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# **THE SYNTAX AND FOCUS STRUCTURE OF SPECIFICATIONAL COPULAR CLAUSES AND CLEFTS**

**Habilitationsschrift**

vorgelegt von

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# Contents

|  |           |
|--|-----------|
| <b>List of Abbreviations</b>                               | <b>1</b>  |
| <b>1 Introduction</b>                                      | <b>3</b>  |
| 1.1 Research Questions . . . . .                           | 3         |
| 1.2 The Issue . . . . .                                    | 5         |
| 1.3 Phenomena . . . . .                                    | 8         |
| 1.4 The Proposal in a Nutshell . . . . .                   | 10        |
| 1.5 Structure of the Book . . . . .                        | 12        |
| <b>2 Proposal</b>  | <b>13</b> |
| 2.1 Introduction . . . . .                                 | 13        |
| 2.2 Background and Major Assumptions . . . . .             | 14        |
| 2.2.1 The syntax of copular clauses . . . . .              | 14        |
| 2.2.2 Focus . . . . .                                      | 22        |
| 2.3 The Phase-Based Interface Model of Grammar . . . . .   | 24        |
| 2.3.1 Introduction . . . . .                               | 24        |
| 2.3.2 Marked Focus as an interface phenomenon . . . . .    | 24        |
| 2.3.3 The Phase-Based Interface Model of Grammar . . . . . | 35        |
| 2.3.4 Example derivations . . . . .                        | 39        |
| 2.3.5 Conclusion . . . . .                                 | 53        |
| 2.4 Mapping Hypothesis . . . . .                           | 53        |
| 2.4.1 Introduction . . . . .                               | 53        |

|       |   |     |
|-------|---|-----|
| 2.4.2 | The General Mapping Hypothesis . . . . .                        | 54  |
| 2.4.3 | The Focus Mapping Hypothesis . . . . .                          | 56  |
| 2.4.4 | Triggering Focus Mapping - A Hypothesis . . . . .               | 58  |
| 2.4.5 | Summary . . . . .   | 60  |
| 2.5   | Applying the Focus Mapping Hypothesis . . . . .                 | 60  |
| 2.5.1 | Introduction . . . . .  | 60  |
| 2.5.2 | Specificational copular clauses . . . . .                       | 61  |
| 2.5.3 | It-Clefts . . . . .   | 66  |
| 2.5.4 | Specificational Pseudoclefts . . . . .                          | 71  |
| 2.5.5 | Conclusion . . . . .  | 78  |
| 2.6   | Comparison with other Models of Information Structure . . . . . | 78  |
| 2.6.1 | Introduction . . . . .  | 78  |
| 2.6.2 | The phase-based interface model of grammar . . . . .            | 80  |
| 2.6.3 | Syntax-oriented theories: Cartography . . . . .                 | 80  |
| 2.6.4 | Prosody-driven theories . . . . .                               | 83  |
| 2.6.5 | Semantic/Pragmatic theories . . . . .                           | 87  |
| 2.6.6 | Mapping theories . . . . .                                      | 93  |
| 2.6.7 | Conclusion . . . . .  | 99  |
| 2.7   | Conclusion . . . . .  | 100 |

### **3 Specificational Copular Clauses 101**

|       |   |     |
|-------|---|-----|
| 3.1   | Introduction . . . . .  | 101 |
| 3.2   | The Syntax of Specificational Copular Clauses . . . . .             | 103 |
| 3.2.1 | A classification of copular clauses . . . . .                       | 103 |
| 3.2.2 | Previous analyses of specificational copular clauses . . . . .      | 105 |
| 3.2.3 | Specificational copular clauses as inversion structures . . . . .   | 107 |
| 3.3   | A Focus-Based Analysis of Specificational Copular Clauses . . . . . | 114 |
| 3.3.1 | Introduction . . . . .  | 114 |
| 3.3.2 | Specificational copular clauses and focus . . . . .                 | 116 |

|          |  |            |
|----------|--|------------|
| 3.3.3    | The proposal: Focus and inversion . . . . .                  | 117        |
| 3.4      | Prosody and Focus: Experimental Evidence . . . . .           | 128        |
| 3.4.1    | Introduction . . . . .                                       | 128        |
| 3.4.2    | Experiment 1: Nominal copular clauses . . . . .              | 128        |
| 3.4.3    | Experiment 2: Nominal copular clauses in context . . . . .   | 134        |
| 3.5      | Conclusion . . . . .   | 137        |
| <b>4</b> | <b>The Syntax of It-Clefts</b>                               | <b>139</b> |
| 4.1      | Introduction . . . . .                                       | 139        |
| 4.2      | State of the Art . . . . .                                   | 140        |
| 4.2.1    | Overview . . . . .   | 140        |
| 4.2.2    | Movement analyses . . . . .                                  | 143        |
| 4.2.3    | Against movement analyses . . . . .                          | 148        |
| 4.2.4    | Predicational copular clause analyses . . . . .              | 153        |
| 4.2.5    | <i>it</i> -Extrapolation from subject . . . . .              | 155        |
| 4.2.6    | Against subject extraposition analyses . . . . .             | 156        |
| 4.2.7    | Pivot modification . . . . .                                 | 158        |
| 4.2.8    | Inversion . . . . .  | 159        |
| 4.2.9    | Against a modification relation . . . . .                    | 160        |
| 4.2.10   | Conclusion . . . . .   | 161        |
| 4.3      | The Proposal in a Nutshell . . . . .                         | 162        |
| 4.4      | It-clefts as Specificational Copular Constructions . . . . . | 165        |
| 4.4.1    | Parallel properties . . . . .                                | 165        |
| 4.4.2    | Inversion in it-clefts . . . . .                             | 169        |
| 4.5      | The Nature of the Pivot . . . . .                            | 172        |
| 4.5.1    | DP pivots . . . . .  | 172        |
| 4.5.2    | Other types of pivots . . . . .                              | 173        |
| 4.5.3    | Agreement . . . . .  | 174        |
| 4.6      | The Role of the Cleft Clause . . . . .                       | 175        |

|          |   |            |
|----------|---|------------|
| 4.6.1    | Introduction . . . . .                                      | 175        |
| 4.6.2    | The cleft clause as the syntactic predicate . . . . .       | 176        |
| 4.6.3    | The cleft clause as light-headed relative clause . . . . .  | 179        |
| 4.6.4    | Wh- vs. that-relative clauses in clefts . . . . .           | 186        |
| 4.6.5    | A note on non-DP clefts . . . . .                           | 190        |
| 4.7      | Cleft Clause Extraposition . . . . .                        | 192        |
| 4.7.1    | Introduction . . . . .                                      | 192        |
| 4.7.2    | Evidence for extraposition: the target position . . . . .   | 192        |
| 4.7.3    | Evidence for a different base-position: c-command . . . . . | 193        |
| 4.8      | Conclusion . . . . .  | 197        |
| <b>5</b> | <b>The Information Structure of it-Clefts</b>               | <b>199</b> |
| 5.1      | Introduction . . . . .                                      | 199        |
| 5.2      | Previous analyses . . . . .                                 | 201        |
| 5.2.1    | Introduction . . . . .                                      | 201        |
| 5.2.2    | Focus semantic approaches . . . . .                         | 202        |
| 5.2.3    | Pragmatic unificational approaches . . . . .                | 207        |
| 5.2.4    | Pragmatic splitting approaches . . . . .                    | 209        |
| 5.2.5    | Conclusion . . . . .  | 216        |
| 5.3      | The Notion of Marked Focus . . . . .                        | 216        |
| 5.3.1    | Introduction . . . . .                                      | 216        |
| 5.3.2    | Marked focus vs. new information focus . . . . .            | 217        |
| 5.3.3    | Marked Focus involves Alternatives . . . . .                | 228        |
| 5.3.4    | Marked Focus vs. Contrast . . . . .                         | 233        |
| 5.3.5    | Marked Focus vs. Givenness . . . . .                        | 240        |
| 5.3.6    | Conclusion . . . . .  | 249        |
| 5.4      | The Contrasting Focus Hypothesis . . . . .                  | 250        |
| 5.4.1    | Introduction . . . . .                                      | 250        |
| 5.4.2    | It-clefts as Focus-Background structures . . . . .          | 250        |

|       |  |     |
|-------|--|-----|
| 5.4.3 | The main hypothesis . . . . .                                  | 253 |
| 5.4.4 | CF in positive statements . . . . .                            | 256 |
| 5.4.5 | CF in negative ICs . . . . .                                   | 260 |
| 5.4.6 | CF and Multiple Focus . . . . .                                | 263 |
| 5.4.7 | CF and Second Occurrence Focus . . . . .                       | 268 |
| 5.4.8 | CF, Topichood and Subjecthood . . . . .                        | 269 |
| 5.4.9 | Conclusion . . . . .   | 272 |
| 5.5   | Experiment 3: Contrast in It-Clefts in English . . . . .       | 273 |
| 5.5.1 | Introduction . . . . .   | 273 |
| 5.5.2 | Design and Predictions . . . . .                               | 273 |
| 5.5.3 | Materials . . . . .  | 275 |
| 5.5.4 | Procedure and Participants . . . . .                           | 276 |
| 5.5.5 | Results and Discussion . . . . .                               | 277 |
| 5.6   | Experiment 4: The Role of Alternatives . . . . .               | 279 |
| 5.6.1 | Introduction . . . . .   | 279 |
| 5.6.2 | Design and Predictions . . . . .                               | 279 |
| 5.6.3 | Materials . . . . .  | 281 |
| 5.6.4 | Procedure and Participants . . . . .                           | 281 |
| 5.6.5 | Results and Discussion . . . . .                               | 282 |
| 5.7   | Contrasting Focus and Existential Presupposition . . . . .     | 283 |
| 5.7.1 | The issue . . . . .  | 283 |
| 5.7.2 | Existential presupposition and focus . . . . .                 | 284 |
| 5.7.3 | Deriving the Existential Presupposition . . . . .              | 288 |
| 5.7.4 | Conclusion . . . . .   | 290 |
| 5.8   | Apparent Predicational It-Clefts . . . . .                     | 290 |
| 5.8.1 | Introduction . . . . .   | 290 |
| 5.8.2 | A contrasting focus analysis of predicational clefts . . . . . | 292 |



|          |  |            |
|----------|--|------------|
| 5.8.3    | Accounting for the properties of apparent predication<br>It-clefts . . . . . | 293        |
| 5.8.4    | Conclusion . . . . .   | 298        |
| 5.9      | Conclusion . . . . .   | 298        |
| <b>6</b> | <b>Exhaustivity in It-Clefts</b>   | <b>301</b> |
| 6.1      | Introduction . . . . .   | 301        |
| 6.2      | Data Issues . . . . .  | 302        |
| 6.2.1    | Introduction . . . . .   | 302        |
| 6.2.2    | Tests for exhaustivity . . . . .   | 302        |
| 6.2.3    | The role of alternatives . . . . .   | 305        |
| 6.2.4    | It-clefts vs. only . . . . .   | 306        |
| 6.2.5    | The (non-)obligatoriness of exhaustivity . . . . .                           | 310        |
| 6.2.6    | Restrictions on additive particles . . . . .                                 | 315        |
| 6.2.7    | Summary . . . . .  | 316        |
| 6.3      | Previous Approaches . . . . .  | 317        |
| 6.3.1    | Introduction . . . . .   | 317        |
| 6.3.2    | Exhaustivity as truth-conditional effect . . . . .                           | 317        |
| 6.3.3    | Exhaustivity as presupposition . . . . .                                     | 318        |
| 6.3.4    | Exhaustivity as conventional implicature . . . . .                           | 320        |
| 6.3.5    | Exhaustivity as conversational implicature . . . . .                         | 321        |
| 6.3.6    | Conclusion . . . . .   | 322        |
| 6.4      | Experimental Evidence for Exhaustivity Effects . . . . .                     | 323        |
| 6.4.1    | Introduction . . . . .   | 323        |
| 6.4.2    | Experiment 5: Exhaustivity effects in English it-clefts A . .                | 323        |
| 6.4.3    | Experiment 6: Exhaustivity effects in German es-clefts . .                   | 327        |
| 6.4.4    | Experiment 7: Exhaustivity effects in English it-clefts B . .                | 331        |
| 6.5      | A Focus Account of Exhaustivity Effects . . . . .                            | 336        |
| 6.5.1    | Introduction . . . . .   | 336        |

|          |  |            |
|----------|--|------------|
| 6.5.2    | Contrastive Focus and Exhaustivity . . . . .                       | 337        |
| 6.5.3    | It-clefts do not assert exhaustivity . . . . .                     | 339        |
| 6.5.4    | It-clefts are compatible with additive particles . . . . .         | 340        |
| 6.5.5    | Exhaustivity effects with positive and negative answers .          | 342        |
| 6.5.6    | Conclusion . . . . .   | 345        |
| 6.6      | Conclusion . . . . .   | 345        |
| <b>7</b> | <b>Pseudoclefts in Hungarian (Hartmann et al. 2013)</b>            | <b>347</b> |
| 7.1      | Introduction . . . . .   | 347        |
| 7.2      | The Phenomenon . . . . .   | 348        |
| 7.2.1    | Types of Pseudoclefts . . . . .                                    | 348        |
| 7.2.2    | Connectivity Effects . . . . .                                     | 350        |
| 7.3      | Previous Approaches . . . . .                                      | 351        |
| 7.3.1    | The ‘question-plus-deletion’ (QPD) approach . . . . .              | 352        |
| 7.3.2    | The ‘What-you-see-is-what-you-get’ (WYSIWIG) approach              | 353        |
| 7.4      | A WYSIWYG Analysis of Hungarian Specificational Pseudoclefts .     | 354        |
| 7.4.1    | Hungarian clause structure . . . . .                               | 354        |
| 7.4.2    | Proposal . . . . .   | 355        |
| 7.4.3    | Hungarian copular clauses and information structure . . .          | 357        |
| 7.4.4    | Evidence for the subjecthood of the pivot . . . . .                | 361        |
| 7.4.5    | The nature and role of the <i>wh</i> -clause . . . . .             | 365        |
| 7.5      | (Anti-)Connectivity in Hungarian Specificational Pseudoclefts . .  | 368        |
| 7.5.1    | Connectivity effects . . . . .                                     | 368        |
| 7.5.2    | Connectivity Effects in a WYSIWYG approach . . . . .               | 370        |
| 7.5.3    | Anti-connectivity effects . . . . .                                | 372        |
| 7.6      | A Comparison of QPD and WYSIWYG Accounts . . . . .                 | 377        |
| 7.7      | Conclusion . . . . .   | 380        |
| <b>8</b> | <b>Pseudoclefts in Serbian (Hartmann &amp; Milicevic accepted)</b> | <b>383</b> |

|          |   |            |
|----------|---|------------|
| 8.1      | Introduction . . . . .  | 383        |
| 8.2      | Basic Data . . . . .  | 384        |
| 8.2.1    | Predicational vs. Specificational Pseudoclefts . . . . .            | 384        |
| 8.2.2    | Types of Pivots and the Nature of the Cleft Relative Clause         | 385        |
| 8.3      | The Analysis of Specificational Pseudoclefts in Serbian . . . . .   | 387        |
| 8.3.1    | Proposal . . . . .  | 387        |
| 8.3.2    | Previous Proposals . . . . .  | 388        |
| 8.3.3    | The Pivot as Underlying Subject . . . . .                           | 390        |
| 8.3.4    | The Non Referential Nature of the Relative Clause . . . . .         | 391        |
| 8.4      | (Anti)Connectivity . . . . .  | 393        |
| 8.5      | Conclusion and Cross-Linguistic Outlook . . . . .                   | 395        |
| <b>9</b> | <b>Conclusion and Outlook</b>                                       | <b>399</b> |
|          | <b>References</b>   | <b>405</b> |
|          | <b>Appendix: Experimental Materials</b>                             | <b>445</b> |
| .1       | Materials Experiment 1 and 2 on SCCs . . . . .                      | 445        |
| .2       | Materials Experiment 3 on Context and ICs . . . . .                 | 455        |
| .3       | Materials Experiment 4 on the Role of Alternatives in ICs . . . . . | 457        |
| .4       | Materials Experiment 5 on Exhaustivity in English It-CLefts A . . . | 463        |
| .5       | Materials Experiment 6 on Exhaustivity in German Es-clefts . . .    | 467        |
| .6       | Materials Experiment 7 on Exhaustivity in English It-CLefts B . . . | 471        |

