgins (1979:220-221), we could say that in the first case *Alfred* is used with ACQUAINTANCE, and that in the second case it is not, where the notion of acquaintance is defined as follows (see also Stalnaker (1972:393–394), Declerck (1988:128–129), and Groenendijk et al. (1996a:205ff)):

I shall say that a proper name is used with Acquaintance if one knows who or what bears the name to an extent that would allow one to use the name as an alternative to a Deictic phrase [i.e., a demonstrative or demonstrative phrase used with deictic, as opposed to anaphoric, reference; LM] accompanied by a pointing gesture if the bearer of the name was present and one was in a position to recognize him, her, or it. To revert to an earlier examples [ex. (1), p. 205; LM], if I ask:

(22) Which one is Jack JONES?

then I may know very well who Jack Jones is — I am Acquainted with him — and merely unable to pick him out, or alternatively, I may not know who he is — I am not Acquainted with him — and wish to become Acquainted with him, that is, to learn which person to associate with the name Jack Jones.  
(Higgins 1979:220–221)

The notion of acquaintance in turn relates to a larger debate within the philosophy of language about the nature of reference, in particular the relationship between a purely semantic, type-theoretic notion of reference and a more pragmatic speaker-based notion of reference (see e.g. Strawson (1950),

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<sup>4</sup>Alternatively, we could say that the second reading is predicational, but that hardly seems satisfactory either. See the discussion of Rothstein’s (2001) analysis in section 4.4.

Linsky (1963), Kripke (1977), and Kronfeld (1990)). These issues seem particularly pressing for the study of copular clauses in so far as these clauses revolve around the identity and characteristic properties of individuals. This point is made clear by Higgins in his discussion of a similar ambiguity, and whether it should be treated as a case of the sentence being used to perform different speech acts. He writes (p. 207) “The factor which seems more important in copular sentences is more often a distinction between what is known and familiar and what is not known or unfamiliar. Because of this, the copular sentence plays an essential role in the communication of new information about known things . . . .”

As important as these issues are, I will not be able to deal with them in a serious way in this dissertation, but I hope to return to them future work.

This concludes the preview of the semantic part of the dissertation. Before I embark on the empirical investigation, I need to introduce my assumptions about DP interpretation (section 4.2), make some remarks on methodology (section 4.3), and tidy up the loose ends left at the end of the last chapter (section 4.4).

## **4.2 Partee’s theory of noun phrase interpretation**

To characterize the differences in DP interpretation previewed above, I adopt Partee’s (1987) type theoretic account of noun phrase interpretation. According

to Partee (1987), noun phrases (which I call DPs) can receive three different interpretations:<sup>5</sup>

(4.6)

TERMS	SEMANTIC TYPE	DENOTATION
<b>Generalized quantifier</b>	$\langle\langle e,t \rangle, t\rangle$	set of sets of individuals
<b>Referential</b>	$\langle e \rangle$	individual
<b>Predicative</b>	$\langle e,t \rangle$	set of individuals

The generalized quantifier interpretation is the most complex, but it is also the most general, in the sense that all DPs can have this interpretation (Partee (1987:121ff); see also Montague (1974), Barwise and Cooper (1981), and Thomsen (1997a)). An example is given in (4.7), where the italicized DP is interpreted as a generalized quantifier:

(4.7) *Every politician* is corrupt.

As a generalized quantifier, *every politician* denotes not the set containing every politician, but the set of properties that every politician has. Given that properties are construed as sets of individuals — namely, the set of individuals that have the property in question — *every politician* denotes a set of sets of individuals (as stated in (4.6)). The sentence in (4.7) is true if and only if the set of corrupt people is a member of this.

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<sup>5</sup>Let me try to clear up a terminological point, which could cause some confusion. Following Higgins (1979), I use the term ‘predicational’ to pick up a class of copular clauses. Following Partee (1987), I use the term ‘predicative’ to designate a kind of DP interpretation. This is potentially confusing, but since both terms are well-established in the literature I will continue to use both, but do my best to use them systematically (the *-ional* form to designate a clause type, and the *-ive* form to designate a type of DP interpretation).

The referential interpretation is perhaps the one we intuitively ascribe to most DPs, namely as denoting individuals and entities in our surroundings. An example, borrowed from Strawson (1950:320), is given in (4.8):

(4.8) *The whale struck the ship.*

Strawson observes (p. 320) that when a speaker utters (4.8), we take her to be “mentioning a particular whale” and a particular ship (though Strawson only discusses the subject DP), and that (4.8) is true if and only if the former struck the latter. In contrast, a speaker of (4.7) does not mention any (or all) politicians in this sense. In terms of semantic types, it is the referential DP interpretation (type  $\langle e \rangle$ ) that underlies the mentioning of a particular individual.

Finally, DPs can be interpreted as predicates, as illustrated by *a lawyer* in (4.9).

(4.9) Shirin Ebadi is *a lawyer* (by profession).

A speaker of (4.9) does not mention a particular lawyer (Geach 1962:35), rather *a lawyer* denotes the set of all lawyers and (4.9) is true if Shirin Ebadi is a member of this set.

Importantly, not all DPs can occur in all three interpretations. For instance, *every politician* in (4.7) can only be interpreted as a generalized quantifier, and the article-less *sagfører* (‘lawyer’) in the Danish version of (4.9) can only be interpreted predicatively:

(4.10) Shirin Ebadi er *sagfører*.  
Shirin Ebadi is lawyer  
‘Shirin Ebadi is a lawyer’

In contrast, definite descriptions like *the whale* and *the ship* can take on all three types. Which type a given definite description has in a given (utterance of a) sentence, depends on its syntactic position, the semantic interpretation of the rest of the sentences (in particular the presence of quantifiers and other scope bearing elements) and the context in which the sentence is used. This is important in what follows, since definite descriptions are extremely frequent in copular clauses, in both subject and predicate complement position.

Partee (1987) argues that every kind of DP has one of the three types by default, but may shift into one of the other types (where the result of this shift is well formed) by application of one or more of the ‘type-shifting operators’ that she defines.

### 4.3 Methodological issues

Before embarking on the semantic investigation, I want to make a few remarks about various methodological issues. In the syntactic investigation carried out in the previous chapters, especially in the effort to distinguish predicate topicalization structures from specificational structures, we were able to base our claims about copular constructions on independently established general properties of clause structure. We were able to show that distinguishing properties of predicate topicalization holds of topicalization structures more generally, and that distinguishing properties of specificational clauses hold of subject-initial clauses in general. In investigating the semantics of these constructions, in particular the

interpretations of the DPs flanking the copula, we are less fortunate. The reason is that we only find this kind of variability of interpretation with DPs in certain contexts, and that many of them are copular constructions of one kind or another or copular-like constructions. This means that we cannot establish the properties of DP interpretations independently of the constructions we are investigating. This leads in certain places to an element of circularity in the argumentation. I have tried to minimize this as much as possible, but have found myself unable to avoid it completely.

Another, partly related, problem is that we do not have at the outset explicit definitions of the different kinds of copular constructions in Higgins' taxonomy. What we have are some exemplars (the recurrent examples in the literature) and a set of behavioral diagnostics (most of them from Higgins (1979)). This leads to a kind of "boot-strapping" in characterizing the different categories of copular clauses. For instance, when trying to establish the semantic type of the subject of specificational and predicational clauses, I rely on a contrast in the predicate complement (name vs. adjective) to force the intended readings. When I later investigate the type of the predicate complement, I use these same distributional facts (that a name, but not an adjective can occur as the predicate complement of a specificational clause) as evidence for the predicate complement being referential. These kinds of interdependencies mean that we cannot build up the semantic analysis of copular clauses from anything like first principles. What one can aim for, though, is an internally consistent and explicit characterization of Higgins' taxonomy, which is in harmony with our current understanding of the

interpretation of DPs and the general principles of semantic composition.

Next, I need to say something about identity clauses (or equatives), whose status in Higgins' taxonomy is somewhat special. Higgins' discussion of identity clauses is very brief (pp. 262–263, 271–272). He does not offer any original, unambiguous examples of identity clauses, but he does cite two of the philosophers' favorite examples (in a quotation from Wiggins (1965:42) on p. 262):

- (4.11) a. The morning star is the evening star.  
b. Hesperus is Phosphorus.

Other examples that are often cited as examples of equatives include:

- (4.12) a. Cicero is Tully.  
b. Clark Kent is Superman.  
c. Mark Twain is Samuel Clemens.

These examples all involve two names.<sup>6</sup> Moreover, they all rely on special circumstances, where the same individual or entity has two different names, and they exploit, for their informativeness, the fact that that a language user need not know both names. Since most individuals do not have two different names (treating first, middle, and last names as one name), equative sentences involving two names are somewhat marked outside of these well-known, highly specialized cases. Thus the examples in (4.13) are difficult to interpret without explicit contextual support.

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<sup>6</sup>I take the descriptions in (4.11a) to be complex names, like *The White House*, though they, in Wiggins' orthography, are not capitalized. See Soames (2002:110–130) on complex names.

- (4.13) a. Chris Smith is Harry Barcan  
 b. Tami is Susan.

They are certainly not ungrammatical (there is nothing wrong with their syntax) and they also seem semantically well-formed (we can assign them truth conditions), but to use them, it seems that we need a context where the hearer has revealed in some way that he or she is harboring a misconception about the names and/or identities of certain individuals. In that kind of context, an utterance of one of the sentences in (4.13) would be informative and, it seems, reasonably felicitous.<sup>7,8</sup> This relates, I believe, to the epistemological issues discussed in connection with example (4.5) above. To avoid these issues in the investigation that follows, I will primarily be relying on sentences of the form in (4.14), which have also been argued to be semantically equative (Büring 1998; Declerck 1988:119–147).

- (4.14) a. He might be Mr. Neson. [Büring 1998:(6b'), 37]  
 b. [An unusual feature of the investiture was the appearance of a lady to receive the V.C.] She was Mrs Green, widow of Captain John Leslie Green, to whom the award of the V.C. was notified on August 5. [Declerck 1988:(11), 121]

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<sup>7</sup>I hedge this because it has been pointed out that even in the kind of context sketched, the preferred way of clearing up the hearer's misconception is not by way of sentences such as those in (4.13), but rather ones that involve the circumlocution *is the same person as* or something similar.

<sup>8</sup>Note that equatives with two names become much more natural when embedded under a verb of propositional attitude with a non-first person subject:

- i. Tanya thinks that Chris Smith is Harry Barcan.  
 ii. Tanya thinks that Tami is Susan.

The embedding provides some epistemic distance between the identity clause and the speaker, while allowing the speaker to use her own words to express a mistaken belief of Tanya's. See Berg (1988) for discussion.

Rather than involving two names, these involve a pronoun and a name. They are used to assert identity between two individuals, but the individuals are picked out by two different kinds of linguistic expression, which avoids the pragmatic oddness associated with the examples in (4.13).<sup>9</sup>

Finally, I need to say something about ambiguities in copular clauses and how that affects the investigation. As Higgins (1979) demonstrated in great detail, many copular clauses are ambiguous, between the readings labelled Predicational, Specificational, Equative and Identificational in his taxonomy. A particular clear case of this is the example in (4.15), due to Kripke (1972:271–273).

(4.15) The winner might have been the loser.

As Higgins observes (p. 271–273), this sentence is multiply ambiguous. Taking the sentence to be uttered in response to the 1972 US presidential election, where McGovern lost to Nixon, the sentence can have at least the following readings:<sup>10</sup>

- (4.16)
- |    |                                       |                   |
|----|---------------------------------------|-------------------|
| a. | Nixon might have lost the election.   | [PREDICATIONAL]   |
| b. | McGovern might have won the election. | [SPECIFICATIONAL] |
| c. | Nixon might have been McGovern        | [EQUATIVE]        |

The (4.16a) reading is clearly predicational: the subject DP is interpreted referen-

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<sup>9</sup>The theory of conceptual covers developed in Aloni (2001) seems well-suited to account for this difference between the examples in (4.13) and the ones in (4.14), but I will not attempt to develop the necessary account here.

<sup>10</sup>Higgins notes that the sentence seems to lack an Identificational reading. This is expected if what Higgins calls the Identificational reading is really a cover term for certain kinds of specificational and equative clauses, as I suggest in chapter 7. Higgins also discusses a set of extra readings of (4.15) involving Donnellan’s (1966) distinction between referential and attributive reading of definite descriptions, and concludes that the ambiguities in (4.16a) do not involve Donnellan’s distinction. I will therefore ignore these here.

tially (to denote Nixon), whereas the complement DP is interpreted predicatively (to denote the property of losing the election). The (4.16b) reading is specificational: the subject DP is interpreted predicatively (to denote the property of winning the election), whereas the predicate complement is interpreted referentially (to denote McGovern). Finally, the (4.16c) reading is equative: both DPs are interpreted referentially (to denote Nixon and McGovern, respectively). While it is encouraging that the three readings seem to correspond to the three categories recognized in my type-theoretic reanalysis of Higgins' taxonomy (see (4.4) above), this kind of ambiguity also presents some obvious difficulties for the investigation of the different kinds of copular clauses. To determine the characteristic properties of specificational clauses we need to know that we are dealing with a specificational clause, and similarly for predicational and equative clauses. My strategy for dealing with this is to work, to the extent possible, with unambiguous examples. This in turn involves a certain amount of prejudging, given that we do not have clear definitions of each kind. Concretely, I will be using the following schemata for constructing unambiguous examples of each kind of copular clause:

(4.17)	Clause	Subject	Copula	Complement
	PREDICATIONAL	Definite Description	BE	AP
	SPECIFICATIONAL	Definite Description	BE	Name
	EQUATIVE	(Gendered) Pronoun	BE	Name

Thus an example like (4.18) is unambiguously predicational:

(4.18) The winner is Republican.

Constructing unambiguously specificational clauses is harder, but (4.19) comes close:

(4.19) The winner is Nixon.

There is, at least for some speakers, an alternative equative reading of (4.19), one where the identity of the winner is already known independently of the utterance of (4.19) and the sentence equates that individual with Nixon.<sup>11</sup> The availability of this reading seems to depend on context, in particular whether the speaker and hearer are acquainted with the winner, and if so how. This in turn relates to the epistemological issues discussed in connection with (4.5) at the end of section 4.1.

Finally, (4.20) is an unambiguous equative clause (see the discussion surrounding (4.13) and (4.14) above):

(4.20) He is McGovern.

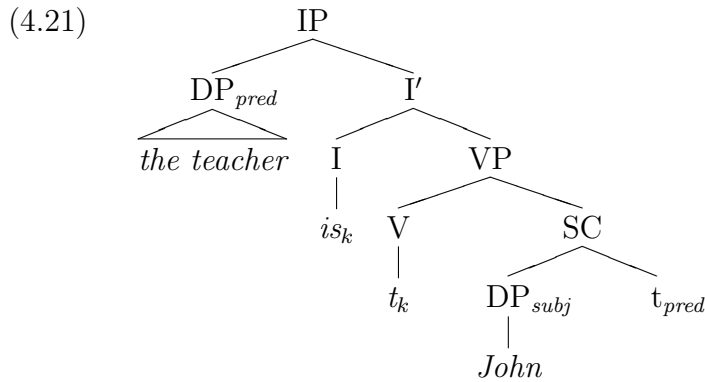
What these examples (together with (4.15)) show, is that the degree of ambiguity in copular clauses is controlled by the form of the expressions flanking the copula. It is exactly this pattern of rich, but not random, interpretive difference that motivates my attempt to relate the interpretation of copular clauses to the general principles of DP interpretation.

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<sup>11</sup>This reading is brought out more easily in the context of a modal, cf. (4.16c).

## 4.4 Consequences for the live syntactic options

At the end of the last chapter we reached what seemed like an impasse. After successfully distinguishing Heggie’s predicate topicalization structures from specificational structures, we saw that the remaining three proposals (Moro’s predicate raising analysis, Heycock & Kroch’s symmetric small clause analysis, and Rothstein’s “transitive” analysis) all converge on the surface structure that we had arrived at for specificational clauses. In particular, these three analyses all agree that the initial DP is the subject and that the post-copular DP is inside the verb phrase. This means that none of the syntactic tests used to distinguish predicate topicalization structures from specificational structures can tell these three analyses apart. However, the semantic characterization of specificational clauses proposed above (that the subject DP is predicative, while the postcopular DP is referential) does distinguish them. More precisely, it favors Moro’s predicate raising analysis over the other two. The proposed type-distribution is exactly what one would expect under Moro’s analysis: the surface subject is raised from the predicative position of a small clause, and hence is semantically predicative. The DP that surfaces in the post-copular position is the small clause subject, and hence referential:



In the final part of the dissertation I will propose a version of the predicate analysis that builds on Moro's, but also attempts to take into account certain aspects of the information structure of specificational clauses.

In contrast to Moro, Heycock and Kroch (1999) claim that the subject and the predicate complement have the same semantic type, and, in the case of specificational clauses involving two DPs, that both DPs are referential (type e) (pp. 382–383). This is in conflict with one of the central conclusions reached here, which is that the subject of a specificational clause is not referential, but predicative. The difficulties with maintaining a completely symmetric analysis of specificational clauses is acknowledged in Heycock and Kroch (2002:144–147), where they suggest that the asymmetry is related to the information structure of specificational clauses. The characterization of the information structure of specificational clauses that I develop in chapter 8 builds on their 2002 proposal, but the conclusions I draw for the syntax and semantics of the construction are quite different. One of the main differences is that they assume that the pronominalization contrasts discussed in the next chapter reflect differences in information structure, whereas I argue that they reflect differences in the semantic type of the antecedent

DP.

Finally, the findings reported here speak against the analysis of specificational clauses proposed in Rothstein (2001). She too assumes that the subject of specificational clauses is referential, in fact her general theory of predication explicitly prohibits a predicative DP in subject position (p. 236). Like Heycock and Kroch (1999), she considers specificational clauses a subtype of equative clauses, but her semantic analysis of equatives differs from that of Heycock and Kroch in a way that is directly relevant for the type-distribution proposed above. Building on an idea sketched in Partee (1987:127), Rothstein proposes (pp. 245–247) to treat equative clauses (including the ones I call specificational) as a special kind of predication structure. The basic idea is that the copula, when faced with two referential DP arguments, forces the complement DP to shift into a predicative type via Partee’s IDENT typeshifter.<sup>12</sup> In a specificational clause like *The mayor is John*, both *the mayor* and *John* start out referential. IDENT is applied to the denotation of *John* to derive the predicate ‘be identical to John’ or  $\lambda x[x = \text{JOHN}]$  (Rothstein 2001:245). This function can then be applied to the referential subject argument without any type-mismatch to yield a truth value. What Rothstein actually proposes is more complicated, because she is working with an event-based semantics, but the conflict with the type-distribution proposed here for specifi-

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<sup>12</sup>It should be pointed out that Partee herself appears to be sceptical about this approach. She writes (p. 127) “. . . in the case of definite singulars . . . the predicative reading [is] tantamount to applying *ident* to the corresponding entity, probably an unsatisfactory analysis.” However, the context of her remark leaves it open whether it is the idea of shifting the complement DP to a non-referential denotation that she finds unsatisfactory, or whether it is the extensionality of this shift, forced by the extensionality of her entire system, that she is sceptical about. See also her footnote 16 (p. 140).

cational clauses remains.<sup>13</sup> According to this analysis specificational clauses are type-identical to predicational clauses and to what I call equative clauses, essentially collapsing the three classes in (4.2) into one (Rothstein does not discuss identificational clauses). While this allows Rothstein to maintain a semantically uniform analysis of the copula and the clauses built around the copula, it leaves open how to account for the contrasts between the different kinds of copular clauses documented in the next two chapters.

## 4.5 Two alternative semantic analyses

One of the main claims of this thesis is that the subject of a specificational clause is not referential (this is what speaks against the assimilation of specificational clauses to equatives proposed by Heycock and Kroch (1999) and by Rothstein (2001)). What I will be proposing that it is a predicate, consistent with Moro’s predicate raising analysis and the analysis I develop in the final part of the dissertation, according to which predicational and specificational clauses share a core predication structure, and differ only in which of the two DPs raises to subject

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<sup>13</sup>To integrate Partee’s IDENT type-shifter into her event-based analysis, Rothstein first defines an EXIST relation, which is “the relation between an individual and the set of events for which that individual is the value of some thematic role” (p. 245). The latter is called “the set of existence events for  $\alpha$ ”. She then redefines Partee’s IDENT operator to map an individual  $\alpha$  onto the set of existence events for  $\alpha$  in which  $x = \alpha$ . In the semantic composition of a specificational clause like *The mayor is John*, this eventive IDENT operator applies to John to yield the set of existence events for John where John is identical to  $x$ . The variable  $x$  is bound by a lambda operator, which is introduced at the VP level. The resulting expression is applied to the subject argument, which then takes the place of  $x$ . Finally, a general operation of existential closure applies to bind the event variable introduced by EXIST (p. 246). Putting all of this together we arrive at the following interpretation for *The mayor is John*: there is an existence event for John in which John is identical to the individual denoted by *the mayor*.

position.

There are other possible interpretations of the pronominalization evidence presented below. In particular, it seems broadly consistent with recent work by Schlenker (2003) and Romero (2003) that treats specificational subjects as concealed questions (in the sense of Baker (1968:81–101), Grimshaw (1979), and Heim (1979)). This idea goes back at least to Ross (1972), who likened specificational pseudoclefts to question–answer pairs (see also den Dikken et al. (2000) for a recent syntactic proposal along these lines). The core idea is that a specificational clause like that in (4.22) is interpreted, informally, as in (4.23):

(4.22) The capital of Italy is Rome.

(4.23) ‘the answer to the question “which city is the capital of Italy” is “Rome is the capital of Italy” ’

Schlenker and Romero both assume that the subject DP contributes the question, that the predicate complement contributes the answer, and that the copula contributes the identity relation. They differ in how the pieces are construed formally. For Schlenker the concealed question DP denotes a proposition, as does the predicate complement (the latter is a clausal structure underlyingly, to which ellipsis has applied). The copula equates the two propositions. Romero interprets the concealed question subject as an individual concept and the predicate complement as a regular individual. The copula feeds a world argument (corresponding to the world of evaluation) to its subject and equates the resulting individual with the one contributed by the predicate complement.

The analysis that I propose is similar to these analyses in that the subject is

not referential (type  $\langle e \rangle$ ), but of some higher type. The three analyses differ in the type assigned to the specificational subject, and with respect to the role played by the copula. For both Schlenker and Romero the copula found in specificational clauses contributes an identity relation, though their analyses differ in the kinds of elements being equated. Under my analysis the specificational copula does not contribute an identity relation, in fact its contribution to the semantic composition is truly minimal (see chapter 9 section 9.3).

Given our current understanding, I believe that all three analyses are serious candidates for the semantics of specificational clauses. One advantage that Schlenker's (2003) analysis has over the other two is that it provides an account of so-called connectivity effects (documented in Higgins (1979), and the topic of much subsequent work). Among the questions that would distinguish the three analyses are the following:

- Which DPs can occur as specificational subjects? Clarifying the status of indefinites specificational subjects is especially important, since it has been argued that only definite DPs can be interpreted as concealed questions (see Ginzburg and Sag (2000:66 fn. 12, 350, 354), see also the brief discussion in Romero (2003:31), and in Schlenker (2003:fn. 36)). In contrast, indefinite specificational subjects are expected under the predicate raising analysis proposed here, since (at least some kinds of) indefinites can clearly function as predicates.
- How tight is the correlation between specificational subjects and other in-

stances of DPs with a concealed question interpretation, such as DP complements to *know*?

- What is the syntactic structure of specificational clauses, and (how) does it relate to the syntactic structure of predicational clauses?
- What is the source of connectivity effects? Are they evidence of non-overt syntactic structure (as proposed by den Dikken et al. (2000) and Schlenker (2003)) or do they in fact provide evidence for non-syntactic analyses of the phenomena involved, especially binding and negative polarity item licensing, as argued by Jacobson (1994), Sharvit (1999), Heller (2002).

As far as I know, these are open issues and I will not be able to settle them here, though I will say something about the first (in chapter 7) and the third (in chapter 9). My reasons for pursuing the predicate raising analysis are as follows. It is simple, in particular it does not require any DP types beyond the three well-established ones found in Partee (1987). Secondly, it allows me to make a connection between specificational clauses and a larger class of inversion structures which casts new light on the pragmatic properties of specificational clauses (this connection is developed in chapter 8). Finally, it provides a clear and simple way of understanding the syntactic and semantic relationship between specificational and predicational clauses (this understanding is laid out in chapter 9). It might well be that this understanding is ultimately too simple, but it seems worth while to make it explicit. Both Romero (2003) and Schlenker (2003) leave open how their semantic proposals relate to the syntax of the specificational clauses (see

Romero's fn. 3 and Schlenker p. 191).

## 4.6 What is to come

The semantic investigation is structured as follows. The next chapter investigates the type of the subject in the different kinds of copular clauses by examining pronominalization of the subject in three environments (tag questions, left-dislocation structures, and question–answer pairs). Chapter 6 investigates the type of the predicate complement drawing on distributional evidence as well as the behavior of VP ellipsis in English copular clauses, and of a very similar VP anaphora process in Danish copular clauses. Finally, in chapter 7 I discuss some consequences and extensions of my analysis of specificational clauses. In particular, I examine the predictions made by the analysis for what kinds of DPs can occur as subject of specificational clauses, and show that these are largely borne out, with an interesting complication that points to the relevance of pragmatic factors. The second half of the chapter examines Higgins' identificational class and makes the argument that it should be reanalyzed as in table (4.3).

# Chapter 5

## Determining the subject type

In this chapter I argue that the subject of a specificational clause is not referential, and that this sets specificational clauses apart from both predicational clauses and equatives. The main argument comes from pronominalization, in particular from a set of systematic contrasts in how the subject DP of these clauses pronominalizes. The argument itself is very simple, but setting up the background assumptions and fending off some obvious alternatives require quite a bit of work. Before launching into these details, I will briefly outline the key contrast. As shown below, a specificational clause like (5.1a) allows *it* in a tag question, where the predicational clause in (5.1b) has the gendered pronoun *she*:

- (5.1)    a.    The tallest girl in the class is Molly, isn't **it**?  
          b.    The tallest girl in the class is Swedish, isn't **{she/\*it}**?

The idea I want to pursue is that this tells us something important about how the subject of the tagged clause, which is the antecedent of the pronoun, is interpreted. In particular, I suggest that the use of *it* indicates that the subject is not referential, but rather denotes a property, whereas the use of *she* indicates that the subject is referential. Notice that we cannot attribute the contrast to any overt form difference between the subjects of the two clauses, since they are string identical. Moreover, this contrast is not specific to tag questions, but also found in constructions where the subject DP has been left dislocated, leaving a resumptive pronoun inside the central part of the clause:<sup>1</sup>

- (5.2) a. The tallest girl in the class, {**that/it**}’s Molly.  
 b. The tallest girl in the class, {**she/\*it/\*that**}’s Swedish.

and in question-answer pairs, where the subject of the answer is pronominal:

- (5.3) a. Q: Who is the tallest girl in the class?  
 A: {**That/It**} ’s Molly.  
 b. Q: What nationality is Molly?  
 A: {**She/\*it/\*that**}’s Swedish.

This indicates that the contrast is a systematic one and my claim is that it is due to a difference in the semantic composition of the two kinds of copular clauses, in particular in the semantic type of their subjects. Since I place a lot of weight on the evidence from pronominalization, the rest of this chapter is devoted to spelling out the argument for this type-theoretic interpretation of the pronoun contrasts.

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<sup>1</sup>I discuss the distributional differences between *it* and *that*, in particular why *that* cannot occur in the tag in (5.1a), in section 5.4.3 below.

## 5.1 Pronominalization as a test for semantic type

To be able to use pronominalization as a test for semantic type in the way that I am suggesting, we need to establish the following:

- (5.4)
- a. that the form of a pronoun reflects its semantic type, as well as the semantic type of its antecedent.
  - b. that *it* and *that* can denote properties, but cannot denote humans.
  - c. that in each of the three environments the pronoun is the subject DP (left dislocation and question–answer pairs) or is anaphoric to the subject DP (tag questions).

These claims are somewhat interrelated (logically and empirically), so there will be some degree of overlap in the discussion of each of them below. Notice also that the connection between the type of the pronoun and the type of its antecedent described in (5.4a) is only strictly needed for the tag question data. In the other two environments the pronoun is the subject of the copular clause, and hence the pronoun itself is the expression whose semantic type we are trying to determine. This difference is also the source of the disjunctive formulation of (5.4c).

### 5.1.1 Pronominal form and semantic type

A connection between semantic interpretation and pronominal form was noted early on by Jespersen (1927:123–124) and Kuno (1972b), based on examples like

the following:<sup>2</sup>

- (5.5) He is a gentleman, {which / \*who} his brother is not.  
(5.6) He is a fool, although he doesn't look {it / \*him}.  
(5.7) LBJ is the President of the United States. He has been {it / \*him} since 1963.

Their observation is that in (5.5) the form of the relative pronoun is *which*, rather than *who*, because the relative clause is formed on a predicative phrase. Similarly in (5.6) and (5.7) the pronoun must be *it*, and not *him*, because it occurs in an environment that is restricted to semantically predicative expressions, cf. (5.8) and (5.9):<sup>3</sup>

- (5.8) He looks {tired/tall/friendly/\*John/\*you}.  
(5.9) He has been {the President/a doctor/crazy/\*John/\*you} since 1963.

These observations get us part of the way, but we also need to establish a link between the semantic type of the anaphoric pronoun and the semantic type of its antecedent. Evidence for this connection comes from the examples in (5.10) and (5.11).

- (5.10) \*Last night I met a gentleman, which my brother is not.  
(5.11) Last night I shook hands with the President of the United States. #Lyndon B. Johnson has been it since 1963.

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<sup>2</sup>This connection is also made in more recent work on DP interpretation, both in English and in other languages (see e.g. Doron (1988:282–286) on English, Heggie (1988a:67–71) on French, Zamparelli (2000:17–18) on Italian, Engdahl (2001:132–133) on Swedish, and Mikkelsen (2003:130–132) on Danish).

<sup>3</sup>Note that there are also some aspectual restrictions on the expressions that can occur in these environments.

In (5.10), we have the same relative clause as in (5.5), but the predicative form *which* is infelicitous. This cannot be explained by the internal semantics of the relative clause, since that is presumably the same as in the felicitous example in (5.5). Instead the problem seems to be that the “antecedent” of the relative pronoun in the matrix clause, *a gentleman*, is referential. Note that *a gentleman* cannot be predicative here because the matrix verb *meet* does not allow a predicative object. We can understand the illformedness of (5.10), if we assume that the semantic type of a relative pronoun has to match that of its antecedent. This principle is recognized by Higgins, who in his discussion of Predicational vs. Referential interpretations of noun phrases observes that “it is evidently part of the identity condition on the relative clause formation rule that the two “co-referential” elements must agree in this respect [i.e. in semantic interpretation; LM]” (Higgins 1979:252).<sup>4</sup>

I want to suggest that something similar is going wrong in (5.11), and that the principle that the semantic type of an anaphoric pronoun must match that of its antecedent should be extended to personal pronouns like *it*, *he* and the like.<sup>5</sup> I thus interpret the infelicity of the continuation with *it* in (5.11) in the following way. We can use *it* to refer back to *the president of the United States*, but only when both *it* and its antecedent are in a position where they can be interpreted

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<sup>4</sup>These observations provide a nice set of tools for the investigation of the compositional structure of relative clauses.

<sup>5</sup>When such pronouns are interpreted as bound variables, e.g. in the scope of an appropriate quantifier, this type-matching principle holds between the relevant variable in the denotation of the binder and the variable contributed by the pronoun. See Partee (1972:430–434) for discussion.

non-referentially. Both of these conditions are satisfied in (5.7) above, where *it* and *the President of the United States* both occur as complements in predicational copular clauses. In (5.11), however, *the President of the United States* is in an unambiguously referential position, as the object of *shake hands with*. Hence, its non-referential meaning (intuitively, the property of being the President) is not available to license the use of *it* in the second clause. We are now in a position to formulate a generalization about the connection between the form of an anaphoric pronoun and the semantic type of its antecedent:

- (5.12) The form of a pronoun reflects its semantic type, which in turn must match the semantic type of its antecedent.

Confirmation for this two-way dependency comes from the observation that there is no easy “fix” for the type mismatches in (5.10) and (5.11). Starting with the relative clause example, we could try to fix it by using the referential *who* instead of the predicative *which*:

- (5.13) \*Last night I met a gentleman, who my brother is not.

This solves the type-mismatch with the referential antecedent *a gentleman*, but creates a problem with the interpretation of the pronoun in its local context, since the form of the pronoun must also reflect its own semantic type. The use of *who* thus forces an equative interpretation of the relative clause, which in turn results in a bizarre interpretation for the sentence as a whole, namely that last night I met some man other than my brother. The equative reading is especially strained

because the antecedent for the pronoun is indefinite (see Geach (1962:35)). Similarly, replacing *it* with *him* in (5.11) results in another anomaly:

- (5.14) Last night I shook hands with the President of the United States. #Lyndon B. Johnson has been him since 1963.

The only possible interpretation of the copular clause in (5.14) is one that implies that Lyndon B. Johnson changed identity in 1963, becoming the person who is, now, the president of the United States (Higgins (1979:242) calls this process “transmogrification”). We can understand this in terms of the principle in (5.12). Changing *it* to *him* fixes the type-mismatch between the pronoun and the antecedent, but creates a misfit with its local interpretation. Since the form of a pronoun must reflect both its local interpretation and that of its antecedent, there is no acceptable way of realizing the anaphor. It is a case of ineffability.

### 5.1.2 *It* and *that* as property anaphors

Next, we need to motivate the assumption that *it* and *that* can be used to refer to properties. Naturally, I am not proposing that this is the **only** interpretation these pronouns have (see below), but it is important for the argument I am about to make that they **can** denote properties.

Evidence for this claim comes from the examples in (5.15), where, in each case, *it* and *that* are anaphoric to an expression that is canonically taken to be property-denoting expressions, such as the bracketed APs in (5.15a,b), the VP in (5.15c), and the NP in (5.15d):<sup>6</sup>

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<sup>6</sup>The first example is from (Ross 1969:357) and the last three examples are adapted from

- (5.15) a. They said that Sheila was [beautiful] and she is **that**.  
 b. John is [considerate]. {**It/That**} is a rare thing to be.  
 c. John [talks quietly]. {**It/That**} is a good thing to do.  
 d. John is [president of the club]. {**It/That**} is a prestigious position.

In contrast, *it* and *that* clearly cannot be used to refer to humans:

(5.16) I ran into [my cousin Audrey] downtown. #I saw {**it/that**} at the corner of Cedar and Locust.

(5.17) A: Have you seen [your cousin Audrey] recently?  
 B: #Yes, I saw {**it/that**} downtown earlier today.

(5.18) [Upon seeing a very tall woman on the street]  
 #Look how tall {**that/it**} is!

In all of these examples we have to use the gendered pronoun *she* to establish either an anaphoric connection to *Audrey* (in (5.16) and (5.17)) or a deictic reference to the person seen on the street (in (5.18)).<sup>7</sup>

So far we have seen that *it* and *that* can denote properties, but not human individuals. It is worth pointing out that *it* and *that* can be used in at least three other ways:

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Doron (1988:299). There are a couple of things to note about these examples. First, that only *that* occurs comfortably in (5.15a), whereas both *it* and *that* are possible in the last three examples. I discuss this in section 5.4.3. Second, that the clauses containing anaphoric *it* and/or *that* do not have the hidden cleft interpretation discussed in connection with the examples in (5.95) in section 5.4.1. I should also point out that this is one of the places where the argumentation becomes somewhat circular. In the last section I used the distribution of anaphoric *it* and *that* vs. *she* and *he* to argue that the type of anaphor must match that of its antecedent. Here I use the fact that *it* and *that* can occur with property-denoting antecedents to motivate the claim that *it* and *that* can denote properties.

<sup>7</sup>Following Heim and Kratzer (1998:244–245), I assume that these restrictions are built into the representation of pronouns in the form of features, which are interpreted as presuppositions on the felicitous use of the pronoun in context.

- i. to refer to inanimate entities
- ii. to refer to propositions
- iii. to refer to various abstract objects

The inanimate use is illustrated in (5.19):<sup>8</sup>

- (5.19) [Said to a child headed for the remote control for the TV]
- a. Don't touch that!
  - b. Don't touch it!

We can immediately rule out this use as a plausible candidate for the interpretation of *it* in examples like (5.20), repeated from (5.1) above, since the definite description contains the sortal *girl* whose denotation is restricted to (a subset of) human individuals:

- (5.20) The tallest girl in the class is Molly, isn't it?

In cases where the head noun of the subject could apply to either something human or something inanimate, such as *winner* in (5.21), the inanimate use of *it* would force a referential inanimate interpretation of the *the winner*, which in turn would force an equative interpretation of the clause (one that equates the referent of *the winner* with the referent of *Molly*). But assuming that *Molly* denotes a person, which clearly seems possible in (5.21), this equative reading is absurd,

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<sup>8</sup>Note that in the first example the stress naturally falls on *that*, whereas in the second example the stress is on the verb. Similar observations apply to the examples in (5.22) and (5.23). I return to this prosodic difference between *it* and *that* in section 5.4.3, where I also discuss the fact that *it* is not possible in place of *that* in (5.15a).

since it involves equating an inanimate entity with an animate one, which seems like a category mistake.

(5.21) The winner is Molly, isn't it?

The fact that the tagged clause in (5.21) is well-formed and that we can provide a context in which it could be uttered to express something true (say announcing the winner of a party game that Molly participated in), makes it clear that we are not dealing with an inanimate use of *it* in the tag. I will thus set the inanimate use aside in what follows, though it becomes relevant again in the discussion of truncated clefts in chapter 7.

The propositional use of *it* and *that* is illustrated in (5.22), where in each of B's responses the pronoun refers back to the proposition expressed by A (that Cordelia sold the house):

(5.22) A: Cordelia sold the house.  
B: I don't believe that!  
B: I don't believe it!

This use is relevant in the light of Schlenker's (2003) proposal that specificational subjects denote propositions. The fact that *it* and *that* can be used to denote and refer back to propositions, means that Schlenker's analysis would also account for the use of *it* and *that* in specificational clauses observed above.

Finally, as discussed in Asher (1993:225ff) and Cornish (1992:166ff), *it* and *that* can also refer to other abstract objects, such as actions, events, facts, and various intensional objects. A candidate for an action-anaphoric use of *it* and *that* is given in (5.23):

- (5.23) A: How do I kill a dragon?  
B: You do that with a sword.  
B: You do it with a sword.

This third kind of use is relevant in the light of Romero’s (2003) proposal that specificational subjects denote individual concepts, i.e. functions from worlds to individuals. In particular, it brings up the question of whether individual concepts fall under the “various abstract objects” referred to in (ii) above. One indication that it does comes from the use of *it/that* in (5.24) to refer back to the “role” DP *Richard III*, since it has been suggested that such DPs denote individual concepts e.g. by Partee (1987:136) (though see also the discussion in Heycock and Kroch (2002:146)).

- (5.24) Oliver is Richard III. {**It/That**/??he} is a difficult part.

If so, the pronominalization facts presented below would not distinguish Romero’s analysis from the one proposed by Schlenker or from mine.

In what follows, I set these other uses of *it* and *that* aside, and assume that their occurrence in the copular clauses discussed below are instances of their property-anaphoric usage.

### 5.1.3 Determining the antecedent

The final piece that we need for the argument from pronominalization to go through is to establish that the pronoun is indeed anaphoric to the subject DP.<sup>9</sup>

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<sup>9</sup>As noted above, this is only relevant for the tag question environment. In the other two environments the pronoun itself is in subject position. In those cases the environment (the form

This is an important issue because in the typical case there is no direct way of telling which of the two DPs in a specificational clause a pronoun is referring back to. This uncertainty can be illustrated with the example in (5.25), which is a variation on an attested example.<sup>10</sup>

(5.25) The most influential architect of the twentieth century may well be Victor Gruen. **He** invented the mall.

The pronoun *he* in the second clause is clearly anaphoric, but we have no way of telling which of the two DPs in the preceding clause (*the most influential architect of the twentieth century* or *Victor Gruen*) is its antecedent, since either resolution would result in the same interpretation of the second clause. This in turn means that examples like (5.25) don't tell us much about the types of these two DPs, except that one of them is referential. Importantly, it does not show that the subject DP is referential, because it is entirely possible that *he* is anaphoric to *Victor Gruen* and not to the subject DP.

Instead we have to look for environments where the antecedent for the pronoun is more tightly controlled. One clear instance of this is the pronoun in a tag question, which is anaphoric to the subject of the tagged clause. There seems to be broad consensus about this claim in the literature (see e.g. Bolinger (1957:17–22, 116–122; 1975:279), Bowers (1976:237), Bresnan (1994:97), Huddleston and Pullum (2002:893, [7i]), Jespersen (1924:198, 302, 323), McCawley (1998:251), Nässlin (1984:3), Quirk et al. (1985:§11.8)) and it is readily motivated by data of the left-dislocated DP and the form of the question, respectively) functions to determine what kind of copular clause we are dealing with.

<sup>10</sup>Malcolm Gladwell, “The Terazzo Jungle”, *The New Yorker*, March 15, 2004, pp. 120–127.

outside the domain of copular constructions. Consider (5.26), which involves two referential DPs *the actress* and *her husband*. If either could function as the antecedent of the pronoun in the tag, we would expect either *she* or *he* to be possible, since the first DP denotes a woman and the second a man. However, only *she* is possible, indicating that the pronoun in the tag question must find its antecedent in the subject position of the tagged clause.

(5.26) [The actress]<sub>i</sub> met her<sub>i</sub> husband for lunch, didn't {she/\*he}?

In (5.27), the subject denotes a man and the object denotes a woman, and we find the inverse pattern in the tag.

(5.27) [The actor]<sub>i</sub> met his<sub>i</sub> wife for lunch, didn't {\*she/he}?

The examples in (5.28) and (5.29) make the same point with respect to number agreement.

(5.28) The actors founded the company, didn't {they/\*it}?

(5.29) The company had several investors, didn't {\*they/it}?

The anaphoric connection between the pronoun in the tag question and the subject of the tagged clause finds a natural explanation if tag questions are analyzed as involving VP ellipsis.<sup>11</sup> Under this analysis, the tag in (5.26) is the

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<sup>11</sup>I thank Kyle Johnson for pointing this out to me. Note however, that this analysis of tag questions creates a tension between the tag question test and the VP ellipsis data presented in the next chapter. There I argue that VP ellipsis cannot apply to specificational clauses, because the predicate complement is not of the right type to undergo this kind of ellipsis. If tag questions are derived by VP ellipsis under some kind of parallelism constraint forcing the tag question to have the same syntactic structure as the tagged clause, this raises the question of how tag questions to specificational clauses are possible.

result of performing VP ellipsis on *didn't she meet her husband for lunch* and the tag in (5.27) is the result of performing VP ellipsis on *didn't he meet his wife for lunch*. What is left over from VP ellipsis is the subject pronoun, the finite auxiliary and negation. The underlying form of the tag question is presumably determined jointly by the parallelism constraints on VP ellipsis as well as an independent requirement that a tag question be anaphorically linked to the tagged clause (this latter requirement seems necessary for tag questions to perform their function, which is, roughly, to question the status of the information conveyed by the preceding clause). Together these two requirements ensure that the pronoun that survives the VP ellipsis is anaphoric to the subject of the tagged clause.

## 5.2 Three environments

Having laid out my assumptions about the connections between pronominalization and semantic type, we can now consider the pronominalization contrast previewed above in more detail. I start with the English data, but in section 5.3 I show that the same pattern is also found in Danish.

### 5.2.1 Tag questions

Consider the three copular clauses below:

(5.30) The tallest girl in the class is Swedish, isn't **she**? [PREDICATIONAL]

(5.31) The tallest girl in the class is Molly, isn't **it**? [SPECIFICATIONAL]

- (5.32) [Pointing to a player on the field]  
SHE is Molly Jacobson, isn't **she**? [EQUATIVE]

The predicational and the equative clause both have *she* in the tag, whereas the specificational clause has *it*. Given what was said above, this indicates a difference in the semantic type of the subjects, in particular that the subject of predicational and equative clauses is referential, whereas the subject of specificational clauses is property-denoting.

Given the propensity for ambiguity in copular clauses, it seems relevant to check whether other pronouns are possible in each of the tags. It seems that no other pronoun is possible in (5.30), in particular using *it* in the tag is impossible:

- (5.33) \*The tallest girl in the class is Swedish, isn't it?

This indicates that a non-referential interpretation of the subject is impossible. As for (5.31), it seems that a referential pronoun is marginally possible:

- (5.34) ?The tallest girl in the class is Molly, isn't she?

I interpret this to mean that without the tag (5.31) is ambiguous between a specificational reading and an equative reading (due to the possibility of either a predicative or referential interpretation of the definite description). The specificational reading, which is the more natural one, is forced by using *it* in the tag, whereas the equative reading is forced by using *she* in the tag. Though I do not currently understand the exact conditions under which the equative reading is felicitous, the speakers I consulted reported that (5.34) is possible if it can be assumed that the hearer has some independent knowledge of the tallest girl in

the class and/or some independent way of identifying her. This connects with the brief discussion of epistemic factors at the end of section 4.1 in chapter 4 (see also the discussion of ambiguity in section 4.3 of that chapter).

As for (5.32), it seems that *she* is the only possibility in the tag. Certainly, *it* is out:

- (5.35) [Pointing to a player on the field]  
\*SHE is Molly Jacobson, isn't it?

This is not surprising, since the subject pronoun *she* can only be referential (that is what I have to assume to make sense of the tag question contrasts in the first place). What is more surprising is that the seemingly equative clause in (5.36) appears to allow either *she* or *it* in the tag:

- (5.36) Molly Jacobson is HER.  
a. Molly Jacobson is HER, isn't she?  
b. Molly Jacobson is HER, isn't it?

(5.36a) is the expected case, though it actually seems hard to contextualize, and for some speakers it is in fact degraded. The fact that (5.36b) is also possible, at least for some speakers, is unexpected; given everything I said above, the use of *it* in (5.36b) indicates that the subject is interpreted non-referentially, but until now I have been assuming that names are always interpreted referentially. I do not have a clear understanding of the conditions under which each of (5.36a) and (5.36b) would be felicitous, but my sense is that they, too, involve some of the epistemological factors discussed at the end of section 4.1 in chapter 4.

## 5.2.2 Left dislocation

As noted for Danish by Diderichsen (1968:178), a similar pattern is found in constructions where the subject has been left dislocated leaving a resumptive pronoun inside the clause (what he calls ‘sætninger med løst fundament’; see also Rullmann and Zwart (1996) who investigate left-dislocation in Dutch copular clauses). Consider first the non-copular example in (5.37):<sup>12</sup>

(5.37) As for [my father], **he** has lived here all his life. [cf. Ross (1967:235, ex. 6.136)]

Here the subject pronoun *he* is anaphorically dependent on the left-dislocated element. Thus (5.38) is impossible:

(5.38) # As for [my father], **she** has lived here all her life.

Constituents other than subject can also be left-dislocated, as illustrated in (5.39). The position of the resumptive pronoun is determined by the grammatical function of the left-dislocated element.

- (5.39) a. (As for) this movie, I have seen **it** ten times.  
b. This guy, I gave **him** the money and now he’s gone.  
c. (As for) the money, I gave **it** to this guy and now it’s gone.

The left-dislocation construction thus provides another potential source of evidence for the semantic type of the subject of a copular clause.

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<sup>12</sup>The *as for* prefix is there to help establish the right pragmatic conditions for left-dislocation (Gundel 1988:19ff). However, the *as for* prefix is not always appropriate, see e.g. (5.39b). I believe the factors governing the applicability of the *as for* prefix are irrelevant for the point I am trying to establish here. See Ward (1985:17–21) for discussion of when the *As for ...* prefix is appropriate.

There are, however, two issues that need to be resolved. First, the left-dislocation construction has been argued to serve a topic-establishing function (Gundel 1988:55ff), and one might wonder whether this requirement would force a referential reading of the left-dislocated DP, obviating left-dislocation as a test for semantic type. The function and nature of left-dislocated DPs is discussed in detail in Gundel (1988:55–69). She does not discuss the possibility of dislocating predicative DPs, but she does consider examples involving left-dislocated DPs, that could plausibly be considered non-referential, such as the non-specific indefinite *an honest politician* in (5.40) (= Gundel’s ex. (43) p. 61), where the resumptive is the indefinite *one* (on anaphoric *one* and (non-)referentiality see Partee (1972)).

(5.40) (As for) an honest politician, Gwendolyn wants to marry one.

Further evidence that non-referential expressions can be left-dislocated comes from the possibility of left-dislocating gerunds, which are picked up by the neuter pronoun *it*:

(5.41) (As for) being the president of the company, it’s a tough job.

It thus seems fair to assume that being left-dislocated does not entail being referential, which is also in line with Ward’s (1985) conclusions about preposed constituents more generally. Secondly, one might wonder whether it is possible to left-dislocate pronouns, which is needed for performing the left-dislocation test on equatives, where the subject is itself pronominal. As Gundel (1988:52–53) shows, using examples like (5.42), it is possible to left-dislocate pronouns. Note that the

left-dislocated pronoun shows up in the default accusative form, independent of the nominative form of the resumptive.

(5.42) Him, he never does anything right.

With this much established, we can turn to subject left-dislocation in copular clauses. The basic pattern is given below:

(5.43) (As for) the tallest girl in the class, **she** is Swedish.

(5.44) (As for) the tallest girl in the class, {**it/that**} is Molly.

(5.45) [Pointing to a player on the field]  
(As for) HER, **she** is Molly.

This mirrors the pattern found in tag questions: predicational and equative clauses allow *she* as the subject pronoun, whereas the specificational clause has *it* or *that*.<sup>13</sup> Again, there is no variation in predicational clauses; using *it* or *that* as the subject resumptive is impossible:

(5.46) \*(As for) the tallest girl in the class, **it/that** is Swedish.

In (5.44), *she* seems marginally possible, indicating the possibility of an equative reading:

(5.47) ?(As for) the tallest girl in the class, **she** is Molly.

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<sup>13</sup>The reason we get both *it* and *that* in (5.44) is that, unlike the case with the tag questions, there are no prosodic restrictions on the position of the pronoun in this construction (see section 5.4.3). Some speakers prefer *that* over *it* in (5.44), which could indicate a preference for the prosodically prominent pronoun for these speakers. I also note that some speakers prefer a reduced form of the copula in left-dislocation structures, as well as in the answers of the question–answer pairs considered in the next section.

Equatives that have the name in subject position and the pronoun as the predicate complement display the same kind of variation in this environment, as they do in the tag question environment (see the discussion at the end of section 5.2.1), though here all of the pronouns seem somewhat degraded.

(5.48) (As for) Molly, {*?she/?that/?it*} is HER.

This might indicate a deeper incompatibility between the function of left-dislocation and the nature of equative clauses, in particular a clash between signalling a topic-comment structure (by left-dislocating the subject), but not really predicating anything about the referent of the subject, at least not in the standard sense of predication. Note, though, that judgments become somewhat clearer if we shift from using a pronoun as the predicate complement to using a demonstrative DP:

(5.49) [Someone comes in and asks for Molly]  
Molly, {*she/\*that/\*it*} is that one over there.

The situation with equatives appears to be even more complex than with the tag questions above, since some speakers accept *that* in addition to *she* in (5.45).

(5.50) % (As for) HER, *that's* Molly Jacobson.

I do not at present fully understand this, but I suggest a possible line of analysis of this use of the neuter form at the end of section 5.4.1.

### 5.2.3 Question–Answer pairs

Finally, we see a contrast in the answers to copular questions. By asking the question in the right way we set up a context for a copular answer with a pronominal

subject. In each case the subject pronoun is anaphoric to the non-*wh* phrase of the question. The basic pattern is the one we have come to expect. If we ask for a property holding of the tallest girl in the class, such as her nationality, we get *she* in the subject position of the answer:

- (5.51) Q: What nationality is the tallest girl in the class?  
A: {She/\*it/\*that} is Swedish. [PREDICATIONAL]

If we ask instead who instantiates a given property, such as being the tallest girl in the class, the subject pronoun is *it* or *that*:

- (5.52) Q: Who is the tallest girl in the class?  
A: {That/It} is Molly. [SPECIFICATIONAL]

These question–answer pairs relate directly to Akmajian’s (1979) informal characterization of the difference between predication and specification: a predicational clause tells us something **about** the individual denoted by the subject DP, whereas a specificational copular clause tells **who** someone is (Akmajian 1979:162–165). Equative answers also involve identification, but in this case of an individual given by demonstration (in the question). Here we find *she* in the answer.

- (5.53) Q: [Pointing to a person] Who is she?  
A: She is Molly Jacobson. [EQUATIVE]

Again, there is some variation in the last two cases similar to the variation found in the other two environments, but I will not discuss it further here. I return to specificational clauses of the kind in (5.52A) in the second half of chapter 7.

To summarize; the pronominalization contrasts reviewed above indicate a systematic difference in the interpretation of the subject DP in the three kinds of

copular clauses: predicational and equative sentences have referential subjects, whereas specificational clauses have non-referential subjects.<sup>14</sup> In the area of specificational and equative clauses there is a fair amount of variation in what pronouns are possible. One kind of ambiguity is expected within the approach taken here, namely why the string in (5.54) allows either a specificational or equative reading, depending on whether the definite description in subject position is interpreted as denoting a property or an individual, respectively.

(5.54) The tallest girl in the class is Molly.

I suggested that the naturalness of each of these readings depends on the epistemic setting, especially the discourse participants' acquaintance with the potential referent of the subject DP.

The second kind of variation seems to indicate that names allow some kind of non-referential interpretation when they occur as subjects of sentences like (5.55):

(5.55) Molly is HER.

This kind of non-referentiality is hard to capture within Partee's system of DP interpretation, but it too seems to relate to epistemic factors, in particular whether

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<sup>14</sup>One difficulty for this analysis is that specificational subjects do not behave as expected with respect to relativization. As Rothstein (2001:257) points out, the specificational subject in (i) (her example (70a)) does not allow a relative clause formed with *which*. She contrasts this with the predicational clause in (ii) (her (71a)), where the same definite description, now serving as the predicate complement, does seem to allow this.

i.\*The murderer, which is a horrible thing to be, is John.

ii. John is the murderer, which is a horrible thing to be.

This is very puzzling given the type-distribution proposed here.

the speaker and/or hearer are in a position to refer to Molly by that name. (See the discussion at the end of section 4.1 in chapter 4.)

### 5.3 Further evidence from Danish

Danish offers further evidence for the conclusions about semantic type drawn on the basis of the English data above. First, we find the same contrast between neuter and gendered pronouns in the three environments discussed above. Secondly, Danish has grammatical gender, which allows us to investigate pronominalization contrasts in the domain of inanimates. Finally, the structural ambiguity between predicate topicalization and specificational structures offers an opportunity to cross-check the semantic claims made here with the results of the syntactic investigation carried out in the first part of the dissertation.

#### 5.3.1 Replicating the contrast in the domain of humans

While English-style tag questions seem rather rare cross-linguistically, Danish happens to have them, which allows us to apply that test in Danish as well. Danish also has left-dislocation structures and, naturally, the relevant question–answer pairs can be constructed as well. The gendered pronouns are *hun* (she) and *han* (he). The neuter pronoun is *det*, which when stressed corresponds to English *that* and when unstressed to English *it*.

**Tag questions** Starting with the predicational clause in (5.56), we see that it allows only the gendered pronoun *hun* in the tag, indicating that the definite description in subject position is interpreted referentially.

- (5.56) Modtageren af Nobels fredspris i år er ikke iraner, er {**hun** / recipient-DEF of Nobel-POSS peace-prize in year is not Iranian, is she / \*det}?  
 it  
*'The recipient of this year's Nobel Peace Prize isn't Iranian, is she/\*it?'*

In contrast, the specificational clause in (5.57) allows *det* (it) in the tag, indicating a predicative interpretation of the subject in this case. We know that this is a specificational clause, and not an instance of predicate topicalization because of the non-final position of negation (see section 5.3.3). As in English, the gendered pronoun is marginally possible, indicating a potential equative reading:

- (5.57) Modtageren af Nobels fredspris i år er ikke Shirin Ebadi, er recipient-DEF of Nobel-POSS peace-prize in year is not Shirin Ebadi, is {??hun / **det**}?  
 she / it  
*'The recipient of this year's Nobel Peace Prize isn't Shirin Ebadi, is ??she/it?'*

Finally, in the equative (5.58) only the gendered pronoun is possible, indicating that the subject is referential.

- (5.58) Hun er ikke Shirin Ebadi, er {**hun** / \*det}?  
 she is not Shirin Ebadi, is she / it  
*'She isn't Shirin Ebadi, is she/\*it?'*

**Left dislocation** As noted by Diderichsen (1968:178), the same pattern shows up in constructions where the subject has been left-dislocated leaving a resumptive

pronoun inside the clause. Danish doesn't have an exact parallel to the English *As for ...* prefix, but the left-dislocation structure can be primed by asking about the subject, as the non-copular example in (5.59) illustrates:<sup>15</sup>

- (5.59) Q: Hvad med Susan?  
           what about Susan  
       A: Susan, **hun** er på ferie.  
           Susan, she is on vacation

As in English, the form of the resumptive pronoun is governed by the dislocated element. Having any pronoun but *hun* in (5.59) would be impossible. Turning to copular clauses, we start with the predicational example in (5.60).

- (5.60) Q: Hvad med modtageren af Nobels fredspris?  
           what about recipient-DEF of Nobel-POSS peace-prize  
       A: Modtageren af Nobels fredspris, {**hun** / \*det } er iraner.  
           recipient-DEF of Nobel-POSS peace-prize, she / it/that is Iranian  
           ‘*The recipient of the Nobel Peace Prize, she/\*it/\*that is Iranian.*’

We see that (5.60) allows only the gendered pronouns *hun* (she) to resume the left-dislocated subject DP, indicating that this DP is referential. In contrast, in the specificational example in (5.61), we find *det* (it/that) as the resumptive pronoun, indicating a non-referential (in our terms, predicative) interpretation of the subject DP.

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<sup>15</sup>There is a prefix *Hvad angår* (what concerns), which is similar to English *As for*, but it requires insertion of the particle *så* (so), which in turn triggers verb second:

- i. Hvad angår Susan, så er hun på ferie.  
       what concerns Susan, so is she on vacation

However, the use of the *Hvad angår ...* prefix in Danish left-dislocation structures appears to be much more restricted than the use of *As for ...* in the English construction. The question prompt has a wider applicability and I therefore use it throughout.

- (5.61) Q: Hvad med modtageren af Nobels fredspris?  
 what about recipient-DEF of Nobel-POSS peace-prize
- A: Modtageren af Nobels fredspris, {??hun / **det** } er Shirin  
 recipient-DEF of Nobel-POSS peace-prize, she / it/that is Shirin  
 Ebadi.  
 Ebadi  
*'The recipient of the Nobel Peace Prize, ??she/it/that is Shirin  
 Ebadi.'*

It is interesting to note that the marginal equative reading, indicated by *she* in (5.61), disappears if the discourse particle *vist* ( $\approx$  I believe) is used:

- (5.62) Modtageren af Nobels fredspris i år, {\*hun / **det** } er vist  
 recipient-DEF of Nobel-POSS peace-prize in year, she / it/that is PTC  
 Shirin Ebadi.  
 Shirin Ebadi  
*'The recipient of this year's Nobel Peace Prize, I believe \*she/it/that is  
 Shirin Ebadi.'*

Given the epistemic meaning of the particle, this again points to the specificational/equative ambiguity being highly sensitive to epistemic factors (see the discussion surrounding (5.34) above).

Finally, and unsurprisingly, we find *hun* as the preferred resumptive in the equative (5.63).

- (5.63) [Pointing to a person on stage]

Q: Hvad med hende?  
 what about her

A: Hende, {hun / ??det} er Shirin Ebadi.  
 her, she / that is Shirin Ebadi

As in the corresponding English example, the neuter *det* is marginally possible for reasons that I do not fully understand (but see the discussion in section 5.4.1).

**Question–answer pairs** The third and final environment where we see a pronominalization contrast is question–answer pairs. The predicational answer in (5.64) allows only the referential *hun* in subject position:

- (5.64) Q: Hvad nationalitet er modtageren af Nobels fredspris?  
What nationality is recipient-DEF of Nobel-DEF peace-prize  
A: {**Hun** / \*det } er iraner.  
She / it/that is Iranian.

In contrast the neuter *det* (it/that) is preferred in the specificational answer in (5.65):

- (5.65) Q: Hvem er modtageren af Nobels fredspris?  
Who is recipient-DEF of Nobel-POSS peace-prize  
A: {??Hun / **Det** } er Shirin Ebadi.  
she / it/that is Shirin Ebadi.

Finally, a gendered pronoun is preferred in the subject position of the equative answer in (5.66), though the neuter *det* also seems possible:

- (5.66) [Pointing to a person]  
Q: Hvem er hun?  
Who is she?  
A: {Hun / ?Det} er Molly Jakobsen.  
she / it is Molly Jakobsen.

This last kind of variation aside, these contrasts point to the same conclusion as that reached for English copular clauses above: specificational clauses are unique in having a non-referential subject.

### 5.3.2 Pronominal contrasts in the domain of inanimates

In English the contrast in pronominalization can only be observed in copular clauses that are about humans or other animate beings, since *it* and *that* are the pronouns used to refer to inanimate beings (see section 5.1.2), a fact which obscures the contrast between referential and property-denoting subjects in the inanimate domain. However, in a language like Danish, which has grammatical gender, the contrast can also be observed with inanimate subjects.

Danish has two grammatical genders: neuter and common gender (the latter being a historical amalgamation of masculine and feminine). Grammatical gender is an inherent lexical property of nouns in Danish. Except for a handful of cases, a noun is either common gender or neuter. The gender is reflected in the form of the definite suffix, pronominal articles, possessive pronouns, other determiner-like elements, and adjectival modifiers. There is no phonological or morphological correlate of gender apparent on the noun itself. For singular neuter nouns the definite article is *det* and for singular common gender nouns the definite article is *den*.<sup>16</sup>

**Tag Questions** We begin by observing that the pronoun in a tag question generally agrees with the subject DP in gender. In (5.67) the subject DP is common gender—because the head noun *by* (city) is common gender—and only

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<sup>16</sup>As seen in the preceding section, the forms *den* and *det* also serve as demonstratives (similar to English *that*) and as third person pronouns (similar to English *it*). The article and pronoun uses are characterized by being stressless (or having only weak stress), whereas the demonstrative use is stressed.

*den* is possible in the tag:

- (5.67) **Den** **by** gik til grunde, gjorde {**den** / \***det** } ikke?  
that-COM city went to ground, did it-COM / it-NEU not?  
*‘That city went under, didn’t it?’*

In (5.68) the subject DP is neuter—because the head noun *bjerg* (mountain) is neuter—and the tag pronoun has to be the neuter *det*:

- (5.68) **Det** **bjerg** ligger i Kenya, gør {\***den** / **det** } ikke?  
that-NEU mountain lies in Kenya, does it-COM / it-NEU not?  
*‘That mountain is in Kenya, isn’t it?’*

Turning to predicational copular clauses, we see that the pronoun in the tag question must agree in gender with the subject DP. In (5.69) the subject DP is common gender (it is headed by the common gender noun *by*), and only the common gender *den* is possible in the tag. In (5.70), the subject is neuter by virtue of the neuter head noun *bjerg*, and only the neuter *det* is possible in the tag.

- (5.69) **Den** **største by i Skotland** er på størrelse med København, er  
the-COM biggest city in Scotland is on size with Copenhagen, is  
{**den** / \***det** } ikke?  
it-COM / it-NEU not?  
*‘The biggest city in Scotland is about the size of Copenhagen, isn’t it?’*
- (5.70) **Det** **højeste bjerg i Danmark** er 147 meter højt, er {\***den**  
the-NEU highest mountain in Danmark is 147 meter high, is it-COM  
/ **det** } ikke?  
/ it-NEU not?  
*‘The highest mountain in Denmark is 147 meters high, isn’t it?’*

However, in tags to specificational clauses the neuter form *det* is used, irrespective of the grammatical gender of the subject DP:<sup>17</sup>

(5.71) **Den** største by i Skotland er vist Glasgow, er {**det** / \*den }  
 the-NEU largest city in Scotland is PTC Glasgow, is it-NEU / it-COM  
 ikke?  
 not?  
 ‘I believe the largest city in Scotland is Glasgow, isn’t it?’

(5.72) **Det** højeste bjerg i Danmark er vist Himmelbjerget, er {det  
 the-NEU highest mountain in Denmark is PTC sky-mountain-DEF, is it-NEU  
 / \*den } ikke?  
 / it-COM not?  
 ‘I believe the tallest mountain in Denmark is Himmelbjerget, isn’t it?’

This is analogous to the situation in the human domain investigated above: in predicational clauses the subject is referential and the pronoun in the tag must agree with the subject pronoun in gender (biological or grammatical), but in specificational clauses we invariably find the neuter *det*, which is licensed by a non-referential interpretation of the subject.<sup>18</sup>

**Left-dislocation** As shown in the non-copular examples below, a resumptive pronoun linked to a left-dislocated inanimate DP has to agree with the dislocated DP in gender:<sup>19</sup>

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<sup>17</sup>*Himmelbjerget* is the name of a “fake hill” in Jylland in Western Denmark (one created by erosion when the ice of the last ice age melted). The word literally means ‘the sky mountain’, but it is only 147 meter above sea level, which is not quite enough to make it the highest point in Denmark. That honor belongs to Ydinge Skovhøj which rises to 173 meters above sea level.

<sup>18</sup>Felicitous equatives with inanimates are difficult to construct, so I will not discuss these here.

<sup>19</sup>Though I have not written out the context for these example, they were constructed and judged with the question prompt used in section 5.2.2 above. Similarly, for the copular examples below.

(5.73) **Den by**, {**den** / \***det** } gik til grunde.  
 that-COM city, it-COM / it-NEU went to ground.  
 ‘*That city, it went under.*’

(5.74) **Det bjerg**, {\***den** / **det** } ligger i Kenya.  
 that-NEU mountain, it-COM / it-NEU lies in Kenya.  
 ‘*That mountain, it is in Kenya.*’

As the examples in (5.75) show, this is also true in predicational copular clauses:

- (5.75) a. **Den største by i Skotland**, {**den** / \***det** } er større end  
 the largest city in Scotland, it-COM / it-NEU is bigger than  
 København.  
 Copenhagen  
 ‘*The largest city in Scotland, that/it is bigger than Copenhagen.*’
- b. **Det højeste bjerg i Danmark**, {\***den** / **det** } er 147  
 the-NEU highest mountain in Denmark, it-COM / it-NEU is 147  
 meter højt.  
 meter high  
 ‘*The highest mountain in Denmark is 147 meters high, isn’t it?*’

But in specificational clauses, we find the neuter *det* irrespective of the gender of the subject DP (I included the epistemic particle *vist* to rule out an alternative equative reading, as well as to preclude any possibility of construing this as a case of predicate topicalization. The latter seems rather remote, given the left-dislocation structure, but the presence of the adverbial rules it out completely):

- (5.76) a. **Den største by i Skotland**, {\***den** / **det** } er vist Glasgow.  
 the-COM largest city in Scotland, it-COM / it-NEU is PTC Glasgow  
 ‘*The largest city in Scotland, I believe that/it is Glasgow.*’

- b. **Det højeste bjerg i Danmark**, { \*den / **det** } er vist  
 the highest mountain in Denmark it-COM / it-NEU is PTC  
 Himmelbjerget.  
 sky-mountain-DEF  
 ‘*The highest mountain in Denmark, I believe that/it is Himmelbjerget.*’

The non-agreeing resumptive *det* in (5.76a) is the crucial piece of evidence that the subject DP is non-referential in these clauses, since the use of *det* as the resumptive in (5.76b) could be a case of agreeing, referential *det*. So (5.76b) does not tell us anything more than its English translation, but (5.76a) does, which is exactly the motivation for extending the investigation of the Danish pronominalization facts into the domain of inanimates.

**Question-Answer pairs** Turning finally to question–answer pairs, we first establish that anaphoric pronouns generally exhibit grammatical gender agreement with their antecedents:

- (5.77) Q: Hvad med **gafflen**?  
 what about fork-DEF-COM  
 ‘*What about the fork?*’  
 A: { **Den** / \*det } må du beholde!  
 it-COM / it-NEU may you keep  
 ‘*You can keep it!*’
- (5.78) Q: Hvad med **glasset**?  
 what about glass-DEF-NEU  
 ‘*What about the glass?*’  
 A: { \*Den / **det** } må du beholde!  
 it-COM / it-NEU may you keep  
 ‘*You can keep it!*’

In predicational answers we also find that the subject pronoun agrees in grammatical gender with its antecedent in the question:

- (5.79) Q: Hvor stor er **den største by i Skotland?**  
 how big is the-COM largest city in Scotland  
 A: {**Den** / \*Det } er større end København.  
 it-COM / it-NEU is larger than Copenhagen
- (5.80) Q: Hvor højt er **det højeste bjerg i Danmark?**  
 how high is the-NEU highest mountain in Denmark  
 A: {\*Den / **Det** } er 147 meter højt!  
 it-COM / it-NEU is 147 meters high

But in the specificational answers below the neuter form *det* is used irrespective of the gender of the antecedent noun phrase in the question (note that the head noun may be omitted in the antecedent definite description since it is recoverable from the preceding *wh*-phrase):

- (5.81) Q: Hvilken by er **den største (by) i Skotland?**  
 which-COM city is the largest (city) in Scotland  
 A: {\*Den / **Det** } er vist Glasgow.  
 it-COM / it-NEU is PTC Glasgow  
 ‘I believe it’s Glasgow.’
- (5.82) Q: Hvilket bjerg er **det højeste (bjerg) i Danmark?**  
 which-NEU mountain is the highest (mountain) in Denmark  
 A: {\*Den / **Det** } er vist Himmelbjerget.  
 it-COM / it-NEU is PTC sky-mountain-DEF  
 ‘I believe it’s Himmelbjerget.’

The key thing to note is the non-agreeing neuter form in (5.81), which indicates that this pronoun in fact is not referential. If it were, it should agree in gender with its common gender antecedent, as in (5.77) and (5.79) above.

What we have seen in this section is that the pronominalization contrasts observed in the animate domain above, are also found in the inanimate domain. We cannot see them in English, because *it* and *that* are used not only as property-anaphors, but also to refer to all inanimates. However, we can see them overtly in Danish, because Danish has grammatical gender, and only the neuter pronoun *det* can be used predicatively, whereas the common gender *den* is always referential. This last point deserves some comment, since I have not argued for it explicitly. One way to show that *den* differs from *det* in this respect is to observe that *den* is systematically impossible in specificational clauses concerned with humans, which is where we first saw *det* in its predicative use:

(5.83) Den højeste spiller på holdet er ikke Minna, er {**\*den** / det}?  
 the-COM tallest player on team-DEF is not Minna, is it-COM / it-NEU

(5.84) Den højeste spiller på holdet, {**\*den** / det } er ikke Minna.  
 the-COM tallest player on team-DEF, it-COM / it-NEU is not Minna.

(5.85) Q: Hvem er **den** højeste spiller på holdet?  
 who is the-COM tallest player on team-DEF

A: {**\*Den** / Det } er vist Minna.  
 it-COM / it-DET is PTC Minna.

The impossibility of using the common gender pronoun in these examples is even more striking, since the antecedent DP is common gender, as seen by the form of the definite article *den* (the-COM). Another piece of evidence that *den* differs from *det* in not having a property-anaphoric use will be discussed in the next chapter (section 6.3.2).

### 5.3.3 Pronominalization and predicate topicalization

In the first part of the thesis, we established that Danish has both predicate topicalization structures and non-topicalized specificational structures, and that a string like that in (5.86) is ambiguous between these two structures.

- (5.86) Den største tilhænger af bilfri søndag er Sparky.  
the greatest advocate of car-free Sunday is Sparky

We also saw that the string is disambiguated by the position of negation (and other central adverbs): clause-final negation indicates a predicate topicalization structure, whereas non-final negation indicates a non-topicalized specificational structure. Given the assumptions about pronominalization in tag questions laid out above, this leads us to expect a correlation between the placement of negation and choice of pronoun in a tag to (5.86). In particular, word-final negation should correlate with using *han* (he) in the tag (since the clause is predicational and the subject DP, *Sparky*, denotes a male individual), and non-final negation should correlate with using *det* (it) in the tag (since the clause is specificational and the subject DP, *den største tilhænger af bilfri søndag*, denotes a property). These expectations are borne out, as shown in (5.87) and (5.88).

- (5.87) Den største tilhænger af bilfri søndag er Sparky **ikke**, er {\*det/**han**}?  
the greatest fan of car-free Sunday is Sparky not, is it/he

- (5.88) Den største tilhænger af bilfri søndag er **ikke** Sparky, er **det**?  
the greatest fan of car-free Sunday is not Sparky, is it

We cannot perform the same experiment using left-dislocation, because topicalization and left-dislocation do not co-occur in Danish, but it is instructive to consider the possible answers to a question like (5.89):

- (5.89) Q: Hvem er [den største tilhænger af bilfri søndag]<sub>i</sub>?  
 who is the greatest fan of car-free Sunday  
 ‘Who is the greatest fan of carfree Sundays?’

Because of verb second (5.89) can be construed as either a subject interrogative (formed on a predicational clause) or a predicate complement interrogative (formed on a specificational or equative clause). Interrogative clauses are themselves a fascinating area of study (see e.g. Higgins (1979:205–263) and Percus (2003)), but here I am more interested in the possible answers to (5.89). There are five potential answers to consider:

- (5.90) A1: Det<sub>i</sub> er nok Sparky.  
 it/that is probably Sparky  
 A2: Det<sub>i</sub> er Sparky nok.  
 it/that is Sparky probably  
 A3: ??Han<sub>i</sub> er nok Sparky.  
 he is probably Sparky  
 A4: \*Han<sub>i</sub> er Sparky nok.  
 he is Sparky probably  
 A5: \*Ham<sub>i</sub> er Sparky nok.  
 him is Sparky probably

The first answer (5.90A1) is a subject initial clause, as indicated by the position of the central adverb *nok* (probably). The subject is the property-denoting *det*, which is anaphoric to the definite description in the question, and the predicate complement is the name. This is a specificational clause. The second answer (A2) is a predicate topicalization structure, as indicated by the sentence-final position of the adverb. What is special about it is that the topicalized predicate (*det*) is anaphoric, again to the definite description in the question. The third answer

(A3) is equative. The subject is the referential pronoun *han*, and the predicate complement is the name. The referential subject pronoun forces a referential interpretation of the definite description, which in turn forces an equative reading of the question itself. While the equative answer in A3 is pragmatically strained, the answers in A4 and A5 are downright ungrammatical. Both of them are topicalization structures—as indicated by the position of *nok*—but neither can be interpreted as a case of predicate topicalization because the topicalized pronouns are of the referential kind. The last answer additionally shows that the predicate complement of an equative structure cannot be topicalized in the manner that predicative predicate complements can. This kind of consistency between the results of the syntactic and semantic investigation is encouraging.

## 5.4 Loose ends

Before I begin investigating the predicate complement, there are various loose ends to tie up. First, I discuss an alternative account of the difference between gendered and neuter pronouns, one which revolves around epistemic factors as opposed to semantic type. I argue that while epistemic factors might play a role in certain contexts, the distribution of the neuter vs. gendered forms cannot be analyzed exclusively in epistemic terms. Second, I discuss an alternative analysis of tag questions, one where the pronoun is not anaphoric to the subject of the tagged clause, but to the tagged clause as a whole. While this offers an alternative account of the use of *it* in tags to specificational clauses, it fails to explain why

*it* is not possible in every tag. Finally, I discuss some differences between *it* and *that* and propose an account of why only the former occurs in tag questions.

### 5.4.1 Uncertain reference

An alternative account of the contrast between *he/she* and *it/that* is that all four pronouns are referential (type ⟨e⟩), but that we use *it* and *that* to signal some form of epistemic uncertainty about the referent. As noted by Declerck (1988:119–127), there are several versions of this approach. A fairly weak version holds that a speaker uses *it* and *that* when she is not sure whether the referent is i) animate or inanimate, ii) human or non-human, or iii) male or female. None of these, however, provides a plausible basis for understanding the contrasts we have been concerned with here, since the lexical content of the subject DP quite often reveals the animacy, humanness, and even gender of the potential referent, and still we find *it* in the tag:

(5.91) The **runner** in first place is Morgan Hobbs, isn't it?

(5.92) The last **speaker** is Carmen Hands, isn't it?

(5.93) The lead **actress** in that movie is Ingrid Bergman, isn't it?

In (5.91) the head noun *runner* implies that the potential referent of the description is animate. Similarly, in (5.92) *speaker* implies a human referent, and in (5.93) *actress* implies a female referent.

The stronger version of this approach holds that we use the neuter forms when the identity of the referent is unknown to the speaker. This position receives some

initial support from the examples in (5.94), where the identity of the referent of the subject DP is explicitly marked as unknown to the speaker.

- (5.94) a. The murderer, whoever it might be, must be insane.  
b. The successful applicant, be it a man or a woman, is required to move to the area.  
c. Someone broke into the office, but I don't know who it was.