# List of Abbreviations

|         |   |
|---------|---|
| AS      | Alternative Semantics                   |
| BG      | background                              |
| BNC     | British National Corpus                 |
| CFH     | Contrasting Focus Hypothesis            |
| D       | discourse                               |
| ECC     | equative copular clauses                |
| EF      | edge feature, drives syntactic movement |
| FMH     | Focus Mapping Hypothesis                |
| FMH     | Focus Mapping Hypothesis                |
| Foc     | marked focus                            |
| focProm | focus prominence                        |
| FP      | Focus Phrase                            |
| GMH     | General Mapping Hypothesis              |
| IC      | it-cleft sentence                       |
| InfS    | information structure                   |
| IS      | information-structure                   |

|         |   |
|---------|---|
| ISF     | information structural features                       |
| MF      | Marked Focus  |
| NIF     | New Information Focus                                 |
| NPI     | Negative Polarity Item                                |
| PC      | Pseudocleft   |
| PCC     | predicational copular clause                          |
| PoT     | Text following IC in BNC examples                     |
| PrICs   | so-called predicational It-clefts                     |
| QPD     | Question plus Deletion analysis of Pseudoclefts       |
| redProm | reduced prominence / deaccentuation                   |
| SC      | Small Clause  |
| SCC     | specificational copular clause                        |
| SiFH    | Specification is Focus Hypothesis                     |
| SM      | Structured Meaning                                    |
| SOF     | Second occurrence focus                               |
| SPC     | Specificational Pseudocleft                           |
| SpICs   | so-called specificational it-clefts                   |
| Top     | Topic   |
| WYSIWYG | What-you-see-is-what-you-get analysis of pseudoclefts |

# 1 Introduction

## 1.1 Research Questions

The partition of information into smaller chunks is an important aspect of human language. Speakers present a complex issue in relation to previous information and important/new subparts are highlighted, while others are backgrounded. One aspect of this information structural partitioning is the notion of focus, which has been a central concern in various domains of linguistics. There has been a large amount of recent literature on the analysis of focus with respect to its prosodic realization, its interpretation, and its role in discourse congruence,<sup>1</sup> as well as on its empirical and typological investigation.<sup>2</sup>

In the syntactic literature on the phenomenon, the major concern was to model information-structural related displacement like focus fronting, topicalization, scrambling, clitic left dislocation and rightward movement, to name a few. Yet, one conspicuous aspect of the interaction of focus with syntax has been generally neglected: the fundamental relationship between focus and copula structures that manifests itself in cleft-sentences and specificational copula clauses more generally. Many languages use sentences

---

<sup>1</sup>The body of literature is large, thus the reader is referred to recent overviews such as Féry and Ishihara (pear), Féry and Zimmermann (2010), Zimmermann and Onea (2011), Krifka and Musan (2012), Hartmann and Winkler (2013) and references therein.

<sup>2</sup>The empirical and typological perspective has been purported in recent years, especially by the guidelines and questionnaire material from Potsdam (Skopeteas et al., 2006), see Dipper et al. (2007), Breul et al. (2010) and Skopeteas (2012) for recent overviews.

with the equivalent of the verb *be* to express focus. In English, these are the so-called cleft sentences as (1).

- (1) It was MARY that solved the problem.

In this example, MARY is focused, while the non-focused part is expressed in a relative clause. The verb *be* (=Copula) connects the two parts of the sentences, and the initial position is filled with the pronoun *it*. The proposition of the clause remains the same as in the corresponding non-clefted example *Mary solved the problem*.

The major theoretical aim of this work is to shed light on this relationship between focus and predication/specification, by addressing the following questions:

- (2) a. What is the basic relationship between focus and predication/specification?  
b. How is this relationship represented?  
c. To what extent does the investigation of this relationship contribute to our understanding of the diverse properties of cleft sentences and specificational copula clauses?

As will become clear from the discussions to follow, the conspicuous property of specificational copula clauses and cleft-sentences is that they express a marked focus (see below for a definition of this term) with syntactic means (word order, subordination), yet, there is no movement of the focused constituent involved. Thus, the work provided here also contributes to the study of the available strategies of syntactic focus marking, which is not limited to movement.

## 1.2 The Issue

The starting point of my investigation is the fundamental relationship between copula sentences and focus. The following four different sets of cross-linguistic facts illustrate this relationship.

1. Existence of clefts cross-linguistically
2. Lexical overlap of focus markers and copula verbs
3. Development of copula verbs into focus markers
4. Focus restrictions in specificational copula constructions

First of all, many unrelated languages exhibit a type of cleft, pseudocleft (=PC) or *it*-cleft (=IC), in which a constituent is focused, the copula appears and the background is represented in a subordinated form, which is usually a type of relative clause. There is quite some variation depending on the syntax of relative clauses and the nature of copula clauses in the respective language, see for example Drubig (2003), Drubig and Schaffar (2001) for cross-linguistic overviews.

Second, some languages exhibit a lexical overlap of focus markers and copula verbs. One such example is Zoque, a language spoken in the Chiapas state in Mexico, provided in Faarlund (2007). So let me take the data from there to illustrate the point.

In Zoque, the clitic *-te* appears on the predicate in regular predicative copular clauses, see (3). It is not category specific, so it can also attach to nominal phrases, see (4).<sup>3</sup>

- (3)    *te    une    che'pü=te*  
          the child small=PRED  
          'the child is small'

(Faarlund, 2007, 234)

---

<sup>3</sup>CNT= continuative auxiliary; SUB=subordinator; REL=relative clause marker;  
 SIM=similative



- (4) anmayobytbü=te  
 teacher=PRED  
 'he/she is a teacher'  
 (Faarlund, 2007, 236)

The same clitic element can be found in verum focus constructions attached to the aspectual element *nü*, see (5), and it can also appear on the wh-phrase in wh-questions, see (6).

- (5) tumdum=jama=se nü=te y-müja-aj-yaj-u  
 every=day=SIM CNT=FOC 3-big-v-3PL-SUB  
 'Every day they were in fact growing bigger' (Faarlund, 2007, 232)
- (6) Judüm=te m-pat-u te tumin?  
 where=FOC 2find-CP the money  
 'Where exactly did you find the money?'  
 (Faarlund, 2007, 238)

The two versions of copula and focus marker seem to conflate in cleft sentences, see (7). Here *te* attaches to the pivot/ clefted constituent, and it is at the same time interpreted as the copula.

- (7) y-mukin=te nü <nu'k-u-pü  
 3-brother=PRED CNT 3-come-SUB-REL  
 'It was her brother who was coming.' (Faarlund, 2007, 233)

The third fact is that there is a historical relationship between copulas and focus marker; Hartmann and Veenstra (2013, 7) citing the work by Heine and Reh (1984), Hopper and Traugott (1993), Givon (1990) write: 'The tendency that copulas develop into syntactic focus markers is quite common across languages'. This can be seen for example in Hausa (Hartmann and Zimmermann, 2007a,b) or in Bura (Hartmann and Zimmermann, 2012).

Fourth, focus is an inherent property of specificational copular clauses (=SCC)—a subtype of copular clauses illustrated in (8).

- (8) a. The source of the gossip was Susan.  
 b. The cause of the uproar was you.  
 c. The most likely winners are the financiers.

This focus restriction has first been observed in Heggie (1988) (see also Heycock 1994, Williams 1997). The data that Heggie (1988) provides show that the precopular DP in SCCs cannot be focused.<sup>4</sup> The first piece of evidence comes from question-answer sequences: only the post-copular DP can be the narrow focus in an answer, see (9), the initial DP in SCCs cannot, see (10).<sup>5</sup>

- (9) A: Who was the culprit? (John or Bill?)  
 B': The culprit was JOHN. [SCC]  
 (Heycock and Kroch, 2002, 148)
- (10) A: What was John? (Was John the culprit or the victim?)  
 B'':\*The CULPRIT was John. [SCC]  
 (Heycock and Kroch, 2002, 149)

The second piece of evidence for the restriction on focus in SCCs, relates to association with focus. The focus sensitive operator *only* cannot associate with the initial DP in SCCs, association is only possible with the post-copular DP, see (11).<sup>6</sup>

<sup>4</sup>Heggie provides the data from a different perspective and takes it to argue that the precopular DP occupies a C-related position. The idea that focus is the **defining** property of SCCs can be found in Hartmann and Hegedűs (2009), and Hartmann et al. (2013), who observe that the major difference between SCCs and predication copular clauses is that the underlying subject in the former appears in the focus position in Hungarian, while this is not the case for the latter.

<sup>5</sup>For an empirical study testing the validity of this observation, see Hartmann (prep) and chapter 3.

<sup>6</sup>Thanks to Michael Rochemont who pointed me to the relevance of these facts. Heggie also discusses the restriction on clefting either DP in SCCs. The latter data however might be related to a possibly independent restriction on wh-movement/operator movement in SCCs.

- (11) a. The teacher is only John.  
b. \*Only the teacher is John.  
(Heggie, 1988, 79)

These observations show that SCCs exhibit a specific focus pattern. Thus these four sets of facts strongly suggest that there is a fundamental and intricate relationship between focus and copular sentences which deserves close examination.

### 1.3 Phenomena

The starting point of my investigation is that there is an inherent relationship between focus marking and (specificational) copula clauses. In this work, I investigate how this relationship arises and provide an answer to the question of why this relationship exists. The phenomena I will look into are specificational copular clauses (=SCCs), *it*-clefts (=ICs), and specificational pseudoclefts (=SPCs). The SCCs provide the general background for both ICs and SPCs—all three belong in the same class. The focus properties will be spelled out in detail for ICs, while the cross-linguistic variation in the structure of SPCs is the major aspect of the analysis of SPCs in chapter 7 on Hungarian (published as Hartmann et al. 2013) and chapter 8 on Serbian (Hartmann and Milićević, 2015).

ICs are particularly interesting as they syntactically express their focus structure—the pivot (also called the clefted constituent) is focused, while the cleft clause is backgrounded. Thus, while the focus structure is transparent on the surface, the syntax of these structures is less so (see Chapter 4 for details). These seem to be the flip case of regular SVO sentences in which the syntax is straightforward, while the focus structure often is ambiguous, as in the sentence *Peter bought a Bicycle*, which can have different focus

domains (indicated here as Focus Phrase(=FP)), illustrated in (12) and (13).

- (12) A: What did Peter do?  
 B: Peter [bought a [Bicycle]<sub>F</sub>]<sub>FP</sub>.  
 (Winkler, 2012, 73)
- (13) A: What happened?  
 B: [Peter bought a [Bicycle]<sub>F</sub>]<sub>FP</sub>.  
 (Winkler, 2012, 73)

At the same time, ICs are similar to focus fronting, illustrated here in (14), in that the background in these cases also forms a constituent, and just as the relative clause in ICs, see (15), it also contains a gap.<sup>7</sup>

- (14) MacaDAmia nuts, I like \_\_\_\_ (Winkler, 2012, 83)
- (15) It's macaDAmia nuts that I like \_\_\_\_

Thus, while a transparent information structure can be reached via movement, the striking feature about ICs is that the same effect is reached without movement (see chapter 4 for arguments against movement analyses of ICs). The question that is addressed here is: How does the focus-background division arise in these base-generation structures?

SCCs are a slightly different case. Similar to ICs, they seem to express their focus structure in word-order: the post-copular DP has to be focused, see (9) and (10) above. However, a major difference between ICs / focus fronting and SCCs is that the background precedes the focus in SCCs and it does not contain a(n obvious) gap.

<sup>7</sup>Note that the case in (14) is a focus fronting case with the background deaccented. Topic topicalization has the same structure, but the prosody is different, requiring a rise on the fronted DP and a fall on the focused verb, see Winkler (2012, 83-84) and references therein.

## 1.4 The Proposal in a Nutshell

The main hypotheses that I investigate for the relationship between focus and predication is the Focus Mapping Hypothesis given in (17), which is a subhypothesis of the General Mapping Hypothesis in (16).

(16) General Mapping Hypothesis (=GMH)

The syntactic configuration for predication can be mapped onto an information-structural division.

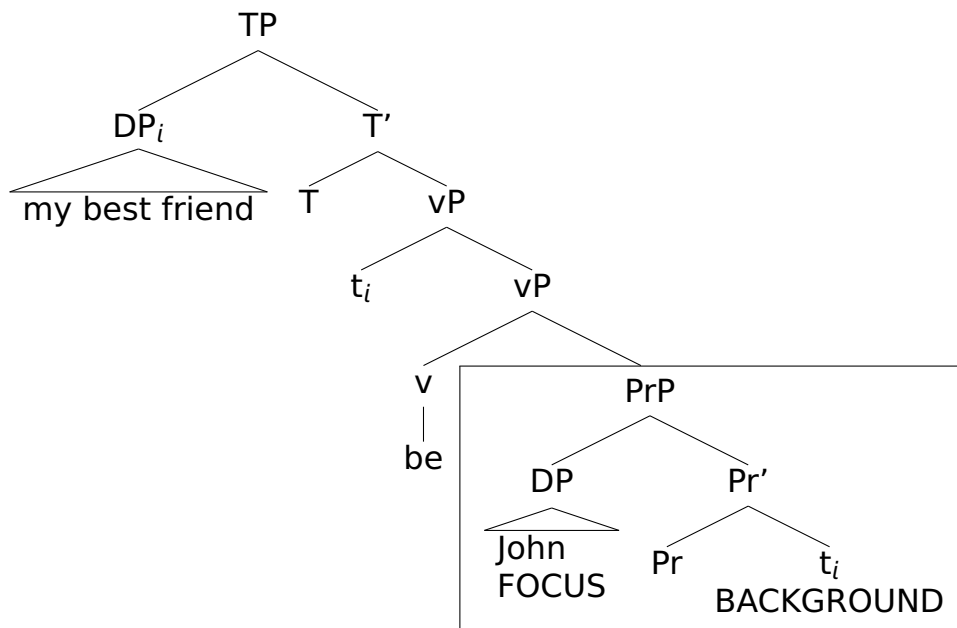
(17) Focus Mapping Hypothesis (=FMH)

In specificational sentences (including clefts) the syntactic configuration for predication is mapped onto a focus-background division.