However, I argue in chapter 7 that in these contexts, *it* is in fact the subject of a hidden cleft and not anaphoric to the matrix subject, but cataphoric to the property denoted by the unexpressed cleft clause enclosed in parentheses below:

- (5.95) a. The murderer, whoever it might be (who is the murderer), must be insane.  
b. The successful applicant, be it a man or a woman (who is the successful applicant), is required to move to the area.  
c. Someone broke into the office, but I don't know who it was (that broke into the office).

This analysis is supported by the fact that in contexts where the hidden cleft construal is not possible, including tag questions (Heycock and Kroch 2002:147), referential DPs marked for epistemic uncertainty do not pronominalize as *it*, but with the gendered pronouns *she/he*.<sup>20</sup>

- (5.96) a. The murderer, whoever it might be, is insane, isn't {he/she/\*it}?  
b. The person who gets the job would have to move to the area, wouldn't {he/she/\*it}?

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<sup>20</sup>For some speakers *they* is also possible in the tags in (5.95a and b). This is plausibly an instance of gender-neutral, singular *they* (Huddleston and Pullum 2002:491–495).

- c. Someone, I don't know who, broke into the office, didn't {they/\*it}?

It thus seems unlikely that the use of the neuter pronouns is governed exclusively by factors having to do with epistemic uncertainty. On the other hand we did see, in section 5.2, a few places where the type-based account fell short of accounting for all the uses of the neuter forms, and I suggested that epistemic factors may play a role in accounting for those cases, in particular for the possibility (for some speakers) of using the neuter forms to refer back to the subject of an equative clause, a DP which I have been assuming is referential:

(5.97) Molly Jacobson is HER, isn't **it**?

(5.98) %(As for) HER, **that**'s Molly Jacobson.

If this is on the right track, it suggests that the use of the neuter pronouns is governed primarily by semantic type, but that epistemic factors also play a role in certain contexts. This needs further investigation.

#### 5.4.2 An alternative interpretation of tag questions

At the heart of the argument for subject type from pronominalization in tag questions is the assumption that the pronoun of a tag is anaphoric to the subject of the tag questions. I motivated this assumption in section 5.1.3 above, but here I want to discuss a specific alternative that has been suggested to me on several occasions.

The alternative explanation for the use of *it* in the tag of a specificational is that *it* is anaphoric to the entire matrix clause, and that the tag contains an

invisible truth predicate, as indicated in (5.99).

(5.99) [The tallest girl in the class is Molly]<sub>*i*</sub>, isn't it<sub>*i*</sub> true?

This is initially plausible as *it* can be anaphoric to propositions (see section 5.1.2) and declarative clauses are standardly taken to denote propositions. There are, however, serious problems with this proposal, which lead me to reject it.

First note that (5.99) is of dubious acceptability. That in and of itself does not render this proposal unviable, since there could be a constraint forcing obligatory deletion of *true*. More problematic is the observation that if *it* is licensed in the tag of (5.99) by virtue of being anaphoric to the matrix clause (rather than its subject), we would expect *it* to be possible in tags to all clauses, since they all denote propositions. This is not the case, as the sample of non-specificational clauses in (5.100) demonstrates:

- (5.100) a. \*He is from Sweden, isn't it?  
b. \*She is a doctor, isn't it?  
c. \*The doctor examined the patient, isn't it?  
d. \*The guest are waiting, isn't it?  
e. \*Your brother lives in Berkeley, isn't it?

To rescue the analysis, one could claim that only in specificational clauses can the pronoun in the tag be anaphoric to the matrix clause, but then one has reduced the original problem—explaining the possibility of *it* in tags to specificational clauses—to another problem, that of explaining why only specificational clauses allow the pronoun in the tag to be anaphoric to the matrix clause. Without

an answer to that question, the alternative analysis is a mere rephrasing of the original question.

The analysis proposed in the previous sections of this chapter offers a more principled explanation: *it* is allowed in the tag of a specificational clause because i) the pronoun in a tag is anaphoric to the subject of the matrix clause, ii) the subject of a specificational clause denotes a property, iii) *it* can be anaphoric to a property-denoting expression.

It is also worth pointing out that, unlike the subject-oriented analysis proposed here, the alternative account of *it* in the tag of a specificational clause does not extend straightforwardly to the use of *it* (and *that*) as specificational subjects in the other two environments. There is no obvious way to build an invisible truth predicate into the left-dislocation construction:

(5.101) ??The lead actress in that movie, it (is true) is Ingrid Bergman.

Nor into specificational answers with pronominal subjects:

(5.102) Q: Who is the lead actress in that movie?  
A: ??It (is true) is Ingrid Bergman.

I thus reject the truth-predicate analysis of tag questions in favor of the subject-anaphora account assumed above.

There are two more things to note here. First, the general explanation put forth in this chapter is also compatible with the subject DP denoting other kinds of abstract objects, as proposed by Schlenker (2003) and Romero (2003). All I have shown is that the pattern is consistent with the subject denoting a property,

not that the subject must denote a property.

Second, in two of the three environments (left-dislocation with resumption and question-answer pairs) *that* patterns with *it*, but in the third it does not: *that* is not possible in tags. I believe that there is a principled explanation for this, which is independent of semantic types, and instead motivated on prosodic grounds. I turn to this issue next.

### 5.4.3 Some differences between *it* and *that*

I argued above (in section 5.1.2) that *it* and *that* can both be anaphoric to property-denoting expressions. A fact that I commented on briefly in section 5.2, but which deserves further comment, is that of the two only *it* is possible in the tag of a specificational clause:

(5.103) The lead actress in that movie is Ingrid Bergman, isn't **it**?

(5.104) \*The lead actress in that movie is Ingrid Bergman, isn't **that**?

Given my assumption that the pronoun in the tag is anaphoric to the subject of the matrix clause, this seems to be evidence against either the claim that *that* can be anaphoric to a property-denoting expression, or that the subject of a specificational clause is property-denoting. However, I will maintain both these claims, and argue that the impossibility of *that* in (5.104) is a special instance of a general ban on *that* in tag questions. The data in (5.105) show that *that* is generally not possible in tag questions. In (5.105a) and (5.105b) the subject denotes an inanimate entity, which is something that *that* is capable of referring

to. However, only *it* is possible in the tags. Even when the matrix subject is *that* itself, *that* is still not possible in the tag, as (5.105c) demonstrates.

- (5.105) a. That movie came out last year, didn't {\*that/it}?  
b. The plant needs water, doesn't {\*that/it}?  
c. [Pointing to a purse]  
That is yours, isn't {\*that/it}?

I believe the explanation for this is prosodic. As noted by Quirk et al. (1985:§6.16), *it* is almost never stressed (discounting metalinguistic uses<sup>21</sup>), while *that* is generally stressed. In a tag-question the nuclear accent falls on the auxiliary, while the pronoun is unstressed (Quirk et al. 1985:§11.8). This is why *it*, but not *that* can occur in tags.

Conversely, there are environments where property-anaphoric *that* is licensed, but *it* is not. One such environment is the predicate anaphor construction illustrated in (5.106) ((5.106a) is from Ross (1969:357)).<sup>22</sup>

- (5.106) a. They said that Sheila was beautiful, and she is {\*it/that}.  
b. They said that Sheila was beautiful, and {\*it/that} she is.

I believe this contrast is due to prosodic and syntactic factors, not semantic ones. In English there is a default preference for the nuclear stress to fall on the rightmost element within the intonational phrase. This disfavors *it* in (5.106), since *it* cannot

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<sup>21</sup>Another exception, pointed out to me by Judith Aissen, are the, possibly idiomatic, expressions *That is IT* and *This is IT*.

<sup>22</sup>Though note the felicity of *it* in a predicative position in (5.7) in section 5.1.1, so this generalization seems to have some exceptions.

carry nuclear stress (similar observations are made by Kuroda (1968:250–251)). The prosodic difficulties with *it* in (5.106) are only compounded by the fact, noted and discussed most extensively by Postal (1998:§2.3), that certain predicative positions in English cannot be occupied by weak definite pronouns; this ‘anti-pronominal’ characteristic is further illustrated in (5.107).

- (5.107) a. \*They said Sheila would remain lonely, and she did remain it.  
b. \*A bagel makes a great snack and a pretzel makes it too.

If the distribution of predicative *it* and *that* is indeed restricted by these prosodic and syntactic factors, we expect either form to be able to occur when these restrictions are not in force (i.e. outside anti-pronominal and prosodically restricted positions). This expectation is borne out in the other two environments: *it* and *that* can both occur as the resumptive pronoun in the left-dislocation constructions (see (5.2a)) and in the subject position of the answer to a specificational questions (see (5.3a)).

This concludes the discussion of the semantic type of the subject in the different kinds of copular clauses.

# Chapter 6

## The type of the Predicate Complement

### 6.1 Introduction

In this chapter I investigate the semantic type of the predicate complement and conclude that in specificational clauses this expression is referential, while in predicational clauses it is predicative. I present two arguments in favor of this claim. The first is based on the range of expressions (adjective phrases, prepositional phrases and various kinds of nominal expressions) that can occur as predicate complements in each of the two constructions. The argument here builds on the results of the previous chapter in establishing an initial distinction between predicational and specificational clauses. The second argument comes from the behavior of VP ellipsis in English copular clauses, and from the behavior of a very

similar process of VP anaphora in Danish copular clauses. While the argument from VP ellipsis (and VP anaphora) is more direct, the evidence it draws in is less clear cut than one would like it to be. In particular, there seems to be some interference from information structure. On the other hand, it is hard to imagine an information structural account of the distributional facts laid out in the first argument, so it seems that a purely semantic, type-theoretic distinction is warranted. Furthermore, the Danish VP anaphora facts allow us to make an important connection with the pronominalization contrasts discussed in the previous chapter.

## 6.2 Possible predicate complements

Using tag questions to distinguish predicational from specificational clauses, we can observe a difference in the kinds of expressions that can serve as the predicate complement in the two constructions. I show how this distributional pattern follows from the proposed type distinction, given certain fairly standard assumptions about the possible denotations of the expressions involved, lending indirect support for the proposed type-distribution. I first discuss the general pattern based on data from English, and then turn to a set of finer distinctions found in Danish.

**The general pattern** As shown in (6.1), possible predicate complements of specificational clauses include names, personal pronouns, definite DPs and indefinite DPs, but not NPs, APs or PPs (see Higgins (1979:264)).

- (6.1)
- a. The winner is Susan, isn't it?
  - b. The winner is you, isn't it?
  - c. The winner is the Mayor of Santa Cruz, isn't it?
  - d. The winner is a blonde, isn't it?
  - e. \*The winner is Mayor of Santa Cruz, isn't it?
  - f. \*The winner is blond, isn't it?
  - g. \*The winner is behind the screen, isn't it?

In contrast, predicational clauses allow PPs, APs, indefinite DPs, and definite DPs, but not names or personal pronouns (I included the conjuncts in (6.2a and b) to rule out an equative reading, which would also license *she* in the tag):

- (6.2)
- a. \*The winner is Susan (and pretty), isn't she?
  - b. \*The winner is you (and right here), isn't she?
  - c. The winner is the Mayor of Santa Cruz, isn't she?
  - d. The winner is a blonde, isn't she?
  - e. The winner is Mayor of Santa Cruz, isn't she?
  - f. The winner is blond, isn't she?
  - g. The winner is behind the screen, isn't she?

This distributional pattern can be described as follows:

- (6.3)
- i. One class of expressions (names and personal pronouns) can only occur as predicate complements in specificational clauses.
  - ii. Another class of expressions (NPs, APs, and PPs) can only occur as predicate complements in predicational clauses.

- iii. A third class (definite and indefinite DPs) can occur as predicate complements in either kind of copular clause.

We then observe that these three classes can be characterized in terms of semantic types:

- (6.4)
- i. Names and personal pronouns can only be individual-denoting.<sup>1</sup>
  - ii. APs, PPs and determinerless NPs can only be property-denoting.<sup>2</sup>
  - iii. Definite and indefinite DPs can be either individual-denoting or property-denoting.

Putting these two sets of observations together we arrive at the following characterization of the data in (6.1) and (6.2):

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<sup>1</sup>At least when the name is used with Acquaintance, as discussed in section 4.1 of chapter 4.

<sup>2</sup>This is not quite true, if we assume with Chierchia (1984) and Partee (1987) that at least some APs can type-shift from a property denotation to a type  $\langle e \rangle$  denotation via the type-shifter NOM. In these accounts this is what accounts for the interpretation of *blue* in an example like (i), and for the subtle ambiguity of (ii):

- i I like blue.
- ii My favorite color is blue.

On the most natural reading (ii) is a specificational clause: it specifies blue as my favorite color. The other reading is predicational: it predicates of my favorite color that it has the color blue (which is either false or a rather odd way of saying the same thing, depending on one's beliefs about the nature of colors). Returning to example (6.1f) in the text, we might then ask whether *blond* could be shifted by NOM to denote the entity correlate of blond, inducing a specificational reading of the sentence. A context supporting such a reading could be one where a range of hair coloring products are competing for best hair color of the year. It seems to me that in that context, (6.1f) could perhaps be used, specificationally, to announce the winner of the competition. But notice that this interpretation of (6.1f), if it exists, is crucially different from the specificational reading of (6.1d). The latter can be used to announce the winner when humans are competing, the former cannot. The distinction between APs and (indefinite) DPs made in the text therefore holds as long as we restrict attention to readings involving humans, and those are, at least in English, the only ones where we can use pronominalization to tell predicational and specificational clauses apart.

- (6.5) a. Only expressions that can denote individuals occur as predicate complements in specificational clauses.  
 b. Only expressions that can denote properties occur as predicate complements in predicational clauses.

This is exactly the type distinctions that I am proposing, and the fact that they provide a succinct and empirically adequate characterization of the observed pattern lends indirect support to this proposal.

**Further evidence from Danish** Further evidence is available in Danish where nominal expressions for nationality and occupation appear as bare (i.e. determinerless) NPs:

(6.6) Han er **svensker**.  
 he is Swede  
*'He is a Swede.'*

(6.7) Hun er **finne**.  
 she is Finn  
*'She is a Finn.'*

(6.8) Han er **læge**.  
 he is doctor  
*'He is a doctor.'*

(6.9) Hun er **bokser**.  
 she is boxer  
*'She is a boxer.'*

These bare NP expressions can only occur in predicative positions; they are impossible in regular argument positions, as the following examples show:

(6.10) \*Jeg mødte **svensker** på færgen.  
 I met Swede on ferry-DEF

- (6.11) \***Finne** blev valgt til generalsekretær.  
 Finn was elected to general-secretary
- (6.12) \*Vi har brug for **læge**.  
 we have need for doctor
- (6.13) \*Han er kæreste med **bokser**.  
 he is sweetie with boxer

To appear in argument position a determiner is needed. Thus the four examples above are all good with an indefinite DP in place of the bare NP:

- (6.14) Jeg mødte **en svensker** på færgen.  
 I met a Swede on ferry-DEF  
*'I met a Swede on the ferry.'*
- (6.15) **En finne** blev valgt til generalsekretær.  
 a Finn was elected to general-secretary  
*'A Finn was elected secretary general.'*
- (6.16) Vi har brug for **en læge**.  
 we have need for a doctor  
*'We need a doctor.'*
- (6.17) Han er kæreste med **en bokser**.  
 he is sweetie with a boxer  
*'He is dating a boxer.'*

In contrast, replacing the NPs in (6.6)–(6.9) with unmodified indefinite DPs results in very odd sentences, which can only be interpreted as equative.

- (6.18) #Han er **en svensker**.  
 he is a Swede
- (6.19) #Hun er **en finne**.  
 she is a Finn
- (6.20) #Han er **en læge**.  
 he is a doctor

- (6.21) #Hun er **en bokser**.  
 she is a boxer

As equatives these are very uninformative, which is probably why they are so odd (see Higgins (1979:243–245) for relevant discussion). I interpret this to mean that the bare NPs can only be property-denoting, while the corresponding indefinite DPs can only be referential. Given this much, what we expect is that indefinite DPs, but not bare NPs, should occur as predicate complements of Danish specificational clauses. This is indeed what we find (I include the adverb *nok* (probably) to rule out any possibility of predicate topicalization):

- (6.22) a. Vinderen er nok **en svensker**, er **det** ikke?  
 winner-DEF is probably a Swede, is it she not  
 b. Vinderen er nok **svensker**, er {**\*det** / **hun**} ikke?  
 winner-DEF is probably Swede, is it / she not

In (6.22a) we have the referential indefinite DP *en svensker* as predicate complement, and the sentence has a specificational interpretation, as shown by the neuter pronoun *det* in the tag. (6.22b) shows that replacing the referential DP with the corresponding property-denoting NP *svensker*, removes the specificational reading (*det* is no longer possible in the tag), leaving us with only a predicational reading (indicated by the possibility of the referential pronoun *hun* in the tag). We find exactly the same pattern with the occupational NP *læge* (doctor), as shown in (6.23).

- (6.23) a. Den nye kasserer er nok **en læge**, er **det** ikke?  
 the new treasurer is probably a doctor, is it not
- b. Den nye kasserer er nok **læge**, er {**\*det** / **hun**} ikke?  
 the new treasurer is probably doctor, is it / she not

What this shows is that very fine-grained distinctions in the distribution of nominal elements in the post-copular position are also captured by the type-characterization in (6.5), which gives it additional support. Next we turn to a different kind of evidence for it, which comes from the behavior of VP ellipsis in copular clauses.

### 6.3 VP ellipsis as a test for semantic type

In the prototypical instance, the process known as VP Ellipsis (VPE) targets a verb phrase. This is illustrated in (6.24) where the VP *help you* is missing.

- (6.24) I can't help you, but Chris can \_\_\_\_\_.

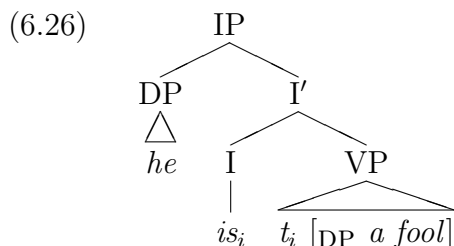
However, it has been suggested (Rothstein (2001:64–65), Kay (2002:465, fn. 19), Jorge Hankamer p.c.) that VPE can target phrases that are not VPs, as long as these are semantically predicative.<sup>3</sup> This is not surprising, if VPE operates on  $\lambda$ -abstracts at the level of logical form, as suggested by Sag (1976). A candidate example of such non-VP VPE is given in (6.25), where VPE appears to have targeted the predicative DP *a fool*:<sup>4</sup>

<sup>3</sup>Baltin (1995) argues that VPE can target also non-predicative expressions, but his notion of predicative seems to be a syntactic one, which does not necessarily coincide with the semantic notion of predicative which is at issue here.

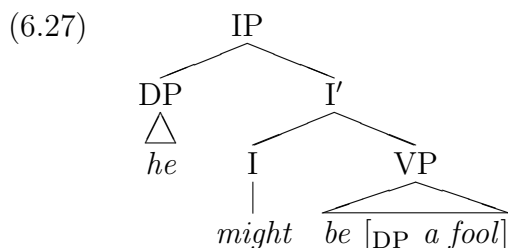
<sup>4</sup>This example was inspired by the example in (i) (from Jane Smiley's "Duplicate Keys", Fawcett Columbine, New York, p. 16).

(6.25) You aren't a fool, but he is \_\_\_\_\_.

However, we have to be careful when making this claim, because there is another possible interpretation of (6.25) on which it does involve ellipsis of a VP. To see this, consider the schematic structure in (6.26):



On the standard assumption that the copula moves to I, we cannot tell from the string in (6.25) whether the target of ellipsis is the entire VP or just the DP, since they would produce the same surface form (*he is*). To distinguish these two possibilities we need to look at examples where the copula doesn't move or in which, at least, the evidence for raising of *be* is less secure. (6.27) is such a case.



The question is how (6.27) would be pronounced under VPE, in particular whether the copula would be pronounced or not. As (6.28) shows, it is possible to delete

- 
- i. "Just because you're a fool," said Ray, "doesn't mean he wasn't."

I'll use the example in (6.25) to avoid the complications introduced by negation and the past tense in (i).

just the DP, indicating that VPE can target non-VP predicative phrases.<sup>5</sup>

(6.28) You aren't a fool, but he might be \_\_\_\_\_.

Further evidence for this point of view comes from the examples in (6.29) where the deleted phrase is an AP, (6.30) where the deleted phrase is a PP, and (6.31) where the deleted phrase is a possessive DP.<sup>6</sup>

(6.29) You aren't [crazy], but he might be \_\_\_\_\_.

(6.30) You clearly aren't [in the mood], but he might be \_\_\_\_\_.

(6.31) Susie makes a lot of things [her business] that shouldn't be \_\_\_\_\_.

Having established that VPE can target not only VPs but also other predicative phrases, it is relevant to turn to specificational copular clauses, to see if this ellipsis process can target the predicate complement in these clauses as well. (Notice that the copular clauses in (6.28)–(6.31) are all predicational.) Some attempts at this are given in (6.32)–(6.34), and they are all degraded.<sup>7</sup>

(6.32) \*Some people think that the smartest person in the department is Betty, but they are wrong; the luckiest person is \_\_\_\_.

(6.33) \*The fact that the tallest player is Harry doesn't mean that the best player is \_\_\_\_.

(6.34) \*I know that the lead actress in that movie is Ingrid Bergman, and I think the one in *Double Indemnity* is \_\_\_\_ too.

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<sup>5</sup>In this example, at least, it seems impossible to also delete the copula; see Lasnik (1995) for some relevant discussion.

<sup>6</sup>(6.31) is an attested example reported to me by Jim McCloskey.

<sup>7</sup>I am not entirely sure how to annotate these examples, in particular whether I am justified in using the '\*'. See the discussion at the end of 6.3.1.1.

I suggest that we can take this as evidence that the predicate complement of specificational clauses is not semantically predicative, but rather referential. In section 6.3.2, I present a similar contrast in Danish copular clauses, supporting the same conclusion. However, there are some complicating factors, which I will attempt to deal with first.

### 6.3.1 Some complicating factors

There are several objections to the argument I am trying to make here. First, there is an alternative account of the unacceptability of VPE in specificational clauses, due to Higgins (1979). Secondly, there is evidence that even in the absence of VPE there is something amiss with the examples in (6.32)–(6.34). Finally, there is some indication that the degradation of these examples can be ameliorated by varying the linguistic context, which is somewhat unexpected if the source of their unacceptability is a “hard” semantic type clash. I discuss these in turn.

#### 6.3.1.1 An alternative account in terms of focus

Higgins (1979:300–302) argues that the predicate complement of a specificational pseudo-cleft cannot be deleted or moved because it is the focus of the clause:

(6.35) \*What John is is **proud of himself** and what Mary is is \_\_\_ too.

In contrast, deletion of the predicate complement is possible in a predicational pseudo-cleft:

(6.36) What John is is **a danger to him** and what Mary is is \_\_\_ too.

Assuming that non-clefted specificational clauses have the same focus structure as pseudo-clefts, Higgins's account of the contrast between (6.35) and (6.36) would carry over to the contrast between the specificational clause in (6.37) and the predicational clause in (6.38):

(6.37) \*Some people think that the smartest person in the department is Betty, but they are wrong; the luckiest person is \_\_\_.

(6.38) I know that Ingrid Bergman is {from Sweden/Swedish/a proud Swede}, and I think Liv Ullmann might be \_\_\_ as well.

If correct, this interpretation would weaken my claim that the unacceptability of (6.37) is due to the predicate complement not being semantically predicative.

There is, however, reason to doubt that a violation of Higgins' constraint (don't delete or move a phrase that is focused) is the source of the unacceptability of (6.37). The outline of the argument is as follows (this line of argument was suggested to me by Jim McCloskey p.c. August 23, 2002):

- There is evidence that VPE can target expressions containing a focus (assuming that the focus structure of an elided phrase is determined by the focus structure of its antecedent). An example of this is (6.39). (In this and the following examples, the use of CAPS indicate focus via prosodic prominence).

(6.39) Sara doesn't even **like BLACK coffee**. Chris does \_\_\_ though.

- Specificational clauses are possible where the predicate complement contains a narrow focus (i.e. the focussed element is properly contained within the predicate complement):

(6.40) The most gifted student in the class is **the one wearing the ORANGE sweater**, isn't it?

- But VPE is still impossible:

(6.41) \*No, you're wrong: the least gifted is \_\_\_.

- Since VPE of a predicative phrase properly containing a focussed element is allowed (cf. (6.39)), and since specificational clauses with a narrow focus inside the predicate complement are allowed (cf. (6.40)) the failure of VPE in specificational clauses such as (6.41) cannot be solely attributed to an improper interaction between VPE and some focus requirement on specificational clauses.

It should be noted that the explanation in terms of semantic types that I advocate does not, as it stands, offer an account of the contrast between (6.35) and (6.36).

### 6.3.1.2 A possible confound

There is evidence that there is something problematic about the coordinations of specificational clauses in (6.32)–(6.34) that goes beyond VPE. In particular, it seems problematic to have the predicate complement of the second clause be anaphorically dependent on the predicate complement of the first clause (which is required for VPE). This anomaly is brought out by the examples in (6.42)–(6.44), where the ellipsis site is filled by a pronoun. To most speakers, these are not fully

acceptable.<sup>8</sup>

(6.42) #Some people think that the smartest person in the department is Betty, but they are wrong; the luckiest person is her.

(6.43) #The fact that the tallest player is Harry doesn't mean that the best player is him.

(6.44) #I know that the lead actress in that movie is Ingrid Bergman, and I think the one in *Double Indemnity* is her too.

The oddness of these examples could have to do with information structure, in particular a clash between the requirement that the predicate complement of a specificational clause be focus and the anaphoric nature of the elements that fill that position in the righthand conjuncts in (6.42)–(6.44).<sup>9,10</sup> (Notice that the linguistic context for these examples clearly favors an anaphoric interpretation of the pronouns.) This explanation is very close to the position articulated in (Higgins 1979:235) with respect to the examples in (6.45), which he judges to be ungrammatical:

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<sup>8</sup>To my non-native ear (6.42) sounds worse than (6.43) and (6.44). (6.43) is still somewhat odd, whereas (6.44) is only very slightly degraded. I have not investigated this with native speakers. The degree of contrast might also play a role: in (6.42) *but* indicates a sharp contrast, whereas the contrast in (6.43)—associated with *doesn't*—is less sharp, and there is no contrast in (6.44).

<sup>9</sup>I hedge the claim about anaphoric elements resisting focus, because it has been argued that this connection is at best indirect, see e.g. Reinhart (1982:17–18), Vallduví (1992:11ff), Lambrecht (1994:129ff).

<sup>10</sup>A partially overlapping explanation was suggested to me by Bill Ladusaw, namely that the trouble with the examples in (6.32)–(6.34) is that the specificational clause in the first conjunct sets up an inappropriate discourse context for the one in the second conjunct. In particular, the first conjunct sets up a discourse context where the predicate complement is Discourse-Old, and where the subject is not Discourse-Old. I discuss the discourse conditions on specificational clauses in chapter 8.

- (6.45) a. \*The one I wanted to talk to was him.  
 b. \*You mentioned Laurel and Hardy. You're quite right. The film stars she likes best are them.

This line of explanation is supported by the examples below, where I have changed the context (and prosody) to favor a deictic interpretation of the pronouns, thereby severing the anaphoric link between the two predicate complements. These coordinations seem more acceptable:

- (6.46) [Pointing, discretely, to a woman across the room]  
 The smartest person in the department is Betty, but the luckiest person is HER.
- (6.47) [Pointing at a player on the field]  
 The tallest player is Harry but the best player is HIM.
- (6.48) [At the Oscar's (a long time ago), pointing at a person on stage]  
 The lead actress in that movie was Ingrid Bergman, but the lead actress in *Double Indemnity* was HER.

One important thing to notice about these examples and the ones in (6.42)–(6.44) is that the pronoun filling the position of predicate complement has to be the referential pronouns *he* and *she*. The property-denoting *that* and *it* are both completely impossible, as shown below (I use *it* in the examples with anaphoric interpretations and *that* in the ones with deictic interpretations).

- (6.49) \*Some people think that the smartest person in the department is Betty<sub>*i*</sub>, but they are wrong; the luckiest person is it<sub>*i*</sub>.
- (6.50) \*The fact that the tallest player is Harry<sub>*i*</sub> doesn't mean that the best player is it<sub>*i*</sub>.
- (6.51) \*I know that the lead actress in that movie is Ingrid Bergman<sub>*i*</sub>, and I think the one in *Double Indemnity* is it<sub>*i*</sub> too.

- (6.52) [Pointing, discretely, to a woman across the room]  
 \*The smartest person in the department is Betty, but the luckiest person is THAT.
- (6.53) [Pointing at a player on the field]  
 \*The tallest player is Harry but the best player is THAT.
- (6.54) [At the Oscar's (a long time ago) pointing at a person on stage]  
 \*The lead actress in that movie was Ingrid Bergman, but the lead actress in *Double Indemnity* was THAT.

The only possible interpretations of *it* in the examples above is one where it is anaphoric to the subject of the first conjunct. Thus in understanding this complicated and subtle cluster of effects we are brought back again to our original claim—that there is an important difference in semantic type (reflected in part in the felicity of different pronouns) between the predicate complement of predicative *be* and the predicate complement of specificational *be*.

Finally Bill Ladusaw has brought the example in (6.55) to my attention. Here it looks like the predicate complement of a specificational clause (the one occurring as the complement to *mean*) has been elided:

- (6.55) Just because the best player on the team isn't Harry, doesn't mean that the richest player isn't \_\_\_.

There are various issues that need to be resolved to determine the implications of (6.55) for the characterization of specificational clauses. First, far from all speakers accept (6.55), so it needs to be investigated how robust the acceptability of (6.55) is, and whether it correlates with differences in the acceptability of other key examples. Second, it might be that what is responsible for the missing predicate complement in (6.55) is not VPE, but some other process. This

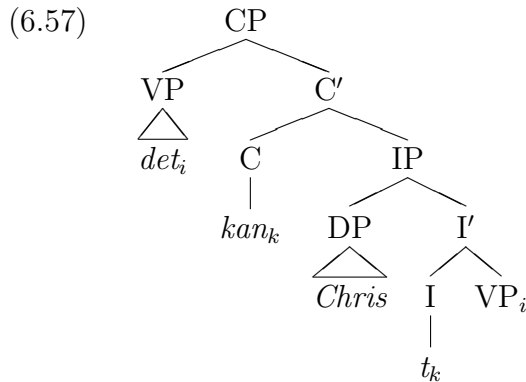
would allow us to maintain both that VPE targets only type  $\langle e,t \rangle$  complements and that the predicate complement of specificational clauses is not of type  $\langle e,t \rangle$ . Thirdly, it might be that the complement clauses in (6.55) are not specificational despite appearances. I will not attempt to resolve these issues here, but tentatively conclude that the behavior of VPE in copular clauses offers some support for the type-characterization proposed here, although several issues remain open for discussion.

### 6.3.2 VP anaphora in Danish

In place of English VP ellipsis, Danish has a VP anaphora process illustrated in (6.56).

- (6.56) Jeg kan ikke hjælpe dig, men **det**<sub>*i*</sub> kan Chris *t*<sub>*i*</sub>.  
 I can not help you, but it can Chris  
 ‘I can’t help you, but Chris can,’

Instead of the VP *hjælpe dig* (help you) being elided in the second conjunct, it is replaced by the pronoun *det* (it), which is then fronted to Spec-CP. This fronting is accompanied by movement of the modal to the C position, which is why the modal appears to the left of the subject *Chris*. This derivation is illustrated schematically in the structure below:



This process shares many of the characteristics of English VP ellipsis: it allows for sloppy and strict readings of pronouns inside the pronominalized VP, it carries a similar licensing condition on the environment to the left of (the base-position of) the VP-anaphor, the target VP can be embedded, etc. The key difference is in the overt realization, namely as pronominalization (plus movement) rather than ellipsis.

Turning to copular clauses, we observe that VP anaphora can target the predicate complement of a predicational clause, whether this be a DP, PP or AP (as in the English examples above I include a modal to be sure that it is just the predicate complement and not the entire VP that is targeted by the pronominalization operation; the base-position of the VP anaphor is indicated by *t*):

(6.58) Ingrid er [<sub>DP</sub> en dygtig klaverspiller ], så **det** må hendes søster også  
 Ingrid is a competent piano-player , so it must her sister also  
 være *t*.  
 be t  
 ‘*Ingrid is a good piano player, so her sister must be too.*’

(6.59) Ingrid er [<sub>PP</sub> fra Sverige ], så **det** må hendes søster også være *t*.  
 Ingrid is from Sweden , so it must her sister also be t  
 ‘*Ingrid is from Sweden, so her sister must be too.*’

- (6.60) Ingrid er [<sub>AP</sub> svensk ], så **det** må hendes søster også være *t*.  
 Ingrid is Swedish , so it must her sister also be *t*  
*‘Ingrid is Swedish, so her sister must be too.’*

At this point we can make a connection with the Danish pronominalization facts discussed in the previous chapter. There I argued that the pronoun *det* is similar to English *it* and *that* in that it can be used to pronominalize predicative expressions. The fact that it is exactly this pronoun that is used in the Danish VP anaphora construction is clearly consistent with the claim that this construction targets semantically predicative expressions.

Turning then to specificational clauses, we observe that these resist VP anaphora:

- (6.61) \*Den højeste spiller er [Minna], så **det** må den bedste spiller også være  
 the tallest player is Minna, so it must the best player also be  
*t*.  
*t*
- (6.62) [Said by a niece to her aunt]  
 \*Min yngste søster er [Susan], så **det** må din yngste niece også være  
 my youngest sister is Susan, so it must your youngest niece also be  
*t*.  
*t*

The claim that this contrast reflects a type-theoretic difference is open to some of the same objections as those discussed in connection with the English VP facts above. I don't have much to add to that discussion here, except to note that the unacceptability of VP anaphora in Danish specificational clauses does not seem to be subject to contextual variation, in the way it was suggested above that the corresponding English data are.

To summarize; I have presented two arguments for a type distinction in the post-copular position of predicational and specificational clauses. One argument came from the kinds of expressions (DPs, NPs, APs, and PPs) that occur in the two positions, the second one from the possibility of VP ellipsis/anaphora of this expression.

# Chapter 7

## Consequences and Extensions

In this chapter I investigate some consequences and extensions of the semantic analysis of specificational clauses developed above. In the first half, I test a prediction made by the analysis, namely that only DPs capable of denoting properties can occur as subjects of specificational clauses. Working from a sample of different kinds of DPs, I argue that this prediction is borne out with an interesting complication regarding indefinite DPs. In the second half, I extend the analysis of specificational clauses to so called truncated clefts, arguing that these are specificational clauses with an anaphoric subject. I show how this analysis is supported by a set of contrasts between truncated clefts and the minimally different demonstrative equative construction, and discuss the consequences for Higgins' taxonomy.

## 7.1 Possible specificational subjects

Given Partee's (1987) observation that not all DPs can occur in all three semantic types, our characterization of specificational clauses as involving a property-denoting subject gives rise to a prediction, namely that only DPs capable of denoting a property can occur as subjects of a specificational clauses. The purpose of this section is to test this prediction, which I will formulate as (7.1):

- (7.1) A necessary, but not sufficient, condition for a DP to be the subject of a specificational clause is that the DP can denote a property (that is, occur in type  $\langle e,t \rangle$ ).

I will test this prediction by examining three groups of DPs. The first group contains DPs that uncontroversially occur in type  $\langle e,t \rangle$  (definite descriptions, possessive DPs and partitive DPs) and show that these occur as subjects of specificational clauses. The second group contains DPs that have been argued not to occur in type  $\langle e,t \rangle$  (proper names, strongly quantificational DPs and some pronouns) and show that these also do not occur as subjects of specificational clauses. The third group is indefinite DPs, which can have a predicative interpretation, but have been argued not to occur as subjects of specificational clauses. While this is true for some indefinites, there are felicitous instances of indefinite specificational subjects, and I argue that to understand this difference between the two kinds of indefinites we need to consider the pragmatic constraints on specificational clauses, especially the discourse-conditions imposed on its subjects. These

issues figure centrally in the final part of the dissertation, and I will investigate indefinite specificational subjects in more detail in chapter 8.

### 7.1.1 Group I: Definite descriptions, possessive DPs, and partitive DPs

These DPs can occur in all three types, including the predicative type (Partee (1987:123–125), Thomsen (1997a:74ff)). Their predicative use is illustrated in (7.2) where they occur as the second element of the small clause complement of *consider*. As argued by Rothstein (1995), it is a defining characteristic of small clauses that the second element is predicative (though see Heycock and Kroch (1999) for relevant discussion). In (7.2), the small clause is in square brackets, and the predicative element(s) in curly braces.

(7.2) I consider [Mary {the best person for the job/my best friend/one of my best friends}]

As the examples in (7.3) through (7.13) attest, all three kinds of DPs also occur as specificational subjects, in accordance with the correlation articulated in (7.1).

**Definite descriptions** We have already seen grammatical examples of specificational clauses with definite description subjects above. Below are some more examples gathered from various newspapers and magazines. Throughout the subject DP is in bold.

- (7.3) **Det mest veltalende indlæg i debatten om kulturel forsoning** the most well-spoken contribution in debate-DEF about cultural reconciliation er Oliver Stones dokumentarfilm *Persona Non Grata*.<sup>1</sup> is Oliver Stone's documentary-film *Persona Non Grata* 'The most articulate contribution to the debate about cultural reconciliation is Oliver Stone's documentary *Persona Non Grata*.'
- (7.4) **The most successful such enterprise** is i-flex solutions Ltd., whose Flexcube is the world's bestselling banking software package.<sup>2</sup>
- (7.5) "Hele Londons jet-set og medier har nu i ugevis sladret som whole London's jet-set and media have now for weeks gossiped like sindsyge om at '**det højtstående medlem af kongefamilien**' der mad about that the high-standing member of royal-family-DEF that **skulle have været involveret i en påstået upassende episode ved hoffet, som en tidligere ansat hævder at have overværet,** should have been involved in an alleged improper episode at court-DEF that a former employee claims to have witnessed, **skulle være Prins Charles,"** sagde sir Michael Peat.<sup>3</sup> should be prince Charles said Sir Michael Peat. ' "For weeks all of London's jet-set and media have been speculating that 'the prominent member of the royal family' who supposedly has been involved in an alleged improper episode at the court that a former employee claims to have witnessed could be Prince Charles" said Sir Michael Peat.'

**Possessive DPs** These also occur readily as subjects of specificational clauses as the following examples show:

<sup>1</sup>From Bo Green Jensen "Stilheden mellem to tanker" (The silence between two thoughts), *Weekendavisen Kultur*, September 5–11 2003, p. 1.