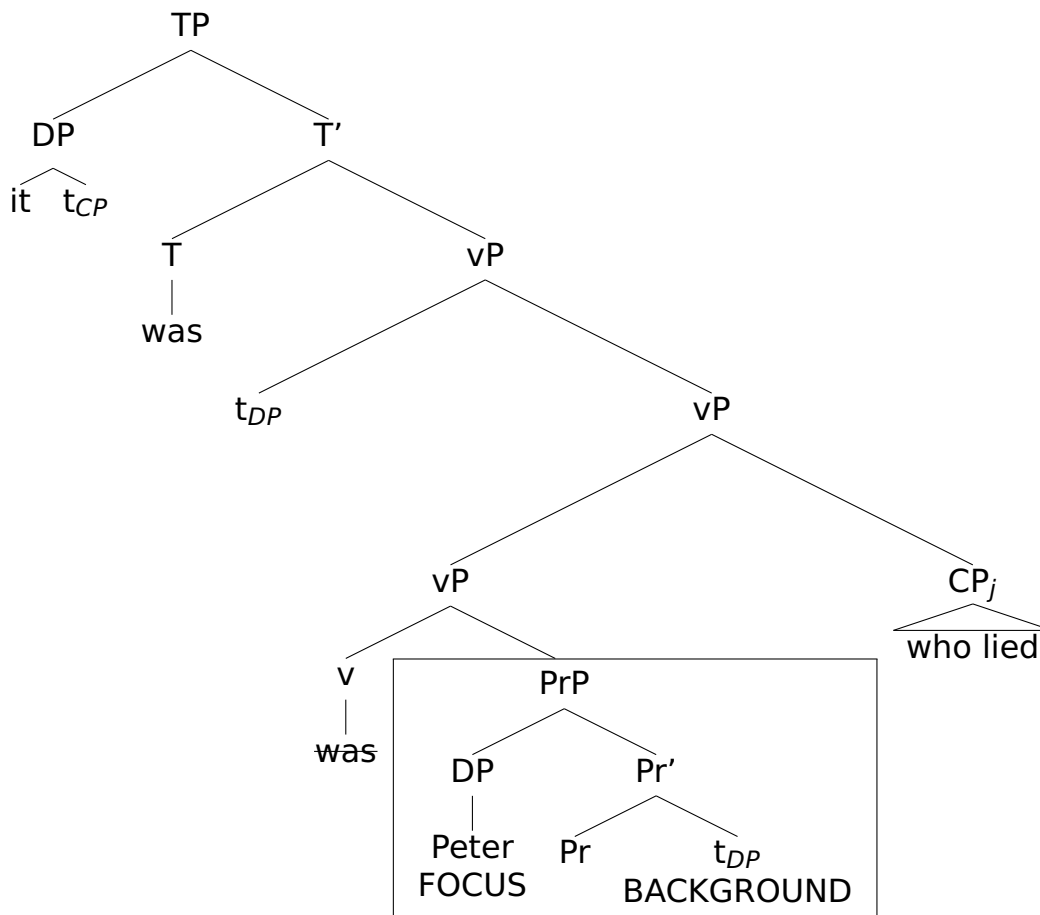
The core idea of the mapping hypothesis is that copular clauses involve a syntactic configuration for predication (PrP in the sense of Bowers 1993, 2001), which introduces an asymmetric relationship between a subject and a predicate. The relationship is asymmetric because the subject c-commands the predicate but not vice versa, and because the predicate applies to the subject, and not vice versa. This structural configuration is exploited for another asymmetric relationship - namely an information-structural division. In line with the FMH this mapping in PrP is the division of focus and background mapping. This is illustrated in (18) for SCCs and in (19) for ICs.

As I will show in detail, this mapping takes place in the information-structural module, which interacts with the syntactic computation at the level of the syntactic phase, which I take to be DP, CP, vP, PrP and potentially PPs and APs. This mapping can give rise to inversion of the background in SCCs. In ICs the DP headed by the pronoun *it* inverts to the subject position.

(18) [<sub>Background</sub> My best friend] is [<sub>PrP</sub> [<sub>focus</sub> Peter ] Pr t ]



(19) It was [<sub>PrP</sub> [<sub>XP</sub> PETER <sub>Focus</sub>] Pr0 [ t<sub>it</sub> [<sub>YP</sub> that lied ] <sub>Background</sub>]]



## 1.5 Structure of the Book

The book is structured as follows. Chapter 2 provides the general outline of the proposal. I will argue that the focus interpretation of cleft sentences is based on the mapping of the syntactic predication configuration (subject-predicate) onto an information-structural division (focus-background). The proposal is implemented in a specific model of grammar which allows for the interaction of syntax with the information-structural module during the derivation. As will be shown, this interaction is needed for the derivation of focus movement, as well as for the derivation of specificational copula clauses – the class of syntactic structures that cleft sentences are part of. Chapter 3 provides the details of the syntactic analysis of specificational copula clauses. It provides experimental evidence for the specific focus structure of SCCs. On this basis, the focus mapping hypothesis is applied to SCCs. Chapter 4 and 5 provide a detailed analysis of the syntax and information structure of *it*-cleft sentences in English, the core phenomenon considered in this work. Chapter 6 shows how the focus analysis for ICs can account for the main observations with respect to exhaustivity effects with ICs. The final two chapters extend the general analysis of specificational clauses to pseudoclefts in Hungarian in chapter 7 and pseudoclefts in Serbian in chapter 8. Chapter 7 is published as Hartmann et al. (2013), chapter 8 is accepted for publication as Hartmann and Milićević (2015).

# 2 Focus and Predication: The Proposal

## 2.1 Introduction

In this chapter, I address Q1 and Q2 of my central questions repeated here in (1).

(1) Central questions

Q1: What is the basic relationship between focus and predication/specification?

Q2: How is this relationship represented?

Q3: To what extent does the investigation of this relationship contribute to our understanding of the diverse properties of cleft sentences and specificational copular clauses?

Section 2.2 provides the background for the syntax (and semantics) of copular clauses and my major assumptions concerning the definition and analysis of the notion of focus. As will become clear from the discussions of focus in this section, a fundamental property of focus is the interface character of the phenomenon—focus is relevant for the syntactic derivation, for the prosodic realization, as well as for the semantic interpretation. In order to model this phenomenon appropriately, the information-structural status



of individual constituents must be available in all modules and already during the syntactic derivation. Therefore, section 2.3 provides an outline of a phase-based model of grammar that includes an information structural module. This model allows for an interaction of syntax with Information Structure (=InfS) and spells out the consequences of such a move. Section 2.4 introduces the mapping hypothesis as an answer to the question of how the relationship between focus and predication is to be modeled. The mapping hypothesis is illustrated with example derivations for cleft sentences and specificational copular clauses in section 2.5 to make the implementation of the mapping hypothesis in the proposed model explicit. Section 2.6 provides a comparison of the model proposed here with other approaches to InfS. The final section provides the conclusion.

This core chapter of the overall work thus provides the main hypothesis and its initial implementation. The following chapters on specificational copular clauses (=SCCs), it-cleft sentences (=ICs) and specificational pseudoclefts (=SPCs) will motivate the structures assumed here and show how this proposal helps to understand their nature and analysis in general (Q3).

## **2.2 Background and Major Assumptions**

### **2.2.1 The syntax of copular clauses**

In the analysis of cleft sentences to follow, I take cleft sentences to be copular clauses. In this section, I lay out my major assumptions about copular clauses and the syntax of predication. I will first provide a classification of copular clauses that distinguishes at least three types, predicational copular clauses, specificational copular clauses and equative copular clauses. Once this classification is established, I will provide the syntactic analysis of predicational and specificational copular clauses. The syntax of specificational

copular clauses will be motivated in more detail in chapter 3.

### 2.2.1.1 *Classifications of copular clauses*

In this section, I provide a brief overview of the different types of copular clauses that have been discussed in the literature.

Traditionally, copular clauses have been divided into at least two types: predicational copular clauses (=PCC), as in (2), and equative sentences (=ECC) as in (3).

- |     |  |     |
|-----|--|-----|
| (2) | a. John is a fool.                       | PCC |
|     | b. John is smart.                        |     |
|     | c. John is in the garden.                |     |
| (3) | a. The morning star is the evening star. | ECC |
|     | b. Cicero is Tully.                      |     |
|     | c. War is war.                           |     |

The distinction of these two types can already be found in Aristotle's work, see the appendix in Moro (1997) for an overview of the early history of the analysis of copular clauses. PCCs can be characterized such that the subject, usually a noun phrase and an individual,<sup>1</sup> is assigned a property which is specified by a non-verbal predicate (NP, AP, PP) (see Roy 2013 for details and subclasses of PCCs). In equative sentences two individuals are equated. Most reserachers distinguish these two classes, though sometimes under different labels (see den Dikken 2006b, 297 for a collection of terms).

More recently the nature and analysis of a third type has been subject to extensive debate: the specificational copular clauses (=SCCs) as identified by Akmajian (1970) and Higgins (1979), illustrated with some typical

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<sup>1</sup>Properties can also be nominalized and be subject of both predicational and equative statements, see Chierchia 1985.

examples in (4) and (5).<sup>2</sup>

- (4) a. The cause of the riot was the announcement of the pay freeze.  
 b. Her favourite author was Joseph Heller.  
 c. One thing you might consider is psychotherapy.  
 d. The culprit is Jennifer.  
 (Heycock, 2013, 342)

- (5) The number of planets is nine. (Romero, 2005, 688)

While they superficially look like equative sentences, there are a number of differences between equatives and SCCs. The crucial consideration is that the initial noun phrase in SCCs (=NP1) seems not to be a referential noun phrase, in contrast to the NP1 in equative sentences. NP1 is not pronominalized with a personal pronoun in SCCs, but instead *it* is used, see (6). In equatives, a personal pronoun is possible, see (7).<sup>3</sup>

- (6) The tallest girl in the class is Molly, isn't it? (Mikkelsen, 2004, 64)

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<sup>2</sup>While most researchers distinguish these three classes, there are a number of further types which have been classified as subtypes of these three, or separate classes altogether. These include identificational copular clauses (see Higgins 1979) as in (i), definitional as in (ii), see Declerck (1988)

- (i) This is Susan.  
 (ii) a. A motor car is a vehicle that has four wheels and is propelled by an internal combustion engine.  
 b. A pyramid is what the Egyptians built to bury their pharaohs in.  
 (Declerck, 1988, 114)

Other types that are less frequently discussed in relation to copular clauses in general are existential sentences as in (iii) (see Hartmann 2008 for details).

- (iii) a. There are dinosaurs.  
 b. There is beer in the fridge.  
 c. There are firemen available.

<sup>3</sup>For further discussion of the differences and similarities of equatives and SCCs, see Heycock and Kroch (1998, 1999, 2002), Mikkelsen (2005) and references therein.

- (7) Ms Smith is Molly, isn't she?

The distinction of specificational sentences from predicational sentences are of two sorts. (i) predicational copular clauses usually contain an indefinite predicate, or an adjectival/prepositional predicate. In specificational clauses, the post-copular DP is usually definite and referential. It is important to note that a simple *NP be NP* can be ambiguous between the two readings, which was originally observed in Akmajian (1970) for pseudoclefts. This fact needs to be accounted for, either as a structural ambiguity (as e.g. implicit in inversion analyses of SCCs), or as an ambiguity that arises from different types of interpretative mechanisms (e.g. different types of copula or different types of NPs).

- (8) His supper is food for the dog.

- a. predicational: 'his supper serves as food for the dog'
- b. specificational: 'he eats food for the dog for his supper'

(den Dikken, 2006b, 296)

I will argue in chapter 3 that SCCs are a separate type from both predicational and equative statements, though they share certain properties of both. In the following, I will provide the resulting syntactic structures of predicational and specificational copular clauses.

### 2.2.1.2 *The syntax of predication and specification*

The syntactic structure of the underlying predication in copular clauses and small clauses has been a major issue in the last four decades going back to at least Stowell (1978), who proposed that the subject and predicate in (non-verbal) predications form a constituent underlyingly. The copula *be* is then a raising verb, so that the underlying subject is raised to the surface

subject position as illustrated in (9).

- (9) a. [<sub>NP</sub> An American flag ] was [<sub>NP</sub> t ] [ planted on the moon ]  
 b. [<sub>NP</sub> An angry lion ] - has been - [<sub>NP</sub> t ] running wild.  
 c. [<sub>NP</sub> A cow ] may be - [<sub>NP</sub> t ] in the barn.  
 (Stowell, 1978, 466)

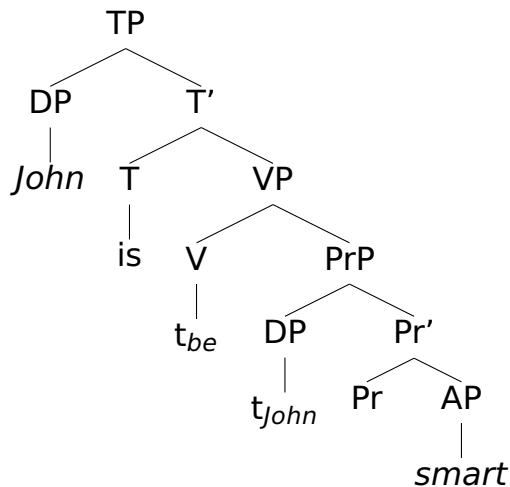
The subsequent discussions have addressed two issues with respect to this idea: (i) What kind of constituent do the subject and predicate form? (ii) How local is predication, and what is the role of the structural configuration? Stowell (1981) proposed that the subject occupies the specifier position of the main predicate. However, this has been shown to be problematic (see Williams 1980, 1983a, Bowers 1993) because the specifier position has to be available for other constituents inside the AP, NP, PP. Second, the locality of predication has been argued not to be linked to a specific phrasal projection. Instead it has been argued that it requires just a specific syntactic configuration, as e.g. mutual c-command (see Rothstein 1983) or c-command in general (see Williams 1980, 1983b). Moreover, Heycock (1992, 1994) argued that there is not a single layer of predication available in a sentence but that predication is possible at various levels. This idea has also been defended in more recent work by Rothstein (2001) and den Dikken (2006a).

One of the most influential proposals on the syntax of predication is Bowers (1993, 2001). He argues that there is a specific syntactic configuration of predication introduced by a functional head Pr. The copula *be* in this analysis is a raising verb and the underlying subject A-moves to the surface structure position Spec,TP, see (10).<sup>4</sup>

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<sup>4</sup>For explicitness, I assume that the copula is a main verb and not just the expression of T. Note though that this question about the nature and role of the copula is orthogonal to the questions discussed here.

(10) John is smart.



Bowers (1993, 2001) provides three main arguments in favour of this independent functional head Pr. First, Bowers argues that this functional head is sometimes overtly expressed, in English this is *as*.<sup>5</sup>

(11) I regard Fred as insane. (Bowers, 2001, 310)

Second, subject and predicate form an independent constituent which can be coordinated.

- (12) a. Mary considers [<sub>PrP</sub> John a fool] and [<sub>PrP</sub> Bill a wimp].  
 b. John regards [<sub>PrP</sub> professors as strange] and [<sub>PrP</sub> politicians as creepy].  
 c. Sue put [<sub>PrP</sub> the books on the table] and [<sub>PrP</sub> the records on the chair].

(Bowers, 2001, 311)

Third, the existence of PrP provides a straightforward explanation to those cases where predicates of different categories are coordinated. This type of coordination is not a coordination of unlike categories (which is unusual

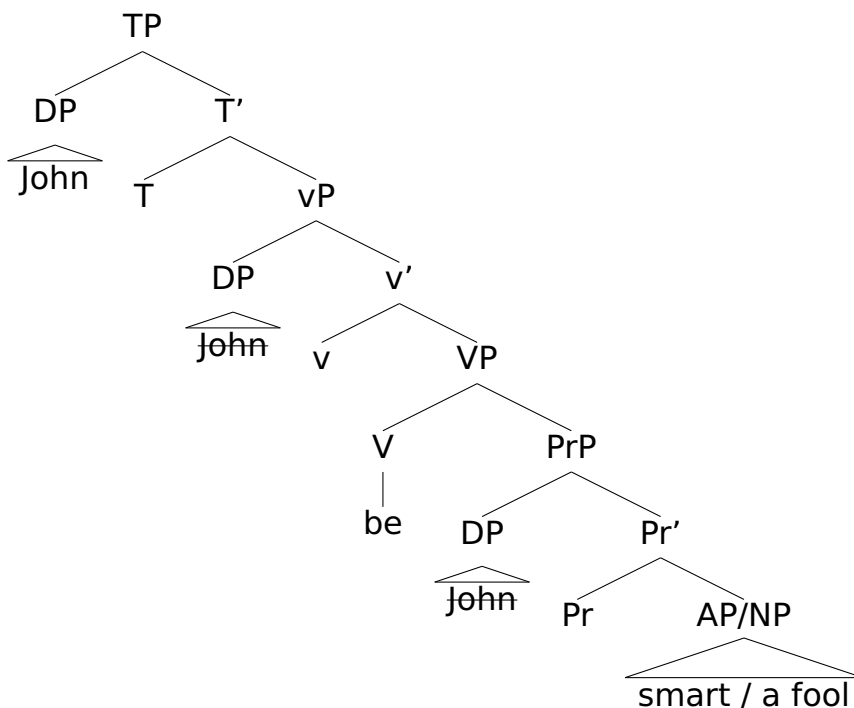
<sup>5</sup>Jäger (2003) provides a semantic analysis for *as*.

given the parallelism requirement of coordination), but a coordination of Pr'.

- (13) a. I consider [<sub>PrP</sub> John [<sub>Pr'</sub> Pr [<sub>AP</sub> crazy]] and [<sub>Pr'</sub> Pr [<sub>NP</sub> a fool]]].  
 b. Bill is [<sub>PrP</sub> *t*<sub>Bill</sub> [<sub>Pr'</sub> Pr [<sub>AP</sub> unhappy]] and [<sub>Pr'</sub> Pr [<sub>PP</sub> in trouble]]].  
 (Bowers, 1993, 605)

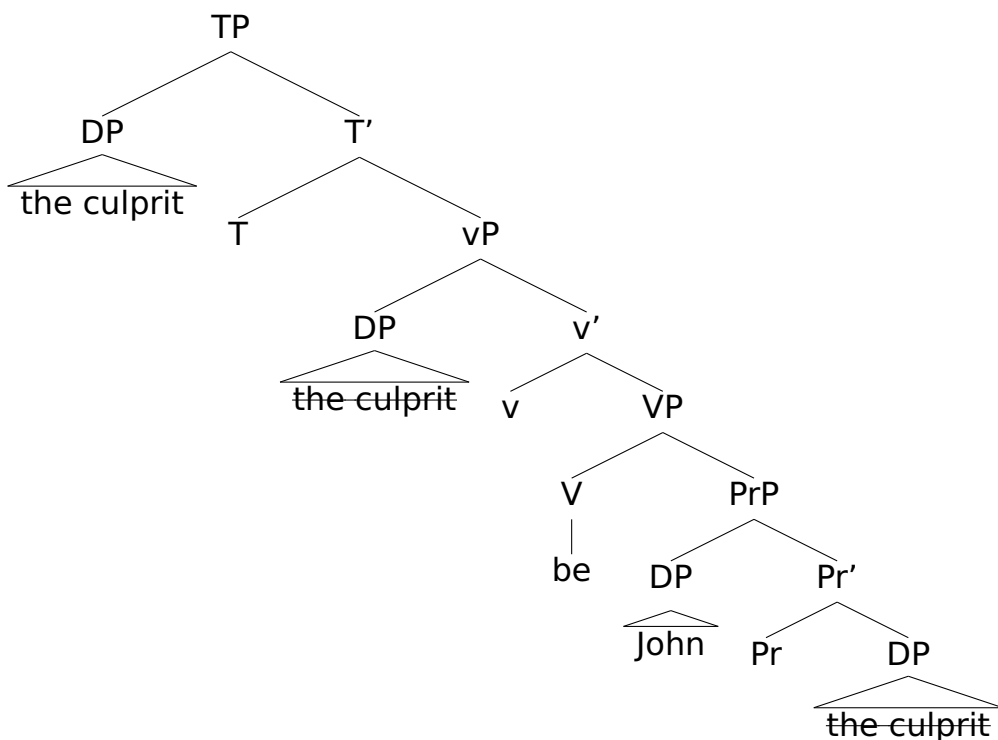
Following Bowers' proposal, I will assume that all copular clauses involve a PrP, in which the subject and predicate (in a broad sense, i.e. not restricted to properties) are base-generated as specifier and complement respectively. I call this phrase the core predication of the sentence, making room for additional layers of predication in a sentence (see Heycock 1994, Rothstein 2001). I take the copula in English to be a raising verb. In PCCs, the underlying subject of predication, i.e. the constituent in Spec,Pr is raised to Spec,TP (possibly via intermediate positions in a local derivational framework), illustrated in (14).

- (14) John is smart/a fool. [PCC]



For specificational copular clauses, I follow previous proposals that these are inversion structures (Heggie 1988 for the original idea; see also Moro (1997), Heycock (1994), Mikkelsen (2005) and references therein)<sup>6</sup>. However, I depart from these analyses in that I do not assume that the initial DP is a predicative noun phrase. Instead I follow Romero (2005) to take the initial DP to have an intensional interpretation, a concealed question. *The culprit* is not used as a noun phrase that refers to a specific entity in the world, but it selects for each world one individual. Overall, therefore, I follow Heycock (2013) who combined Romero's semantic analysis with the syntactic inversion analysis. The resulting structure is given in (15).

(15) The culprit is John. [SCC]



The main point for the analysis here is that I assume a designated structural configuration for predication. This structure is asymmetric and it is this configuration that is exploited for the division of focus and background. Before I can spell-out these details, I turn to the definition of focus in the next

<sup>6</sup>Chapter 3 will provide the motivation of the inversion analysis



section.

### 2.2.2 Focus

In this section, I will turn to a general definition of focus. The starting point is the definition of focus provided in Krifka (2008a), see (16). I will come back to this general notion of focus in chapter 5, where this definition is refined.

(16) Definition of focus

Focus indicates the presence of alternatives that are relevant for the interpretation of linguistic expressions. (Krifka, 2008a, 247)

A crucial point here is that I take alternative focus to be a marked focus, which has to be distinguished from new information focus. The distinction between two different types of focus has been present in the linguistic literature for several decades, (see Halliday 1967a, Rochemont 1986, Drubig 1994, 2003, É. Kiss 1998, Winkler 2005, Rochemont 2013), though it has received various different labels, such as contrastive focus versus presentational focus, identificational focus vs. information focus, wide focus versus narrow focus, to name just a few. In the following, I will present some of the arguments to distinguish between New Information Focus (=NIF) and what I will call Marked Focus (=MF) (for reasons which will become clear below). (17) is an example of NIF. The *wh*-question asks for some general information and the answer is an all-new answer. (18) on the other hand shows an example of MF, both in the question, where the question operator has to associate with the accented constituent JOHN and in the answer, in which the relevant information is corrected.<sup>7</sup>

<sup>7</sup>Note that this distinction does not entirely match the distinction between wide-focus/all-new focus vs. narrow focus. A narrow focus is not necessarily contrastive. Thus, in (i), the constituent that is new is a narrow-focus in the sense that only part of the sentence is focused, however, the focus is still a NIF. For discussion on NIF vs. MF in answers to *wh*-questions in general, see below.

- |      |  |     |
|------|--|-----|
| (17) | What happened?<br>John ate the beans.              | NIF |
| (18) | Did JOHN eat the beans?<br>No, BILL ate the beans. | MF  |

NIF and MF have been distinguished with respect to the following four properties (for details see chapter 5 section 5.3.2).

**(i)** Focus sensitive operators are sensitive to MF, but not NIF, see Kratzer and Selkirk (2010) cited in Katz and Selkirk (2011), also Rochemont (2013). Thus, it is not enough for a phrase to be (discourse-)new in order to associate with *only*. Additionally, phrases that are given can also associate with *only*.

**(ii)** There are a number of works that show that MF and NIF differ with respect to prosody, see Selkirk (2002), Katz and Selkirk (2011), Rochemont (2013) among others contra Gussenhoven (2004), Ladd (1996). While both MF and NIF usually receive a pitch-accent, MF is by and large longer in duration and the pitch range is larger.

**(iii)** A cross-linguistic dominant pattern is that MF can trigger syntactic overt movement of a constituent, while this is generally speaking not the case for NIF (É. Kiss, 1998, Rochemont, 2013).

**(iv)** MF gives rise to intervention effects along the lines of Beck (2006), while NIF does not, see Rochemont (2013).

For the overall proposal discussed in this chapter, the important aspect is that this distinction is a necessary one. NIF will be determined in relationship to the discourse, whereas MF provides some additional meaning that

- (i) What did Mary do? She [<sub>F</sub> left ].

is only indirectly dependent on context. For the issues under consideration here, the distinction helps to disentangle some of the intricate issues with respect to the common information structure of different subtypes of cleft sentences.

## 2.3 The Phase-Based Interface Model of Grammar

### 2.3.1 Introduction

In this section, I lay out the details of the model that I assume in order to express my main ideas about the syntax, focus structure and semantics of cleft structures and specificational structures generally to be discussed in detail in the chapters to come. The aim of this section is to make my assumptions explicit and to provide the motives and reasons why I chose the respective options.

### 2.3.2 Marked Focus as an interface phenomenon

#### 2.3.2.1 Introduction

In my view, there are at least five important general observations with respect to focus and information structure, more generally.

**Discourse coherence.** First, discourses require coherence. Coherence relies on establishing relations between what has been previously said and what is added. Information structure is a device that allows to link information in a sentence to the discourse, by marking which information is (assumed to be) shared and which information is new on the sentence level. As a result the felicity of a sentence in a given context depends on its semantic, syntactic, morphological and prosodic properties. Or, viewed from the opposite direction, the semantic, syntactic, morphological and prosodic

properties of a sentence are partly dependent on its context. I take context to include those propositions that have been previously mentioned, i.e. salient/shared/known propositions and sets of propositions (possible worlds, including the ‘real world’). Thus, a language may allow a large range of combinations of syntactic, morphological and prosodic properties in one sentence, however, they are not equally felicitous in different context. One such example is the phenomenon of question-answer congruence, illustrated here for English.<sup>8</sup> Thus, the two sentences in (19) are not equally felicitous in the context in (20) (Small caps indicating main sentence accent).

- (19) a. JOHN bought ice-cream.  
b. John bought ICE-CREAM.

(20) Who bought ice-cream?

Similarly, cleft sentences in English as (21) are not felicitous in a context like (22a), but are most adequate in a context like (22b).

(21) It was JOHN who hired an attorney.

- (22) a. What did John do?  
b. Did PETER hire an attorney?

**Focus interpretations.** Second, languages can grammaticalize special markings of InfS (for example by non-default prosody or syntax) that give rise to semantic interpretations that rely on the (contextually-restricted) set of alternatives to the marked constituent, see the general definition of focus provided in (16) above following Krifka (2008a). As argued above, I take this

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<sup>8</sup>Reich (2002, 2003) provides a detailed study of questions-answer congruence on the basis of German data.

to be a marked focus. In English, this marked focus can either be expressed by movement or by prosodic means, which are two different ways to express the relevance of alternatives for the interpretation of the sentence in its context.

**Association with focus.** Third, there is a class of lexical items whose meaning depends on the alternatives to the marked focus of the sentence they occur in. These are the so-called focus sensitive operators that associate with a focused constituent. Thus, languages seem to use the same means to express (some notion of) focus as they use to mark the associate of focus sensitive operators. English uses pitch-accents for this purpose. Languages that use other means for marking focus use the same means for marking the associate of such particles. Thompson River Salish for example uses some type of clefting (see Koch and Zimmermann 2009).<sup>9</sup>

**Cross-linguistic variation.** Fourth, while languages certainly mark InfS in some way, the categories and interpretations which they grammaticalize and the means languages use to express them might vary. We find this kind of variation in other domains as well. One example is the expression of number: while all languages do have a concept of number, the way it is grammaticalized differs. Many languages distinguish grammatically between singular vs. plural, e.g. plural marking -s in English. Other languages have three categories for number - singular, dual and plural.<sup>10</sup> Similarly, languages can vary with respect to which types of foci they grammaticalize and the means to express it.

**Module Interaction.** Finally, a striking fact about focus and InfS more generally, is the fact that focus interacts with prosody, syntax, interpretation

<sup>9</sup>This generalization seems to hold. However, I am not aware of a systematic cross-linguistic study of this generalization.

<sup>10</sup>WALS online lists Koasati, Maricopa, Navajo, Pomo (Eastern), Wichita, see Pearce (2012) for dual in a range of unlisted Vanuatu languages, Ritter (1995) for limited dual marking in Hebrew.

and more generally discourse. This has been taken to mean that (marked) focus and InfS in general are so-called interface phenomena, i.e. a phenomenon that involves the interaction of the modules of syntax, PF and LF. This interaction of modules is a very prominent and interesting aspect of InfS, yet, at the same time, this aspect has so far not yet lead to a rethinking of the architecture of grammar, which is a serious challenge for InfS research.<sup>11</sup> The model proposed here tries to spell-out some of the details of a model of grammar that makes this interaction available. In order to do that, this section considers this aspect of focus in more detail, as this lays the foundation for the model assumed in this monograph. There are four domains where the interaction of modules for the expression of focus is relevant, namely (i) Context dependency; (ii) Multiple Markings (iii) Focus movement and (iv) Focus in-situ. I consider these four in turn to motivate the need for a model that allows for interaction of syntax, PF and LF via a InfS Module.

### 2.3.2.2 *Context dependency*

The interpretation of focus is context dependent because the set of alternatives relevant to the interpretation of these sentences is context dependent. Consider the interpretation of (24) in the context of (23).

(23) John and Peter are brothers of Mary. Mary gave a party and she wanted to introduce her brothers to her new boyfriend Bill. During the party, she was busy introducing all her friends to her new boyfriend. Her brother Peter left early. As a result:

(24) Mary only introduced JOHN to Bill.

<sup>11</sup>There are predecessors of various types that try to make room for some interaction of PF with LF, or PF with syntax, see for example Winkler (2005), Büring (2013), Féry (2013).

In this context, (24) can be interpreted such that from the set of introductions of Mary's brothers to Bill, only one introduction took place. This sentence does not mean in this context that there were no other introductions taking place during the party. Thus, context plays an important role in the interpretation of focus sentences. However, the exact process of how the relevant set of alternatives is construed is a process which is not yet fully understood.

### 2.3.2.3 *Means of expression*

Focus can affect syntax, prosody and semantics separately and at the same time, both in a single language and across languages. The main questions I address in this subsection are given in (25).

#### (25) Focus as an interface phenomenon

- a. To what extent does focus affect syntax, PF and LF at the same time?
- b. Does this give rise to a redundancy in expression of a single concept?