<sup>2</sup>Shailaja Neelakantan "India's IT Firms: Beyond Outsourcing", *The Wall Street Journal Europe*, November 20, 2003, p. A9.

<sup>3</sup>Annegrethe Rasmussen "Royale rygter ryster Windsor" (Royale rumors shock Windsor), *Information*, November 8-9, 2003, p. 20.

- (7.6) **Our next speaker** is Claudia Maienborn.<sup>4</sup>
- (7.7) **My German consultant** is Trude Heift.<sup>5</sup>
- (7.8) **His main deputy in the subject** is Brett Kavanaugh, a Federalist Society member who ...<sup>6</sup>
- (7.9) Ifølge de seneste prognoser er **valgets** **favorit** partiet  
 according-to the latest polls is election-DEF-POSS favorite party-DEF  
 Det Forenede Rusland, *Jedinaja Rossija*.<sup>7</sup>  
 the united Russia, Jedinaja Rossija  
 ‘According to the latest polls, the favorite to win the election is the party  
 United Russia, Jedinaja Rossija.’
- (7.10) When I reached my station I bought a paper; and, reading the tail-end of that sentence, discovered that **Rysty’s bride** was: a beautiful cover girl from the Arkansas hills, Miss Margaret Thatcher Fitzhue Wildwood. Mag!<sup>8</sup>

**Partitive DPs** These also occur as subjects of specificational clauses, as illustrated in the examples below. Note that the embedded, definite DP may be a definite description, as in (7.11) and (7.12), or a possessive DP, as in (7.13).<sup>9</sup>

<sup>4</sup>Rainer Blutner, session chair at the workshop “Pragmatics in Optimality Theory” at the 14th ESSLLI in Trento, August 14 2002.

<sup>5</sup>Hedberg (2000:893, fn. 5).

<sup>6</sup>Jeffrey Toobin “Advice and Dissent”, *The New Yorker*, May 26 2003, p. 47.

<sup>7</sup>Anna Libak “Designet demokrati” (Democracy by design) *Weekendavisen*, December 5–11 2003, p. 9.

<sup>8</sup>Truman Capote *Breakfast at Tiffany’s*, Vintage International edition, p. 76.

<sup>9</sup>Also note that Danish does not make an obligatory orthographic distinction corresponding to English *one* vs. *a*. The distinction can be made by doubling the vowel (*een/eet*) and/or an accent (*én/ét*), both of which get rid of the article meaning. Though neither of these devices are used in the Danish examples in (7.11) and (7.12) I nonetheless gloss these as *one*, in correspondence with the English translation where only *one* is possible.

- (7.11) **En af de danske skribenter, jeg altid har beundret næsten uden reservation,** er den som tennisspiller mere kendte Torben Ulrich.<sup>10</sup>  
 One of the Danish writers I always have admired almost without reservation is the as tennis-player more known Torben Ulrich  
*‘One of the Danish writers that I have always admired almost without reservation is Torben Ulrich, who is in fact better known as a tennis player.’*
- (7.12) **Et af de store problemer** er det rådgivende regeringsråd på 25 personer,  
 one of the big problems is the advisory council of 25 people  
 som USA oprettede og som repræsenterer Iraks forskellige etniske og  
 that USA created and that represents Iraq’s different ethnic and  
 religiøse grupperinger.<sup>11</sup>  
 religious groups.  
*‘One of the big problems is the 25 person advisory council which the US created and which represents the different ethnic and religious groups in Iraq.’*
- (7.13) **“One of my heroes** is [Apple Computer Inc. founder] Steve Jobs” says  
 Rajesh Hukku, i-flex’s founder and chief executive.<sup>12</sup>

The fact that these three kinds of DPs (definite descriptions, possessive DPs and partitive DPs) occur as subjects of specificational clauses is in line with (7.1), since they satisfy the central semantic condition for occupying this position identified in (7.1): they can all denote properties, and that, according to the argument laid out in chapter 5, is exactly what subjects of specificational clauses denote.

<sup>10</sup>Dan Turrel, quoted in Lars Bukdahl “Beatnik med boldøje” (Beatnik with an eye for the ball), *Weekendavisen Bøger*, May 9–14 2003, p. 2.

<sup>11</sup>Jens Holsøe “USA’s allierede presser på for kursskifte” (US allies push for change of course), *Politiken*, November 14, 2003, p. 11.

<sup>12</sup>Shailaja Neelakantan “India’s IT Firms: Beyond Outsourcing”, *The Wall Street Journal Europe*, November 20, 2003, p. A9.

### 7.1.2 Group II: Quantificational DPs, pronouns, and names

These DPs do not (readily) occur in the predicative type, as indicated by their inability to occur as small clause predicates:

(7.14) #I consider [Ingrid Bergman and Liv Ullmann {most actresses in that movie}].

(7.15) #I consider [Mary {her/Mrs. Robinson}].

The reason for the lack of a predicative reading varies from case to case, so I will discuss this individually for each of the three types of DP. What they have in common is that they do not occur as subjects of specificational clauses (except for a well-defined subset of pronouns: see below). Based on (7.1) we can understand their inability to occur in this position as a direct consequence of their inability to occur in the predicative type.

**Strongly quantificational DPs** These are DPs formed with determiners like *every*, *both*, *all*, and *most* (a more comprehensive list is given in Barwise and Cooper (1981:182)). By default, they denote generalized quantifiers. Partee (1987:124–125) shows how generalized quantifier denotations can be shifted into predicative denotations by application of the type-shifter BE. Intuitively speaking, BE applies to a generalized quantifier (i.e. a set of sets of individuals), finds all the singleton sets and collects their members into a set (Partee 1987:127). While BE is always defined (it is a total function) the result is sometimes “degenerate”, in the sense that it yields unsatisfiable predicates (Partee 1987:118–119). For instance in the case of a strongly quantificational DP like *most politicians*, there are no single-

ton sets in its generalized quantifier denotation, and hence the result of applying BE to the generalized quantifier denotation is the empty set.<sup>13</sup> Since nothing is the member of the empty set, the resulting predicate is unsatisfiable. Thus we can understand the unacceptability of (7.14) as due the lack of a non-degenerate, satisfiable predicative denotation for *most actresses*.

Given these observations and the hypothesis in (7.1) we expect strongly quantificational DPs not to be able to occur as subjects of specificational clauses, and that is what we find, as shown in (7.16) – (7.18).<sup>14</sup>

(7.16) \***Both actresses in that movie** are Ingrid Bergman and Liv Ullmann.

(7.17) \***Most actresses in that movie** are Ingrid Bergman and Liv Ullmann.

(7.18) \***Every actress in that movie** is Ingrid Bergman or Liv Ullmann.

Note that unlike the previous cases, the subject DPs in (7.16)–(7.18) are all plural. However, their ungrammaticality cannot simply be due to the subject DP being plural, since there are well-formed examples of specificational clauses with a plural subject DP:

(7.19) **Favoritterne** er Zatoichi, japaneren Takeshi Kitanos svært populære favorites-DEF are Zatoichi, Japanese Takeshi Kitano’s heavily popular debut i samuraigenren, og Andrej Zvjagintsevs russisk rugende debut in samurai-genre-DEF and Andref Zvjagintsev’s Russianly brooding

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<sup>13</sup>The exception to the generalization that the set of sets denoted by *most politicians* does not contain any singletons is the limiting case where there is only one politician in the domain of interpretation. In this case, however, Gricean principles would compel us to use *the politician*, rather than *most politicians*, cf. Partee’s discussion of *every man* vs. *the man* on p. 127.

<sup>14</sup>The only reading possible for these sentences is a “derived” predicational one where some actresses (both, most, or all, depending on the example) pretend to be Ingrid Bergman and/or Liv Ullmann.

Vozvrascenje (Hjemkomsten).<sup>15</sup>  
 Vozvrascenje (homecoming-DEF)  
 ‘The favorites are Zatoichi, the Japanese director Takeshi Kitano’s wildly popular debut in the samurai genre and Andref Zvjagintsev’s brooding (in a Russian manner) Vozvrascenje (The Homecoming).’

In the grammatical example in (7.19) the complement of the copula is a coordinated DP, just as is the case in the ungrammatical examples in (7.16)–(7.18). However, in (7.19) the subject DP is a plural definite description *favoritterne* (the favorites), and not a quantifier. Definite descriptions, including plural ones, can denote properties. We can maintain this claim either on the grounds that this is their default type (as argued by Graff (2001)) or by virtue of their ability to denote plural individuals (in the sense of Link (1983)), from which a predicative reading can be derived by application of Partee’s type-shifter IDENT, as shown in the previous chapter. Thus the contrast between (7.19) and (7.16)–(7.18) is in line with the hypothesis pursued here.

The difference between so-called distributive and collective readings of plural DPs might also play a role in the (un)grammaticality of these sentences, but that requires a separate investigation. (On the difference between distributive and collective interpretations, see e.g. Link (1983), Thomsen (1997a:129–165), and references cited there.)

**Pronouns** Outside of their uses as bound variables, pronouns like *she*, *he*, and *they* seem inherently referential. These pronouns do not have any obvious quan-

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<sup>15</sup>From Bo Green Jensen “Stilheden mellem to tanker” (The silence between two thoughts), *Weekendavisen Kultur*, September 5–11 2003, p. 1.

tificational structure, and apart from basic information about gender and number they have no descriptive content. According to Heim and Kratzer (1998:244) this number and gender information is presupposed in the use of a pronoun, not asserted. As the examples in (7.20) and (7.21) show, this information can be exploited to create a predicative meaning, but only when these pronouns are assisted by the indefinite article:

(7.20) Holy smoke! The chief chef is a she!<sup>16</sup>

(7.21) The Holy Spirit is a He, not an It.<sup>17</sup>

In these examples a *she* and a *he* seem to be used to mean ‘female’ and ‘male’, respectively, exploiting the gender (and, in the case of (7.21), animacy) information presupposed by each of the pronouns. The property of being female/male is predicated of the subject of the clause (the chef and the Holy Ghost, respectively). However, this predicative reading disappears if we remove the indefinite article. Thus (7.22) is not synonymous with (7.20), nor is (7.23) synonymous with (7.21).<sup>18</sup>

(7.22) Holy smoke! The chief chef is her!

(7.23) The Holy Spirit is him, not that.

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<sup>16</sup>Headline in online edition of *The Hindu*, August 15 2003.  
(<http://www.hinduonnet.com/thehindu/mp/2003/08/25/stories/2003082501650300.htm>).

<sup>17</sup>Posting at “What do the scriptures say? Bible Questions and Answers”  
(<http://www.scripturessay.com/q451b.html>).

<sup>18</sup>I use *that*, rather than *it* in (7.23), because it occurs in is what Postal (1998:§2.3) calls an ‘antipronominal’ context, which does not accept weak pronouns like *it*. Notice also the obligatory change to the accusative form of the gendered pronoun.

This is valuable evidence that these pronouns, on their own, cannot denote properties. Consistent with this observation, they also do not occur as the second constituent of a small clause:

(7.24) \*I consider [the best doctor in the county {him/her}].

We thus expect these pronouns not to be able to function as subjects of specificational clauses. This is indeed the case, as the examples in (7.25) and (7.26) show:

(7.25) \***She** is Ingrid Bergman, isn't it?

(7.26) \***They** are Ingrid Bergman and Liv Ullmann, isn't it?

I include the tag question to be sure that these are interpreted as specificational clauses. Without the tag (or with a gendered pronoun in the tag) the matrix clauses can be interpreted as an Identity statement (see chapter 5, section 5.2.1), i.e. as stating that the referents of the two DPs are identical. However, that is not the reading we are interested in here, and the fact that the addition of the specificational tag results in ungrammaticality is strong evidence that these clauses do not have a specificational reading. Given (7.1), we can understand the lack of a specificational reading of these clauses in terms of the lack of a predicative denotation of the pronouns that occupy their subject position.

An important exception to the claim that pronouns cannot occur as subjects of specificational clauses is that the pronouns that are used to pronominalize property-denoting DPs, Danish *det* and English *it* and *that*, **can** occur in this position:

- (7.27) Da jeg besøgte politistationen i dag, var der én, der ikke havde  
 When I visited police-station-DEF today was there one who not had  
 skudsikker vest på — **det** var mr. Vittrup<sup>19</sup>.  
 bulletproof vest on — that was Mr. Vittrup  
 ‘When I visited the police station today, there was one person, who wasn’t  
 wearing a bulletproof vest — that was Mr. Vittrup.’
- (7.28) Carla heard the car coming before it topped the little rise in the road  
 that around here they call a hill. **It’s** her, she thought.<sup>20</sup>
- (7.29) [In response to seeing a familiar face across the room]  
**That’s** Susan!

That these are specificational clauses is indicated by the fact that when continued by tag questions, the pronoun is *det/it*:

- (7.30) Det var mr. Vittrup, var **det**/\*han ikke?  
 that was Mr. Vittrup, was it/ he not
- (7.31) It’s her, isn’t **it**/\*her?
- (7.32) That’s Susan, isn’t **it**/\*her?

In section 7.2 I argue that these clauses are “hidden” clefts, where the subject pronoun (*det/it/that*) is anaphoric to a contextually salient property. Assuming this analysis, the data presented here offer further support for the hypothesis in (7.1): pronouns that cannot denote properties are barred from occurring as subjects of specificational clauses (examples (7.25) & (7.26)), while the pronouns that are

<sup>19</sup>Jacob Basbøll & Hakon Mosbech “Første dag på stationen” (First day at the station), *Information*, August 9–10 2003, p. 5.

<sup>20</sup>Opening paragraph of Alice Munroe’s “Runaway”, *The New Yorker*, 11/8 2003, p. 63.

used as property-anaphors **can** occur as subjects of specificational clauses, in particular as subjects of specificational clauses of the hidden cleft variety (examples (7.27)–(7.29)).

**Names** The third and final kind of DP in this group is proper names. There is an extremely large and detailed literature on the semantics of names (for a recent review of the linguistic debate see the exchange between Geurts (1997, 2002) and Abbott (2002)). What is not in doubt, as far as I can tell, is that names can be referential. Here I take the stronger position, defended by Geach (1962:14, 31, 42), Kripke (1972:48ff), and Soames (2002:55–95) among others, that names, by themselves, are necessarily referential. With the help of an indefinite article a predicative reading is available for some names, as (7.33) shows.<sup>21</sup>

(7.33) This guy is **a real Einstein**, though, because he just keeps getting away with these things.<sup>22</sup>

Here *a real Einstein* is used to denote a property, ‘very smart’ or ‘(a) genius’, which is predicated of the subject referent. Notice that without the modifier *a real*, (7.33) loses this reading, in favor of a, rather implausible, equative reading (that the individual referred to by *this guy* is Einstein himself). Setting aside cases like (7.33), we observe that names cannot occur as the second element of a

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<sup>21</sup>Thomsen (1997b) suggest that names are by default predicative via an implicit ‘be called’ relation. Here I will assume, contra Thomsen (1997b) (and Geurts (1997)), that a predicative reading is only available when facilitated by some additional linguistic material, as in (7.33). This also connects with the discussion of seemingly non-referential uses of names in 4 (end of section 4.3) and chapter 5 (section 5.2.1)

<sup>22</sup>Posting at

[http://www.movie-fan-forum.com/movies/Thirteen\\_pretty\\_powerful\\_577776.html](http://www.movie-fan-forum.com/movies/Thirteen_pretty_powerful_577776.html).

small clause:

(7.34) \*I consider [the best doctor in the county {Susan/Einstein}]

nor as the subject of a specificational clause. Thus (7.35) with a specificational tag is ungrammatical.

(7.35) \***Susan** is Mrs. Robertson, isn't it?

As is the case with the pronominal subjects in (7.25) and (7.26), the tagged clause has only an equative reading, which is ruled out by *it* in the tag, resulting in overall ungrammaticality.

To summarize the results of this section: we have seen that strongly quantificational DPs, most pronouns, and names do not occur as subjects of specificational clauses. Given the hypothesis in (7.1), we can understand this as a consequence of their inability to function as predicates, i.e. to have (non-degenerate) type  $\langle e,t \rangle$  denotations. Let us finally turn to the third group, which contains indefinite DPs.

### 7.1.3 Group III: Indefinites

It seems undeniable that indefinite DPs like *a cat* can be interpreted predicatively, i.e. as denoting sets of individuals (in the case of *a cat*, the set of cats in the domain of interpretation).<sup>23</sup> In fact Geach (1962:35) argues forcefully that that is the **only** interpretation available for the indefinite in a sentence like (7.36).

(7.36) Jemima is a cat.

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<sup>23</sup>Partee (1987:117–118) argues that indefinite descriptions, along with definite descriptions, can occur in all three types (see also de Swart (1999)).

Note also that indefinites occur readily as the second element of a small clause:

(7.37) I consider [Susan {a good doctor/a friend}].

The ability of indefinites to denote predicates, together with the hypothesis in (7.1), lead us to expect that indefinites can occur as subjects of specificational clauses. However, not all indefinites are felicitous as specificational subjects. For instance, Heycock and Kroch (1999) cite (7.38) (their (52b)) as ungrammatical, and the Danish example in (7.39) is no better.

(7.38) # **A doctor** is John.

(7.39) # (**En**) **læge** må være Jonas.  
a doctor must be Jonas.

In the next chapter I argue that these examples are not actually ungrammatical, but infelicitous in any context (which is why I present them with a # rather than a '\*'). Part of the evidence for this conclusion comes from the observation that some indefinites **do** occur as subjects of specificational clauses, as the examples in (7.40)–(7.43) show:

(7.40) **A philosopher who seems to share the Kiparskys' intuitions on some factive predicates** is Unger (1972), who argues that ...<sup>24</sup>

(7.41) **Another speaker at the conference** was the *Times* columnist Nicholas Kristof, who got Wilson's permission to mention the Niger trip in a column.<sup>25</sup>

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<sup>24</sup>Delacruz (1976:195, fn. 8).

<sup>25</sup>Seymour M. Hersh "The Stovepipe", *The New Yorker*, Oct 27, 2003, p. 86.

(7.42) **One Iraqi émigré who has heard from the scientists’ families** is Shakir al Kha Fagi, who left Iraq as a young man and runs a successful business in the Detroit area.<sup>26</sup>

(7.43) **A doctor who might be able to help you** is Harry Barcan.

The examples in (7.40)–(7.43) make the important point that indefinites may, under the right conditions, occupy the subject position of a specificational clause, thus confirming one of the core predictions of this thesis. They also, of course, pose the challenge of understanding what distinguishes them from the strongly unacceptable examples in (7.38)–(7.39). Because this issue is complex and is best considered in the larger context of the information structure of copular clauses, I postpone it to a separate chapter (chapter 8). For now, we take away only the interim conclusion that the distribution of DP-types in the subject position of specificationals is correctly predicted by our proposals.

## 7.2 Truncated clefts

Finally in this chapter, I want to discuss (what I will argue to be) a particular subclass of specificational clauses, whose subject position is occupied by the bare demonstrative *that* or by the pronoun *it*. Distinguishing this class from the equatives is not completely straightforward, but once the distinction is made and their properties elucidated, additional evidence for the type-assignment argued for here emerges. The crucial examples are of the kind seen in (7.44):

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<sup>26</sup>Seymour M. Hersh “The Stovepipe”, *The New Yorker*, Oct 27, 2003, p. 86.

- (7.44) a. That's Susan.  
 b. It might be my best friend.  
 c. Det er nok Robert.  
 it/that is probably Robert  
 'That's probably Robert.'

Such sentences are known in the literature as TRUNCATED CLEFTS (or HIDDEN CLEFTS), due to a perceived semantic similarity with cleft constructions (see e.g. Poutsma (1916:732), Jespersen (1958:149), Prince (1978:897), Nølke (1984:74ff), Declerck (1983:223–240), Buring (1998:42–43), Merchant (1998:§4.1), Hedberg (2000:898–902), Ward et al. (2003), and Bachrach (2003:chapter 4); more on this in section 7.2.1 below).

In the discussion of specificational subjects in section 7.1.2, I noted that *it* and *that* behave differently from referential pronouns like *he*, *she*, *they*, *you*, *I*. Whereas the latter cannot occur as specificational subjects (by hypothesis, because they cannot denote properties), *it* and *that* do appear as specificational subjects, consistent with the argument put forth in chapter 5 that the use of exactly these two pronouns is evidence that their antecedents are property denoting. Building on these observations, the business of this section is to argue that sentences like those in (7.44) are specificational clauses with anaphoric subjects.<sup>27</sup>

If successful, this argument has several important consequences. First it strengthens the semantic characterization of specificational clauses proposed above (that these involve a property-denoting subject, a semantically vacuous copula,

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<sup>27</sup>This characterization is suggested, but not developed, in Hedberg (2000:901 fn. 17, 907 fn. 22, 917) and Geist (2003:19).

and a referential predicate complement) by showing that an independently expected subclass exists: pronominalization is a general process, so, other things being equal, we expect it to target specificational subjects.<sup>28</sup> Second, it suggests a revision of Higgins' taxonomy, which in its original form classified truncated clefts as Identificational clauses along side sentences like those in (7.45):

- (7.45) a. That woman is Susan.  
b. That person might be my best friend.  
c. That guy might be Robert.

As I show below, truncated clefts differ systematically from the construction exemplified in (7.45), indicating a split in Higgins' Identificational class. These differences suggest that the sentences in (7.45) involve two referential DPs, and thus belong in the equative class, whereas the truncated clefts in (7.44) have a property denoting subject, and thus belong in the specificational class. Finally, analyzing truncated clefts as a subtype of specificational clauses provides a link between the research on copular clauses grounded in Higgins' taxonomy and a more recent, and largely independent, line of research focusing on the interpretation of pronouns and identity in modal contexts (see Groenendijk et al. 1996a; 1996b, Büring 1998, and references cited there).

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<sup>28</sup>Following this line of reasoning, one might equally well expect pronominalization to target the predicate complement. While this is possible, it seems to require a deictic, rather than anaphoric, interpretation of the pronoun (see chapter 6, section 6.3.1.2). In contrast the subject pronouns discussed here can clearly be anaphoric (see section 7.2.3). I believe this asymmetry reflects the fixed information structure of specificational clauses. In the briefest possible terms: the subject is topic (or relatively Discourse-Old), while the predicate complement is focus (or relatively Discourse-new). I will be discussing this characterization in detail in chapter 8. See also the brief discussion of the information structure of clefts in connection with (7.77) in section 7.2.4.

### 7.2.1 Hidden and full clefts

The similarity between the truncated clefts in (7.44) and the full clefts in (7.46) can be brought out by providing an utterance context for the truncated clefts, as in (7.47):

- (7.46) a. That's Susan who's knocking on the door.  
b. It might be my best friend who had the accident.  
c. Det er nok Robert der har spist den.  
it/that is probably Robert who has eaten it  
*'That's probably Robert who ate it.'*
- (7.47) a. [After hearing a knock on the door]  
That's Susan.  
b. [Responding to news that someone had an accident]  
It might be my best friend.  
c. [Finding an empty plate where the cake should have been]  
Det er nok Robert.  
it/that is probably Robert  
*'That's probably Robert.'*

The observation is that in the given contexts the truncated clefts are interpreted as roughly synonymous with the overt clefts in (7.46), as if the truncated clefts have an unexpressed cleft clause:

- (7.48) a. That's Susan (who is knocking on the door).  
b. It might be my best friend (who had the accident).  
c. Det er nok Robert (der har spist den).  
it/that is probably Robert (who has eaten it)  
*'That's probably Robert (who ate it).'*

One could take the paraphrases in (7.48) literally and suggest a deletion analysis, but, for reasons to be explained later (section 7.2.3), I will take a different route. I suggest that the similarity between overt and truncated clefts can be understood in the following way: in both constructions the subject pronoun (*that* or *it*) denotes a property variable. In an overt cleft the pronoun is bound (cataphorically) by the cleft clause, whereas in truncated clefts the pronoun is anaphoric to a contextually salient property. In both constructions, the property is predicated of the referent of the post-copular DP.

I will not explore the analysis of overt clefts in any detail (see Percus (1997) and Hedberg (2000) for specific implementations of this line of analysis), but focus on the truncated clefts, in particular on showing that these involve a property-anaphoric subject (section 7.2.2) whose antecedent is given either by the preceding discourse or the physical context (section 7.2.3).

Hedberg (2000:895–904) argues convincingly that the choice between *it* and *that* for the subject of a (hidden or full) cleft has to do with the “cognitive status” of the referent of the pronoun, using the givenness hierarchy proposed in Gundel et al. (1993). This is consistent with the specificational analysis of truncated clefts proposed here, as long as the givenness hierarchy can be extended to cover the cognitive status of non-individual referents, properties in particular. This issue resurfaces in the discussion of the discourse constraints on specificational clauses in the next chapter, and I will discuss it in more detail there.

## 7.2.2 Determining the subject type

The key point that I am arguing for here is that the demonstrative subject pronoun *that* in (7.49) is property denoting, and that it contrasts in exactly this respect with the complex demonstrative subject *that woman* in (7.50), which is individual denoting. In both constructions the predicate complement *Susan* is individual denoting. I will be referring to the construction in (7.49) as a TRUNCATED CLEFT, and to the construction in (7.50) as a DEMONSTRATIVE EQUATIVE.

(7.49) **That** is Susan.

(7.50) **That woman** is Susan.

I will argue for this point by showing how the subjects of the two constructions differ with respect to the anaphors they license, the modifiers they take, and the way they are expressed in a language with grammatical gender.

The first piece of evidence comes from the now familiar pronominalization test:

(7.51) That is Susan, isn't {**it**/\*she}?

(7.52) That woman is Susan, isn't {\*it/**she**}?

We see that (7.51) allows only *it* in the tag, indicating unambiguously a property interpretation of the subject of the tagged clause. In contrast, *she* is the preferred pronoun in the tag of (7.52), indicating a referential interpretation of the complex demonstrative in subject position.<sup>29</sup>

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<sup>29</sup>While no speaker variation has been reported for the tag in (7.51), some speakers accept *it* in the tag in (7.52). (The '\*' on *it* in (7.52) represents Higgins (1979:283)'s judgment.) For the speakers who accept *it* in (7.52), the logic of my argument forces me to say that these speakers allow a predicative interpretation of the complex demonstrative *that woman*, yielding an alternative specificational reading for (7.52).

Further evidence comes from the distribution of non-restrictive relative clauses, which have been argued to attach only to type ⟨e⟩ expressions (Rothstein (1995:43), McCawley (1998:451), Potts (2002)). As (7.53) shows, the subject of a truncated cleft does not accept a non-restrictive relative clause formed with *who*, whereas the subject of the demonstrative equative in (7.54) does.

(7.53) \*That, who everybody can see clearly, is Susan.

(7.54) That woman, who everybody can see clearly, is Susan.

Finally, in a language with grammatical gender, like Danish, we see a contrast in the gender of the demonstrative in the two constructions. As explained in chapter 5 (section 5.3.2), Danish has two grammatical genders: common and neuter. The singular common gender demonstrative is *den* (homophonous with the singular common gender third person pronoun and with the singular common gender definite article, except for being obligatorily stressed) and the singular neuter demonstrative is *det* (also homophonous with its pronominal and definite article counterparts, except for stress). The demonstrative determiner agrees with the head noun in gender, thus, since *kvinde* (woman) is common gender, only *den* is permissible in the subject of the demonstrative equative in (7.55):<sup>30</sup>

(7.55) a. \***Det** **kvinde** er Susan.  
           that-NEU woman is Susan

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<sup>30</sup>We know that we are dealing with the demonstrative in (7.55), and not the definite article, because definiteness is only expressed by an article in the presence of modifiers. In a minimal definite DP like *the woman*, definiteness is expressed by a suffix on the noun *kvind-en* (woman-DEF): see Delsing (1993:115–116) for data and discussion.

- b. **Den** **kvinde** er Susan.  
 that-COM woman is Susan

In contrast, the neuter form *det* is the only option for the subject of a truncated cleft:<sup>31</sup>

- (7.56) a. **Det** er Susan.  
 that-NEU is Susan  
 b. \***Den** er Susan.  
 that-COM is Susan

Note that this contrast between *den* and *det* rules out an analysis where the truncated cleft in (7.56a) is derived from the demonstrative equative in (7.55b) by deletion of the head noun *kvinde* (woman). Danish has NP-ellipsis, but the stranded determiner always exhibits gender agreement with the elided N, as shown in the dialogue in (7.57).

- (7.57) Q: **Hvilken trøje** kan du bedst lide?  
 which-COM sweater can you best like  
 ‘Which sweater do you like the best?’  
 A: {**Den** / \***Det** } der.  
 that-COM / that-NEU there  
 ‘That one there.’

There is thus little ground for assuming that there is any deletion process involved in deriving the subject of a truncated cleft: it is simply a (demonstrative) pronoun interpreted as a property variable.

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<sup>31</sup>Depending on prosody, *det* in (7.56a) can be interpreted as a demonstrative (*dét* ‘that’) or a pronoun (*det* ‘it’). The demonstrative interpretation can also be singled out by adding the locative *der* (there): *det der* ‘that’.

One might ask whether it is an accident that it is the neuter form *det*, and not the common gender form *den*, that is used this way. Thinking back to the Danish VP anaphora facts discussed in chapter 6, we have reason to say that it is not. Recall that the Danish construction resembles English VP ellipsis closely, except that it leaves behind a proform, which is then (in most circumstances) fronted to Spec-CP. As (7.58) shows, the only option for this VP anaphor is the neuter *det*, the common gender pronoun *den* is impossible here:

- (7.58) Tami elsker sushi og {**det** / \*den } gør jeg også.  
 Tami loves sushi and {that-NEU / that-COM} do I too  
 ‘*Tami loves sushi and I do too.*’

We also observed that the VP anaphora process, like VP ellipsis in English, can target predicates that are not syntactically VPs, as long as they are semantically predicative. A natural conclusion to draw from these observations is that the neuter form *det* is the dedicated property anaphor in Danish, whereas the common gender *den* is exclusively referential.<sup>32</sup>

**A potential objection** One might object to the proposal that *that* denotes a property in truncated clefts, on the grounds that *that* is the quintessential demonstrative, which denotes individuals and does so rigidly and directly (Kaplan 1989a). I believe this conflict is illusory. To see this, let us contemplate an analysis of truncated clefts like (7.59) where *that* does denote an individual, and the copula equates the referents of the two DPs:

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<sup>32</sup>This is not to deny that *det* can be referential. It can, but only with reference to an inanimate entity.

(7.59) That is Susan.

If *that* were individual-denoting in (7.59) it would, presumably, refer to Susan.<sup>33</sup> But *that*, unlike *that woman* can generally not be used to refer to people. We see this with predicates that subcategorize for a human-denoting argument, such as *vote* with respect to its subject (see also Higgins (1979:238)):

(7.60) \***That** voted.

(7.61) That woman voted.

and *give* with respect to its indirect object:

(7.62) \*I gave the keys to **that**.

(7.63) I gave the keys to that woman.

A less dramatic, but no less telling, reflex of the same effect is found with predicates that accept either human-denoting or non-human denoting arguments, such as *be from Sweden*:

(7.64) **That** is from Sweden.

(7.65) That woman is from Sweden.

Whereas (7.65) can clearly be used to express that a person is from Sweden, (7.64) cannot. (7.64) can only be used to express that some artifact or non-human being

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<sup>33</sup>The obvious alternatives are that *that* refers to a human individual which is not Susan, in which case (7.59) could never be true, or that *that* refers to an inanimate individual, in which case it also seems to be necessarily false—how could a human individual be identical with something inanimate?—unless the copula contributes something more than the standard identity relation. Clearly, there are situations where (7.59) can be uttered felicitously and make a true statement about the world, so our semantic analysis has to allow for that.

is from Sweden (a similar point is made by Higgins (1979:237) with respect to the predicate *be heavy*). It thus seems that *that* cannot in general be used to refer to people, so an analysis of truncated clefts where *that* is not individual-denoting is consistent with the general behavior of *that*.

Moreover, we know independently, from Ross' example in (7.66), that *that* can be used as a predicate anaphor:

(7.66) They said that Sheila was beautiful and she is **that**. (Ross 1969:357)

Note that this reading is not available for the complex demonstrative *that beauty*:

(7.67) \*They said that Sheila was beautiful and she is **that beauty**.

We can understand this as a reflex of [*that* N] being always referential, lacking the property denotation available to *that*.<sup>34</sup>

A final contrast between *That is Susan* and *That woman is Susan* is that only the former can be expanded into a full cleft:

(7.68) That might be Susan who is knocking on the door.

(7.69) ??That woman might be Susan who is knocking on the door.

If (7.69) has a grammatical reading at all, it is one where the *wh*-clause is interpreted as an extraposed non-restrictive relative clause, and not as an ordinary cleft clause.

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<sup>34</sup>Though complications arise, given the speaker variation in the choice of tag pronouns observed for equative demonstratives in footnote 29 above.

### 7.2.3 Determining the antecedent

Having argued that truncated clefts involve a property-denoting anaphor in subject position, the next question is what can serve as the antecedent for this property anaphor. It seems that there are two basic strategies plus a third, derived, one: the value of the property anaphor can either be provided by preceding linguistic material and the common ground established by this material (what Lambrecht (1994:36–37) calls the TEXT-INTERNAL WORLD) or by non-linguistic elements of the context (Lambrecht’s TEXT-EXTERNAL WORLD), or by inference on either of these.<sup>35</sup>

Some examples of truncated clefts where the subject pronoun has a clear linguistic antecedent are given in (7.70) and (7.71). The first example is adapted from an example discussed by Büring (1998:36–7):

- (7.70) Context: *Upon coming back to your hotel, you learn from the receptionist that one of your accomplices has had an accident down at the harbor. You are supposed to go to see him or her in the hospital, but in the hectic course of events the receptionist forgot to take down the name of your friend, and since there is a bunch of you, it is unclear which of your friends is the actual victim. You call your housemate to tell her what happened and you say:*

A friend of mine had an accident. **It might be Susan.** (cf. Büring (1998:36–7))

Here the predicate of the first sentence *had an accident* is the antecedent for

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<sup>35</sup>A similar characterization is proposed in Büring (1998:§3.2), though he argues that the subject pronoun of a truncated cleft is an expletive and that the property variable is introduced by a null pronominal occupying the position of the cleft clause in an overt cleft. See also Erades (1949:304–305) and Karlsen (1965:5ff).

the subject pronoun of the truncated cleft, and the pronoun is interpreted as denoting the property of having had the (contextually relevant) accident. As a result the truncated cleft is interpreted to mean that the property of having (had) the accident might hold of Susan, or, paraphrasing with an overt cleft, that it might be Susan who had the accident (see Büring (1998:42–43) for an explicit proposal to this effect). Similarly, in the Danish example in (7.71) the pivot of the existential *én der ikke havde skudsikker vest på* (one person who wasn't wearing a bulletproof vest) sets up a contextually salient property (being the contextually unique person who wasn't wearing a bulletproof vest), which is picked up by the subject pronoun of the truncated cleft. Consequently, the truncated cleft is interpreted to mean that the property of not wearing a bulletproof vest holds uniquely of Mr. Vittrup.

- (7.71) Da jeg besøgte politistationen i dag, var der én, der ikke havde  
 When I visited police-station-DEF today was there one who not had  
 skudsikker vest på — **det** var mr. Vittrup<sup>36</sup>.  
 bulletproof vest on — that was Mr. Vittrup  
 ‘When I visited the police station today, there was one person, who wasn’t  
 wearing a bulletproof vest — that was Mr. Vittrup.’

In the example in (7.72) (from the opening paragraph of a short story) the subject of the truncated cleft is also interpreted relative to the preceding linguistic material, but in this case it is a little less clear what exactly forms the linguistic antecedent.

- (7.72) Carla heard the car coming before it topped the little rise in the road

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<sup>36</sup>Jacob Basbøll & Hakon Mosbech “Første dag på stationen” (First day at the station), *Information*, August 9–10 2003, p. 5.

that around here they call a hill. **It's her**, she thought.<sup>37</sup>

The intended antecedent seems to be something like “that’s coming over the hill”, but this is not expressed directly anywhere in the text. Nonetheless, we do seem to interpret the truncated cleft in a way that makes the text cohere, suggesting that some kind of inference is involved (cars are normally driven by people, so if a car is coming over the hill its driver is too). Similarly, in the example in (7.73), which is the second verse of a traditional Danish song, the truncated cleft in the last line seems to be interpreted as ‘it was you who opened the door’, or ‘it was you who was coming in’, though neither of those properties (‘being the one who opened the door’ and ‘being the one coming in’) have been explicitly designated in the preceding lines of the song.

(7.73)	Jeg lagde mig på sengen og græd så bitterligt og hver en gang at døren gik jeg troede <b>det var dig</b>	<i>I laid down on the bed and cried so bitterly and every time the door opened I thought <b>it was you</b></i>
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However, doors are normally opened by people who are entering or leaving a room or building, so we can infer from the opening of the door that someone is entering.<sup>38</sup> This kind of indeterminacy in reconstructing an explicit linguistic antecedent speaks against a deletion analysis of truncated clefts: to maintain that these are derived by deletion it seems natural to require that we can reconstruct

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<sup>37</sup>Opening lines of Alice Munroe’s “Runaway”, published in *The New Yorker*, August 11, 2003, p. 63.

<sup>38</sup>The Danish expression *døren gik* (lit. ‘the door went’) is neutral in perspective between being on the opening or closing side of the door. The inference to the door opening, as opposed to closing—and thus to a person entering, rather than leaving—is probably due to the expectation set up in the first verse of the song, namely that the narrator’s lover has promised to come to the house of the narrator.

with some degree of certainty what the deleted cleft clause is. However, in examples like (7.72) and (7.73) it seems impossible to know what exactly the deleted cleft clause would be or what exactly the speaker/writer had in mind. This kind of pragmatic indeterminacy seems more compatible with the anaphoric analysis pursued here, where the subject pronoun is resolved, possibly via inference, to some contextually salient property.<sup>39</sup> While the preceding text determines some key features of this property (or perhaps a family of properties), it is up to the reader/hearer to arrive at a suitable property interpretation, and we needn't assume that the result must be the same for all hearers nor that there is an identity requirement that it match the property the speaker had intended (a similar point is made by Büring (1998:47)).

The second strategy for resolving the antecedent for the subject pronoun of a truncated cleft is illustrated in the following examples and scenarios (repeated from section 7.2.1 above)

(7.74) [After hearing a knock on the door]  
That's Susan.

(7.75) [Finding an empty plate where the cake should have been]  
Det er nok Robert.  
it/that is probably Robert  
'That's probably Robert.'