Taking English as an example, we can see that focus (as defined above along the lines of Krifka 2008a) can be expressed by prosodic means (here: accent placement), give rise to movement or be expressed with a cleft, see (26). Thus, focus can be expressed through very different means. For ease of reference the constituent in focus is marked as Focus Phrase (=FP).

- (26)
- a. I only like [<sub>FP</sub> the sister of John].
  - b. [<sub>FP</sub> The sister of John ], I like.
  - c. It's [<sub>FP</sub> the sister of John ] that I like.

At the same time, at least some of these mechanisms seem to be used in cases in which focus is not relevant. Thus, deaccentuation of preceding material can lead to a shift in accent placement, cf. (27), however, there are no alternatives at stake, see Rochemont (pear, 16).

- (27) Mary, Sam, and John were sitting on the couch. Then Mary KISSED John. (Rochemont, pear, 16)

The same seems to hold in the comparable example in (28).

- (28) Last night, Judy met several relatives of John. She talked to the sister of John for several hours.

A similar point can be made for movement to the clause-initial position. Besides being used for focus preposing, it can also be used for topic preposing, see (29).<sup>12</sup>

- (29) Tea, I LIKE. Coffee, I DESPISE.

Note, however, that this lack of a one-to-one correspondence of focus marking in these constructions only concerns a uniform notion of focus. Arguably these different constructions have slightly different meanings and different discourse conditions, which might or might not be due to a different sub-kind of focus they express, see for cases like (29) the study by Constant (2014).<sup>13</sup> A more-fine-grained analysis of focus and the means to express it

<sup>12</sup>Skopeteas and Verhoeven (2009) provide data from Yucatec Maya to show that left dislocation can be ‘triggered’ by InfS requirements, but it is not restricted to InfS interpretations. The model developed and illustrated below is compatible with such an observation, as features that trigger syntactic movement can have different origins: they might be assigned with an InfS feature bundle, but they can also be available for other syntactic needs. This lack of a one-to-one correspondence is even more obvious in German, where fronting of a constituent to the initial position can have a range of different discourse functions (see Fanselow 2002, Frey 2005, Fanselow and Lenertová 2011, Skopeteas and Fanselow 2011).

<sup>13</sup>In a different line of research, cases as in (29) have been analysed as topics containing a focus in Buring (2003), Steedman (2000), Krifka (2008a).



might be necessary for these cases. Additionally, the means that are taken to be the ones to express focus—here accent placement—have to be taken under closer scrutiny. The relevant means might be related to accent placement and pitch accent type (Pierrehumbert and Hirschberg 1990), however, phonetic aspects such as relative pitch height, duration or intensity might be also relevant.<sup>14</sup>

In conclusion, it is clear that under the general definition of focus in (16), focus can be expressed by various means in a single language, here English. So there is a one-to-many relationship between focus and means of expression. This conclusion should be taken with a grain of salt though, as there might not be a single notion of focus involved to begin with, but marked focus might need to be classified in different sub-classes (see chapter 5 section 5.3 for further discussion).

Looking at the issue from the opposite perspective, it is clear that there is no one-to-one relationship between means of expression and focus. Focus can be marked by multiple means at the same time. One standard example for multiple marking is focus in Hungarian. A focused constituent is linearized in a non-default, pre-verbal position; it carries main sentence accent and receives a specific focus-semantic interpretation. This is dominantly analysed as movement of the focused constituent to a specific pre-verbal position.

- (30) a. János el ment.  
John away went
- b. JÁNOS ment el  
John went away  
(É. Kiss, 2002, 83)

<sup>14</sup>Skopeteas and Féry (2014) show the relevance of duration, phonation type (breathy voice) and pitch range are correlates of prominence in signaling exhaustivity in Georgian, while generally prosodic alignment seems to be the most important correlate for focus in marked focus constructions in this language.

There are several accounts for this type of movement. This dislocation has been analysed (i) as genuine syntactic movement to a functional projection followed by verb movement (Bródy 1990, Puskás 2000, É. Kiss 2002), (ii) as prosodically-driven movement, (Szendrői, 2001), (iii) as some kind of scope driven movement (Szabolcsi, 1997, Horvath, 2010), or (iv) as movement of a predicate of predicates escaping type mismatch (Surányi 2011, see also É. Kiss 2006, Szabolcsi 1994). What is clear from this case in all analyses, though, is that there is not a single means to express focus: movement and prosody conflate to express focus.

Thus, coming back to the initial question of focus as an interface phenomenon, what we can see so far is that there seems to be no one-to-one relationship of a single unique mechanism to mark focus, and more often than not, focus is marked by various means at the same time.

#### 2.3.2.4 *Focus movement*

Focus movement, as exemplified for Hungarian, is especially interesting from the perspective of focus as an interface phenomenon. In this case, all modules of grammar are involved and need to interact. Movement is a syntactic process, which is driven by—or, depending on the model, which leads to—a specific interpretation of this constituent, i.e. it involves the semantic component. Finally, the focused constituent receives the nuclear accent, in this position, thus the PF component is involved as well.

In the traditional T-model in which PF and LF do not communicate directly, focus movement (and InfS-driven movement in general) has been modelled as driven by InfS-features in syntax. The idea of F(ocus)-marking in syntax goes back to Jackendoff (1972), and it has survived many stages of syntactic theory since. However, this approach to focus movement has been criticized on both theoretical and empirical grounds.

The first theoretical problem consists of the assignment of InfS-related features (=ISF), as this violates the inclusiveness condition proposed in Chomsky (1995). The inclusiveness condition states that the elements driving the derivation have to be inserted by lexical items. Discourse features like focus or topic, however, can only be linked to syntactic constituents, and as such cannot be introduced by lexical items.

Secondly, these features are ‘foreign’ to the syntactic component, as this component can only operate on formal features (see Chomsky 2008). ISF, however, are interpretive features and as such should not drive syntactic computation.

Additionally, Surányi (2011) criticizes that the analysis in terms of ISF leads to the doubling of features on heads and phrases that are attracted by these heads—a doubling that seems highly superfluous and should therefore be omitted if possible.

Fourth, various researchers have pointed out several empirical problems for assuming focus features in the syntactic component. Most languages allow some process of InfS-related displacement. However, the same notions can be expressed by independent means, without movement (see for example Neeleman and van de Koot 2008, Fanselow and Lenertová 2011). To account for that, some researchers have assumed covert movement of the focused constituent.<sup>15</sup> Yet, the question of why movement in some cases can be overt, while in other cases it cannot, needs to be addressed.

Finally, if ISF trigger movement to specific syntactic positions, as proposed in the cartographic framework (see Rizzi 1997 and follow-up work), there is an additional problem of the uniqueness of the target position, which has been challenged in Neeleman and van de Koot (2008), arguing against

<sup>15</sup>The most prominent problem for covert movement is that focus does occur in islands as observed in Rooth (1996). Note however, that the notion of focus phrase as proposed in Drubig (1994), Krifka (2006) weakens this argument significantly.

a unique hierarchy of InfS-related projections. Additionally, there is hardly any agreement on the exact content of the ISF cross-linguistically, so that it is hard to see how a universal hierarchy is supposed to work.<sup>16</sup>

I conclude from this discussion that a ‘simple’ analysis in terms of ISF is not satisfactory in accounting for focus movement. Additionally, I think it does not give justice to the core observation—namely that InfS is a phenomenon in its own right, which affects syntax, prosody and interpretation.

The next section describes another reason to model Focus as a phenomenon that needs to allow for the interaction of the individual modules during the derivation.

#### 2.3.2.5 *Focus in-situ*

There are several phenomena that have been discussed as cases in which InfS-related displacement is actually not driven by the need of the moved constituent, but rather by the need of the constituent that the moved element evacuates. This has been argued, for example, for scrambling in German, see Diesing (1992), and for Catalan Clitic Right Dislocation, see López (2009) for discussion.

SCCs are a case in point here as well. As shown above and argued for at length below, I take SCCs to be inversion structures. The syntactic literature on the phenomenon and inversion analyses in general has been concerned with the question, ‘What triggers inversion?’. While the relevance of InfS for these phenomena has been recognized from the beginning, the question of the interaction of inversion and focus on the post-copular subject could not be expressed appropriately.

The empirical generalization for SCCs and inversion in general is that

---

<sup>16</sup>Neeleman and Szendrői (2004) have argued on the basis of multiple foci sentences that focus features are problematic in general, independent of focus. Note though that the indexing of focus features seems necessary for interpretative reasons, see Wold (1996).



### 2.3.2.6 Conclusion

The current section aims to show that Marked Focus is an interface phenomenon. By this, I mean that (i) Focus can have an effect in various modules of grammar at the same time (i.e. syntax, PF, LF) and (ii) whether a constituent is assigned an ISF can influence the derivation of a sentence, which I illustrated here with focus movement and focus-in-situ phenomena. In the next section, I will amend the T-model in such a way that it can handle these facts.

## 2.3.3 The Phase-Based Interface Model of Grammar

### 2.3.3.1 Overview

The discussion on the nature of (marked) focus has shown that focus is a so-called interface phenomenon, that is, it is relevant for more than one module of grammar. The aim of this section is to develop a model that can account for the major properties of focus as interface phenomenon. The major observations from the discussion in section 2.3.2 are summarized here.

1. Context dependency: Focus is a phenomenon that can only be interpreted with respect to the discourse and common ground. In effect, the module responsible for focus assignment and focus interpretation has to have access to the information in the common ground and discourse.
2. Multiple Marking: Focus can be expressed in various modules at the same time (for example syntax and PF). Thus, the information that a constituent is focused has to be available in all modules.
3. Focus movement: the status of a constituent as a marked focus can give rise to further syntactic operations. Thus, the information that a

constituent is focus-marked needs to be available during the syntactic derivation.

4. Focus-in-situ: A focused subject in-situ can give rise to ‘evacuation’ movement: i.e. material following the in-situ subject and that cannot be de-accented (in English) moves away. Thus, the InfS-component has to be able to assign a formal feature readable to PF that requires material to be deaccented.

The model of grammar presented here allows for individual modules to interact while building a representation for individual sentences. The move towards a phase-based approach to syntax (see Chomsky 2008 et seq.) allows such an interaction at specific points in the representation, namely at the phase-level.

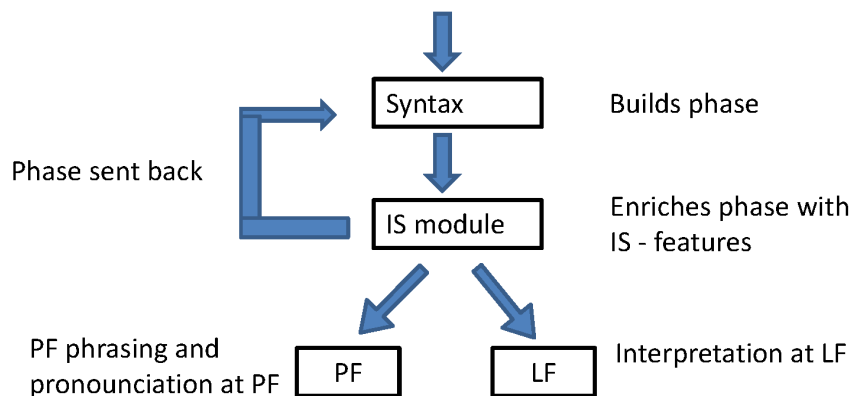
The main interest of this manuscript is the interaction of predication and focus. As focus is crucially involved in various different modules in grammar, the model needs to be flexible enough to account for the interactions observed. Therefore, I assume a phase-based interface model of grammar. This model allows an interaction of the individual modules, namely syntax, information structure, prosody and semantics, while deriving an individual sentence.

I assume that DPs, vPs, PrPs and CPs and potentially PPs and APs are phases. When a phase is syntactically built up by merge (and formal feature driven move), it is sent to an information-structural module that assigns InfS-features to the syntactic representation. These features in turn can be interpreted by the PF and LF component. As a result, syntax, PF and LF can be built up recursively and compositionally (see Wagner 2005 for a prosodic model, that is compatible with the system proposed here). Thus, the model dispenses with F-features assigned in syntax, but in effect, features assigned in the InfS Module can in principle be combined with formal features that are

legible to the syntactic component, and features legible at PF and LF.

A phase enriched with InfS-feature-packages (including discourse features, formal features legible to syntax, prosodic features legible to PF) is sent back to the syntactic component, where the syntactic derivation proceeds further. As illustrated below, phases are sent back to the syntactic component once they are enriched with InfS-features. If the InfS Module is a module in its own right, the T-model can be maintained, as illustrated in the graphics in (33).<sup>18</sup>

(33) The phase-based interface model of grammar



In this model, the InfS Module plays a crucial role—it acts as the mediator between syntax, PF, LF and discourse. Its major tasks are sketched in the next section. The model and the tasks of the InfS module will be illustrated with example derivations in section 2.3.4.

### 2.3.3.2 The Information Structural Module

The InfS Module that I propose here is responsible for two processes. First, it links individual phases to the discourse, and second, it enriches phases

<sup>18</sup>Note that I remain agnostic with respect to the question of whether the complement of the phase is sent to PF at the phase-level or later. As I am not primarily concerned with the interaction of InfS with the domain of PF, I do not provide new insights into the prosody of these structures.



with InfS-features, that are legible to syntax, PF and LF. The two different types of focus discussed above - MF and NIF - thus fall into these two different domains. MF is a special semantic concept that is only indirectly linked to the discourse context. NIF, on the other hand, is defined directly in relation to the discourse. The InfS module thus contains the core concepts of anaphoricity, topichood, focus (MF and NIF) and givenness (to name the most prominent ones). Language specific variation, then, depends on whether these concepts are grammaticalized, i.e. whether or not they give rise to processes in other modules. For syntactic processes, I take this to mean that certain InfS-markings are grammaticalized to contain formal features (e.g. edge features in current terms) that drive further processes in the computation. Additionally, InfS features can be linked to prosodic features that are readable at PF and give rise to prosodic processes like prominence or deaccentuation. Thus, I assume that there are universal concepts of InfS, however, the expression of InfS, or rather the extent to which elements are grammatically marked for these InfS concepts, vary across languages. In this view, the research task is to uncover the universal components of InfS and understand how these are grammaticalized in individual languages.

One important aspect of the InfS Module is that it compares a given phase to the discourse. The discourse is to be distinguished from the common ground, even though this distinction is not easy to make. I think that the discourse contains individuals and propositions mentioned before, whereas the common ground is a collection of propositions that the interlocutors share to be true or false, i.e. a set of true and false propositions that the interlocutors are committed to (see Stalnaker 1978, Farkas and Bruce 2010, Krifka 2015 for different versions of this understanding of the common ground and references). The discourse is thus, a collection of mentioned propositions and individuals (without an assigned truth value), while

the common ground is a set of propositions that are accepted as true or false in different possible worlds. If the model as presented here indeed interacts with the discourse, it has to provide some initial interpretation up to the level of propositions and reference to individuals, while the assessment of the truth of a proposition is left to LF, including the update of the common ground.<sup>19</sup>

### 2.3.4 Example derivations

In this section, I consider a few examples to illustrate how the model works for simple sentences. Individual constituents are assigned sets of features in the InfS module. These are: information-structural features (=IS) such as Focus (=Foc), Background (=BG), Topic (=Top); discourse features (=D) which involve the notions of new, accessible and given; prosodic features such as for example deaccentuation/reduced prominence (=redProm), or focus prominence (=FocProm)<sup>20</sup>; and syntactic formal features triggering movement to the edge (=EF). These feature bundles can also leave specifications empty ( $\emptyset$ ). In this model here, the two types of foci discussed above, MF and NIF, belong to two different domains – the former to a domain of information structure, while the latter is part of the relation in the discourse. This allows a cross-classification of the two: thus a MF is not necessarily new, and a new constituent is not necessarily focused. I will go through a number of concrete derivations step-by-step. Each phase will be generated by merge applying repeatedly. At the phase-level the feature bundles are assigned in the InfS Module. Features can be assigned to the phase itself, to the phase

<sup>19</sup>The alternative is that the InfS Module is in effect part of LF, with the effect that derivations proceed by phase from syntax  $\rightarrow$  LF  $\rightarrow$  syntax  $\rightarrow$  LF, with PF spell-out at a later stage. While this model might be plausible and possible a step in the right direction, the current model is conservative in the sense that it sticks to the original T-model as much as possible.