For (7.74), imagine that we are sitting in a room waiting for Susan to start the meeting. There is a knock on the door and I say "That's Susan". The most

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<sup>39</sup>This interpretation is in harmony with the more general observation that conditions on identity of form seem to be characteristic of deletion, as opposed to anaphoric, phenomena (Hankamer and Sag 1976).

natural interpretation is one where the *that* is anaphoric to the property of (being the person) knocking on the door. Similarly, the most natural interpretation of (7.75) in the context given is one where the subject pronoun is interpreted as the property of having eaten the cake. The use of these pronouns without any linguistic antecedent is similar to the use of pronouns or demonstratives to refer to individuals in the physical context which have not been linguistically introduced. Stalnaker (1979:323) observes that if a goat walks into the room we can start referring to it (using expressions like *the goat*, *that thing*, *that*, and *it*) without any linguistic introduction of a discourse referent for the goat being required. Similarly, I suggest, the knock on the door allows us to refer to the knock, the person knocking, the property of being the person knocking on the door etc, without any explicit linguistic introduction of these.

Notice that the same kind of vagueness as to what exactly the antecedent property is arises with this strategy too. Imagine that I utter (7.74) after hearing a sound whose source is not entirely clear in the context; it might have come from a knock on the door, or from someone coughing, or from a car crashing into a lamp post further away, or from something else. Nonetheless, my audience is likely to interpret my utterance to mean that Susan is responsible (in some way) for the sound that we just heard, even if they don't all assume the same responsibility-relation. Again, this contextually constrained vagueness seems to favor the anaphoric analysis over a deletion analysis.

To summarize, the antecedent of the property anaphor may be explicitly linguistic (examples (7.70) and (7.71)), or derived by inference from the preceding

linguistic material (examples (7.72) and (7.73)). It may also be given by the physical context, e.g. by auditory input, as in (7.74), or visual input as in (7.75). Here too, some inferencing might be required to arrive at an appropriate antecedent property.

#### 7.2.4 Some consequences and advantages

What I have been arguing here is that the truncated cleft construction can reasonably be considered a kind of specificational clause, since it has the type distribution characteristic of specificational clauses: a property denoting subject and a referential predicate complement. What is special about truncated clefts, compared with the specificational clauses investigated in previous chapters, is that their subject is anaphoric. This proposal has several attractive consequences.

First, it provides an account of the facts presented in section 7.2.2, i.e. why the subject of a truncated cleft pronominalizes as *it* and not *she* or *he*, why it does not accept a non-restrictive relative clause formed with *who*, and why it is invariably expressed with the neuter pronoun *det* in Danish.

Second, it allows us to simplify our assumptions about *that*. To account for the use of *that* in truncated clefts as well as in predicational clauses like (7.64), Higgins (1979:236–237) assumed that there are two kinds of *that*. A “common gender” *that*, which is what is found in *That is Susan* vs. an “inanimate” *that* found in *That is heavy* and *That is from Sweden*. In addition, we need to assume a property-denoting *that* to account for Ross’ example in (7.66).<sup>40</sup> Similarly,

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<sup>40</sup>As noted in chapter 5 (section 5.1.2), we also need to acknowledge propositional *that/it*.

Maclaran (1982), in her dissertation on English demonstratives, has to include the following exception clause in her generalizations about the distribution of *that* and *this*:

Demonstrative pronouns can refer to people only in the equative constructions where the identity of the referent is at issue. (Maclaran 1982:99)

She illustrates this with the example in (7.76), which shows that her “equative construction where the identity of the referent is at issue” is what I have been calling a truncated cleft:

- (7.76) Q: Who’s that?  
A: {That/It}’s Claud.

Under the analysis of truncated clefts as specificational clauses proposed here, truncated clefts do not involve an exceptional use of the individual denoting *that*, but rather an instance of property-denoting *that*. If this analysis is accepted, we can dispense with Higgins’ “common gender” *that* and with Maclaran’s exceptional human-denoting *that*. The generalization we are left with is that *that* can denote a non-human individual or a property.

Third, the specificational analysis of truncated clefts fits well with what is known about the information structure of clefts and specificational clauses. It is a long-standing observation that the focus of a cleft is generally the post-copular, or clefted, constituent (though see Prince (1978), Kiss (1998), and Hedberg (2000:905–906) for important qualifications to this statement). Independently, it has been argued that the focus of a specificational clause is the predicate

complement (see e.g. Higgins (1979:234–6), Partee (2000:199–200), Heycock and Kroch (2002:148–149), Mikkelsen (2002b:§4) and the works cited there). Under the analysis proposed here, these two observations can be directly related to each other, since the focus position of cleft **is** the focus position of specificational clause, as the diagram in (7.77) makes clear:

(7.77)      **(Hidden) Cleft:**                      *That/It*    BE    DP<sub>focus</sub>    (*wh-* . . . )  
                 **Specificational clause:**    DP                      BE    DP<sub>focus</sub>

Finally, the proposed analysis of truncated clefts has implications for Higgins’ taxonomy. In arguing for the specificational character of truncated clefts, I contrasted them with a class of copular clauses with a complex demonstrative subject (*That woman is Susan*), which I call demonstrative equatives, because they were seen to involve two referential DPs, one of which is a complex demonstrative. In Higgins’ taxonomy these two constructions are both classified as Identificational (Higgins 1979:236–238). The differences uncovered in section 7.2.2 above suggest that this classification cannot be maintained, at least not if we take these differences as indicative of a systematic underlying semantic difference, as I have suggested we should. My semantic interpretation of these differences suggests the following revision of Higgins’ taxonomy: truncated clefts should be reclassified as specificational and demonstrative equatives should be reclassified as Identity clauses. This proposal naturally raises the question of whether the Identificational class can be eliminated altogether? The data discussed here suggests ‘yes’, but Higgins’ taxonomy is intended not only for “plain” copular clauses of the

sort discussed here, but also for pseudoclefts. Interestingly, recent work by Yael Sharvit on so-called tense harmony in pseudo-clefts suggests a unified analysis of Specificational and Identificational clauses in the domain of pseudoclefts (Sharvit 2003:387–391), one where Identificational pseudoclefts are a subtype of Specificational pseudoclefts. If Sharvit’s unification is viable, and if the arguments presented here for a reclassification of plain Identificational clauses (as Specificational and Identity clauses, respectively) hold up, then we are left with the following, simpler, taxonomy of copular clauses:

(7.78)	CLAUSE TYPE	EXAMPLE	SUBJECT	COMPLEMENT
	Predicational	<i>Susan is a doctor.</i>	$\langle e \rangle$	$\langle e, t \rangle$
	Specificational	<i>The winner is Susan. / That is Susan.</i>	$\langle e, t \rangle$	$\langle e \rangle$
	Identity	<i>She is Susan. / That woman is Susan.</i>	$\langle e \rangle$	$\langle e \rangle$

# Part III

## Use

# Chapter 8

## Aspects of Use

### 8.1 Topic–Focus structure

From early on the notions of topic and focus (as well as those of given vs. new information, and theme vs. rheme) have figured prominently in work on copular clauses (Halliday (1967), Higgins (1979), Akmajian (1979), Declerck (1988); and, more recently, Heycock and Kroch (1999, 2002) and Partee (2000)). While there is no agreement on what exactly these terms mean (and what the relationship between the three pairs of terms are), almost everyone seems to agree that specificational clauses differ from predicational ones in that specificational clauses have a fixed information structure, one where the predicate complement is focus (or new information or rheme), and the subject is topic (or given information or theme). This characterization is typically based on question-answer pairs like those in (8.1) and (8.2), and the notion of question-answer congruence, which to my knowledge

was first discussed in Halliday (1967).

- (8.1) Q: Who is the winner?  
A1: The winner is JOHN. [Specificational]  
A2: JOHN is the winner. [Predicational]
- (8.2) Q: What is John?  
A3: #The WINNER is John. [Specificational]  
A4: John is the WINNER [Predicational]

In a congruent question–answer pair the constituent in the answer that corresponds to the *wh*-phrase in the question is the focus. Thus in the answers to the question in (8.1), *John* is the focus, because it corresponds to the *wh*-phrase of the question, and in the answers in (8.2) *the winner* is the focus because it corresponds to the *wh*-phrase of the question. What we observe is that the predicational clause can felicitously be used to answer either question (A2 and A4 are both fine), which indicates that it can carry focus on either the subject (A2) or the predicate complement (A4). In contrast, the specificational clause is only felicitous as an answer to the question in (8.1), where the predicate complement is the focus (A1). Having focus on the subject is infelicitous, as (A3) shows.<sup>1</sup>

While this characterization is often cited in the literature and sometimes used to motivate various parts of the proposed analyses (such as the TOPIC PHRASE proposed by den Dikken et al. (2000), and the division into a FOC(US) PHRASE and a GROUND constituent proposed by Heycock and Kroch (2002)), there have,

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<sup>1</sup>As Heycock and Kroch (2002:108, fn. 2) note, A3 is grammatical, but only usable in a different context, one in which the sentence is not interpreted specificationally. Citing a corpus study by Delin (1989), they further note that a peak accent on the subject DP is only possible if the post-copular DP also bears a peak accent. I will not discuss such dual accent cases here.

to my knowledge, been few attempts at explaining why specificational clauses should differ from predicational clauses in this way. It is this question that I will be concerned with in the last part of the dissertation.

The answer that I will give is that the fixed topic–focus structure of specificational clauses is intimately connected to their syntactic and semantic properties, in particular their distinctive alignment of the less referential DP with the subject position. The basic idea is as follows. Other things being equal the more referential DP surfaces in subject position. This is the case in predicational copular clauses. However, there is also a preference for the topic to be in subject position and in cases of conflict (when the less referential DP is topic) this may override the preference for the more referential DP to surface in subject position. The result is a specificational clause. In chapter 9, I develop an implementation of these ideas within the framework of the Minimalist Program.

This present chapter is concerned with laying the groundwork for a better understanding of the notion of topic that is involved in copular clauses. To my knowledge, this issue has not been investigated in detail, but it is an important one, since there are many notions of topic in the literature and at least some of them would make different empirical claims of the characterization of specificational subjects as obligatory topics. I have not found a notion of topic that seems to match specificational subjects (and their relation to specificational predicate complements) exactly, so the observations and ideas that I present below are of a rather preliminary nature, and meant as a starting point for further research. The basic idea that I pursue is that part of what governs topic–focus distribution

in copular clauses (and perhaps more generally) is DISCOURSE-FAMILIARITY in the sense of Prince (1992). Following Vallduví (1992:21), I assume that being Discourse-old is a precondition for being topic, and hence specificational subjects must be Discourse-old, at least relative to the predicate complement. This understanding of topic allows us to make an important connection between specificational clauses and INVERSION structures in the sense of Birner (1994, 1996). Birner argues that inversion serves as an information packaging device, which allows the presentation of relatively familiar information before a comparatively unfamiliar logical subject. Building on Birner's work, and on the idea that part of what it means for a specificational subject to be topic is for it to be (relatively) Discourse-old, I suggest that specificational clauses are a special kind of inversion structure, subject to (a strengthened version of) the discourse condition on inversions identified by Birner (1994, 1996), but structurally different from other cases of inversion.

While I have encountered some difficulties in characterizing specificational clauses in terms of Discourse-familiarity (these difficulties will become clear as we go through the data in sections 8.3.2 and 8.3.3), I nonetheless find this avenue of research promising, because it holds the promise of answering two questions that, again as far as I know, have not been addressed before. First, why specificational clauses should exist at all (intuitively, why do we “need” the specificational structure in A1, when the predicational structure in A2 can be used to answer the question?). Second, why some indefinite DPs can be used as specificational subject, while others cannot. While I cannot offer definite answers to these ques-

tions, I believe that the insights from Birner’s work on inversion structures offers at least a useful first step towards some answers. Before we get to these questions there is some background work to be done first (sections 8.2–8.3.3). This background work is independently useful as it situates specificational clauses in the larger context of inversion structures and provides an empirical and conceptual basis for the analysis of specificational clauses developed in the next chapter.

The difficulties alluded to in the previous paragraph enforce a conclusion reached by most researchers working on topic, namely that Discourse-familiarity (and more generally, ‘being old information’) is not all that there is to being topic. In fact, Reinhart (1982), in her influential work on sentence topic argues that even though “topics strongly tend to be old information” (p. 19) there is no inherent connection: being old information is neither sufficient nor necessary for being topic in her sense (p. 18–23). Other researches have argued for a tighter connection between the two. I return to this issue at the end of the chapter.

## 8.2 Inversion structures

Birner (1994, 1996) presents a study of ‘inversion’ structures in written and spoken English, based on a corpus of 1778 naturally occurring tokens. She defines inversion as in (8.3).

- (8.3) An INVERSION is a sentence in which the logical subject appears in a post-verbal position while some other, canonically post-verbal, constituent appears in clause-initial position. (Birner 1996:12)

Examples of inversions from Birner’s study are given below. As the examples make clear the fronted constituent may be a PP, a VP, an AP, an Adverbial Phrase or a DP (in Birner’s terms, an NP):<sup>2</sup>

- (8.4) PP INVERSION [Birner 1996: ex. (51),g p. 34–35]  
**With the Nobel Peace Prize winner** are Archbishop Francis Stafford, Mother Mary Thomas Beil and the Very Rev. Marcian O’Meare, who is vicar for religious affairs for the Denver archdiocese.
- (8.5) VP INVERSION [Birner 1996: ex. (16c), p. 56]  
**Listening to the pilots’ excited voices** were congressional leaders, Cabinet officials and foreign advisors.
- (8.6) AP INVERSION [Birner 1996: ex. (65a), p. 40–41]  
**More impressive to me** was Tom Conti in the thankless role of Mr. Lawrence, the audience’s alter ego.
- (8.7) ADVP INVERSION [Birner 1996: ex. (73a), p. 45]  
**Thus** was born one of southern Asia’s best real-life mysteries.
- (8.8) DP-INVERSION [Birner 1994: ex. (30a), p. 252]  
**One of the people killed** was Filimon Delgadillo, the mayoral candidate of Belaunde’s party, Popular Action, in Huamanguillo.

What these sentences have in common is that the DP of which something is being predicated (“the logical subject” in (8.3)) appears to the right of the verb, while some other, canonically post-verbal constituent, appears in clause-initial position (Birner 1994:234). Inversions are similar to topicalization structures, but differ (in English) in having the verb in second position. Moreover, the logical subject does

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<sup>2</sup>Most of the examples cited here involve inversion around the copula, but that is not in fact representative of Birner’s corpus, where only 654 of the 1778 tokens involve inversion around *be*, while the remaining 1124 tokens involve inversion around some other main verb (as with *born* in (8.7)). Birner (1996:105–135) discusses some semantic and syntactic differences between the inversions around *be* and inversion around other verbs, but these are not relevant for the present discussion.

not necessarily immediately follow the finite verb, but is located after the main verb, as (8.7) shows. Notice that the uninverted versions of (8.4), (8.5), (8.6), and (8.8) are all predicational copular clauses. This naturally raises the question of whether specificational clauses can be identified as DP inversion around *be* in Birner's sense. One immediate obstacle is that Birner explicitly assumes (1996, p. 14) that the post-verbal DP is the (possibly extraposed) subject and that the preposed constituent is in some higher (A-bar) position. This is certainly the consensus view on PP inversions, which have been studied extensively (see Bresnan (1994) and references cited there), and it explains why verb agreement is determined by the post-copular DP (cf. (8.4) and (8.5)), and why the fronted constituent cannot invert with the copula to form a polar question:

- (8.9) \*Was **more impressive to you** Tom Conti in the thankless role of Mr. Lawrence, the audience's alter ego?

However, the situation with DP inversions is less clear, as Birner herself points out (1994: 252, fn. 20, 1996: 42–45). Here the verb agrees with the preposed DP. This is not clear from the example in (8.8) where both DPs are singular, but the example in (8.10), from Rothstein (2001:257), shows this:

- (8.10) The Prime Minister and the Minister of Defense in the 1992 Labour government were (both) Yitzhak Rabin.

The initial DP can also invert with the copula in polar questions, as (8.11) shows:

- (8.11) Were the Prime Minister and the Minister of Defense in the 1992 Labour government (both) Yitzhak Rabin?

These observations point to the fronted DP being in subject position, which is in accordance with the conclusions about specificational clauses reached in chapter 2. Birner (1996:42–44) offers three arguments in favor of examples like (8.8) being inversions nonetheless. First, that given the existence of PP, VP, AP, and AdjP-inversions, “the non-occurrence of NP-inversion [i.e. DP-inversion; LM] would represent an inexplicable gap in the paradigm” (p. 42). Secondly, Birner gives the examples in (8.12)–(8.14) as evidence that the post-copular DP is the logical subject, as required by the definition of inversion structures in (8.3).

(8.12) She is a nice woman, isn’t she? **Also a nice woman** is our next guest.  
 ...<sup>3</sup>

(8.13) A diphthong is a double vowel sound in which the first part makes a smooth transition into the second. **Examples** are the vowel sounds of *I*, *now*, and *toy*.<sup>4</sup>

(8.14) **Not the least of Upali’s enemies** is Sri Lanka’s prime minister, Ranasinghe Premadasa.<sup>5</sup>

She writes:

In 69a [= (8.12); LM], ‘also a nice woman’ constitutes a quality or property being attributed to ‘our next guest’, and not vice versa. Similarly, in 69b [= (8.13); LM], the writer does not seem to be predicating of some set of examples that they are the vowel sounds of *I*, *now*, and *toy*, but rather predicating of these sounds that they are examples.

<sup>3</sup>David Letterman, 5/31/90 (rerun); Birner (1996:43, ex. (69a)).

<sup>4</sup>Kaplan (1989b:25); Birner (1996:43, ex. (69b)).

<sup>5</sup>“A Sri Lankan tycoon leaves a rich mystery,” *Philadelphia Inquirer*, 8/21/83, p. 2-A; Birner (1996:43, ex. (69c)).

And finally, 69c [= (8.14); LM] is predicating of the prime minister that he is Upali's enemy, and not predicating of 'not the least of Upali's enemies' that he is the prime minister. That is, in these sentences the quality or property being predicated is represented by the pre-copular rather than the post-copular phrase, while the NP subject of which this property is being predicated appears in post-copular position. Consequently, these appear to be predicative NP inversions. (Birner 1996:43).

The similarity with my characterization of specificational clauses in the previous chapters should be obvious. To back up her intuitions about the subject-predicate relations in these examples, Birner (1996:44) cites examples where the fronted element is a determiner-less NP, which by standard assumptions could only be predicative:

(8.15) **Second runner-up** was Miss Alabama [...]<sup>6</sup>

The third argument that she gives is that all the potential examples of DP-inversion in her corpus obey the discourse condition obeyed by the other kinds of inversion, namely that the pre-verbal constituent is relatively familiar in the discourse. As I will argue below, the same holds for the naturally occurring examples of specificational clauses that I have been collecting. For these reasons, it seems highly desirable to identify specificational clauses as inversions in Birner's sense. On the other hand we have to account for the different behavior of specificational clauses with respect to verb agreement and polar question formation. I believe that this conflict can be resolved by recognizing specificational clauses as a special kind of inversion structure, one where the preposed element is in subject position.

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<sup>6</sup>KYW News; Birner (1996:44, ex. (72a)).

Perhaps, at an earlier stage of the language, all inversions were to non-subject position, but DP-inversions developed to become inversion into subject position (what I have been calling specificational structures).<sup>7</sup> After being reanalyzed as a subject, a preposed DP would control agreement on the verb (as in (8.10) above) and participate in subject-auxiliary inversion (as in (8.11)). All other inversion types remained inversion into a higher (A-bar) position, which is why the preposed element in these constructions do not control agreement on the verb, nor participate in subject-auxiliary inversion. The most obvious explanation for why it was DP-inversions that developed in this way and not any of the other inversion types, is that DP is the standard syntactic category for subjects. This proposal allows us to understand why specificational clauses pattern with the other inversions in terms of the discourse conditions on their use, but also why DP-inversions behave differently syntactically.<sup>8</sup>

### 8.3 The discourse function of inversion

Birner proposes that inversion is an information packaging device (in the sense of Chafe (1976) and Vallduví (1992)) that serves to “present information that is relatively familiar in the discourse before information that is relatively unfamiliar in the discourse” (Birner 1996:90). Inversions thus serve a CONNECTIVE FUNCTION

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<sup>7</sup>This is pure speculation. At this point I do not have any diachronic evidence to support it.

<sup>8</sup>One important question, raised by Donka Farkas, is whether all DP-inversions around *be* involve inversion to subject position, or whether specificational clauses coexist with inversions structures where a DP has been raised across *be* to a higher, topic position. This is an empirical question that I am not able to answer here, though the tag question test should be useful in settling this.

(in the sense of Green (1980)) by “indicating the relevance and importance of the postposed subject to the information that has been presented in the prior text” (Birner 1996:65). Using Ellen Prince’s (1992) notion of DISCOURSE-OLD, Birner argues that the central well-formedness condition on inversions—and what allows inversions to perform this connective function—is that the fronted constituent is at least as Discourse-old as the post-copular constituent (1996:90ff).

Below I present Birner’s analysis in more detail and show how it applies to the examples of specificational clauses that I have been collecting. I start, in section 8.3.1, by introducing Birner’s framework, which is the theory of information status developed by Ellen Prince (1981, 1992). In section 8.3.2, I illustrate her analysis with respect to the cases of inversion cited in section 8.2 above (examples (8.4)–(8.8)), and discuss various issues that come up when assessing the Discourse-familiarity of a constituent. In the last two sections, I apply Birner’s theory to some examples of specificational clauses that I have been collecting, and argue that not only do these obey her discourse condition on inversion, but that Birner’s condition is also relevant for understanding the puzzle about indefinite specificational subjects (why only some indefinites can occur as specificational subjects) encountered in the previous chapter (section 7.1.3).

### **8.3.1 Discourse-familiarity**

To characterize the felicity conditions on inversion structures Birner (1994, 1996) uses the theory of information status developed by Ellen Prince, in particular the notion of DISCOURSE-FAMILIARITY proposed in Prince (1992). In that paper,

Prince distinguishes three dimensions of ‘old’ vs. ‘new’ information.<sup>9</sup> The first identifies old with presupposed information, and new with focussed information (in the sense of ‘at issue’ meaning). The second identifies old as “what is known to the hearer” (or in the hearer’s “permanent registry” in the sense of Kuno (1972a)), and new as “what is not known to hearer”. The third dimension identifies “age” with respect to the discourse model (on the nature of the assumed discourse model see Prince (1981:235–237)). The entities that are already in the discourse model are Discourse-old, whereas entities that are not currently in the discourse model are Discourse-new. Based on statistical analysis of a text, Prince (1992) argues that it is the third dimension, Discourse-familiarity, that is most relevant for subjecthood, in the sense that Discourse-old DPs are favored for subject position in a statistically significant way, whereas Hearer-old DPs are not (p. 314).<sup>10</sup> Similarly, Birner argues that it is Discourse-familiarity not Hearer-familiarity that governs inversion. Building on these results, I suggest that Discourse-familiarity is also a key factor in the use of specificational clauses.

As Prince (1992) points out (p. 309–310), Discourse-familiarity and Hearer-familiarity are only partly independent of each other. Whereas a Discourse-new entity may be Hearer-new or Hearer-old, a Discourse-old entity is necessarily also Hearer-old, because “hearers are assumed to remember the entities we have told them about, at least for the duration of the discourse” (p. 18). Conversely, “if

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<sup>9</sup>As pointed out by Vallduví (1992:19), there is something inappropriate in using the term information about sub-clauses (or, rather, subpropositional) elements, but I will nonetheless continue this malpractice in what follows.

<sup>10</sup>Prince (1992) does not discuss the first dimension (presuppositional vs. focussed information) with respect to subject choice, and I will also not discuss it here.

something is Hearer-new, then it must be Discourse-new, for, if it were not, the hearer would already know about it” (p. 309). Thus we end up with the matrix in (8.16) (adapted from Prince’s (1992) table in (26), p. 309), where the cells are labelled with the corresponding terms from the taxonomy proposed in Prince (1981):

(8.16)

	Discourse-new	Discourse-old
Hearer-new	Brand-new	[D.N.A.]
Hearer-old	Unused	Evoked

Two categories from Prince’s (1981) taxonomy are missing in the table; ‘inferrables’ and ‘containing inferrables’. Inferrables entities are discourse entities whose “existence is assumed to be inferrable by the hearer on the basis of some trigger entity, itself Discourse-old, in combination with some belief the hearer is assumed to have which says that entities like the trigger have associated with them entities like the Inferrable” (Prince (1992:307), see also Chafe (1976:40)) . In (8.17) (= Prince’s (17b)) for example, the door referred to in the second clause is inferrable from the building evoked by *the Bastille* in the first clause:

(8.17) He passed by the Bastille and the door was painted purple.

Containing inferrables are like Inferrables in that they require some inference from a trigger on the basis of background knowledge. The difference is that “the entity which triggers the inference is not, as in the case of Inferrables, necessarily in the prior discourse, but rather is within the NP itself” (Prince 1992:307). The DP in

(8.18) (= Prince's (21a)) is an example of a Containing Inferrable.<sup>11</sup>

(8.18) The door of the Bastille was painted purple.

The status of Inferrables and Containing Inferrables with respect to the matrix in (8.16) is not clear cut on theoretical grounds. Prince writes:

Inferrables are [...] like Hearer-old entities in that they rely on certain assumptions about what the hearer does know, e.g. that buildings typically have doors in (17b) [= (8.17); LM], and they are like Discourse-old entities in that they rely on there being already in the discourse model some entity to trigger the inference, e.g. *the Bastille* in (17b). At the same time, Inferrables are like Hearer-new (and, therefore, Discourse-new) entities in that the hearer is not expected to already have in his/her head the entity in question. (Prince 1992:305–306).

Based on her empirical investigation, Prince concludes (p. 315) that Inferrables behave like Discourse-old material with respect to subject position.<sup>12</sup> Similarly, Birner (1994:248–251, 1996:93–97) concludes that Inferrables may be collapsed with Evoked information (Hearer-old and Discourse-old) for the purposes of determining the felicity of an inversion. As for Containing Inferrables, Prince (1992) decides to treat them as Unused (Hearer-old and Discourse-new) for the purposes

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<sup>11</sup>The distinction between Inferrables and Containing Inferrables has some affinity, at least conceptually, with the distinction between 'definites' and 'self-establishing definites' in Hawkins (1978).

<sup>12</sup>More precisely, she shows that the category of Inferrables can be collapsed with the category of Discourse-old Nonpronominals without losing the statistical correlation with subjecthood. The distinction between pronominals and non-pronominals is not central to our immediate concerns, so I will not discuss it further, except to note the connection to the 'givenness hierarchy' of Gundel et al. (1993), where nominal form (including pronominal and non-pronominal forms) is tied to information status.

of the coding, “on the rationalization that, if it is true that speakers . . . use Containing Inferrables partly because they can be understood also as Unused entities, then the two categories should not differ with respect to the grammatical role of the NP that represents them” Prince (1992:312). In contrast, Birner (1994:251–252, 1996:98–99) reaches the conclusion that the discourse status of a Containing Inferrable is dependent on the discourse-status of the the trigger. If the trigger is itself Discourse-old the Containing Inferrable is also Discourse-old (and behaves as such with respect to inversion); if the trigger is Discourse-new the Containing Inferrable is also Discourse-new (and behaves as such). I will follow Birner in this respect (see the discussion of the DP-inversion in (8.25) in section 8.3.2 below).

This is the core of Prince’s theory of information status, but before we can turn to Birner’s discourse condition on inversions, a few other issues need to be addressed.

**How do things become Discourse-old?** Entities may become Discourse-old (i.e. enter the discourse model) in several different ways: by being mentioned in the discourse, by being inferrable from something else in the discourse model or by being present (and salient) in the context of utterance. The last case is called ‘Situationally Evoked’ in Prince (1981:236). It is not discussed explicitly in Prince (1992), probably because in that paper she is analyzing a written text, which means that the “speaker” (i.e. writer) and the “hearer” (i.e. reader) do not share a physical or social context. Birner does not discuss this either, but it will come up in the discussion of Discourse-familiarity in specificational clauses below

(see also the discussion of truncated clefts in the previous chapter).

**Discourse entities and linguistic expressions** Technically, it is entities in the discourse model that are Discourse-new or Discourse-old, but when discussing examples it is useful to be able to classify linguistic expressions as Discourse-new or Discourse-old, based on the discourse-familiarity of the entities they refer to. Thus a Discourse-old DP is one that refers to a Discourse-old discourse entity, and a Discourse-new DP is one that refers to a Discourse-new discourse entity. The same applies to Hearer-familiarity. This terminological extension is used (though not explicitly discussed) in both Prince's and Birner's work, and I too will make use of it in what follows. Note, that this dual understanding of Discourse-familiarity (and Hearer-familiarity) seems necessary if we are to make generalizations about the relationship between syntactic constructions (such as inversions) and information status, since syntactic constructions contains linguistic expressions, not discourse entities.

**What kinds of things can be Discourse-familiar?** Prince (1992) only discusses the Discourse-status of DPs (and their referents in the discourse model), since her main concern is the relation between Discourse-status and subject choice, and DP is the most typical syntactic category of subjects. However, Birner's work on inversion clearly relies on the assumption that linguistic expressions other than DPs (such as APs, VPs, AdjPs, and PPs) can be Discourse-old, and consequently, that the kinds of discourse entities that these denote (properties, actions, loca-

tions, states, qualities, etc) can be classified as old or new with respect to the discourse model, and that we as speakers pay attention to this when structuring our conversations and texts (Birner (1996:140ff); see also Chafe (1976:28) and Webber (1981, 1988)). This issue is important for the analysis of specificational clauses, since I have argued that the subject of a specificational is not referential but property-denoting. I am thus committed to this broader view of what can sensibly be classified as Discourse-old and Discourse-new.

**Discourse-old vs. construed as Discourse-old** Finally, it is important to note that what counts in the end is not actual Discourse-familiarity, but being treated as Discourse-old or Discourse-new (Birner 1996:140). As with most pragmatic principles, what matters ultimately is how speakers present information (and themselves and their beliefs) and not about the information itself (or the speakers and their actual beliefs). Thus it is possible to present information as Discourse-old without it (verifiably) being old, in fact. What happens then depends on whether the hearer is willing to accommodate his or her discourse model (in roughly the sense of Lewis (1979)), to process this information as Discourse-old. This in turn depends on a multitude of factors, including how costly the accommodation is and how much is to be gained from it (in the the relevance-theoretic sense). Infelicity results when the hearer cannot (reasonably) perform this accommodation. I suggest in section 8.3.4.2 that a possible case of this is presented by specificational clauses with a bare indefinite DP in subject position.

### 8.3.2 Birner’s discourse condition on inversion

Birner coded her corpus of inversions for several factors, the most relevant ones here being the Discourse- and Hearer-familiarity of the preposed and postposed constituents.<sup>13</sup> While there was no significant interaction between relative Hearer-familiarity and position (preposed vs. postposed), she found a clear interaction between Discourse-familiarity and position. The results are summarized in the table in (8.19) (reproduced from Birner (1994:251, table 4)).<sup>14</sup>

(8.19) Discourse-familiarity in inversions (Birner 1994:251, table 4)

INITIAL ELEMENT → FINAL ELEMENT ↓	DISCOURSE-OLD	DISCOURSE-NEW	TOTAL
DISCOURSE-OLD	138	3	141
DISCOURSE-NEW	1008	141	1149
TOTAL	1146	144	1290

What is immediately noticeable is that in the overwhelming majority of inversions (1008 out of 1290, or 78%) the initial element is Discourse-old and the final element Discourse-new. In 279 cases (22%) the constituents were of equal Discourse-familiarity, either both Discourse-new (141) or both Discourse-old (138). In only

<sup>13</sup>Whereas Prince capitalizes the d in Discourse-old/new and the h in Hearer-old/new, Birner in her work does not. I follow Prince in this matter, except when quoting directly from Birner’s work.

<sup>14</sup>The reason that the total in table in (8.19) is 1290, and not 1778, is that it excludes 20 tokens with Containing Inferrables and 468 tokens “for which insufficient context was available to determine the discourse-familiarity of one or both constituents” (Birner 1994:251). ‘Initial element’ refers to the preposed element, and ‘final element’ to the postposed element (the ‘logical subject’ in the definition in (8.3)).

three tokens (representing %0.23 of the 1290 relevant inversions), was the final element relatively Discourse-familiar compared to the initial element.<sup>15</sup> Based on this distribution, Birner proposes the following discourse constraint on inversion:

- (8.20) DISCOURSE-CONDITION ON INVERSION  
The preposed element in an inversion must not be newer in the discourse than the postposed element. (Birner 1996:90)

A stronger condition saying that the preposed element must be Discourse-older than the postposed element would fail to account for the 279 cases where the constituents were of equal Discourse-familiarity (see end of section 8.3.3 for further remarks on a stronger version of Birner's condition, and how it might be appropriate for specificational clauses).

To illustrate Birner's condition let us return to the examples of inversion from her corpus discussed in section 8.2 above (examples (8.4)–(8.7)) and look at them in their discourse context. These examples will give us occasion to discuss some important nuances and refinements of (8.20), which are directly relevant for the analysis of specificational clauses in the next section.

The PP inversion in (8.4) occurred in the caption to a photo that accompanied a newspaper article.<sup>16</sup> The caption reads as follows:

- (8.21) VISITING BOULDER ABBEY: Mother Teresa pays a Saturday afternoon visit to St. Walburga's, an abbey east of Boulder. **With the**

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<sup>15</sup>In each of the three cases, the final constituent was categorized as Discourse-old, because it "represented potentially inferrable information" and in each case "there is some basis for doubt about the status of one or both of the elements" (Birner 1994:251). If Inferrables are left out of the calculation, there are no instances of the final element being more Discourse-familiar than the initial element (Birner 1994:244, table 2).

<sup>16</sup>"Nun to send missionaries to Colorado," *Boulder Camera*, 5/12/89, P. 7A.

**Nobel Peace Prize winner** are Archbishop Francis Stafford, Mother Mary Thomas Beil and the Very Rev. Marcian O’Meare, who is vicar for religious affairs for the Denver archdiocese.

The DP inside the preposed PP is Discourse-old, since it refers to the previously mentioned Mother Teresa. In contrast, none of the individuals referred to in the post-copular DP have been mentioned earlier (at least not in the caption itself). This inversion thus obeys the condition in (8.20), in fact it falls within the majority class (Discourse-old initial element and Discourse-new final element). One thing to note here is that I took the Discourse-oldness of the DP inside the preposed PP as evidence for the PP being Discourse-old, even though the preposition itself (*with*) has not been mentioned earlier. This is not an unusual situation, in fact Birner found that “it was seldom the case that the ENTIRE preposed constituent represented familiar [i.e. Discourse-old; LM] information” (1996:83, emphasis in the original), but that often “a previously evoked (or, in many cases, inferrable) entity is being referred to, with additional information about it being added within the preposed constituent” (1996:84). Thus for a preposed (or postposed) constituent to count as Discourse-old with respect to the condition in (8.20), it is enough that some part of the constituent is Discourse-old.<sup>17</sup> While this might appear to be a weakening of Birner’s result and analysis, it makes a good deal of sense when we think about the proposed function of inversion

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<sup>17</sup>As stated this is almost certainly too weak. Further conditions on how much and which parts of the fronted constituent must be Discourse-old for the whole constituent to count as Discourse-old are needed, but I am not at present able to articulate these. The very weak condition suggested in the text (that something is Discourse-old if any part of it is Discourse-old), in effect, elevates Prince’s (1981) Anchored entities to Discourse-old, which goes against the classification of her 1981 categories in terms of Discourse-familiarity in her 1992 paper; see Prince (1981:236ff) for relevant discussion.

and the general tendency for speakers to make the most of each sentence (what one might call ‘linguistic multitasking’). If, as Birner puts it (1996:84), “inversion’s preposing of relatively familiar information serves essentially a connecting function . . . this function is equally well served by the preposing of familiar information whether or not some portion of the constituent adds some new information”. That Discourse-old DP may, in general, contain new information (in the form of attributes) is also noted in Prince (1981:237).

The context for the VP inversion in (8.5) is given in (8.22):<sup>18</sup>

(8.22) In the Cabinet Room of the White House yesterday, Pres. Reagan played 8 minutes of taped conversations among three Soviet pilots that took place before a South Korean jetliner apparently was shot out of the sky in Soviet airspace early Thursday.

**Listening to the pilots’ excited voices** were congressional leaders, Cabinet officials and foreign advisors.

Within the preposed VP the DP *the pilots* is Discourse-old by virtue of being mentioned in the preceding text (*three Soviet pilots*), *voices* is Inferrable from the pilots and the information that the pilots were having a conversation, and *listening* is also Inferrable from the information that the conversation was being played and the common knowledge that when something is being played there are often people listening. The VP thus counts as Discourse-old with respect to (8.20). The entities referred to by the postposed DP are Discourse-new, with the possible exception of “Cabinet officials”, which might be Inferrable from the previously mentioned Cabinet Room, together with the background knowledge

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<sup>18</sup>“Reagan, officials play tapes of Soviet pilots,” *Philadelphia Inquirer*, 9/5/83, p. 4-A.

that Cabinets have officials (or members). So technically, this might be a case of equal Discourse-familiarity (both constituents are Discourse-old), though there is a clear sense in which the preposed constituent is more connected to the previous discourse than the postposed constituent: it has more points of contact than the postposed constituent. This brings up another important point, namely whether there are degrees of Discourse-oldness, beyond the binary classification provided in Prince's theory. Though Prince herself appears to reject the idea that Discourse-oldness could be a graded notion, she acknowledges that a purely binary distinction seems insufficient in various respects (1992:306). First, there is the existence of Inferrables. By definition Inferrables are not quite Discourse-old, nor quite Discourse-new (see the quote from Prince (1992) below example (8.18)). However, Birner (1996:140) suggests a promising way out of this dilemma by appealing to the notion of accommodation, in particular that Inferrables represent Discourse-new information "being treated as if it were in fact familiar, which in turn (assuming that the appropriate inferential connections can be made) causes the hearer to add the inferrable information to the discourse model and treat it as if it was Discourse-old." If this were the case, we could make sense of the fact that Inferrables behave as Discourse-old in inversions, while also allowing for a secondary distinction between Discourse-old by being explicitly mentioned and Discourse-old by accommodation, which might help explain why the former could appear 'more' Discourse-old than the latter.<sup>19</sup> As Prince (1992:11) points out,

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<sup>19</sup>Though this goes against the conclusion drawn by Birner (1996:97), that "evoked [i.e. Discourse-old; LM]) and inferrable elements are treated as equally discourse-old for the purposes of inversion."

there are other factors such as ‘salience’ which affect the discourse status of an entity, in particular their potential for being expressed by a pronoun (see Chafe (1976), and much subsequent work in Centering Theory<sup>20</sup>) and being salient might also lend an air of being ‘more’ Discourse-old. Finally we might add, based on the example in (8.22), that the number of points of contact that an internally complex constituent has with the preceding discourse (and the entities mentioned there) also seems to make that constituent appear ‘more’ Discourse-old. These are difficult issues, and I will not try to resolve them here, but continue to work with the theory as it was developed by Prince and employed by Birner.