<sup>20</sup>The phonetic features introduced here are very basic and underspecified, as these are not the focus of the study here.

head and to constituents inside the phase (specifier and complement of the phase-head).

#### 2.3.4.1 Example 1: All-new context

The first illustration is an example of a neutral sentence in which all the information is discourse-new.

- (34) A: What happened?  
B: Peter bought a book.

The first two steps are the derivation of the two DP phases, both of which are new to the discourse. They are assigned this discourse feature (=D:new).

① Syntax: merge DP phase 'a book'

DP  
|  
*a book*

② InfS Module: check DP phase

D: referent is new

DP  
D: new  
|  
*a book*

③ Syntax: merge DP phase 'Peter'

DP  
|  
*Peter*

④ InfS Module: check DP phase

D: referent is new

DP  
D: new  
|  
*Peter*

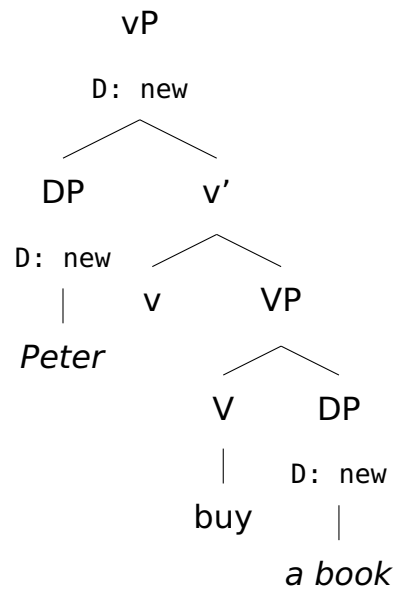
Once these elements are built, the vP phase can be merged and checked against the discourse. As there is no buying event in the discourse, the vP phase is marked as new.

⑤ Syntax: merge vP-phase

vP  
├── DP  
│ D: new  
│ |  
│ *Peter*  
└── v'  
 ├── v  
 └── VP  
 ├── V  
 │ |  
 │ buy  
 └── DP  
 D: new  
 |  
 *a book*

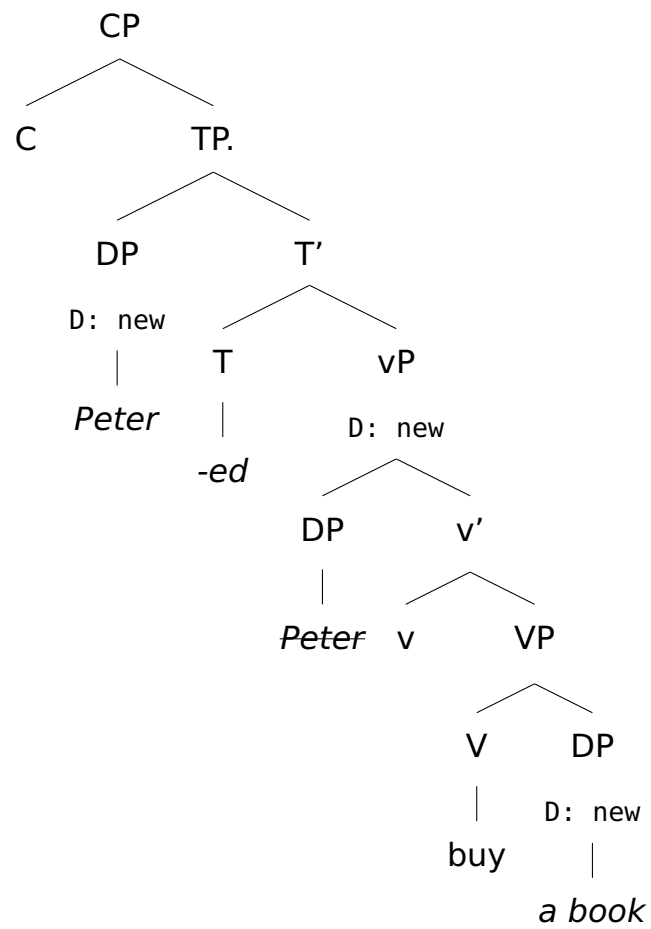
## ⑥ InfS Module: check vP phase

D: vP is new



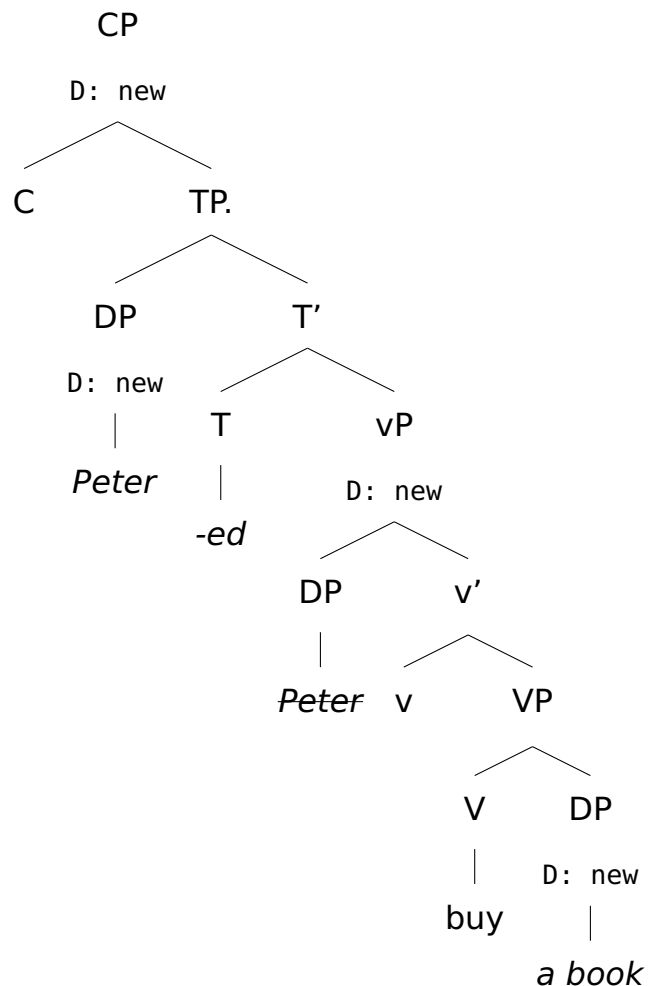
The final step is the derivation of the CP-phase, including the merger of T and the movement of the underlying subject to Spec,TP, as usual. The InfS Module checks the CP and derives that the whole proposition specified in the CP is new in the discourse and marked as such. The CP is sent to PF and LF for full interpretation. At PF, all the constituents are new, thus, default prosody is assigned to the phase. At LF, the proposition is added to the common ground.

## ⑦ Syntax: merge CP-phase



## ⑧ InfS Module: check CP phase

D: proposition is new



## 2.3.4.2 Example 2: Corrective statement

The second example I want to discuss is a corrective statement, in which one constituent is a marked focus.

- (35) A: John ate the beans.  
 B: No. PETER ate the beans.

As before the first steps are merging the two DP phases.

① Syntax: merge DP-phase "the beans"

DP  
|  
*the beans*

The first DP phase 'the beans' is sent to the InfS Module. The DP is given in the preceding discourse and marked as such. In English, givenness in this sense usually has an effect on the prosody in that its prominence is reduced. Thus, the feature *given* in English comes with a PF-readable feature, here abbreviated as *redProm* (reduced prominence). This feature is used here as a place-holder for the appropriate feature necessary to derive deaccentuation.

② InfS Module: check DP phase

D: referent is given

DP  
D: given  
PF: redProm  
|  
*the beans*

The DP phase is merged and as 'Peter' is new in the discourse the DP is marked new.



## ③ Syntax: merge DP-phase "'Peter'"

DP  
|  
*Peter*

## ④ InfS Module: check DP phase

D: referent is new

DP  
D: new  
|  
*Peter*

The next step is to build the vP-phase. Which is then sent to the InfS Module.

## ⑤ Syntax: merge vP-phase

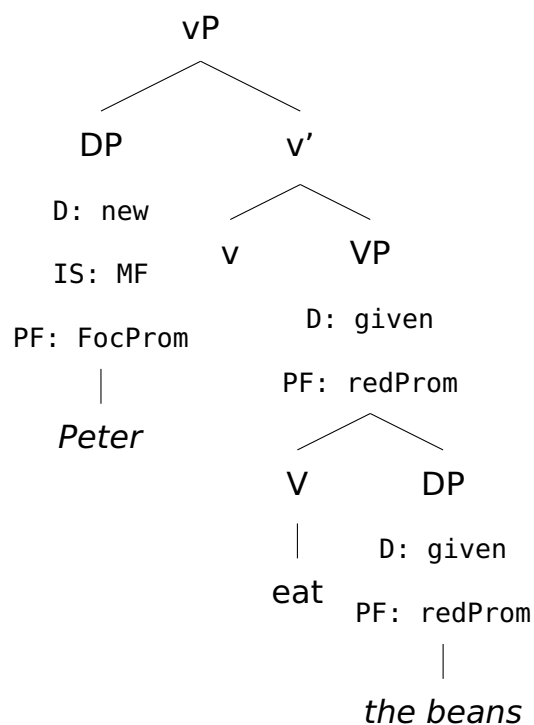
vP  
├── DP  
│ D: new  
│ |  
│ *Peter*  
└── v'  
 ├── v  
 └── VP  
 ├── V  
 │ |  
 │ eat  
 └── DP  
 D: given  
 PF: redProm  
 |  
 *the beans*

The crucial InfS step occurs here at the vP level. The event described in the DP phase is given in the discourse, however, with a different subject. The particle *no* indicates that there is a disagreement in one respect to the previous statement. As a result of this and the available contrasting event, the subject is assigned the status of a marked focus.

⑥ InfS Module: check vP phase

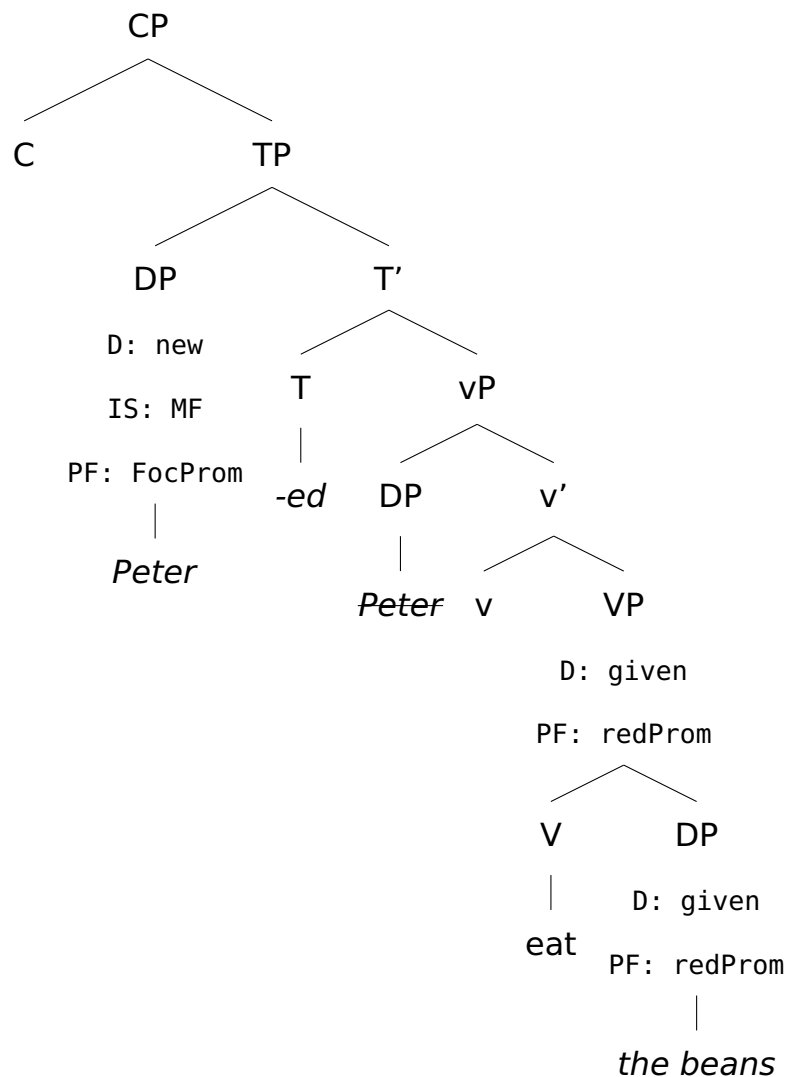
D: event is given; mark as such.

IS: contrasting event in discourse; mark *Peter* as MF;



The CP phase is built in the syntax in the next step and sent to the InfS Module. Nothing additional happens in the InfS Module. The CP phase is sent to LF for interpretation and to PF for pronunciation. At LF, the marked focus can be interpreted, i.e. that the current proposition replaces the previous proposition in the common ground.

## ⑦ Syntax: merge CP-phase



## 2.3.4.3 Example 3: Focus movement

As a third example, I would like to show how a case of focus movement can be handled in this system. Consider the example in (36) from English.

(36) A: Did you want tea?

B: COFFEE, I ordered.

(Ward et al., 2002, 1381)

① Syntax: merge DP-phase *coffee*

DP  
|  
*coffee*

The phase is transferred to the InfS Module. The comparison with the discourse shows that the referent is an element of a partially-ordered set {tea, coffee}. Following the analysis in Ward et al. (2002), this leads to the assignment of a specific subtype of focus. This focus feature comes with a bundle of features, which contains a syntactic feature that drives dislocation, and phonetic feature that forces prominence of a specific type. Thus, the idea here is that the notion of a partially-ordered set in the discourse is grammaticalized for a constituent in focus. This is abbreviated here as MF-pos.

## ② InfS Module: analysis of DP

D: DP is accessible;

IS: assign MF-pos to DP;

DP  
D: accessible  
IS: MF-pos  
Syn: EF  
Phon: Prom  
|  
*coffee*

The next step is to merge the subject as a separate DP-phase. As a discourse-participant I assume that the DP 'I' is given.