The AP inversion occurred in a review of a theater performance, the relevant part of which is reproduced in (8.23).<sup>21</sup>

(8.23) Bowie has always cultivated his “misterioso” quality and in “Mr. Lawrence” it serves him well. His icy determinism and eccentric little bits really flesh out what is at heart an underwritten role, more icon than person. But I just didn’t come away from the movie with hints, as others have suggested, that a great new star has burst upon the screen.

**More impressive to me** was Tom Conti in the thankless role of Mr. Lawrence, the audience’s alter ego.

Here it appears that both the preposed and the postposed constituent are Discourse-new, since neither Tom Conti, nor (his) impressiveness has been mentioned in the preceding text. This would be in conformity with (8.20), which only requires that the preposed constituent not be Discourse-new in the presence of an Discourse-old postposed element. However, one cannot help but feel as if this classifica-

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<sup>20</sup>See Beaver (2004) for a recent overview of Centering Theory and for references to the central works of that research program.

<sup>21</sup>“David Bowie in a work by Nagisa Oshima,” *Philadelphia Inquirer*, Weekend section, p. 20.

tion is missing something important, namely the indirect comparison between the Discourse-new Tom Conti and the Discourse-old Bowie provided by *more impressive*. Seen in this light the preposed AP does serve a connecting function, though that relation is difficult to translate into a classification of the AP as Discourse-old in Prince's sense. Perhaps one could argue that *more impressive* is Inferrable from the evaluation of Bowie's performance in the preceding paragraph, but that seems to be stretching the notion of Inferrable to cover a connection that might be better described in terms of rhetorical relations.<sup>22</sup>

Turning to the adverbial inversion in (8.24), things are somewhat clearer.<sup>23</sup>

(8.24) Upali was going to turn 45 in two days. A gala party was planned at his palatial mansion, with his cousins, the nations president, among the guests. Upali never made it. [...].

**Thus** was born one of southern Asia's best real-life mysteries.

Here the preposed *thus* refers to the string of events described in the preceding discourse, which clearly makes it Discourse-old. The Discourse-status of the postposed constituent is harder to assess. Within the excerpt provided by Birner (= (8.24)) no (other) real-life mysteries in Southern Asia are discussed, so the partitive would seem to be Discourse-new. It is worth noting though, that the term *mystery* does occur in the title, as does *Sri Lanka*, which together might make the postposed DP Inferrable. This brings up the issue of 'locality', in par-

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<sup>22</sup>Thanks to Bill Ladusaw for pointing out the potential relevance of rhetorical relations to inversion (albeit in connection with a different example). This is one of the issues that I will have to leave for further research. A possible starting point for this research is the recent work on rhetorical relations by Nicholas Asher and Alex Lascarides, in particular Asher and Lascarides (2003).

<sup>23</sup>"A Sri Lankan tycoon leaves a rich mystery," *Philadelphia Inquirer*, 8/21/83, p2-A.

ticular whether it matters for the felicity of inversions how recently the relevant Discourse-old entities have been introduced. Prince (1992) assumes that once introduced into the discourse model, an entity remains Discourse-old for the rest of the text or conversation, but Birner (1996:90–91) points out that in the majority of inversions containing both a Discourse-old initial element and a Discourse-old final element, the initial element had been mentioned more recently than the final element. She tentatively concludes that “recency of mention is . . . relevant to inversions”, and that “speakers may recognize varying degrees of discourse-familiarity based on recency of mention” (1996:91). (See also the discussion of degrees of Discourse-familiarity in connection with (8.22) above.) This ‘locality effect’ is plausibly also related to the connective function of inversions: if inversions are motivated by their ability to provide a smoother transition from the preceding discourse than their non-inverted counterparts, it makes sense that the most recent discourse is more important than the more distant discourse, since discourses (including texts) are ordered in a linear fashion.<sup>24</sup>

Let us finally consider the DP-inversion in (8.25).<sup>25</sup>

(8.25) Official sources said yesterday that at least 22 people were killed in rebel attacks during nationwide municipal elections in which voters swung to the left in a sharp rebuff to President Fernando Belaunde Terry’s centrist government.

[. . .] **One of the people killed** was Filimon Delgadillo, the mayoral candidate of Belaunde’s party, Popular Action, in Huamanguillo.

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<sup>24</sup>The status of titles with respect to Discourse-familiarity in the text is discussed in Prince (1981:244, fn. 14).

<sup>25</sup>“Peru rebels said to kill 22 in voting,” *Philidelphia Inquirer*, 11/15/83, p. 7-A.

The preposed DP is a Containing Inferrable, where the trigger is *the people killed*. Since we can always infer from the existence of a group to the existence of each member of a group (Prince 1981:236), partitives are Containing Inferrables by design. The trigger is Discourse-old by the earlier mention of 22 people being killed. Since a Containing Inferrable inherits the Discourse-familiarity of its trigger, the preposed DP is itself Discourse-old. While the name in the postposed constituent is Discourse-new, part of the description is Discourse-old. President Belaunde has been mentioned earlier, so the existence of his party is Inferrable from that and the common knowledge that Presidents typically belong to a party. Moreover, the existence of a mayoral candidate is Inferrable from the earlier mention of municipal elections and the commonly known fact that municipal elections involve mayoral candidates. So this seems to be a case of both constituents being Discourse-old, though intuition has it that the preposed DP is more Discourse-old than the postposed DP (see the discussion below (8.22) above).

There is one further issue, inherent to DP-inversions, that deserves comment. Given my analysis of specificational clauses (aka DP-inversions), the preposed constituent describes the discourse-entity denoted by the postposed constituent. This leads one to question whether the two DP constituents can be separated from each other for the purposes of calculating their Discourse-familiarity, in particular, whether the Discourse-familiarity of one would necessarily follow from that of the other. In the case of (8.25), could we reason from the Discourse-oldness of the subject DP to the Discourse-oldness of the postcopular DP on the basis that they relate to the same discourse entity (namely Filimon Delgadillo)? Or vice-

versa? For Birner’s condition to say anything non-trivial about DP-inversions, we must rule out this pattern of inference. To do so, we need to appeal to the fact that Discourse-familiarity concerns elements other than individuals, and that the Discourse-familiarity of a property might differ from that of an individual who has that property, even when the individual is the (contextually) unique bearer of that property (as is the case in specificational clauses with definite description subjects).<sup>26</sup>

### 8.3.3 Discourse-familiarity in specificational clauses

Let us now consider some more examples of specificational clauses in the light of Birner’s discourse-familiarity condition on inversions. Ideally, one would carry out a systematic study and compare the results to Birner’s results, but I do not currently have enough examples of specificational clauses (with enough discourse context to determine the Discourse-familiarity of the pre- and post-copular constituents) to do this. Instead I will present a few examples, with no claim to their representativeness, and show how they obey Birner’s condition and also seem to perform the connecting function that she ascribes to inversions.

Let’s start with the example in (8.26), which occurred about midway through an article on the role and selection of US Vice-Presidents.<sup>27</sup> (The cited para-

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<sup>26</sup>One might ask whether this separation of an entity from its properties with respect to Discourse-oldness invalidates my earlier claim that in the PP inversion in (8.21) above, *the Nobel Peace Prize winner* is Discourse-old by virtue of the prior mention of Mother Teresa. I think it does not. The key difference between (8.21), and a specificational clause like *The Nobel Peace Prize winner is Mother Teresa* is that in (8.21) both DPs are used referentially, whereas, I claim, that is not the case when the two DPs are put together in a specificational clause.

<sup>27</sup>Hendrik Hertzberg “Vice Squads”, *The New Yorker*, March 22, 2004, pp. 31–34. The

graph actually contains two specificational clauses—the first with a CP predicate complement— but I will only discuss the second one, whose subject is in bold.)

- (8.26) The biggest reason people want to be Vice-President, though, is that it has become the royal road to the Presidency, even if one's boss remains in perfect health. After Adams and Thomas Jefferson, during the republic's first two centuries **the only person ever to win a Presidential election while serving as Vice-President** was Martin Van Buren, in 1836.

The predicate complement *Martin Van Buren* is clearly Discourse-new, since that name is not used previously in the article, nor is there any prior reference to a President of that name. In contrast, the subject DP *the only person ever to win a Presidential election while serving as Vice-President* contains Discourse-old material. *Vice-President* is Discourse-old, as it is mentioned in the preceding sentence (and several times earlier in the article too) and *Presidential election* is Inferrable from the previously mentioned Presidency together with the knowledge that Presidents are elected. This specificational clause thus obeys Birner's condition on inversions. Moreover, it can be seen to serve a connecting function, since it is the descriptive content of the preposed DP that lets us infer the connection between Martin van Buren and the two Presidents mentioned immediately prior to the inversion (John Adams and Thomas Jefferson); all three were elected President while serving as Vice-President. There is also a clear connection between the preposed DP and the notion of 'royal road to the Presidency' introduced in the preceding sentence.

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relevant paragraph is on p. 34.

The next example is from an introduction to a collection of articles.<sup>28</sup> It occurred at the beginning of a section, as indicated in (8.27).

- (8.27) ... [end of section 4.5; LM]  
4.6 *Roberts and Roussou*  
**Ian Roberts and Anna Roussou's contribution** is “The Extended Projection Principle as a Condition on the Tense Dependency.”

The subject DP in boldface is clearly Discourse-old, as it repeats the two last names given in the immediately preceding title for the section. The predicate complement, which gives the title of their paper, is Discourse-new within the introduction. The title does occur in the table of contents preceding the introduction, but that seems too far away to have any effect on the connective function served by the inversion (see the discussion of ‘locality’ in connection with (8.24) above).

The example in (8.28) is interesting, because it involves making an inference from the non-linguistic context. It was uttered by the chair person at a workshop, as a way of introducing a speaker.<sup>29</sup>

- (8.28) **Our next speaker** is Claudia Maienborn.

The preposed DP is Inferrable, since the existence of a next speaker is inferrable from the existence of an (unfinished) workshop, which itself is Discourse-old by being salient in the context of utterance (it is Situationally Evoked in the terms of Prince (1981)). The predicate complement *Claudia Maienborn* is not Inferrable

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<sup>28</sup>Peter Svenonius (2002) “Introduction” in P. Svenonius (ed.) *Subjects, Expletives, and the EPP*, pp. 3–27, Oxford University Press. The inversion in (8.27) is on p. 15.

<sup>29</sup>Rainer Blutner, session chair at the workshop “Pragmatics in Optimality Theory” at the 14th ESSLI in Trento, August 14 2002.

from the existence of the workshop, though she might be mentioned in the program. Notice also, that it does not seem to matter for the felicity of the inversion whether Claudia Maienborn is (assumed to be) Hearer-old or not.

The last example that I'll discuss in this section occurred in an article about the military lawyer Will Gunn and his appointment as the lead defense counsel in the trials by military tribunal of the detainees at Guantánamo Bay.<sup>30</sup>

(8.29) The question now before the Supreme Court is whether the United States exercises sovereignty over its naval base at Guantánamo Bay. If it does, the detainees have a right to sue; if not, they don't. The Bush Administration's argument is that, because of the century-old treaty with Cuba, Castro, not Bush, is the true sovereign of the base. As the Solicitor General put it in his brief, "The military base at Guantánamo is not, and it not even remotely like, an American territory."

**The most persuasive refutation of the Administration's position** may be Guantánamo itself.

The predicate complement is clearly Discourse-old, since Guantánamo is mentioned several times in the preceding text. The subject also contains Discourse-old material, in particular *the Administration* which is mentioned two sentences previously. This thus seems to be a case where both the preposed and the postposed constituent are Discourse-old. However, there is something interesting about the preposed DP, in particular its link to the preceding discourse via the embedded DP *the Administration's position* which relates to the connective function of inversion. Ward (1988:170ff) observes that in topicalizations the preposed DP often serves a 'bridging' function, by providing an alternative description or summary

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<sup>30</sup>Jeffrey Toobin "Inside the Wire", *The New Yorker*, February 9, 2004, pp. 36–41. The passage quoted here is from pp. 39–40.

of the previously mentioned or described entity. Thus the topicalized DP *this insight* in (8.30) (= Ward's ex. (350), p. 170), relates to the previous sentence by describing the (complex) proposition it expresses as an insight (see also Birner (1994:243)):

(8.30) Facts about the world thus come in twice on the road from meaning to truth: once to determine the interpretation, given the meaning, and then again to determine the truth value, given the interpretation. **This insight** we owe to David Kaplan's important work on indexicals and demonstratives, and we believe it is absolutely crucial to semantics.

Similarly, in (8.29), *the Administration's position* labels the understanding outlined in the preceding two sentences as 'the Administration's position'. This anaphoric bridging clearly furthers the connective function of the inversion.<sup>31</sup>

At this point, I want to contemplate the possibility that specificational clauses are subject to a slightly stronger discourse condition than the one proposed by Birner for inversions in general. Birner's condition (given in (8.20) above) states that the preposed element in an inversion must not be newer in the discourse than the postposed element (Birner 1996:90). In terms of the matrix in (8.31), this means that all but one of the four possible combinations of relative Discourse-familiarity are allowed in inversions (cf. Birner's actual matrix in (8.19) above):

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<sup>31</sup>Ward's notion of anaphoric bridging raises some interesting questions about my separation of a discourse entity from its properties with respect to the calculation of Discourse-oldness (see end of section 8.3.2). I cannot address these here.

(8.31) Discourse-familiarity in inversions (schematic version)

INITIAL ELEMENT →	DISCOURSE-OLD	DISCOURSE-NEW
FINAL ELEMENT ↓		
DISCOURSE-OLD	✓	#
DISCOURSE-NEW	✓	✓

Notice that the specificational clauses discussed above all fall in the leftmost of the two columns: the initial element is Discourse-old, while it varies whether the postposed element is Discourse-new, as in (8.26)–(8.28), or Discourse-old, as in (8.29). The same is true of the other examples that I have gathered. If representative, this suggests that specificational clauses might be subject to a slightly stronger discourse condition, formulated in (8.32).

(8.32) DISCOURSE CONDITION (STRONG)

The initial element of a DP-inversion must be at least as Discourse-old as the final element, and it cannot be entirely Discourse-new.

This rules out the lower right cell in the matrix, as shown in (8.33):

(8.33) Discourse-familiarity in DP-inversions (schematic version)

INITIAL ELEMENT →	DISCOURSE-OLD	DISCOURSE-NEW
FINAL ELEMENT ↓		
DISCOURSE-OLD	✓	#
DISCOURSE-NEW	✓	#

The difference hinges on the existence of non-DP inversions like the one in (8.34) (Birner 1994:234, ex. (1b)), where, according to Birner, both the initial and final

elements are Discourse-new, and the absence of DP-inversions where both DPs are Discourse-new.<sup>32</sup> The latter is central to attempt to account for the infelicity of certain kinds of indefinite specificational subjects in section 8.3.4.2.

(8.34) George, can you do me a favor? **Up in my room, on the nightstand,** is a pinkish-reddish envelope that has to go out immediately.

If it turns out that DP-inversions are indeed subject to this stronger discourse conditions, a natural question to ask is whether that is related to the structural difference between DP-inversions and other inversions, namely that only in the former is the initial element in subject position.<sup>33</sup> I speculate that the answer is yes, but I do not have much else to say about it at this point.

Could we strengthen the discourse condition on DP-inversions even further, to also disallow the bottom left cell (where both elements are Discourse-old)? The answer is fairly clearly no, given the existence of examples like (8.25) and (8.29), which instantiate this cell.

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<sup>32</sup>Given the presence of *my* in the preposed PP, the PP is Anchored in the sense of Prince (1981). According to Birner, however, being Anchored is not enough to make an expression Discourse-old. It could be that the difference between Birner's discourse condition on inversion in general and the strengthened discourse condition on DP-inversions that I propose in (8.32) above comes down to how much of the fronted element has to be Discourse-old for the whole constituent to count as Discourse-old. I assume that the first and second person pronouns are always Discourse-old, since their referents (the speaker and the addressee(s)) are always Situationally Evoked.

<sup>33</sup>I am grateful to Judith Aissen for raising this question, though I regret not being able to provide a better answer at this point.

### 8.3.4 Discourse-familiarity and definiteness

The specificational clauses discussed in the previous section all involve preposed DPs that are formally definite, as signalled by the definite article (*the only person ever to win a Presidential election while serving as Vice-President; the most persuasive refutation of the Administration's position*) or a possessive element (*Ian Roberts and Anna Roussou's contribution; our next speaker*). According to Prince (1992:10), definite form typically signals Hearer-old. By definition, Discourse-old material is Hearer-old (since hearers are assumed to remember what they have been told), so we can understand the use of definite form in specificational subjects as an indirect reflex of their Discourse-oldness. Similarly, Birner found that in 90% of the inversions where the preposed constituents that contained a DP, the DP was definite, while only 10% were indefinite (1996:99–102). She reasons—supporting my suggestion above—that “there is a strong tendency for the initial element to be definite, because the initial element in the inversion tends to be discourse-old, and any element which is discourse-old is necessarily hearer-old, and hence definite” (Birner 1996:101).

The correlation with definiteness is highly relevant for the analysis of specificational clauses, since it has been claimed (e.g. by Higgins (1979:223–224) and Heycock and Kroch (1999:379)) that indefinite DPs are ungrammatical as subjects of specificational clauses. Moreover, the purported impossibility of indefinite specificational subjects has been argued by Heycock and Kroch (1999) and Partee (2000:194) to be a serious problem for the predicate raising analysis of specifica-

tional clauses. They start by observing that indefinite DPs are possible (and are in fact very common) as predicate complements of predicational clauses, as the completely routine example in (8.35) illustrates.

(8.35) John is a doctor.

Given this and the hypothesis that specificational clauses involve raising the predicative DP to subject position (the central claim of the predicate raising analysis), we would expect to find indefinites as subjects of specificational clauses. However, as these researchers observe, the inverse of (8.35) is decidedly odd, in fact Heycock and Kroch (1999) and Partee (2000) judge it to be ungrammatical, and present with a star, as in (8.36).

(8.36) \*A doctor is John.

Their criticism is mostly directed at Moro's (1997) analysis, but it applies equally to the analysis I am proposing here, since I too assume that the subject of a specificational clause is predicative and that indefinites can be predicative. (I touched on this issue in chapter 7, but I am now in a position to explore it in more detail.) My response to this criticism takes the following form. It is true that certain indefinites do not felicitously occur as subjects of specificational clauses, but that is not because they are semantically predicative, but rather because these particular indefinites fail to contain any Discourse-old material, which in turn takes away the necessary discourse motivation for raising the predicate to subject position. I will argue for this by first showing that there are felicitous instances of specificational clauses with indefinite subjects, and that these obey not only

Birner's discourse condition on inversion, but also the strengthened condition I proposed for DP-inversions in the previous section (see (8.32) above). I then suggest that the strengthened discourse condition on DP-inversions (namely that the initial element must be Discourse-old) together with the Novelty Condition on indefinites (Heim 1982) conspire to make examples like (8.36) unusable.

#### 8.3.4.1 Indefinite specificational subjects

Given the connection between inversion, relative Discourse-oldness and definiteness outlined above, we would expect indefinite specificational subjects to be rare. The goal of this section is to show that even if indefinite specificational subjects might be rare, they are not impossible. The reason they are not impossible is that preposed elements can be considered Discourse-old for the purposes of inversion as long as they **contain** Discourse-old information (see the discussion below (8.21) in section 8.3.2 above) and indefinite DPs can contain Discourse-old information, in the form of modifiers or arguments. So we in fact expect certain indefinites, the ones that contain Discourse-old material, to occur as subjects of specificational clauses. There seems to be some empirical support for this.

Consider first the excerpt in (8.37), which occurred in a linguistics article on factive predicates (Delacruz 1976:195). The specificational clause occurs in a footnote towards the end of the paper (the subject of the specificational clause is in bold).

(8.37) The occurrence of a factive sentence in contexts like (40) and (41) shows that factives do not always have the force of the-fact-that- $\phi$  sentences.<sup>8</sup>  
...  
...

<sup>8</sup>A philosopher who seems to share the Kiparskys' intuitions on some factive predicates is Unger (1972), who argues that a sentence like (i) entails (ii):

- (i) John regrets that it is raining.
- (ii) It is raining.
- ...

The philosopher Unger has not been mentioned earlier, nor has his work. The subject DP is also Discourse-new in the sense that no philosopher who shares the Kiparskys' intuitions on some factive predicates has been mentioned before—this is partly what allows it to be indefinite—but it contains Discourse-old material. In particular, the relative clause modifying *philosopher* mentions the Kiparskys, who figure prominently throughout the article through many references to their work on factives. Moreover, the DP *the Kiparskys' intuitions on some factive predicates* provides an anaphoric bridge (in the sense of Ward (1988:170ff)) to the immediately preceding sentence in the main text, since it describes the position that is being denied there (that factives always have the force of the-fact-that- $\phi$  sentences) as 'the Kiparskys' intuition on (some) factive predicates'. That this is indeed the Kiparskys' intuition about factive predicates is made clear at several points earlier in the paper (e.g. three pages earlier in the discussion of examples (29) and (30)). This knowledge is required for the anaphoric bridge to work.

The specificational clause in (8.38) occurred in an email exchange (between

Geoff Pullum and myself, January 19, 2004). The subject is indefinite as signalled by *one*, but it contains Discourse-old material, in particular the DP *a Humanities Fellow position at Stanford*, which was mentioned in the email to which this one is responding.

(8.38) **One example of someone who started with a Humanities Fellow position at Stanford (actually a Mellon)** is Ivan Sag.

Following the convention established in the discussion of Birner's examples in section 8.3.2, we can say that the Discourse-old material inside the subject is enough to make the subject relatively Discourse-old compared with the predicate complement, *Ivan Sag*, whose referent had not been mentioned earlier in the email exchange.

Another example of a specificational clause with an indefinite subject is given in (8.39). This paragraph occurred in an article discussing the quality of the intelligence cited by the US government as motivation for the military invasion of Iraq.<sup>34</sup>

(8.39) Joseph Wilson, the diplomat who had traveled to Africa to investigate the allegation more than a year earlier, revived the Niger story. He was angered by what he saw as the White House's dishonesty about Niger, and in early May he casually mentioned his mission to Niger, and his findings, during a brief talk about Iraq at a political conference in suburban Washington sponsored by the Senate Democratic Policy Committee (Wilson is a Democrat). **Another speaker at the conference** was the *Times* columnist Nicholas Kristof, who got Wilson's permission to mention the Niger trip in a column.

Again we see that the indefinite subject contains Discourse-old material, in this

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<sup>34</sup>Seymour M. Hersh "The Stovepipe", *The New Yorker*, Oct 27, 2003, p. 86.

case the DP inside the PP modifier *at the conference*. The conference referred to is the ‘political conference in suburban Washington sponsored by the Senate Democratic Policy Committee’ introduced in the previous sentence. The referent of the predicate complement, Nicholas Kristof, has not been mentioned earlier, and the inversion clearly functions to connect him to the preceding discourse, via his participation in the conference mentioned in the preposed DP.

In a later paragraph on the same page of the article, we find another specificational clause with an indefinite subject:

- (8.40) Among the best potential witnesses on the subject of Iraq’s actual nuclear capabilities are the men and women who worked in the Iraqi weapons industry and for the National Monitoring Directorate, the agency set up by Saddam to work with the United Nations and I.A.E.A. inspectors. Many of the most senior weapons-industry officials, even those who voluntarily surrendered to U.S. forces, are being held in captivity at the Baghdad airport and other places, away from reporters. Their families have been told little by American authorities. Desperate for information, they have been calling friends and other contacts in America for help.

**One Iraqi émigré who has heard from the scientists’ families** is Shakir al Kha Fagi, who left Iraq as a young man and runs a successful business in the Detroit area. “The people in intelligence and in the W.M.D. business are in jail,” he said. “The Americans are hunting them down one by one. Nobody speaks for them, and there’s no American lawyer who will take the case.”

The way the indefinite subject of the specificational clause connects to the preceding discourse is both obvious and complex. We can start by noting that *the scientists families* is Discourse-old by virtue of the earlier mention of *their families*, where *their* is anaphoric to *the men and women who worked in the Iraqi*

*weapons industry and for the National Monitoring Directorate* in the first sentence of the paragraph. That these men and woman are scientists is presumably inferrable from the information about where they worked and the knowledge that the weapons industry employs scientists. The preceding paragraph states that these Iraqi families have called “friends and other contacts in America”, from which we can infer that some people in America have heard from the families, which confers Discourse-oldness on the rest of the relative clause inside the indefinite subject. The person named in the predicate complement has not been discussed earlier, and is therefore Discourse-new, as is the description of him provided by the appositive relative clause (except for the word *Iraq*). This specificational clause thus seems to perform the information packaging function characteristic of inversions by presenting material that is (relatively) familiar in the discourse before material that is new in the discourse.

What these examples seem to indicate is that indefinite specificational subjects are possible, as long as they allow the specificational clause to serve its discourse connective function, and further that this is possible when the indefinite subject contains arguments or modifiers that are (partly) Discourse-old. This is good news for the predicate raising analysis, since it shows that there is nothing inherently wrong with indefinites (which by assumption are predicative) in the subject position of specificational clauses. What still needs to be explained is why not all instances of specificational clauses with indefinite subjects are felicitous.

### 8.3.4.2 Some indefinites cannot be specificational subjects

In (8.41), I repeat the example that Heycock and Kroch (1999) cite as evidence for the impossibility of indefinite specificational subjects.

(8.41) **A doctor** is John.

We can immediately see how the indefinite subject in this example differs from the indefinite specificational subjects encountered in the previous section: the indefinite in (8.41) does not contain any modifiers or arguments that could provide links to the preceding discourse. It consists of just the common noun *doctor* and the indefinite article. The only way that this DP could count as Discourse-old is if *a doctor* itself is Discourse-old. But then the indefinite article would not be felicitous, as (8.42) shows:

(8.42) I spoke to my friend Brian about a doctor. #Then I made an appointment with a doctor.

Using the indefinite *a doctor* to link back to an already mentioned doctor, as in (8.42), violates the Novelty Condition on indefinites (Heim 1982:300ff). I want to suggest that something similar is going wrong in (8.41): the discourse condition on specificational clauses requires the subject to be Discourse-old, but the Novelty Condition on indefinites requires it to be Discourse-new.

Thus we find that indefinites in the subject position of specificational clauses have to walk a tight rope: on the one hand, they have to contain enough Discourse-old material to satisfy the topic requirement associated with this position; on the other hand, they have to maintain overall novelty to qualify for an indefinite article

or determiner.

Since there is no topic requirement on the subject position of a predicational copular clause, we expect to find Discourse-new indefinites in this position. And it seems that we do.<sup>35</sup> Thus (8.43) could occur discourse initially, which would imply Discourse-newness for the entire sentence, and (8.44) would be a suitable answer to a discourse-initial question like *How did the meeting go?*

(8.43) A student is here to see you.

(8.44) A philosopher was present and he hijacked the discussion.

If this line of analysis is on the right track, it suggests that examples like (8.41) are not ungrammatical, but rather infelicitous. They are infelicitous in all contexts, because no context can resolve the tension between the conflicting requirements imposed on the indefinite subject.<sup>36</sup> I will therefore assign it the cross hatch of infelicity, rather than the asterisk of ungrammaticality:

(8.45) #A doctor is John.

As pointed out to me by Donka Farkas, the inability of *a doctor* to be Discourse-old cannot be the whole story about (8.41)/(8.45), since the second sentence of (8.46) is equally infelicitous.

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<sup>35</sup>Since there is a general dispreference for indefinites in subject position, good examples are not easy to come by (see Mikkelsen (2002a) for discussion and reference). Nonetheless, comparing (8.41) with (8.43) and (8.44), there does seem to be a contrast between Discourse-new indefinite subjects in specificational and predicational clauses.

<sup>36</sup>Several speakers of English have, voluntarily, racked their brains to come up with contexts in which (8.41) could be uttered felicitously, but none of them have been successful enough to persuade other speakers, so I will continue to assume that (8.41) is infelicitous in all contexts, and, hence, that we do need the stronger discourse condition on DP-inversion in (8.32) to account for it.

(8.46) Bill is a doctor. #A doctor is John (too).

Here, it would seem, the property of being a doctor is Discourse-old by virtue of the predicative use of *a doctor* in the immediately preceding sentence. This presents a problem for my account of (8.41)/(8.45). How serious a problem this is depends, among other things, on the extent to which the infelicity of (8.46) is due to independent factors, in particular whether it is parallel to the infelicity of (8.42) above and that of (8.47) below, both of which also contain two occurrences of *a doctor*.

(8.47) Sally is a doctor. #A doctor came to dinner last night.

What the Novelty Condition explains is why, in all of the three examples, the second occurrence of *a doctor* cannot be anaphoric to the first. What it does not account for is why the second occurrence of the indefinite cannot be used in such a way that it simply does what such indefinites normally do, namely introduce an entirely new discourse referent. Note that the addition of a prenominal modifier like *different* or *other* improves all three examples:

(8.48) I spoke to my friend Brian about a doctor. Then I made an appointment with another doctor.

(8.49) Bill is a doctor. Another doctor is John.

(8.50) Sally is a doctor. A different doctor came to dinner last night.

We also need to understand what distinguishes (8.46)—and (8.42) and (8.47)—from (8.51), which also contains two occurrences of *a doctor*, but is nonetheless felicitous:

(8.51) Bill is a doctor. John is a doctor (too).

As pointed out to me by Donka Farkas, there are still other factors that seem to play a role in determining the felicity of indefinite specificational subjects, such as the content and form of the modifier (adjectives like *different* differ from adjectives like *tall*, and adjectival modification differs from modification by a relative clause), and the nature of the indefinite determiner itself (indefinites headed by singular *some* seem to behave differently from indefinites headed by *a* and *one*). I have to leave these very interesting observations as questions for further research.

## 8.4 Discourse-familiarity and topic

So far the discussion of the discourse conditions on specificational clauses has been purely descriptive. To make it bear on the analysis developed in the next chapter, we need to connect the (descriptive) notion of Discourse-old with the (theoretical) notion of topic. As noted in the introduction, the relation between Discourse-familiarity and topichood is controversial. This is not the place for a comprehensive review of the controversy (see e.g. Vallduví (1992:chapter 2) and Lambrecht (1994:117–205) for extensive discussion), so I will limit myself to some brief remarks.

My current understanding is that the notion of topic that is relevant to the distribution of copular clauses, and specificational ones in particular, is a complex one, which involves as part of its constitution being (treated as) Discourse-old. However, being topic involves other more abstract properties that have to do

with the structure of the discourse, possibly as conceived in the work of Roberts (1996) and Büring (2003). Below, I briefly illustrate why I believe that Discourse-familiarity is relevant to the distribution of copular clauses, and also why it cannot be sufficient for accounting for the distribution of specificational clauses.

**The limitations of Discourse-familiarity** Consider again the question–answer pairs cited at the beginning as evidence for specificational clauses having a fixed topic–focus structure:

- (8.52) Q: Who is the winner?  
 A1: The winner is JOHN. [Specificational]  
 A2: JOHN is the winner. [Predicational]
- (8.53) Q: What is John?  
 A3: #The WINNER is John. [Specificational]  
 A4: John is the WINNER [Predicational]

If Discourse-oldness was all that mattered, we would expect that we could make the specificational answer in A2 felicitous, by mentioning *the winner* in the question. This is not the case, as (8.54) shows:

- (8.54) Q: What is John? the winner or the runner-up?  
 A3: #The WINNER is John. [Specificational]  
 A4: John is the WINNER [Predicational]

This clearly indicates that the predicative DP being Discourse-old is not a guarantee that a specificational clause is possible. The structure of the question (and perhaps more generally, the structure of the ‘question under discussion’ (Roberts

1996)) prohibits the specificational answer.<sup>37</sup> This points to another issue, which I have not discussed at all, namely the role of focus. We could account for the infelicity of the specificational answer in A2 if we assumed that specificational subjects must be topic (for the reasons outlined at the beginning of this chapter), and that being topic is incompatible with being focus. Then the specificational answer would be out—despite *the winner* being Discourse-old—because the question demands that *the winner* be the focus in the answer, which in turn prevents it from surfacing as the subject of a specificational clause. While I think such considerations play an important part in understanding why A2 is infelicitous, they cannot be the whole story either.

**The contribution of Discourse-familiarity** If all there was to being topic was not being the focus (in the sense determined by question-answer congruence), one could reasonably ask why there should be specificational clauses at all, since a predicational clause with narrow focus on the subject can be used to answer the same question (or make the same move in the sense of Roberts (1996)), as (8.52) shows. What Discourse-oldness, and Birner’s work on the discourse function of inversion, bring to the table is the relevance of linear order. The “advantage” that the specificational answer in (8.52) has over the predicational one is that it presents the relatively familiar information before the relatively new information, or, more abstractly, that it aligns the topic with clause-initial position (Horn

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<sup>37</sup>Making both DPs Discourse-old in (8.2), e.g. by asking *Who is the winner? John or Bill?*, does not change the answer possibilities either, but that is less informative since the possibility of a specificational answer in the resulting context is fully consistent with the discourse condition on specificational clauses arrived at above.

1986).

**Summary** I started this chapter by noting that almost all researchers agree that the subject of a specificational clause is topic, though it is not clear what is meant by this term. I then went on to suggest that part of what it means for the subject of a specificational clause to be topic is for it to be Discourse-old, and that we can view specificational clauses as a special kind of inversion structure, building on Birner's work. My conclusion is that while being topic cannot be reduced to being Discourse-old, the notion of (relative) Discourse-familiarity and the connection with inversion are useful to consider, because they give us a handle on how specificational clauses differ from predicational clauses with narrow focus on the subject, a difference that to my knowledge has not been widely discussed. They also provide a new perspective on the status of indefinite specificational subject, though several difficult questions remain unresolved.

# Chapter 9

## An integrated analysis

### 9.1 Where we are

I will start by summarizing the conclusions we have reached so far about specificational and predicational copular clauses and their relation to each other.

- Predicational and specificational clauses are both subject-initial clauses (chapter 2)
- Predicational and specificational clauses both involve one predicative and one referential DP, but they differ in how the predicative and referential DPs are aligned with syntactic position at surface structure (chapters 4–6).
  - In predicational clauses the referential DP is in subject position, and the predicative DP is inside the verb phrase.



The goal of this chapter is to bring all of these observations together, to develop an analysis which integrates them, and to spell out some of the implications for our general theoretical understanding of clause structure and the special requirements associated with the subject position. The central intuition behind my analysis is that the fact that the subject of a specificational clause is always topic is intimately related to the fact that the subject DP is less referential than the post-copular DP. The reasoning that connects this intuition to the analysis presented below proceeds in three steps:

- (9.2)
- i. Other things being equal, the most referential DP occupies the subject position. This is the case in predicational copular clauses.
  - ii. But, the preference for the topic to be in subject position may override this default alignment. The result is a specificational clause.
  - iii. The reason why the subject of a specificational clause is always topic is that this is a precondition for getting a specificational clause at all.

The first states that when a predicative DP and a referential DP compete for the subject position the referential DP is inherently privileged. This is supported by Keenan (1976), who includes on his list of prototypical subject properties several that involves referentiality, such as Presupposed Reference (property 3.6, p. 318) and “Highly Referential” (property 3.9, p. 319). In the case of copular clauses we can understand this preference as a reflection of the syntax-semantics mapping: the referential DP is the subject of predication (or the logical subject),

and the default syntax-semantics mapping is one where the subject of predication is realized in the syntactic subject position (Spec-TP).<sup>1</sup> (This is reminiscent of Jespersen's (1924:145) claim that within a nexus (made up of a subject and a predicate) the subject is primary and the predicate secondary, though it is not entirely clear how Jespersen's notion of primacy relates to referentiality in the sense in which I am using the term here.)

The second step holds that when a topic marked DP competes with a non-topic marked DP for subject position, the topic-marked DP is inherently privileged. This claim is grounded in the very large literature on the relation between subjects and topics, in particular in the work showing that there is a preference for the subject to be topic and vice versa (see e.g. Prince (1981:242,252), Horn (1986), Prince (1992:317–318), Aissen (2001:72–73), Beaver (2004:18) and references cited there).<sup>2</sup>

The concluding step is that it is the interaction between these two preferences that causes the subject of a specificational clause to necessarily be topic. This

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<sup>1</sup>In recent work in Optimality Theoretic syntax, pioneered by Aissen (1999), such default alignments between syntactic position (or grammatical function) and non-syntactic properties (including thematic role, animacy, topicality, person, and definiteness) are captured in terms of constraint hierarchies derived by a technique known as Harmonic Alignment (Prince and Smolensky 1993:136ff). Within that conception, the default alignment of the referential element with subject position proposed here could be seen as the result of a Harmonic Alignment between a referentiality scale (defined on semantic types) and the grammatical function scale (according to which subjects are more prominent than non-subjects). In my derivational analysis, the relation between referentiality and syntactic position is built into the configuration of the predicational core, shared between predicational and specificational copular clauses, which I call PredP. It is an interesting question how the two approaches relate to each other, but one that I will not attempt to answer here.

<sup>2</sup>For the purposes of this discussion, I use subject to refer to syntactic position (specifically, Spec-TP) and topic in the sense discussed at the end of the previous chapter.

connection is hinted at in Partee (2000:199), but no actual analysis is developed there.<sup>3</sup>

Below, I develop an analysis of predicational and specificational clause that captures this reasoning, in particular the proposed connection between referentiality, topicality and subjecthood, in terms of featural interactions of the sort that drives the syntactic computation within the Minimalist framework.

## 9.2 A Minimalist analysis

My analysis builds on Moro's (1997) idea that in certain copular structures either DP can raise to subject position, but integrates information structure as a crucial factor in determining the syntactic conditions under which each of the two DP raises to subject position. In fleshing out the structural relation between the copula and the two DPs I rely on earlier work on the structural representation of

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<sup>3</sup> What Partee concretely says is that "The occurrence of the less referential NP as NP<sub>1</sub> [= the initial NP; LM] in specificational clauses, whether it is subject (as in English) or not (as in Russian), seems to be conditioned in part by its topicality, as noted by Sgall (1995), Percus (p.c.), Heycock and Kroch (in press), and others" (Partee 2000:199). I have not had access to Sgall's paper (it was published in the *Moscow Linguistics Journal*) nor to Percus' observations (the connection between subjecthood, referentiality and topicality in specificational copular clauses is not mentioned in Percus' written work on copular clauses, at least not the in the papers that I have had access to (Percus 1997, 2002b, 2002a)). The reference to Heycock and Kroch's work is to a preprint version of Heycock and Kroch (1999). In the published version, the connection between subjecthood, referentiality, and topicality is not made, and it is difficult to see how it could be made, given that Heycock and Kroch (1999) maintain the the subject of specificational clause is of the same semantic type as the predicate complement, which means type ⟨e⟩ in the examples under discussion here. Perhaps a subdivision could be made within type ⟨e⟩, such as Donnellan's (1966) distinction between attributive and referential uses of definite descriptions, but Higgins (1979:271ff) argues, to my mind convincingly, that Donnellan's notion of attributive does not provide an adequate characterization of the interpretation of the subject of a specificational clause.

predication by Bowers (1993), Svenonius (1994), and, more recently, Adger and Ramchand (2003).