③ Syntax: merge DP-phase "'I'"

DP

|

/

④ InfS Module: analysis of DP;

D: Discourse-participant: Given

DP

D: Given

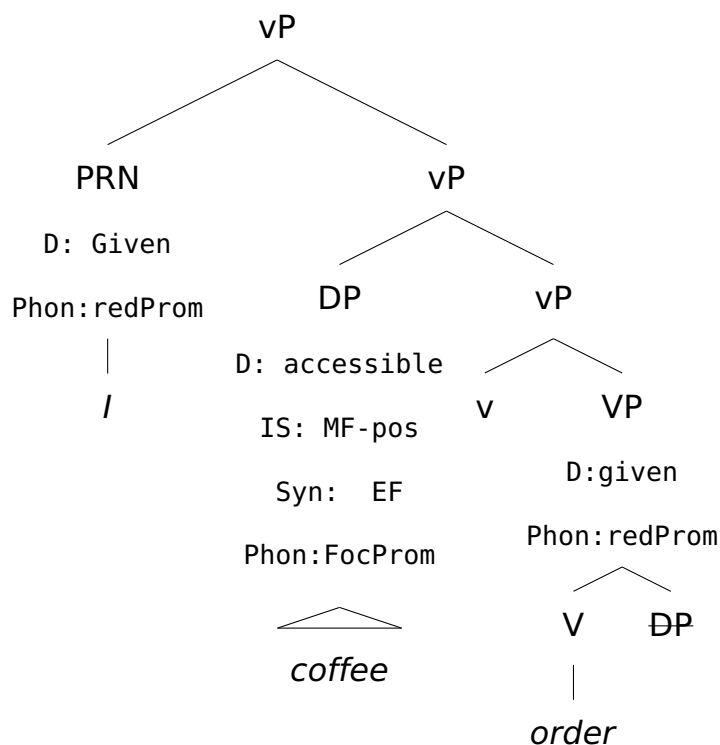
Phon: redProm

|

/

Step 5 shows the merger of vP. As *coffee* has been assigned a formal feature that forces dislocation, it moves to the edge. For explicitness sake, I assume a mechanism along the lines of Müller (2011), which drives this element to move before the subject is inserted.

⑤ Syntax: merge vP; move DP to the edge;

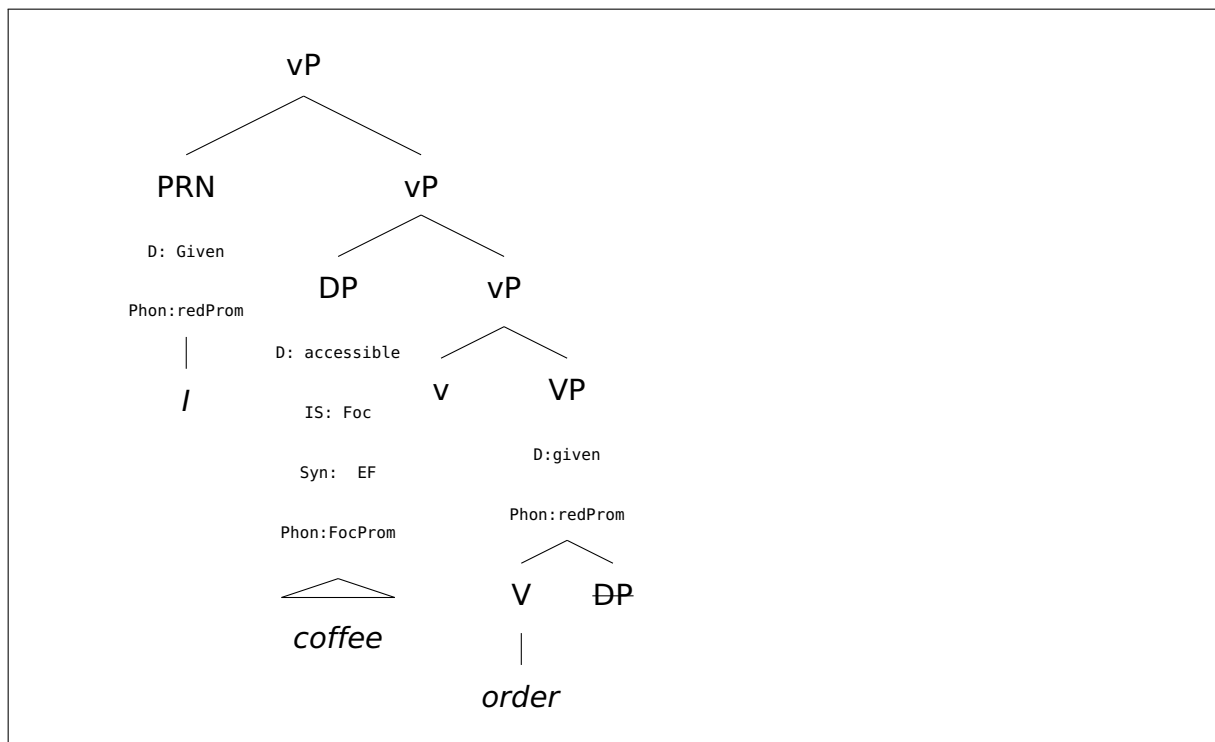


In the InfS module the phase and its subparts are examined. Inside the phase the VP can be assigned the status of given. In the context the VP 'ordered coffee' is entailed in the previous discourse (ordering can be derived from wanting in a cafe-scenery) along the lines of the notion of givenness in Schwarzschild (1999).<sup>21</sup>

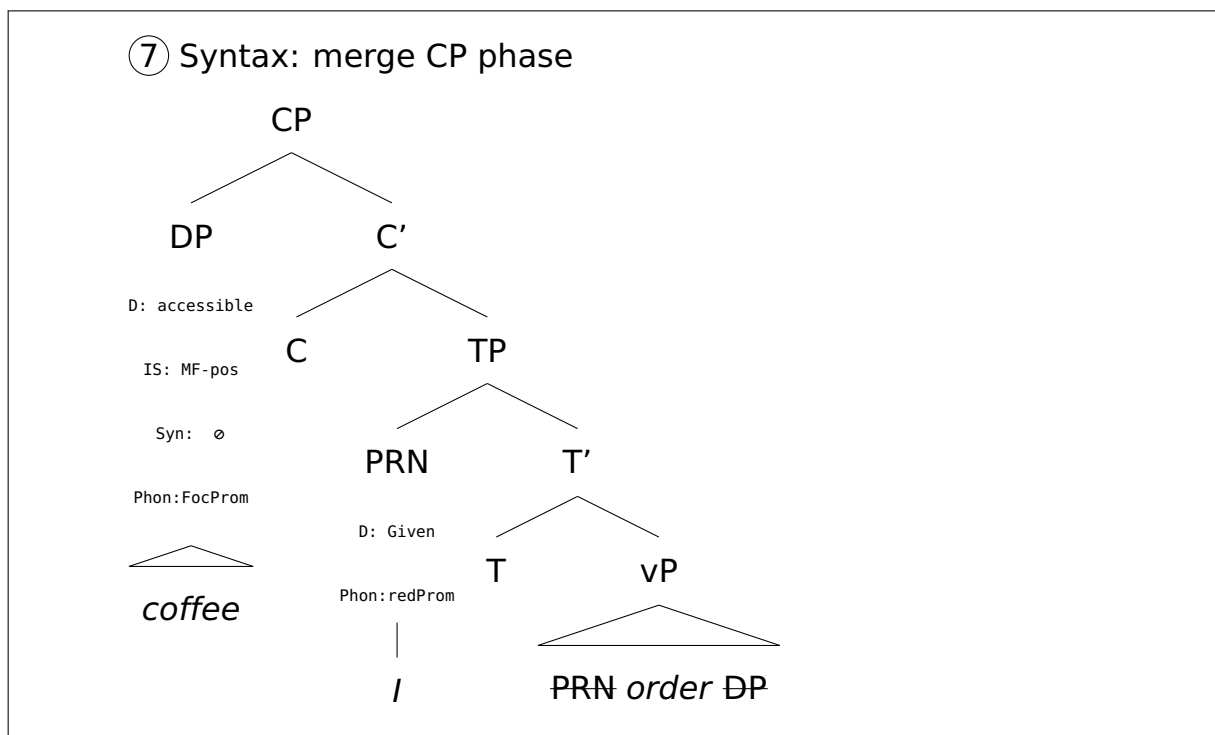
⑥ InfS Module: check vP phase

D: VP given

<sup>21</sup>That such a notion is necessary for these cases of focus preposing is obvious from the deaccentuation of the verb.



Next, the CP-phase is merged. The formal feature present on the DP gives rise to movement of this DP to the edge of the CP phase. The formal feature is satisfied and can be deleted.



Once the CP phase is checked in the InfS Module, the phase can be sent to PF and LF and the proposition can be added to the common ground. The specific feature of partially ordered set, gives rise to a specific type of prominence on the DP.

### **2.3.5 Conclusion**

In this section, I have presented a phase-based interface model based on the T-model. It contains a separate InfS Module that has access to the discourse, in order to enrich phases with InfS-Features. These features might be combined with features that are legible to syntax, PF and/or LF, depending on what is grammatically marked in a language. The model has been applied to three simple example sentences in context for illustration purposes. Additionally, I have shown how the model applies to focus movement cases.

This model serves as the basis to implement the core idea of this work – namely the mapping hypothesis presented in the next chapters. The model provides the frame to understand and derive the properties of Specificational copular clauses and It-clefts, which will be discussed in detail in chapters 3 and 5, respectively.

## **2.4 Mapping Hypothesis**

### **2.4.1 Introduction**

So far, I have established that a fundamental relationship between focus and predication is plausible on the basis of the cross-linguistic observations already provided above. Additionally, I have sketched a model of grammar that allows for a crucial property of InfS phenomena - the fact that InfS is relevant for other modules of grammar, syntax, PF and LF, respectively. In this section, I introduce my answer to the second question Q2 repeated here



for convenience.

Q2: How is this relationship between focus and specification/predication represented?

My proposal is that the relationship of focus-background will be mapped onto the asymmetric relationship of predication represented in the predication phrase PrP. This will be implemented in the model just introduced. The mapping is an integral part of the derivation at the phase-level, which allows it to influence both the syntactic and semantic derivation.

#### **2.4.2 The General Mapping Hypothesis**

In this section, I introduce the general idea of the mapping hypothesis. The *General Mapping Hypothesis* in (37) states that the Information Structure module (=InfS Module) maps the phrase in Spec,PrP (the syntactic subject of predication) onto an information structural division.

(37) General Mapping Hypothesis

The syntactic configuration for predication (PrP) can be mapped onto an information-structural division.

This idea seems implicit in early research on the information structure in the notions of psychological subject and psychological predicate, which were first introduced in the work by von der Gabelentz, Georg (1868) and Paul (1924). Linguists in the Prague School picked up on these notions, which have been taken to be similar to topic-comment structures, see Beneš (1968), Daneš (1966), Firbas (1964), Novák (1966), Novák and Sgall (1968). The selection of terminology expresses a similar idea of correspondence - namely that subject corresponds to topic, while the predicate corresponds to the

comment.<sup>22</sup> In general, one finds such mappings in examples of the type in (38).

- (38) What do you know about Fred?
- a. [ Fred ]<sub>Top</sub> [ is smart. ]<sub>Comment</sub>
  - b. [ Fred ]<sub>Top</sub> [ is the smartest student in class. ]<sub>Comment</sub>

Note though, that this mapping is not necessary in copular clauses—at least not with stage-level predicates (see Diesing 1992, Drubig 1994, Jäger 2001 for discussion of the relevance of topic-hood for the individual- vs. stage-level distinction). Thetic sentences, such as in (39), seem to lack topic-comment structures (or the topic is a spatio-temporal argument, see Erteschik-Shir 1997, Maleczki 2004, Maienborn 2005, Hartmann 2008 for discussion and references).

- (39) [ Two DOGS were asleep. ]<sub>Comment</sub>

While this correspondence of subject to topic is implicit in earlier works (see for example Givon 1976's notion of subject as grammaticalized topic, see also Li 1976 and references therein for earlier work on this topic), there hasn't been an in-depth analysis as to whether this psychological subject/topic only concerns the surface subject (Spec,TP, vP-external subject), or whether it can also correspond to an underlying subject (Spec,vP or Spec,PrP in modern terms). I leave this topic to future research, as the main goal here is to explore and support the mapping of focus-background in the underlying structure.<sup>23</sup>

<sup>22</sup>Krifka (2008b) investigates an interesting hypothesis that the asymmetry of the topic - comment structure has its source in the asymmetry of bimanual coordination.

<sup>23</sup>A potential working hypothesis could be that the Focus-Background Mapping is restricted to underlying /vP internal focus-background mapping, while Topic Comment is a mapping at a higher level of predication, namely at the level of the surface subject (Spec,TP) or higher in the C-domain. This would explain the InfS restriction that a background cannot contain a topic-comment structure (see Neeleman and van de Koot 2008, 2010

There are two important, well-known observations as to why a topic-comment mapping cannot be the only option for the InfS of subject-predicate structures in copular clauses and more generally. First of all, subjects (in English) can be focused, see (40). Thus, the underlying subject position and the surface subject position are not necessarily topic.

- (40) A: Who is available tomorrow?  
 B: [ Peter ]<sub>Foc</sub> is available tomorrow.

Second, topical arguments need not be (surface) subjects.

- (41) a. As for the car, someone has WASHed it already.  
 b. The car, someone has WASHed already.

In essence, while it is plausible that there is an option of mapping (underlying) subject and predicate onto topic and comment, it cannot be a necessary, or unique mapping. In this work, I explore the alternative mapping, namely the mapping of focus-background onto subject-predicate configurations. This is stated in the Focus Mapping Hypothesis, as will be discussed in the next session.

### 2.4.3 The Focus Mapping Hypothesis

In this section, I present the core hypothesis of my work on the relationship between focus and predication. The main hypothesis here is that the asymmetric configuration of predication can be exploited to express the asymmetry of focus and background. By asymmetry I mean that one (the specifier) c-commands the other (the complement) but not vice-versa. Additionally, these structures are asymmetric in that one takes the other as an argument and not vice-versa. This is what happens in *it*-clefts and specificational cop-

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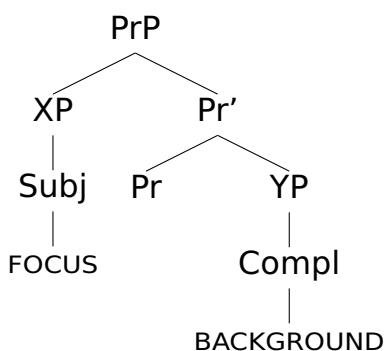
for discussion of this restriction).

ular clauses more generally, as formulated in the Focus Mapping Hypothesis in (42) and illustrated in (43).

(42) Focus Mapping Hypothesis (=FMH)

In specificational sentences the predication phrase (=PrP) is mapped onto a focus-background division.

(43) Mapping: Focus-Background



Based on a syntactic PrP as proposed by Bowers (1993, 2001), which I refer to as the core predication, the FMH says that this configuration is mapped onto a Focus-Background structure, as an integral part of the derivation.<sup>24</sup> This mapping is assumed to be an available option for a specific and limited set of sentences - specificational copular clauses. Thus, the common feature of the class of specificational copular clauses, which includes it-clefts (see Chapter 5 below), can be derived from this common aspect of focus on the underlying syntactic subject, see (44), (45).<sup>25</sup>

(44) [ My best friend <sub>BG</sub> ]<sub>i</sub> is [ <sub>PrP</sub> [ Peter <sub>FOC</sub> ] Pr t<sub>i</sub> ]

(45) a. It was [ <sub>XP</sub> PETER <sub>FOC</sub> ] Pr [ <sub>YP</sub> that lied <sub>BG</sub> ]

b. [ <sub>YP</sub> What Peter bought <sub>BG</sub> ] was [ a picture of himself <sub>FOC</sub> ] Pr t<sub>YP</sub>.