I will be drawing most of my theoretical assumptions from the version of the Minimalist Program developed in Chomsky (2000) and Chomsky (2001), and I start in section 9.2.1 by laying out basic assumptions about features and featural interactions. Then, in section 9.2.2, I introduce the ‘predicational core’, which is my structural rendering of the small clause, and which is common to both predicational and specificational clauses. In sections 9.2.3 and 9.2.4 I give sample derivations for predicational and specificational clauses, before turning to a more systematic examination of the syntactic conditions under which the derivation will yield one or the other kind of clause (section 9.2.5). In section 9.2.6 I discuss a range of questions, theoretical and empirical, that arise from the proposed analysis.

### **9.2.1 Starting assumptions**

Features are the nuts and bolts of Minimalist syntax, as it is their properties and interactions that drive the syntactic derivation and computation. What effect a given feature has on the derivation depends, among other things, on where in the derivation it is introduced (as part of which feature bundle), and on whether it is interpretable or not. Uninterpretable features need to be checked before the syntactic structure is sent off to one of the interfaces. Once checked, an uninterpretable feature deletes.

Feature checking takes place via one of the two operations Merge and Agree.

We distinguish “First Merge”—the initial incorporation of a syntactic object (say a DP) into a larger structure—from “Second Merge”, “Third Merge” and so on. These last refer to the re-use of already-introduced material under the Merge operation. That is, First Merge does the same work as base-generation in earlier versions of the theory; subsequent applications of Merge do the work of movement.

Selectional features have priority over others, in the sense that First Merge of a syntactic object to a head are motivated by selectional requirements of the head. EPP is also a selectional feature; it requires that the head to which it belongs has a specifier in addition to those required by other selectional features. Thus the EPP can be satisfied either by movement (Second Merge) or by First Merge of an expletive.

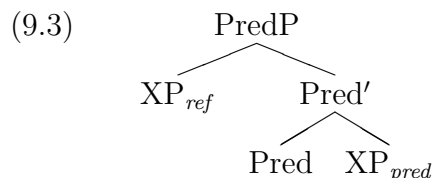
Feature checking under Agree comes about when a higher head bears an uninterpretable feature that is not satisfied by Merge. The higher head, called ‘the probe’, seeks an element inside the syntactic structure that bears the feature in question (and that is active in a sense that will be made clear below). That element is called ‘the goal’. The probe enters into an Agree relation with the goal, valuing and checking matching features. Speaking informally, the probe agrees with the closest goal that can eliminate all relevant features on the probe (see section 9.2.6.1 for a more precise statement and motivation of this principle).

**Notational conventions** Uninterpretable features are prefixed with *u*. So for a particular occurrence of a feature F in a particular feature bundle, the notation [F] means that F is interpretable and [*u*F] means that F is uninterpretable. That

a feature has been checked is shown by striking it through: [~~u~~F]. Movement is indicated by enclosing the lower copy (copies) of the moved element in angle brackets: ⟨XP⟩.

### 9.2.2 The predicational core

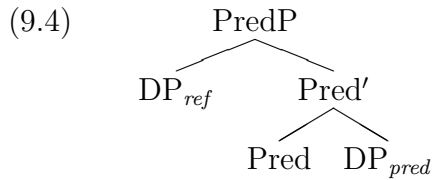
Following Bowers (1993), Svenonius (1994:28–31), Adger and Ramchand (2003), and much other work, I assume that the predication relation is syntactically mediated by the projection of a functional head, Pred.<sup>4</sup> Pred takes two arguments—a predicative one and a referential one:



This is a case of semantic selection (s-selection), since the predicative argument can be of any category as long as it is semantically predicative (including AP, PP, NP, DP, and VP). The referential argument is typically a DP, but it can also be a CP or an AP insofar as these can be type-shifted to denote (abstract) individuals. In the PredPs that we will be considering here the referential argument is always a DP, and in the ones that give rise to specificational clauses both arguments are DPs, as in (9.4).

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<sup>4</sup>Pred is the term used by Svenonius (1994) and by Adger and Ramchand (2003). Bowers (1993) calls it Pr.



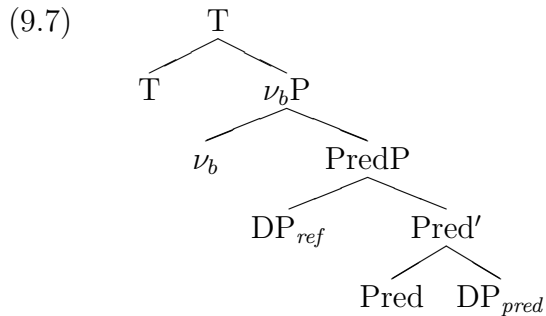
While their syntactic category may vary, the order in which the two arguments are merged is fixed: the predicative argument is merged as the complement of Pred, and the referential argument is merged as the specifier of Pred. I assume that the fixed order, as well as the s-selection for one predicative and one referential element, is governed by the semantic type of the Pred head, which is  $\langle\langle e,t \rangle, \langle e,t \rangle\rangle$ .

Supporting evidence for the assumption that Pred merges with its arguments in this fixed order comes from certain embedded predicational structures. As observed by Rothstein (1995:41ff), in a small clause under *consider* the referential element must precede the predicative element, as in (9.5). The opposite order is impossible, as (9.6) shows. If we identify the complement of *consider* as PredP we can understand this restriction as a reflection of the fixed order in which the predicative and referential arguments are merged.

(9.5) I consider [P<sub>PREDP</sub> Susan my best friend]

(9.6) \*I consider [P<sub>PREDP</sub> my best friend Susan]

In a copular clause PredP is surmounted by functional architecture, which consists, minimally, of a ‘little v’ head, which I will call  $\nu_b$  and T, the locus of tense:

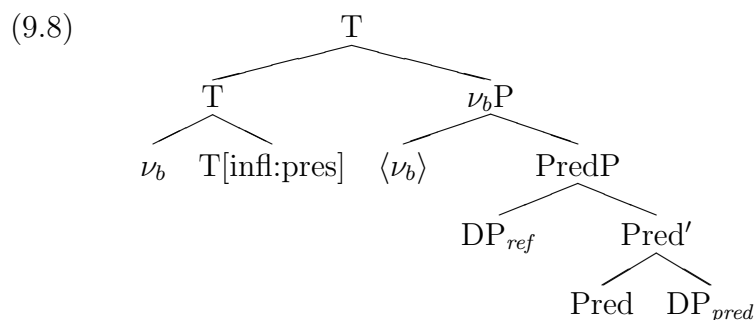


$\nu_b$  is a subtype of unaccusative  $\nu$ : it does not assign a  $\Theta$ -role (nothing is merged in its specifier position) and it does not assign accusative case. The difference between the normal unaccusative  $\nu$  and  $\nu_b$  is in the category of their complement:  $\nu$  takes a VP complement,  $\nu_b$  takes a PredP complement. Since we know from (9.5) that PredP has a distribution independent of the copula, I assume that the verb *be* is the morphophonological exponent of  $\nu_b$ , and that Pred itself has no morphophonological exponent (at least not in English and Danish).

The separation of  $\nu_b$  and Pred, allows us to understand a well-known cross-linguistic difference in the domain of copular clauses. In languages like English and Danish, all copular clauses contain some verbal element, whereas many other languages (including Hebrew, Irish, Scots Gaelic, Polish, Russian, Arabic, Zapotec) allow copular clauses without any verbal element. Given the structure in (9.7) we can understand this as a difference in the status of  $\nu_b$ . In languages like English and Danish,  $\nu_b$  is obligatory in the sense that T cannot select PredP directly. In the second group of languages, T can select PredP directly, as suggested for Scots Gaelic by Adger and Ramchand (2003:331ff) (see also Rothstein (2001:205–338) for detailed discussion of the difference between Hebrew and English in this

respect).<sup>5</sup>

As is well-known, the copula behaves as an auxiliary verb with respect to verb raising: a finite copula precedes negation and undergoes subject-auxiliary inversion. Thus if T is finite,  $\nu_b$  moves to T, as shown in (9.8).<sup>6</sup>



The T- $\nu_b$  complex is spelled out as one of the present tense copula forms *am*, *are*, or *is*. Which one depends on how the  $\phi$ -features are valued on T (by the DP in Spec-TP).

As is the case in non-copular clauses, there can be more more structure between T and the ‘little v’ head, signalled by negation, or aspectual marking (progressive and/or perfective). Thus (9.9) involves a NegP and a PerfP between T and  $\nu_b$ , and (9.10) a ProgP (see Adger (2003:171–185) for discussion of these intermediate

<sup>5</sup>Given the analysis I propose for specificational clauses below, word order in raising constructions (*The winner seems to be Susan*, not *\*The winner seems to Susan be*) and specificational clauses containing a modal (*The winner might be Susan*, not *\*The winner might Susan be*) provides further evidence that *be* is not the spell out of Pred in English. I am grateful to Jason Merchant for pointing out the relevance of these facts.

<sup>6</sup>The nature of this movement, and of head movement more generally, is the subject of much current debate within the Minimalist Program. These issues, however, are not directly relevant for my concerns; the movement of  $\nu_b$  to T plays no special role in my analysis of predicational and specificational clauses, other than accounting for the surface position of the copula with respect to negation, and it does not interact with movement of phrasal elements to Spec-TP, which is at the core of my proposal. I thus remain agnostic as to how exactly this movement should be understood theoretically.

projections):

(9.9) Susan might not have been a linguist.

(9.10) Susan is being careful.

I will not be concerned with these more articulated clause structures in what follows, since they do not affect the part of the derivation that distinguishes predicational from specificational copular clauses, which is my main concern here.

Building on the analysis in Moro (1997), I assume that predicational and specificational copular clauses share the structure in (9.7), and that they differ in which DP raises to subject position. If the referential DP raises to subject position the result is a predicational clause; if the predicative DP raises to subject position the result is a specificational clause. It is worth noting that Moro (1997) did not discuss under which circumstances which of the two DPs raises, but focussed on showing that raising of the predicative DP to subject position was theoretically possible, and that it was an attractive analysis of specificational clauses in empirical terms. This should be seen in the light of the fact that Moro was working within the Principle and Parameters framework, where movement is optional and free (given the general principle of Move  $\alpha$ ), though regulated indirectly by well-formedness filters, such as the EPP and the Case-filter. Within that conception of movement, there was no theoretical problem with assuming that from one and the same initial structure either DP could move to subject position, as long as the resulting structure passed the well-formedness criteria.<sup>7</sup> The situation is very dif-

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<sup>7</sup>Though it is puzzling why moving the lower, predicative, DP to subject position does not induce a violation of relativized minimality.

ferent within the Minimalist framework, where movement is not free, but driven by the need to check and eliminate uninterpretable features, such that the structure can eventually be interpreted at the interfaces with language-external systems, in particular the Conceptual-Intentional system and the Articulatory-Perceptual system (cf. the discussion of ‘Interpretability’ in Chomsky (2000:113, 118–119)). The following three sections are thus concerned with characterizing, syntactically, the conditions under which  $DP_{ref}$  raises to subject position—resulting in a predicational clause—and the conditions under which  $DP_{pred}$  raises to subject position, resulting in a specificational clause. Based on the discussion of topic–focus structure in the previous chapter, I will suggest that the key factor in this calculation is the distribution of a topic feature, which is interpretable on DPs, but uninterpretable on T. This goes beyond Moro’s analysis, not only technically (by getting rid of the assumption that either DP is free to move in all structures), but also conceptually and empirically by integrating information-theoretic properties of the two kinds of copular clauses as a central piece of their syntactic derivations.

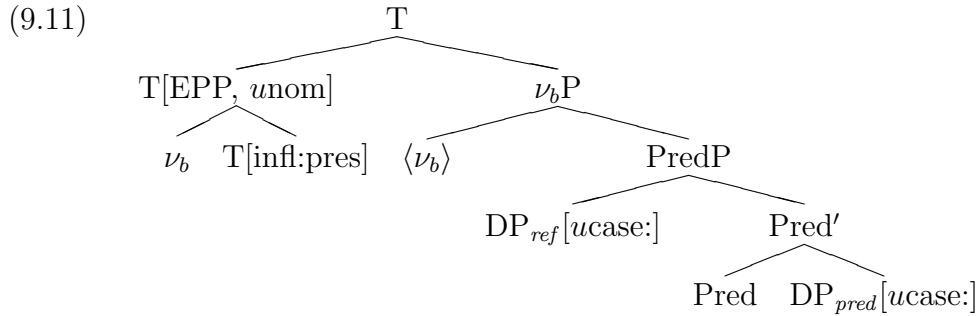
### 9.2.3 Deriving predicational clauses

Let us start by considering a derivation where neither DP bears the topic feature, in order to appreciate how the other features interact. T is finite so it bears an interpretable inflectional feature [infl:pres], an uninterpretable nominative case feature, [*unom*], and the standard EPP feature.<sup>8</sup>  $DP_{ref}$  and  $DP_{pred}$  both bear an

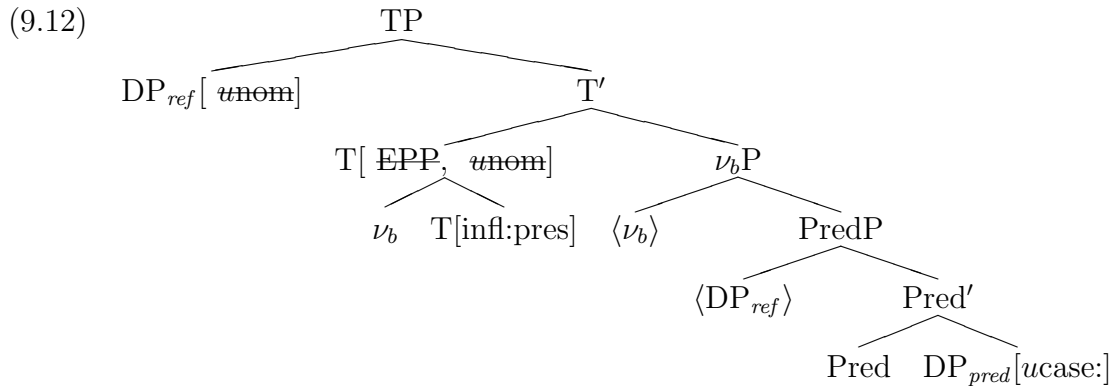
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<sup>8</sup>My notation for the valued case feature on T [*unom*] is an abbreviation for the more explicit notation [*ucase:nom*] (see Adger (2003:211,239)). When the case feature on T is checked I will write it as [~~unom~~], rather than [~~ucase:nom~~]. Similarly, when the unvalued case feature on a

uninterpretable case feature [*ucase:*]. After raising  $\nu_b$  to T, we have the following structure:



The uninterpretable case and EPP features on T need to be eliminated. In principle, either  $DP_{ref}$  or  $DP_{pred}$  could do the job (they are both Ds and they both have an unvalued case feature), but  $DP_{ref}$  is closer to T, since it asymmetrically c-commands  $DP_{pred}$ . T therefore enters into an Agree relation with  $DP_{ref}$ , valuing the case feature on  $DP_{ref}$  as nominative. The EPP feature on T forces the specifier of T to be filled, and, as a result,  $DP_{ref}$  moves to Spec-TP:



At this point the only remaining unchecked feature is the case feature on  $DP_{pred}$ . One might question whether a predicative DP bears a case feature at all (as DP is valued and checked, I will write that as [*unom*], rather than [*ucase:nom*].

Safir (1985:77), Chomsky (1986:95), and Authier (1991:725, fn. 5) do), but as will become clear when we consider the derivation of specificational clauses, it is crucial to my analysis that  $DP_{pred}$  can check the nominative case feature on T, so I will assume that it bears a case feature (see Maling and Sprouse (1995) for relevant discussion).<sup>9</sup> In the present derivation nominative case is checked by  $DP_{ref}$ . By assumption  $\nu_b$  does not have a case feature, and nor does Pred. This means that neither of these heads can value the case feature on  $DP_{pred}$ . It is not clear from overt morphology what case  $DP_{pred}$  has, since non-pronominals do not show case distinctions morphologically (except for the genitive *s*, which is not relevant here), and the only pronominal that can take the place of  $DP_{pred}$  is the neuter *it* (see chapter 7), and *it* does not show case distinctions either (nor does Danish *det*.) Given this paucity of evidence, I will assume that  $DP_{pred}$  is valued with default case, in roughly the sense of Schütze (2001), at the interface with PF.<sup>10</sup> I will say more about default case in the next section. As for the case feature on  $DP_{ref}$  being valued nominative in (9.12), we are on firmer empirical ground, since the

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<sup>9</sup>Alternatively, one could adopt some non-standard assumptions about how case checking works and/or assume that the case feature on  $DP_{pred}$  is optional. Neither of these seem attractive to me.

<sup>10</sup>My notion of default case is not quite Schütze's, because he assumes that a DP that is spelled out with default case is not associated with any case feature in syntax (p. 206), whereas I assume that it can be associated with an (unvalued) syntactic case feature, such as is the situation with  $DP_{pred}$  in (9.12). In this respect, my notion of default case is more in line with that appealed to by McCloskey (1985) in his discussion of overt subjects in infinitival contexts in Irish, where he characterizes default case as "a more general default rule which simply assigns (accusative) Case to any NP which does not get Case by some other means" (p. 195); see also Chung and McCloskey (1987:188) and the references cited there. It is also in line with more recent rethinking of the Case Filter as primarily a matter of eliminating uninterpretable case features on the probe (e.g. T or  $\nu$ ). Under this conception, the role of a case feature on a DP is to activate it as a goal, which allows it to enter into relations with an active probe (Agree) and possibly undergo Movement, if the probe bears an EPP feature (Chomsky 2000:127).

referential pronouns *she* and *he* (and *I*, *we*, *they*) do distinguish nominative and accusative overtly, as do their Danish counterparts. As the examples in (9.13) and (9.14) show, the subject pronoun of a predicational clause must be in the nominative form in both English and Danish:

- (9.13) a. She/\*Her is a linguist.  
b. He/\*Him is a linguist.

- (9.14) a. {Hun / \*Hende} er lingvist.  
she / her is linguist.  
b. {Han / \*Ham} er lingvist.  
he / him is linguist.

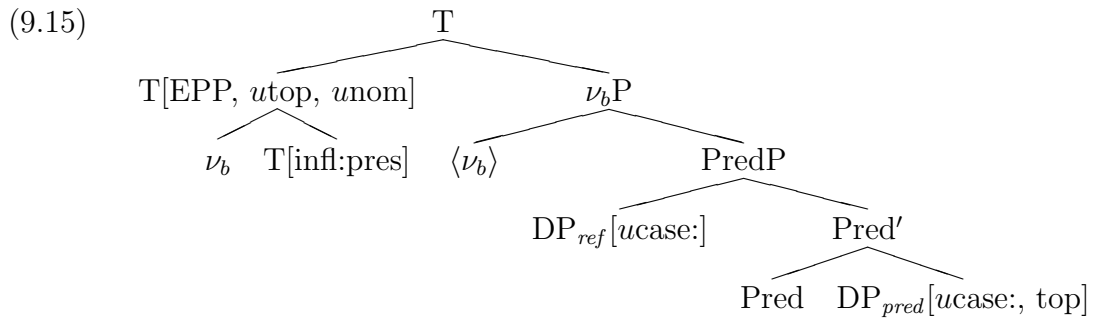
The structure in (9.12) is spelled out as a predicational clause: the referential DP is in subject position—preceding the finite copula—and the predicative DP is inside PredP, following the finite copula. This derivation thus illustrates the first premise of the reasoning schematized in (9.2), that other things being equal, the referential DP is realized as the subject. Let us next consider a case where other things are not equal.

#### 9.2.4 Deriving specificational clauses

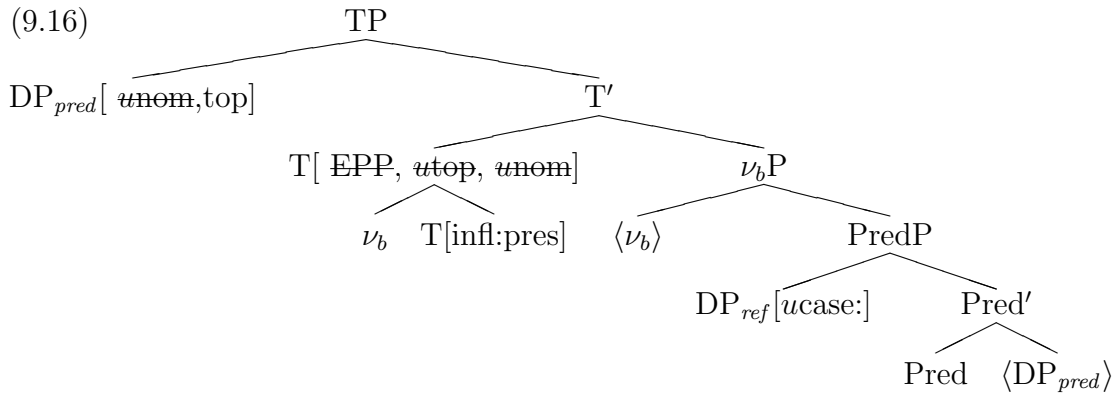
I assume that information structure impinges on the syntactic derivation by way of features, in particular a topic feature [top] which is interpretable on DPs (and possibly other lexical categories, but we will only be concerned with DPs here), but uninterpretable on T ([*utop*]). This is very similar to the suggestion in Adger (2003:329–332) that in a V2 language like German, C bears an uninterpretable

topic feature, which forces a topic marked XP to move to Spec-CP; see also Bailyn (2004).

We start with the structure in (9.15), where head movement has taken place, but as yet no XP movement has occurred. T bears the uninterpretable nominative case feature, the standard EPP feature and an uninterpretable topic feature. Crucially,  $DP_{pred}$  bears an interpretable topic feature, and  $DP_{ref}$  does not.



The three uninterpretable features on T need to be eliminated. There is exactly one DP that can check all three, and that is  $DP_{pred}$ . It is a DP so it can check the EPP feature, it has an unvalued case feature which can be valued by  $[unom]$ , and, crucially, it bears an interpretable topic feature which can check the uninterpretable topic feature on T. Since the EPP requires Spec-TP to be filled,  $DP_{pred}$  raises to Spec-TP, as shown in (9.16):



The uninterpretable case feature on  $DP_{pred}$  is valued nominative by T. Since the only pronominal that can take the place of  $DP_{pred}$  is the neuter *it*—cf. the discussion in chapter 7, section 7.2—we cannot see the nominative case overtly:

(9.17) It is Susan.

(9.18) Det er Susan.  
it-NEU is Susan

Things become more interesting when we consider how the case feature on  $DP_{ref}$  is valued in (9.16). The nominative case on T goes to value the case feature on  $DP_{pred}$  and, by assumption, there is no case feature on  $\nu_b$  (nor on Pred). Following the reasoning used in the derivation of the predicational clause above, we have to say that  $DP_{ref}$  gets default case at the interface with phonology. The reason this is a more interesting claim is that here it is the referential DP that is getting default case, and since referential pronouns show overt case (beyond genitive vs. non-genitive) we can test the accuracy of this proposal empirically. In Danish and English the default case is accusative (Schütze (2001:210–216, 227), Ørnes (2002:333–337)), and we thus expect a pronominal  $DP_{ref}$  to show up in the accusative form in a specificational clause. This is indeed what we find in (9.19)

and (9.20). (For pragmatic reasons the pronoun has to be prosodically prominent, so that it can receive a deictic, rather than anaphoric interpretation; see chapter 6, section 6.3.1.2).<sup>11</sup>

(9.19) The winner isn't HIM/\*HE.

(9.20) Vinderen er ikke HAM/\*HAN. Danish  
winner-the is not him/ he

Moreover, when we turn to Swedish, where the default case is not accusative, but nominative (Schütze 2001:229), we find that DP<sub>ref</sub> is nominative in specificational clauses:<sup>12</sup>

(9.21) Vinnaren är inte \*HONOM/HAN. Swedish  
winner-the is not him/he

This is a systematic difference between specificational clauses in Swedish on the one hand and in Danish and English on the other.<sup>13</sup> First, it holds for all persons. Thus in the Swedish examples in (9.22), the nominative forms are all acceptable (9.22a), and the accusative forms are all unacceptable (9.22b). In Danish, the pattern is the exact opposite, as (9.23) shows.

(9.22) a. Vinnaren är inte HAN / HON / JAG / DU / ... [Swedish]  
winner-the is not he / she / I / you-NOM /

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<sup>11</sup>In (very) formal registers, some English speakers allow the nominative pronoun in (9.19). This is part of a larger pattern of difference between formal and informal registers; see Huddleston and Pullum (2002:459–460) for relevant discussion. There is no register of Danish that allows the nominative pronoun in (9.20).

<sup>12</sup>The judgments on (9.21) were confirmed by Ida Toivonen, Lars-Olof Delsing, Kersti Börjars, and Christer Platzack. Christer Platzack further provided me with (9.22), Lars-Olof Delsing with (9.24a), and Kersti Börjars with (9.28).

<sup>13</sup>The situation in Norwegian is more complex, both with respect to default case in general and case patterns on post-copular DPs (Schütze 2001:225–226, 236). This is partly due to dialectal variation, and I will not discuss it here.

- b. \*Vinnaren är inte HONOM / HENNE / MIG / DIG ...  
 winner-the is not him / her / me / you-ACC /
- (9.23) a. \*Vinderen er ikke HAN / HUN / JEG / DU / ... [Danish]  
 winner-the is not he / she / I / you-NOM /
- b. Vinderen er ikke HAM / HENDE / MIG / DIG / ...  
 winner-the is not him / her / me / you-ACC /

Second, the same case difference is found in truncated clefts, which I have argued are specificational clauses with anaphoric subjects (chapter 7, section 7.2). If the predicate complement,  $DP_{ref}$ , is also a pronoun it must be nominative in Swedish, but accusative in Danish:

- (9.24) [Said when calling home]
- a. Hej, det är {jag / \*mig}. [Swedish]  
 Hi it is I / me
- b. Hej, det er {\*jeg / mig}. [Danish]  
 Hi it is I / me

Unless one finds independent reasons to think that specificational copular clauses have a very different syntactic derivation in Swedish, a language closely related to Danish, this contrast supports my proposal that when  $DP_{ref}$  or  $DP_{pred}$  does not have its case feature valued by T, it is realized with default case, i.e. accusative in Danish and English, nominative in Swedish.<sup>14</sup>

Concretely, I assume that default case is effected by an interface rule, which assigns the default case (of the language in question) to any DP that reaches spell-out without having its case feature valued:

<sup>14</sup>This is in contrast with the conclusions reached by Maling and Sprouse (1995) and Schütze (2001:235–238).

- (9.25) Default case rule (Danish/English):  
Value any instance of an unvalued case feature with accusative.
- (9.26) Default case rule (Swedish):  
Value any instance of an unvalued case feature with nominative.

Though it does not bear directly on the analysis of specificational clauses, it is worth noting that the case contrast extends to equatives. Where Danish has nominative subject and accusative predicate complement, as in (9.27), Swedish has nominative subject and nominative predicate complement, as (9.28) shows. Out of context such equatives are rather odd, but if we imagine a case of mistaken identity, say on a TV show or film, then (9.27) and (9.28) could be uttered by a helpful co-watcher, along with some pointing, to clear up the issue (thanks to Kersti Börjars for suggesting this scenario).

- (9.27) HUN er ikke HENDE/\*HUN. [Danish]  
she is not her/ she
- (9.28) HON är inte \*HENNE/HON [Swedish]  
she is not her/she.

This seems to indicate that the DP that does not raise to Spec-TP in equative clauses is also realized with default case, suggesting that in copular clauses generally (predicational, specificational, and equative) there is no accusative case assigner, which in turn correlates with the absence of an agentive  $\nu$ . Moreover, the example in (9.28) shows that there is nothing inherently wrong with having two nominative DPs in a copular clause in Swedish. This is important because, according to my analysis, this is exactly the situation in a specificational clause: the subject,  $DP_{pred}$ , is valued nominative by T, and the predicate complement,

$DP_{ref}$ , is nominative by default, since there is no accusative case assigner around. We do not see both nominatives overtly in specificational clauses, because the Swedish predicative pronoun *det* (it-NEU) does not show case distinctions. In the absence of morphological evidence, one might be sceptical about the claim that both DPs are nominative in Swedish (in particular, that the predicative subject DP is nominative), and suggest instead that the differences in overt case in Danish and Swedish specificational clauses are indicative of radically different derivations. The fact that two overtly nominative DPs are possible—and in fact obligatory—in the copular clause in (9.28), indicates that my claim that Swedish specificational clauses involve two nominative DPs is not problematic, which removes one potential objection to my default case approach.<sup>15</sup>

So far I have given one convergent derivation for a predicational clause and one convergent derivation for a specificational clause. The latter illustrated the role of the topic feature in allowing the predicative DP to move to subject position, whereas I abstracted away from the topic feature in the derivation of the predicational clause. It is time to investigate more systematically under which conditions (i.e. given which numerations) we get one or the other clause, and consider the role of the topic feature in more detail. This is the business of the next section.

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<sup>15</sup>An alternative account of the Swedish double nominative pattern would be in terms of case matching between the two DPs; see Maling and Sprouse (1995:172–176) for relevant discussion.

### 9.2.5 The markedness of specificational clauses

As we saw above, the distribution of the topic feature (on the two DPs and on T) plays a key role in the derivation of a specificational clause, and, hence, in determining whether a given derivation will result in a predicational or a specificational clause. There are many more possible numerations than the two I considered above. Schematically, we can represent the relevant ones as in table (9.29), distinguishing whether  $DP_{ref}$  and/or  $DP_{pred}$  bears an interpretable topic feature, and whether T bears an uninterpretable topic feature. For all of the numerations, I assume that each DP also bears an uninterpretable case feature, that T bears the nominative case feature, as well as the standard EPP feature, and that head movement (of  $\nu_b$  to T) takes place as in the derivations given above.

(9.29)	Numeration	$DP_{ref}$	$DP_{pred}$	T	Clause
	1. = (9.11)–(9.12)	—	—	—	Predicational
	2.	—	—	<i>utop</i>	*
	3.	—	top	—	Predicational
	4. = (9.15)–(9.16)	—	top	<i>utop</i>	Specificational
	5.	top	—	—	Predicational
	6.	top	—	<i>utop</i>	Predicational
	7.	top	top	—	Predicational
	8.	top	top	<i>utop</i>	Predicational

I will not give all the derivations in full, but I will go through them one by one and try to bring out why it has the outcome that the table claims it has, and

what the empirical consequences are.

The first numeration is the one that underlies the derivation in (9.11)–(9.12) in section 9.2.3. Neither of the two DPs bears an interpretable topic feature, nor does T bear the uninterpretable topic feature. As discussed above, this gives rise to a predicational clause, because the referential DP is closest to T (it asymmetrically c-commands  $DP_{pred}$ ) and it can satisfy all features on T. This is the sense in which  $DP_{ref}$  is structurally favored for subject position by the configuration of PredP. The result is a predicational clause which can be felicitously used in a context where neither DP is interpretable as topic.

In the second numeration, T bears the uninterpretable topic feature, but neither DP bears an interpretable topic feature. This means that [*utop*] on T goes unchecked and the derivation crashes at the interface with the Conceptual-Intentional system, since the structure to which the semantic interface rules apply cannot contain any features not interpretable at that level.

In the third numeration, the predicative DP bears an interpretable topic feature, but T does not bear *utop*. This means that the structurally favored  $DP_{ref}$  can check all relevant uninterpretable features on T (*unom* and EPP), and—to satisfy the EPP— $DP_{ref}$  moves to Spec-TP, resulting in a predicational clause. The topic feature on  $DP_{pred}$  is interpretable, so it does not have to be eliminated in the syntactic derivation. Instead it has an effect on the interpretation, namely that the resulting predicational clause is felicitous in a context where the predicative, but not the referential DP, is interpretable as topic. This is the situation in the question–answer pair in (9.30), where the question sets up the referential DP

as focus and the predicative DP as topic:

- (9.30) Q: Who is the winner?  
A: JOHN is the winner. [Predicational]

The fourth numeration is the one that underlies the derivation in (9.15)–(9.16) above. As in the third numeration only the predicative DP bears an interpretable topic feature, but, crucially, T bears an uninterpretable topic feature. This means that  $DP_{ref}$  cannot eliminate all features on T, since it cannot eliminate *utop*. Instead T enters into an Agree relation with  $DP_{pred}$ , and  $DP_{pred}$  moves to Spec-TP, satisfying the EPP and eliminating the topic feature on T. The result is a specificational clause where only the predicative (i.e. subject DP) is interpretable as topic. A natural context in which such a structure might be used is the question–answer pair in (9.31), where the predicative DP is given in the question:

- (9.31) Q: Who is the winner?  
A: The winner is JOHN. [Specificational]

Note that this is the same discourse-context as that provided for the predicational clause arising from the third numeration (see (9.30) above). Empirically, this is appropriate because both types of answers are felicitous in this context. Theoretically, it shows that the presence of the uninterpretable topic feature on T is not determined by discourse context (in fact it is not even clear to me what that would mean). Whereas there is a relatively direct relation between the presence of the interpretable topic features and discourse context—the presence or absence of [top] on a DP has certain effects on its interpretation which in turn restricts

the contexts in which the associated sentence can be used felicitously—there is no inherent connection between discourse context and the presence of the uninterpretable topic feature on T. [*utop*] is a purely syntactic feature, which has a clear and discernible effect on the derivation (its presence is the sole difference between the third and fourth numerations, which give rise to different surface structures), but its distribution is not predictable from discourse context or from anything else. What the grammar does do is restrict the set of structures that are grammatical and, via interpretable features like [*top*], impose some restrictions on the interpretation of these structure, which indirectly restricts the contexts in which these structures can be used felicitously. The grammar, however, never determines what a speaker is going to say or how she/he is going to say it. Paraphrasing Bolinger (1972), we can say that “Inversion is predictable (if you are a mind reader)”. In a diachronic perspective, we can view the existence of an uninterpretable topic feature on T as a grammaticalization of functional pressures (Chomsky 2000:120–121), but its function in the synchronic grammar is purely mechanical and divorced from any notion of discourse context.

In the fifth numeration,  $DP_{ref}$ , but not  $DP_{pred}$ , bears an interpretable topic feature, and there is no uninterpretable topic feature on T. As usual, T attracts the closest DP that can satisfy all of its uninterpretable features, which, in this case, is  $DP_{ref}$ . The result is a predicational clause. Since  $DP_{ref}$  bears a topic feature, the resulting predicational clause is felicitous in a context where the referential DP is given in the question, as in (9.32).

- (9.32) Q: What is John?  
 A: John is the winner. [Predicational]

The sixth numeration is identical, except that T bears the uninterpretable topic feature. This has no overt effect on the outcome of the derivation, since  $DP_{ref}$  bears an interpretable topic feature, so it is able to check all the uninterpretable features on T, and therefore raises to Spec-TP, resulting in a predicational clause, which is indistinguishable from the one arising from the derivation from the fifth numeration. Since the distribution of the interpretable topic feature is the same in the two derivations, the resulting clause is felicitous in the same context. This allows us to understand why the specificational answer in (9.33) is no good: since the question sets up the referential DP as topic, there is nothing to favor the predicative DP as subject, which is necessary for  $DP_{pred}$  to overcome the structural disadvantage conferred on it by the configuration of PredP.

- (9.33) Q: What is John?  
 A1: John is the winner. [Predicational]  
 A2: #The WINNER is John. [Specificational]

The last two numerations form a similar pair, except that here both DPs bear the interpretable topic feature. In numeration 7, T does not bear the uninterpretable topic feature, and the by now familiar result is that the closest DP, i.e.  $DP_{ref}$ , moves to subject position and we have a predicational clause. In numeration 8, T bears the uninterpretable topic feature. Since both DPs bear an interpretable topic feature, either of them is in principle capable of checking all features on T: they are both Ds (necessary for checking EPP), they both have

an unvalued case feature (which can be valued by and check the nom feature on T), and they both have an interpretable topic feature which can eliminate the uninterpretable topic feature on T. However, the configuration of PredP once again favors the  $DP_{ref}$ , and the result is a predicational clause.

A further indication that T is crucially involved in the derivation of specificational clauses comes from the contrast between (9.34) and (9.35):

- (9.34) a. I consider [Susan the best cook in the county].  
 b. \*I consider [the best cook in the county Susan].

- (9.35) a. I consider [Susan to be the best cook in the county].  
 b. I consider [the best cook in the county to be Susan].

In the examples in (9.34), the complement of *consider* is a PredP and only the word order associated with the structure of PredP (referential DP preceding predicative DP) is possible. In the examples in (9.35), the complement of *consider* is a non-finite TP that contains a  $\nu_b$ P, as indicated by the presence of *to be*. In this case, both word orders are possible. Given the analysis proposed above, we can understand the contrast in terms of the presence vs. absence of T in the embedded structures: if T is absent, as in (9.34), there is also no uninterpretable topic feature to drive the movement of the predicative DP to a higher position, hence no way to derive the word order in (9.34b). If T is present, it can, presumably, bear the [*utop*] feature, which would allow for the derivation of (9.35b) under the same circumstances as in the finite TP derivations discussed above (i.e. when  $DP_{pred}$  bears an interpretable topic feature and  $DP_{ref}$  does not).

## 9.2.6 Discussion

Having laid out the analysis, I want to discuss some questions that arise within the Minimalist framework, as well as from empirical considerations. Much of the discussion can be seen as a starting point for further research, in particular on how my analysis of copular clauses relates to the current understanding of clause structure and featural interaction within the Minimalist Program.

### 9.2.6.1 Locality, Equidistance, and Defective Intervention

In the derivations discussed above, I assume that when either DP is a possible goal for satisfying the uninterpretable features on T (i.e. when both DPs bear the features necessary to eliminate all relevant features on T), T always enters into an Agree relation with  $DP_{ref}$ , as in the derivations based on numerations 1, 3, 5, 7, and 8 in (9.29). I take this to be a locality effect;  $DP_{ref}$  is closer to T than  $DP_{pred}$ , since  $DP_{ref}$  asymmetrically c-commands  $DP_{pred}$ . On the other hand, when the closer  $DP_{ref}$  cannot satisfy all uninterpretable features on T, such as in derivation 4, I assume that T enters into an Agree relation with the lower  $DP_{pred}$ , and it checks all relevant features on T [EPP, *unom*, *utop*]. While this seems like a natural notion of locality—Agree with the closest goal that can satisfy all relevant features—there are complications arising from other work within the Minimalist Program, in particular the notions of ‘defective intervention’ and ‘equidistance’.

Defective intervention has it that an intervening goal (defined in terms of c-command) will block access to a lower goal, even if the intervening goal is ‘defective’, in the sense of not bearing an unchecked feature matching that of the

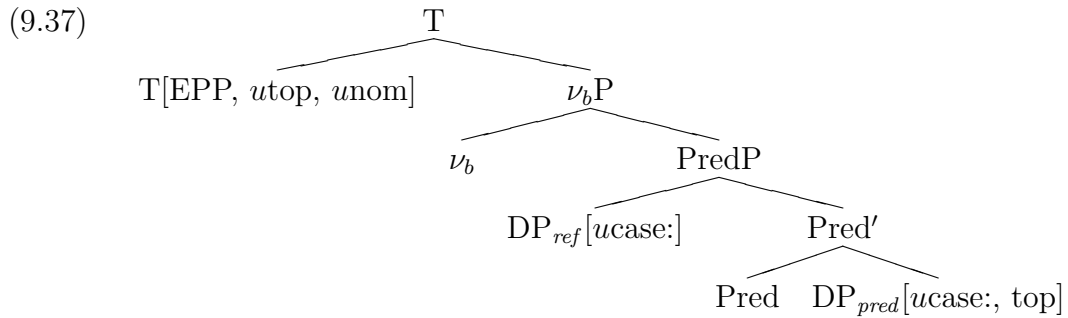
probe (Chomsky 2000:123). This situation is illustrated schematically in (9.36), where  $\alpha$  is the probe,  $\beta$  the inactive (defective) goal,  $\gamma$  the active (non-defective) goal, and  $>$  represents c-command.<sup>16</sup>

$$(9.36) \quad \alpha[uF] > \beta[\mathbb{F}] > \gamma[F]$$

Chomsky suggests (p. 128) that defective intervention is the source of the *Wh*-Island constraint: the [Q] feature of the already checked *wh*-phrase (=  $\beta$  in (9.36)) bars the probe ( $\alpha$ ) from entering into an Agree relation with the lower goal ( $\gamma$ ) which bears an unchecked [Q] feature. Since the [Q] feature on  $\beta$  is not active,  $\beta$  cannot move or check the uninterpretable features on  $\alpha$  and the derivation crashes. Chomsky further appeals to defective intervention in a range of other cases involving complex interactions between (long-distance) agreement, expletives, raising, and quirky Case (pp. 129–131). The notion of defective intervention raises a problem for my analysis of specificational clauses, since  $DP_{ref}$  intervenes between T and  $DP_{pred}$ . I have been assuming that in the relevant configuration, given in (9.37), the intervening  $DP_{ref}$  does not bar T from entering into an Agree relation with  $DP_{pred}$ , because  $DP_{ref}$  cannot check [*utop*] on T (I have simplified the structure by leaving out the representation of head movement):

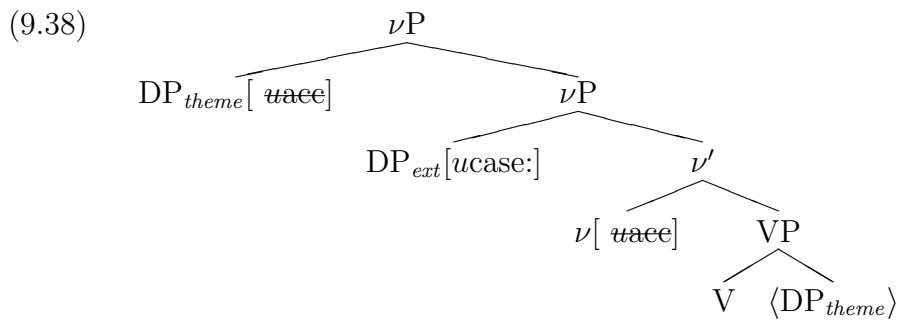
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<sup>16</sup>The matching features on  $\beta$  and  $\gamma$  can be interpretable (as in the case discussed below) or uninterpretable (e.g. a case feature).

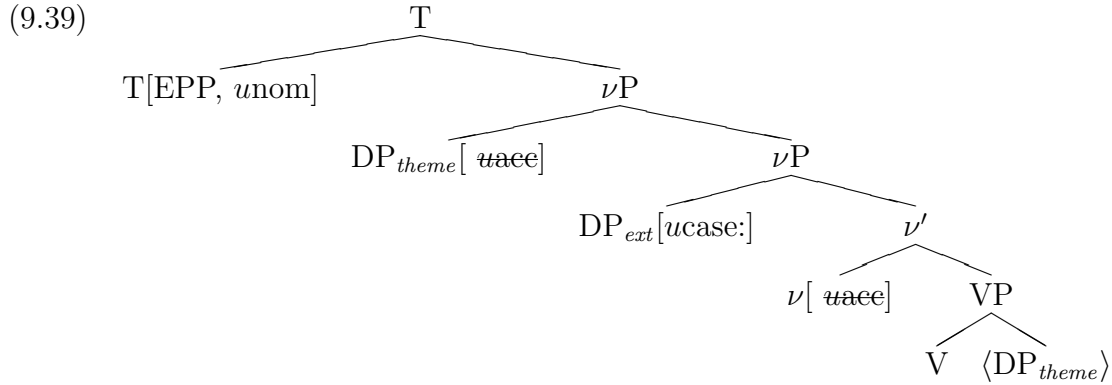


If defective intervention is real, however,  $DP_{ref}$  would bar T from entering into an Agree relation with  $DP_{pred}$ , and the derivation would crash, because  $utop$  on T is not eliminated. This would leave us no way of deriving specificational clauses at all, clearly an unacceptable outcome.

There are, however, other cases where it has been argued that we need to allow the probe to skip a potential, but defective, goal and access a lower, non-defective, goal. One such case is EPP checking after object shift (Chomsky 2000:130). Assume that we have created a structure like (9.38), where  $DP_{ext}$  is the external argument merged as the (first) specifier of  $\nu$ , and  $DP_{theme}$  is the direct object which has moved to the second specifier of  $\nu$ , and been assigned accusative case by  $\nu$  ( $DP_{ext}[ucase:]$  cannot check accusative case on  $\nu$ , since it is not c-commanded by  $\nu$ ):



We then merge finite T with its uninterpretable nominative and EPP features:



Given the definition of defective intervention above,  $DP_{theme}$  should block T from entering into an Agree relation with  $DP_{ext}$ , but we need this to be possible for  $DP_{ext}$  to raise to subject position.

To overcome this tension, it has been suggested that in certain configurations two goals are equidistant from a probe, and then defective intervention does not come into play (if two goals are equidistant from a probe neither intervenes between the probe and the other goal). The broad notion of equidistance is that goals immediately contained within the projection of the same head are equidistant to a higher probe (Chomsky 2000:122-123).<sup>17</sup> For the object shift case in (9.39), this means that the two specifiers of  $\nu$  are equidistant from T and T can enter into an Agree relation with the inner specifier, as desired. It would also solve the problem in (9.37), since the broad notion of equidistance would render  $DP_{ref}$  and  $DP_{pred}$  equidistant to T (the two DPs are both immediately contained in the projection of Pred), allowing T to enter into the required Agree relation with  $DP_{pred}$ . However,

<sup>17</sup>There are complications arising from head movement, via the definition of minimal domain, but these are not directly relevant here, so I will ignore them.

adopting this notion of equidistance would entail that  $DP_{pred}$  is **always** as close to T as  $DP_{ref}$ , and we would lose the result that ‘other things being equal’  $DP_{ref}$  moves to Spec-TP, which in turn would leave us, in effect, with Moro’s (1997) analysis, where either DP is free move to subject position. This would be a setback. We thus seem to have arrived at a situation where we need equidistance to be able to derive specificational clauses at all, but if we adopt equidistance we lose the asymmetry between predicational and specificational clauses.

The resolution, I propose, is to assume that defective intervention effects are not real (rather, they are the result of other interactions, plausibly related to the properties of phases), and that there is no equidistance (if there is no defective intervention, we do not need equidistance!). This is in line with recent work by Bissell (2004), who argues that the notion of equidistance has no place in the theory of locality. Under these assumptions, T can Agree with  $DP_{pred}$  in (9.37), but not in derivations where  $DP_{ref}$  can check all features on T (the ones corresponding to numerations 1, 3, 5, 6, 7, and 8 in (9.29)). This allows us to maintain the key result that specificational clauses are possible, but only arise when  $DP_{ref}$  cannot check all relevant features of T. It also resolves the tension between object shift and EPP checking in (9.39): if there are no defective intervention effects,  $DP_{theme}$  becomes irrelevant for T, since the case feature on  $DP_{theme}$  has already been checked, rendering it inactive for further case checking). Consequently, T can Agree with  $DP_{ext}$ . This leaves us with the definition of closeness in (9.40), which is the one argued for by Bissell (2004).

(9.40) Closeness:

$\beta$  is closer to  $\tau$  than  $\alpha$  if  $\tau$  c-commands  $\beta$  and  $\beta$  c-commands  $\alpha$ .

There is another, directly related, issue that needs to be clarified. In the discussion above, as well as in the derivations given in the preceding sections, I tacitly assumed that, when co-present on T, *unom*, EPP, and *utop* were always checked by one and the same DP. This is not a trivial assumption, since it has been argued that in other situations, including expletive constructions and constructions with quirky subjects, nominative case checking is divorced from checking of the EPP feature. If this were possible in (9.37), we could imagine that T would Agree with  $DP_{pred}$  for EPP and *utop*—causing  $DP_{pred}$  to raise to Spec-TP—but enter into an Agree relation with  $DP_{ref}$  for the purposes of case checking.  $DP_{pred}$ , failing to get case by other means, would receive default accusative case at PF. This hypothetical derivation would result in a specificational clause where the post-nominal DP is nominative as in (9.41):

(9.41) \*The winner is he.

Since this is ungrammatical, in English and in Danish, I assume that this kind of split checking is not possible, and that once the probe–goal relationship is established, the three features agree to the maximal extent possible. Intuitively, we can think of this as a ‘clumping’ effect: *unom*, EPP, and *utop* clump together on T and must be checked in unison. For the derivation in (9.37) this means that if  $DP_{pred}$  checks *utop* and EPP, it must check *unom* also, and the ungrammatical (9.41) is not generated. Theoretically, we can understand ‘clumping’ as a requirement on

the Agree operation, as articulated in (9.42).

(9.42) ‘Clumping’:

Given a head H bearing uninterpretable features F:

- i. Search the c-command domain of H (down to the edge of the next lowest phase) for a syntactic object whose label (head) contains features which would allow the elimination of the uninterpretable features of H
- ii. Perform the Agree operation between H and the closest syntactic object whose label (head) allows elimination of all the uninterpretable features of H. Otherwise:
- iii. If no head is found whose featural content allows elimination of all uninterpretable features on H, perform the Agree operation between H and the closest syntactic object whose label (head) allows elimination of some of the uninterpretable features of H.

In the derivation for a specificational clause, H is T and F is [*unom*, EPP, *utop*]. The closest syntactic object whose label (head) allows elimination of all three features on T is  $DP_{pred}$ , since  $DP_{ref}$  cannot check *utop*. By clause (ii) of (9.42), T enters into an Agree relation with  $DP_{pred}$ , and  $DP_{pred}$  eliminates all three features and moves to Spec-TP. In derivations where  $DP_{ref}$  can check all relevant features on T (those arising from numerations 1, 3, 5, 6, 7, 8 in (9.29)),  $DP_{ref}$  enters into the Agree relation with T, and checks all features (because it is the **closest** syntactic

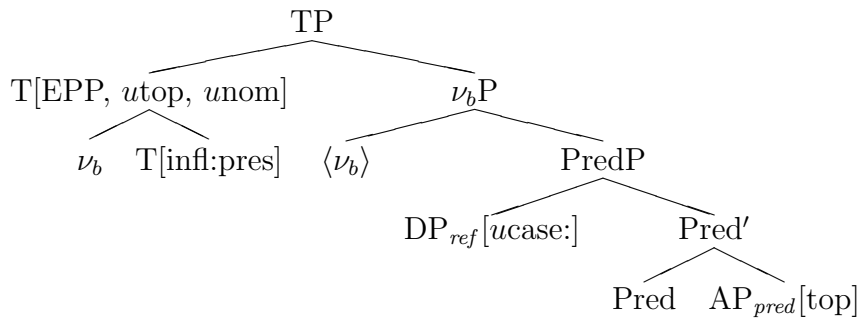
object whose head allows elimination of all uninterpretable features on H). The third clause comes into effect in the derivations of expletive constructions and constructions with quirky subjects, where, at least according to some analyses, there is no syntactic object whose head allows elimination of all the relevant features on T.

The definition of ‘clumping’ would also subsume Chomsky’s proposal (2000: 124) that checking of  $\Phi$ -features on T is a “one fell swoop” operation, which affects the set of  $\Phi$ -features as a unit, precluding different  $\Phi$ -features on T from agreeing with different DPs, e.g. the person feature agreeing with one DP and the number feature agreeing with another DP.

### 9.2.6.2 Non-DP predicate complements

Another question raised by my analysis is why non-DP complements to Pred cannot raise to Spec-TP when topic. For instance, why can the AP not raise to Spec-TP in (9.43), yielding (9.44)?

(9.43)



(9.44) \*Tired<sub>[top]</sub> is him.

Under the terms of my analysis there are at least two reasons why this derivation will not converge. First, the AP cannot satisfy the EPP feature on T, since the category feature of the AP is A, and the EPP feature requires T to enter into an Agree relation with a D feature. Intuitively, we can say that the EPP on T is category specific in the sense that it can only be satisfied by (a) D(P). (This is the intuition underlying the construal of the EPP as an uninterpretable D feature on T, e.g. by Adger (2003).)<sup>18</sup>

The second reason is that even if the AP could, exceptionally, satisfy the EPP feature on T, it could not check the case feature on T, since it does not bear a case feature itself. Furthermore, given that EPP, *utop*, and *unom* ‘clump’ together on T, it is also not possible for AP to Agree with T for EPP and *utop*, but leave the

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<sup>18</sup>This conception of the EPP feature on T leaves unresolved the old question of what to say about apparent cases of non-DP subjects, such as (i).

- i. Under the desk is a good place to hide.

I do not at this point have anything interesting to say about the general issue, but it is important to note that (i) is predicational, not specificational in meaning: it is being predicated of (the space) under the desk that it is a good place to hide, not vice versa. The corresponding specificational clause would be (ii), which has a DP subject:

- ii. A good place to hide is under the desk.

Neither of these examples challenge my claim that a non-DP complement to Pred cannot raise to Spec-TP, which is what is needed to rule out (9.44). The part of my analysis that (i) directly challenges is that the specifier of Pred is always a DP, which I have been assuming more or less tacitly, though see the brief discussion above (9.4) in section 9.2.2. Conversely, (ii) challenges the generalization that the predicate complement of a specificational clause is always referential (chapter 6), but that was only intended as a claim about specificational clauses involving two DPs, since it appears to be blatantly false about specificational predicate complements of other categories, as in the example in (iii), from Rothstein (2001:252), where the predicate complement is a non-finite VP:

- iii. A solution is to visit only Mary.

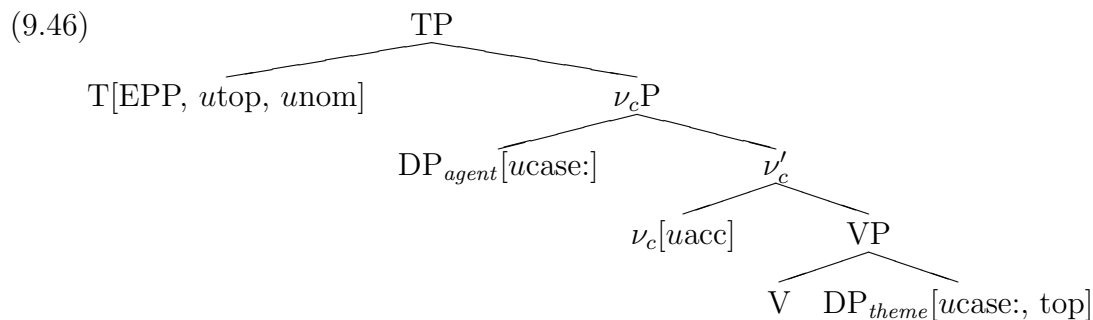
checking of  $\text{nom}$  to  $\text{DP}_{ref}$  which does bear an uninterpretable case feature. By clause (iii) of (9.42) the DP, being closer to T than the AP, would check the EPP feature on T. This is a good result, insofar as (9.45) is also impossible:

(9.45) \*Tired<sub>[top]</sub> is he.

It is relevant to note that in cases of discourse-driven movement not involving T and its category-specific EPP feature, there is no discrimination against non-DP categories. Thus in discourse-driven movement to Spec-CP, such as ‘topicalization’ or inversion (in Birner’s sense) the moved element (the goal) can be an AP, a PP, a (non-finite) VP, or an NP, as well as a DP.

### 9.2.6.3 Topic-driven movement in non-copular clauses

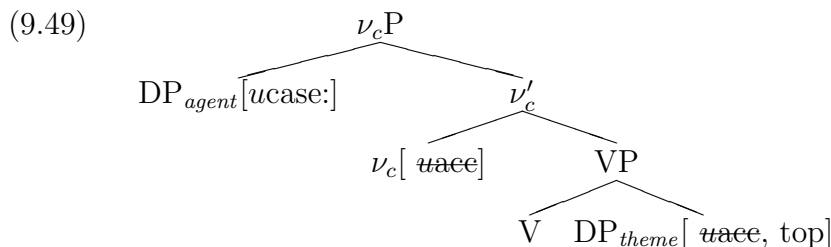
Another question to ask is why topic-marked DP-complements do not raise to Spec-TP in non-copular clauses. For instance, in the transitive structure in (9.46), why can the topic-marked  $\text{DP}_{theme}$  not move to Spec-TP, on analogy with  $\text{DP}_{pred}$  moving to Spec-TP in the derivation of a specificational clause (see (9.15)–(9.16) above)? If it could, it would yield the surface form in (9.47) with the meaning of (9.48), which is not a possible interpretation of (9.47).



(9.47) She<sub>[top]</sub> pushed him.

(9.48) He pushed her<sub>[top]</sub>

The answer is that  $DP_{theme}$  cannot move to Spec-TP, because it is rendered inactive in virtue of having its case-features valued by  $\nu_c$  before T is merged:



This renders  $DP_{theme}$  inert for further featural interaction with T, because  $DP_{theme}$  cannot satisfy all uninterpretable features on T. Nor can  $DP_{agent}$ , but in that situation, by clause (iii) of the definition of clumping in (9.42), T enters into the Agree relation with the closest DP that can satisfy some of the uninterpretable features on T, and that is  $DP_{agent}$ .<sup>19,20</sup> In copular clauses, on the other hand,  $DP_{pred}$  does not check accusative case, since  $\nu_b$  does not assign accusative case (put another way, *be* is an unaccusative light verb). Since  $\nu_b$  does not assign accusative case, the DP complement to Pred,  $DP_{pred}$ , remains active and hence capable of entering into an Agree relation with T, in just those cases where  $DP_{pred}$  is able to check all three features on T, and  $DP_{ref}$  is not.

<sup>19</sup>As Chomsky (2000:123) puts it, “if structural Case has already been checked (deleted), the phrase P(G) [i.e. the goal whose case feature has been valued; LM] is “frozen in place”, unable to move further to satisfy the EPP in a higher position”.

<sup>20</sup>It is important to note that this inactivity holds only with respect to T (since T has a case feature). If a C is merged next, bearing an uninterpretable topic feature,  $DP_{theme}$  can enter into an Agree relation with C for the purposes of checking the topic feature on C, and move to Spec-CP.

This leaves the door open to [*utop*] playing a role in the derivation of passives. It has long been noted that passivization is sensitive to discourse factors, such as topicality and prominence (see Aissen (1999) and references cited there) . **If** it turns out that those factors are the same as those governing inversions, in particular DP-inversion, then we would have the analytical tool already, namely [*utop*] on T. As there is no accusative case available in passives, the inactivity issue would, presumably, not arise. If viable, this move might let us capture an important similarity between specificational clauses and passive clauses: both involve a non-canonical subject. In the case of passives, a non-agent subject; in the case of specificational clauses, a non-referential subject.

### 9.3 Interpreting the structures

Having proposed syntactic derivations for specificational and predicational clauses, we must now ask how these structures are interpreted. I will be concerned here with truth-conditional aspects of meaning. As we have seen earlier, the principal result to be guaranteed in this context is that corresponding predicational and specificational sentences emerge as truth-conditionally equivalent. The task I focus on, then, is that of showing that the syntactic analysis developed here can form the basis for a compositional semantics which is consistent with current conceptions and which guarantees this empirical result. I will have nothing to say here, then, about the contribution of the interpretable topic feature on the raised predicative DP of specificational clauses. This feature is indeed interpretable,

but the contribution it makes is not to truth-conditional aspects of meaning. In chapter 8 we began the investigation of what that contribution might be, but a detailed formal proposal must await further research.

Given that the syntactic derivations involve movement of a DP into subject position, one question that arises is whether that DP is interpreted in the subject position or in its base-position. We saw in the discussion of Danish in chapter 2 that there is no evidence for reconstruction of A-movement for the purposes of binding reflexives or licensing negative polarity items. In fact the data considered there (sections 2.3.3 and 2.3.4) indicates that there is no reconstruction of A-movement, at least for these purposes. The evidence from English points to the same conclusion (REF) and I will therefore assume that the subject DP is interpreted in the higher position (Spec-TP). I further assume that the raising of the DP into subject position leaves an index just below the landing site, and that the index is interpreted as an abstraction operator over the variable contributed by the trace of the moved element in the spirit of Heim and Kratzer's (1998) treatment of movement in relative clauses and quantifier raising. In a specificational clause, the raised DP is of type  $\langle e,t \rangle$  and the index therefore contributes a lambda abstraction over a property variable.<sup>21</sup>

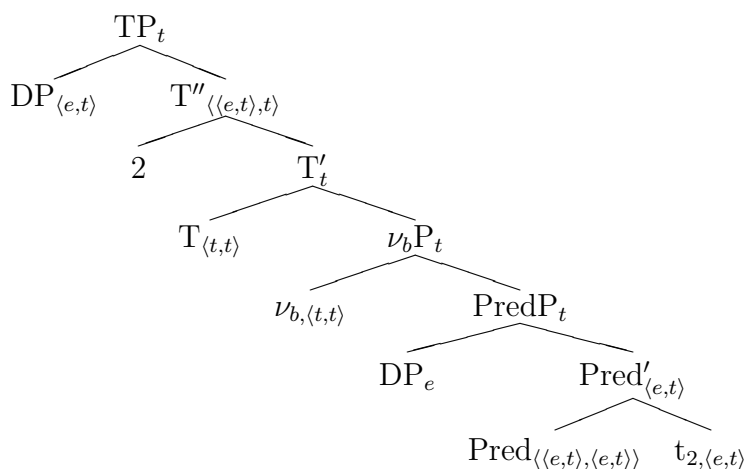
Given that that Pred s-selects for one property-denoting expression and one referential expressions, i.e. Pred is of the type  $\langle \langle e,t \rangle, \langle e,t \rangle \rangle$ , this leaves us with the

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<sup>21</sup>That the index binds the right variable is ensured by (appropriate extensions of) Heim and Kratzer's (1998) Traces and Pronouns Rule (p. 111) and their Predicate Abstraction Rule (p. 186). These rules manipulate the assignment function to have the desired effect of the lambda abstractor contributed by the index binding the variable contributed by the trace. I leave the assignment function unexpressed here.

following type structure for a predicational clause (where 2 is the index of the DP raised into subject position, and t the type of propositions, cf. chapter 4):

(9.50)    Specificational clause (*The actress is Ingrid Bergman*)



Adopting the notation for lambda expressions used in Partee (1987), the nodes in the tree receive the semantic representation in (9.51), where b is an individual constant, x, y, z, and v are individual variables, P and Q are property variables,  $\mathcal{R}$  and  $\mathcal{S}$  are proposition variables, and  $\Rightarrow$  represents beta-reduction.

- (9.51)    Pred    :  $\lambda P[\lambda x[P(x)]]$   
            $t_2$      : Q  
           Pred'   :  $\lambda P[\lambda x[P(x)]](Q) \Rightarrow \lambda x[Q(x)]$   
            $DP_{ref}$  : b  
           PredP   :  $\lambda x[Q(x)](b) \Rightarrow Q(b)$   
            $\nu_b$      :  $\lambda \mathcal{R}[\mathcal{R}]$   
            $\nu_b P$    :  $\lambda \mathcal{R}[\mathcal{R}](Q(b)) \Rightarrow Q(b)$

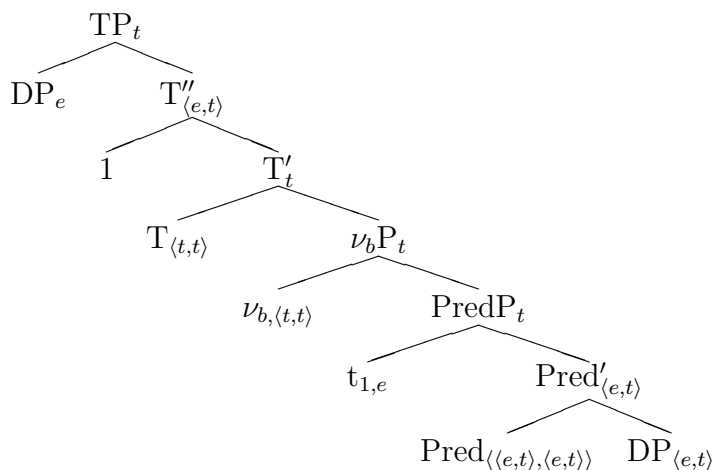
T	:	$\lambda\mathcal{S}[\mathcal{S}]$
T'	:	$\lambda\mathcal{S}[\mathcal{S}](Q(b)) \Rightarrow Q(b)$
T''	:	$\lambda Q[Q(b)]$
DP <sub>pred</sub>	:	$\lambda x[\text{actress}'(x) \wedge \forall y[\text{actress}'(y) \rightarrow y=x]]$
TP	:	$\lambda Q[Q(b)](\lambda x[\text{actress}'(x) \wedge \forall y[\text{actress}'(y) \rightarrow y=x]])$ $\Rightarrow \lambda x[\text{actress}'(x) \wedge \forall y[\text{actress}'(y) \rightarrow y=x]](b)$ $\Rightarrow \text{actress}'(b) \wedge \forall y[\text{actress}'(y) \rightarrow y=b]$

The meaning that I assign to the Pred head—essentially “apply predicate”—is the meaning assigned to the copula by Partee (1987:124) (and by Geist (2003)). This difference reflects the fact that under my analysis it is Pred that s-selects for one predicative and one referential expression, not the copula. The lower copy of the raised DP ( $t_2$  in the tree) contributes a property variable, which later gets bound by the lambda-abtractor introduced by the index adjoined to T'. The referential DP contributes an individual constant, leaving us with a type  $t$  meaning for PredP. This is also the meaning-type that we need for the use of PredP in other syntactic contexts, such as the complement position to *consider* and *find*. The  $\nu_b$  head is semantically vacuous, which I express by letting it denote an identity function on propositions. So also in a semantic sense  $\nu_b$  is truly a light verb, perhaps the lightest of them all. In this sketch, I treat T in the same way, but the contribution of T could be folded in by recasting propositions as sets of time–world coordinates, and let T contribute, minimally, existential quantification over the time coordinate. The movement index results in lambda abstraction over the property variable Q, yielding an unsaturated meaning for T''. It is saturated

by the property contributed by the subject DP. The predicative interpretation for the definite description is borrowed from Partee (1987:125).<sup>22</sup> In a case like (9.50) the property is determined by the descriptive content of the subject DP. In a truncated cleft (like *That's Ingrid Bergman*) the subject DP is anaphoric and the property is determined by the context, as discussed in informal terms in chapter 7.

The type-structure of a predicational clause is identical, except that it is the referential DP that raises to subject position, leaving behind a type *e* trace inside PredP, and depositing an index in a position left-adjoined to T':

(9.52) Predicational clause (*Ingrid Bergman is the actress*)



<sup>22</sup>A more satisfying analysis would have the uniqueness condition as a presupposition and relativized to the context (see Heim and Kratzer (1998:73–82), Farkas (2002), Roberts (2003) for discussion and pointers to the literature).

$$\begin{aligned}
(9.53) \quad \text{Pred} & : \lambda P[\lambda z[P(z)]] \\
\text{DP}_{pred} & : \lambda x[\text{actress}'(x) \wedge \forall y[\text{actress}'(y) \rightarrow y=x]] \\
\text{Pred}' & : \lambda P[\lambda z[P(z)]](\lambda x[\text{actress}'(x) \wedge \forall y[\text{actress}'(y) \rightarrow y=x]]) \\
& \Rightarrow \lambda z[\lambda x[\text{actress}'(x) \wedge \forall y[\text{actress}'(y) \rightarrow y=x]](z)] \\
& \Rightarrow \lambda z[\text{actress}'(z) \wedge \forall y[\text{actress}'(y) \rightarrow y=z]] \\
t_1 & : v \\
\text{PredP} & : \lambda z[\text{actress}'(z) \wedge \forall y[\text{actress}'(y) \rightarrow y=z]](v) \\
& \Rightarrow \text{actress}'(v) \wedge \forall y[\text{actress}'(y) \rightarrow y=v] \\
\nu_b & : \lambda \mathcal{R}[\mathcal{R}] \\
\nu_b P & : \lambda \mathcal{R}[\mathcal{R}](\text{actress}'(v) \wedge \forall y[\text{actress}'(y) \rightarrow y=v]) \\
& \Rightarrow \text{actress}'(v) \wedge \forall y[\text{actress}'(y) \rightarrow y=v] \\
T & : \lambda \mathcal{S}[\mathcal{S}] \\
T' & : \lambda \mathcal{S}[\mathcal{S}](\text{actress}'(v) \wedge \forall y[\text{actress}'(y) \rightarrow y=v]) \\
& \Rightarrow \text{actress}'(v) \wedge \forall y[\text{actress}'(y) \rightarrow y=v] \\
T'' & : \lambda v[\text{actress}'(v) \wedge \forall y[\text{actress}'(y) \rightarrow y=v]] \\
\text{DP}_{ref} & : b \\
\text{TP} & : \lambda v[\text{actress}'(v) \wedge \forall y[\text{actress}'(y) \rightarrow y=v]](b) \\
& \Rightarrow \text{actress}'(b) \wedge \forall y[\text{actress}'(y) \rightarrow y=b]
\end{aligned}$$

At this point we note that the semantic representations associated with the TP nodes in (9.51) and (9.53) are equivalent, which is what we wanted to establish.

# Chapter 10

## Conclusion

In this dissertation I have investigated the structure, meaning, and use of specificational copular clauses. I take the main findings to be the following. First, that specificational clauses are subject-initial structures, which sets them apart, syntactically, from the predicate topicalization structures discussed in Heggie's work. I further suggested that this structural difference is accompanied by a pragmatic difference: in predicate topicalization structures the initial DP is (contrastive) focus, whereas in a specificational structure the initial DP is topic. Second, the subject of a specificational clause is not referential. This sets specificational clauses apart from equative clauses, and speaks against the unification of specificational and equative clauses proposed by Heycock and Kroch (1999) and, in a different guise, by Rothstein (2001).

What I propose instead, building on Moro's (1997) work, is that specificational and predicational copular clauses are derived from the same core structure: both

involve a minimal predication structure, which is projected from a functional head Pred, and a light verb  $\nu_b$ , which is the structural correspondent of the copula. Pred s-selects one predicative and one referential element, merged in that order. Predicational clauses are the result of the referential element moving to the subject position, which is the default case, given the configuration of PredP. Specificational clauses are the result of the predicative DP moving to subject position, which is only possible when favored by a certain distribution of certain features relating to information structure.

This understanding of specificational clauses lets us begin to make sense of the restrictions on the kinds of DPs that can occur as subjects of specificational clauses; they must be able to be semantically predicative and they must be able to be construed as topic. The first half of this condition rules out quantificational DPs, names, and personal pronouns as specificational subjects. The second half casts new light on the status of indefinites in this position. The standard question has been “why are indefinite specificational subjects impossible?”. The empirical findings of this dissertation suggests that this question should be rephrased as “why are certain indefinites not possible in this position?”. The characterization of specificational subjects proposed here further suggests that the answer to that second question is to be found in the interaction between topichood, discourse-familiarity, and indefiniteness, though many open issues remain.

This hybrid characterization of specificational subjects has an analogue in McNally’s (1992) characterization of the pivot of the *there*-existential construction. McNally argues (pp. 134–150) that the pivot of an existential must denote a nom-

inalized function (in the sense of Chierchia and Turner (1988)), and that the discourse referent corresponding to the instantiation of the nominalized function must be novel (in, roughly, the sense of Heim (1982)). Like my condition on specificational subjects, McNally's condition combines a semantic, type-theoretic condition with a pragmatic condition on the discourse status of the referent of the DP. Given that both constructions involve the copula and a non-canonical subject (in the case of specificational clauses a non-referential DP, in the case of the existential construction an expletive), it seems highly relevant to look for a possible relation between these two sets of conditions, and, even if no such relation exists, to clarify the differences and similarities between them.

Another connection that deserves further investigation is that between specificational clauses and cleft constructions. While the connection between pseudoclefts and specificational clauses was firmly established in Higgins's (1979) work, the relation between specificational clauses and *it*-clefts has been much less prominent in the literature (though see Heggie (1988a), Büring (1998), Hedberg (2000) and Bachrach (2003)), and our understanding of the relation between the two constructions is much less clear. The analysis of specificational clauses developed here, together with the characterization of *it* and *that* (and Danish *det*) as property anaphors, suggests that perhaps clefts can be understood as specificational clauses with anaphoric subjects. The connection is most obvious in so called truncated clefts, which I discussed in chapter 7. A major topic for further research is whether this understanding can be extended to overt clefts, and if so, what the syntactic and semantic relationship is between the pronominal subject and the

cleft-clause.

Taking a step back to consider the consequences for Higgins' taxonomy, we find that the dissertation makes the following contributions. First, it sets predicational and specificational clauses apart from equative clauses on semantic grounds. The first two clause types are alike in that they both involve one referential and one predicative DP, whereas equatives involve two expressions of the same semantic type. Second, it clarifies the relation between specificational and predicational clauses syntactically, semantically, and pragmatically. While the exact nature of the interpretable topic feature employed in the analysis developed in chapter 9 is not fully understood, the analysis does provide a theoretical basis for understanding the interaction between information structure, semantic type, and movement to subject position. Third, the separation of truncated clefts and demonstrative equatives suggests a revision to Higgins' taxonomy, specifically that truncated clefts should be reclassified as specificational clauses and demonstrative equatives as identity clauses. If this reclassification turns out to be correct, and if it can be extended to the set of pseudoclefts characterized as identificational by Higgins (as recent work by Yael Sharvit suggests is the case), then we might be able to simplify the taxonomy by eliminating the identificational class altogether.

Turning to the role of the copula itself, the analysis developed in the last part of the thesis suggests that the semantic and syntactic work attributed to the copula in many analyses of predicational clauses (that of mediating the predication relation) is in fact done by a functional head which has no overt exponent (in English and Danish). This allows us to understand the relation between copular

clauses and other, embedded, occurrences of predication structures, as well as the possibility of non-verbal copular clauses cross-linguistically. In syntactic terms, the copula is an unaccusative light verb, which assigns no theta role and no Case. It is the lightness of the copula, in particular its inability to license a structural Case, that distinguishes copular clauses from transitive clauses and which opens up the possibility for the lower, predicative DP to move to subject position (i.e. the possibility of inversion).

Taking a step still further back, we can begin to see how the different kinds of copular clauses distinguished by Higgins arise from the interaction between well-known and quite general syntactic and semantic factors, including

- the basic nature of predication as the combination of a predicative (unsaturated) expression with a referential (saturating) expression,
- the ontology of DP denotations, and the principles for shifting between these denotations laid out in Partee's work, and
- the competition for subject position, influenced by various functional pressures (which we see also in passive and expletive constructions).

The one special ingredient in copular clauses is the “lightness” of the copula itself. This distillation brings us closer to the larger goal of explaining Higgins' taxonomy in terms of general principles of clause structure, semantic composition, and information structure. If we reach that goal, the terms ‘predicational’, ‘specificational’ and ‘equative’ would become unnecessary, since they would be nothing

more than convenient labels for certain syntactic and semantic configurations, arising from the interaction of these general principles.

Many unresolved issues remain, however. I have only just begun to scratch the surface of equative clauses, in particular I have not made any progress on understanding their syntax. Do they involve a main verb copula (as suggested by Rothstein and many others) or do they also involve a light verb copula in combination with some functional head, which contributes the identity relation (as suggested by Heycock and Kroch)? (Whatever the answer to that might be, the semantic separation of specificational and equative clauses still stands.) How can we understand the variability in the interpretation of names in equative clauses, and, more broadly, the epistemic conditions under which these are felicitous and informative? The notion of ‘identifier’ developed in Groenendijk et al. (1996a) and the notion of ‘conceptual cover’ developed by Aloni (2001) both promise to be relevant here.

Theoretically, the analysis of specificational clauses as discourse-driven inversion to subject position raises a more general set of questions about the relation between (discourse-driven) movement to subject position (in passive and specificational clauses) and (discourse-driven) movement to an A-bar position, to Spec-CP in particular (in topicalization structures, interrogatives, and (non-DP) inversions in Birner’s sense). What kinds of features on T and on C are involved in facilitating these movements? Can the features that occur on C all occur on T, or only a subset of these? Could there, for instance, ever be focus-driven movement to subject position? If not, what does that tell us about subject position? And

what is the relation to verb second?

Empirically, there is a large and under-explored territory of specificational clauses whose predicate complement is not a DP, such as the ones in (10.1):

- (10.1) a. Our hope is [<sub>CP</sub> that the house will sell quickly].  
b. One solution is [<sub>TP</sub> to visit only Mary]. (Rothstein 2001:252)  
c. A good place to hide is [<sub>PP</sub> under the bed].  
d. The answer is [<sub>?</sub> “yes”]. (Potts to appear:§4)

To understand these examples, and in what sense they too are specificational, we clearly need to go beyond the present proposal, which has been exclusively concerned with specificational clauses involving two DPs. The examples in (10.1) suggest that the notion of specification has a much wider applicability. What remains to be established is the degree of structural, semantic, and pragmatic unity of these examples, and the extent to which pursuing that project can generalize from the proposals made in this dissertation for specificational clauses involving two DPs.

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