<sup>24</sup>In Government & Binding Theory, this boils down to the claim that this mapping already happens at D-structure.

<sup>25</sup>I use Focus (=Foc) as a cover term for marked focus and Background (=BG) as the corresponding open proposition left by extracting the focus.

Thus, I take focus to be an integral part of specificational copular clauses. Before showing, how the individual derivations work in the phase-based model of InfS interaction, I will sketch a proposal for when the FMH applies.

#### 2.4.4 Triggering Focus Mapping - A Hypothesis

One crucial question to answer is: when does the FMH apply? So far it has been a stipulation that it applies in SCC. In this section, I put forth the hypothesis that an information-structural mapping applies when the two constituents in PrP give rise to a type mismatch. This is the case in specificational sentences, in which both the underlying subject and the underlying predicate are definite expressions of type  $\langle e \rangle$ . As I will argue in chapter 4, the cleft clause is also a definite DP. Thus, neither of the two constituents in PrP is a function that can take the other as an argument. Focus-Background mapping results in a type-shift of the background, so that it can take the focus as its argument. This is formulated in the *Type Mismatch Hypothesis* in (46).<sup>26</sup>

(46) *Type Mismatch Hypothesis*

A type mismatch in which two definite DPs are merged in the PrP can be solved by Focus-Background marking shifting the background to a functional interpretation.

This hypothesis is built on a collection of ideas present in the literature on focus and cleft sentences. Surányi (2011) suggested (along the lines of Ogiwara (1987)) that focus movement in Hungarian is triggered by a type-mismatch, though contrary to what is proposed here, Suranyi suggests that the focused constituent has a functional interpretation and as such must be

<sup>26</sup>Note that I concentrate here on Focus being a solution to type mismatch. Note however, that it is conceivable that Topic-Comment mapping might also be able to solve this type mismatch. I leave the investigation of this question to future research.

moved. Heycock and Kroch (2002) proposed for specificational pseudoclefts (=SPCs), that their very nature corresponds to an information-structural partition. Finally, the discussion on the semantics of specificational pseudoclefts has repeatedly taken the non-focused noun-phrase to have a functional interpretation (as a concealed question, see Romero 2005, a functional DP, see Jacobson (1995), Sharvit (1999), or an individual concept M. Krifka (p.c.)).<sup>27</sup>

The Type Mismatch Hypothesis (=TMH) has two aspects which are not trivial in their consequences. First of all, it requires that all SCCs are built on two phrases that are of the same semantic type. In the cases discussed here, the semantic type is  $\langle e \rangle$ , but other options are conceivable.<sup>28</sup> Type-shift in this understanding is a kind of meaning-changing operation (contra Partee (1987)) - though the meaning change is limited. In SCCs, the type shift reduces the meaning of a DP to its intensional meaning, canceling the referential reading of the initial DP. A change in meaning induced by type-mismatch and type-shift has been discussed in the literature with respect to aspectual coercion (see Pulman 1997 and for discussion and references Egg 2005, Bott 2010).

The TMH has a number of advantages, relevant for the analysis of these phenomena here. First of all, SCCs are a subtype of equative sentences, without actually bearing the semantics of 'just' equating X with Y. The resulting change in meaning accounts for the asymmetry of the two DPs in SCCs. The post-copular DP, which is the focus, is referential, whereas

<sup>27</sup>As in PCCs, the complement to PrP is not of type  $\langle e \rangle$ , there is no type mismatch and thus, focus mapping does not apply. A possible analysis for the third case - equative copular clauses - is that the type mismatch is resolved in a topic-comment structure. I do not develop this idea further in this work.

<sup>28</sup>As a result, indefinite DPs as in (i) are either not specificational (which I consider unlikely) or these indefinites are necessarily specific and of type  $\langle e \rangle$ .

(i) A philosopher who seems to share the Kiparsky's intuitions on some factive predicates is Unger (1972) ... (cited from Mikkelsen, 2005, 155)

the initial DP - the background - has an intensional semantics (see Romero 2005). In it-clefts, this shift provides the correct semantics of the cleft clause. The cleft clause is definite in the sense that it gives rise to a uniqueness presupposition (see Percus 1997), yet it does not have an extensional meaning, but just an intensional interpretation. The cleft clause provides the unique individual that satisfies the property expressed in the cleft clause. Additionally, the TMH further specifies the link between focusing and copula sentences, as the latter are exactly those where type-shifting has been considered an essential and necessary mechanism.

#### **2.4.5 Summary**

In this section, I have introduced the main proposal and the mapping hypothesis that provides a link between focus and predication, a link which aims to help to understand the observation that there is a fundamental relationship between the two. I turn to concrete applications of the FMH in the next section.

### **2.5 Applying the Focus Mapping Hypothesis**

#### **2.5.1 Introduction**

In this section, I apply the focus mapping hypothesis to the main phenomena under discussion here: specificational copular clauses, it-clefts (=ICs) and specificational pseudoclefts (=SPCs). Mapping applies in the InfS Module.<sup>29</sup>

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<sup>29</sup>If the TMH in (46) is on the right track, the InfS Module has to do a minimal interpretive check to discover the type mismatch and assign a focus-background mapping to solve it.

### 2.5.2 Specificational copular clauses

In this section, I sketch how the focus mapping hypothesis applies to specificational copular clauses (=SCCs).

Following Heycock (2012), Hartmann and Heycock (2014), I argue that SCCs are inversion structures in which a functional DP has been inverted to the sentence initial position. As will be argued for in more detail below in chapter 3, I assume that SCCs in English are subject to the FMH, that is, the inversion is triggered by the focus mapping onto PrP.

The derivation in a phase-based manner including the focus assignment for (47) in the given context proceeds in the following steps.

(47) ‘What’s new about the murder case in Kansas City?’

The culprit is John.

First the two DPs are merged in the syntax and individually sent to the to the InfS Module.

① Syntax merge DP phase ‘the culprit’

DP  
|  
*the culprit*

As the context mentions a murder case, the DP ‘the culprit’ can be inferred and is thus accessible in this context (for details of this notion of accessibility see Chafe 1994, Gundel 1996, Baumann and Grice 2006, Baumann and Riester 2013 and references therein).



② InfS Module: check DP; assign feature bundle;

D: DP: accessible

DP  
D: accessible  
|  
*the culprit*

The DP 'John' is not present in the preceding discourse, thus it is marked as new.<sup>30</sup>

③ Syntax: merge DP phase 'John'

DP  
|  
*John*

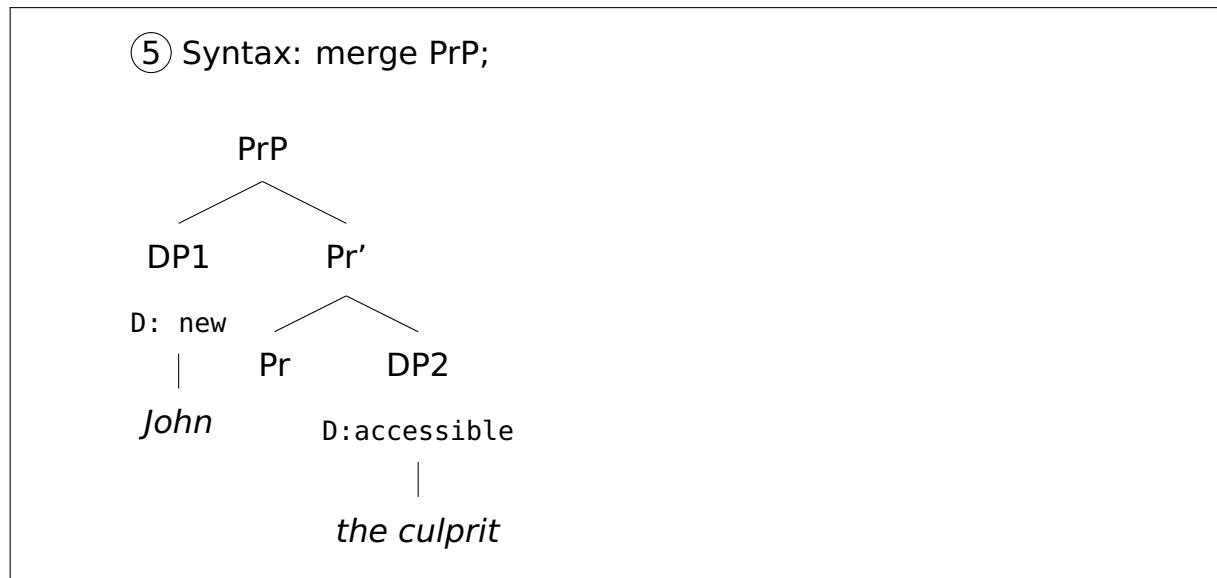
④ InfS Module: check DP; assign feature bundle;

D: new

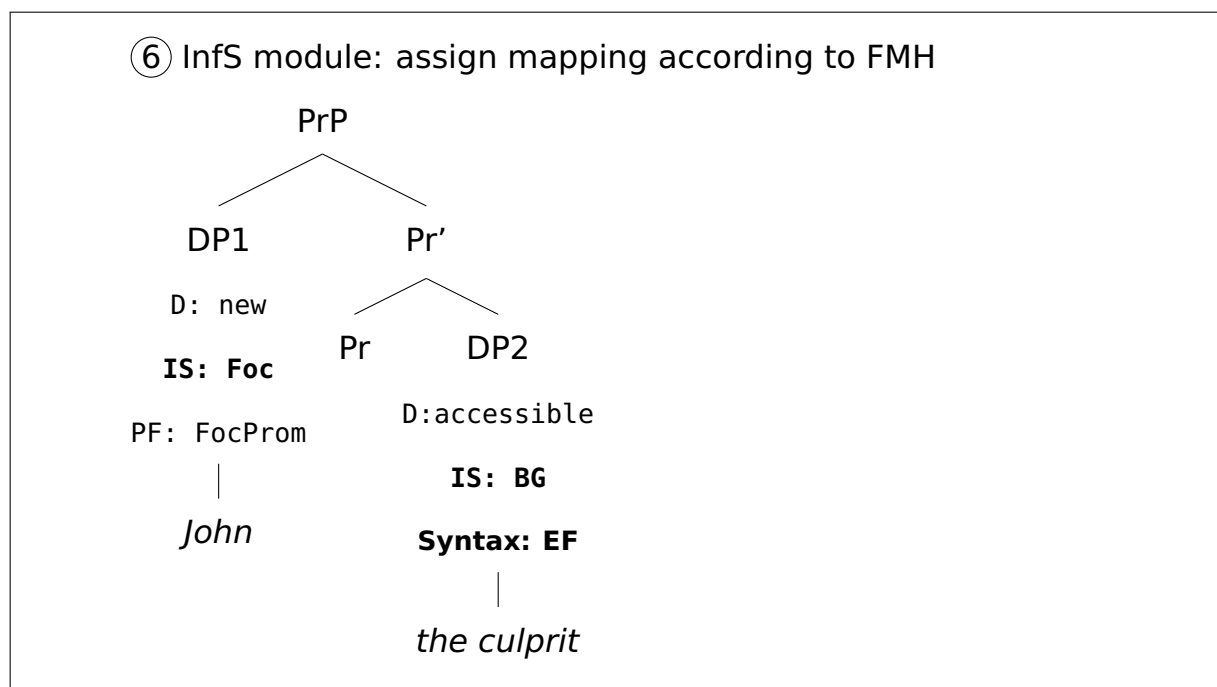
DP  
D: new  
|  
*John*

<sup>30</sup>As I restrict the notion of newness to the discourse and not to the common ground, there are discourse-new definites, which have been argued for independently, see Ward and Birner (1995), Hartmann (2008).

The next step is to merge PrP. I assume PrP to be a phase as proposed in den Dikken (2006a, 2007).

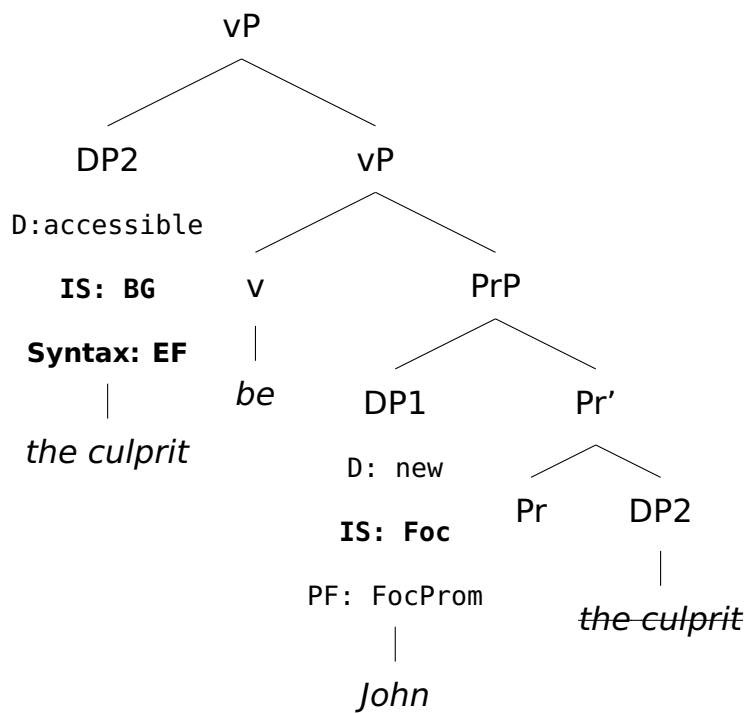


When this phase is sent to the InfS Module, the mapping as hypothesized in the FMH takes place. This mapping is grammaticalized in English, such that the Background is assigned a formal feature that drives movement.

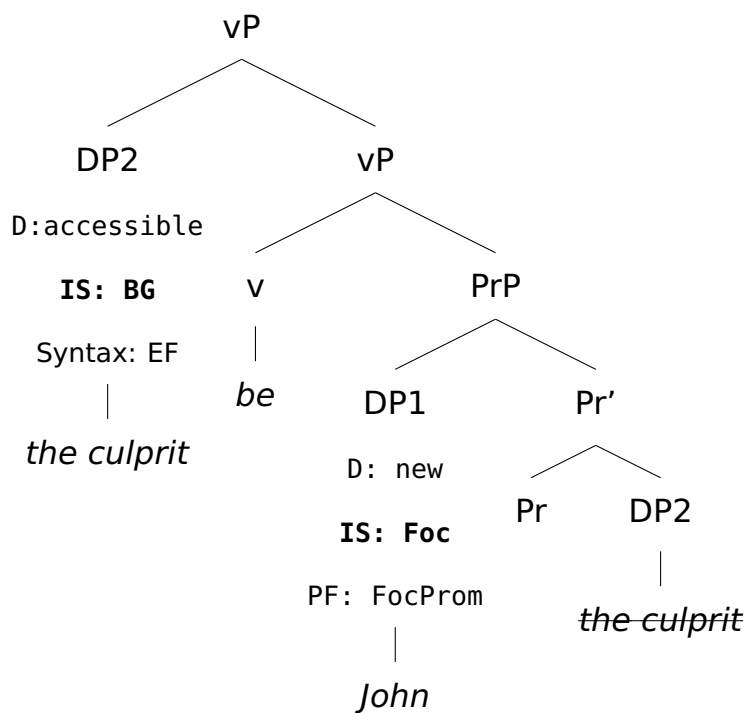


At the level of the vP phase the background is moved to the edge. After that the derivation proceeds in its regular steps.

## ⑦ Syntax: merge vP phase

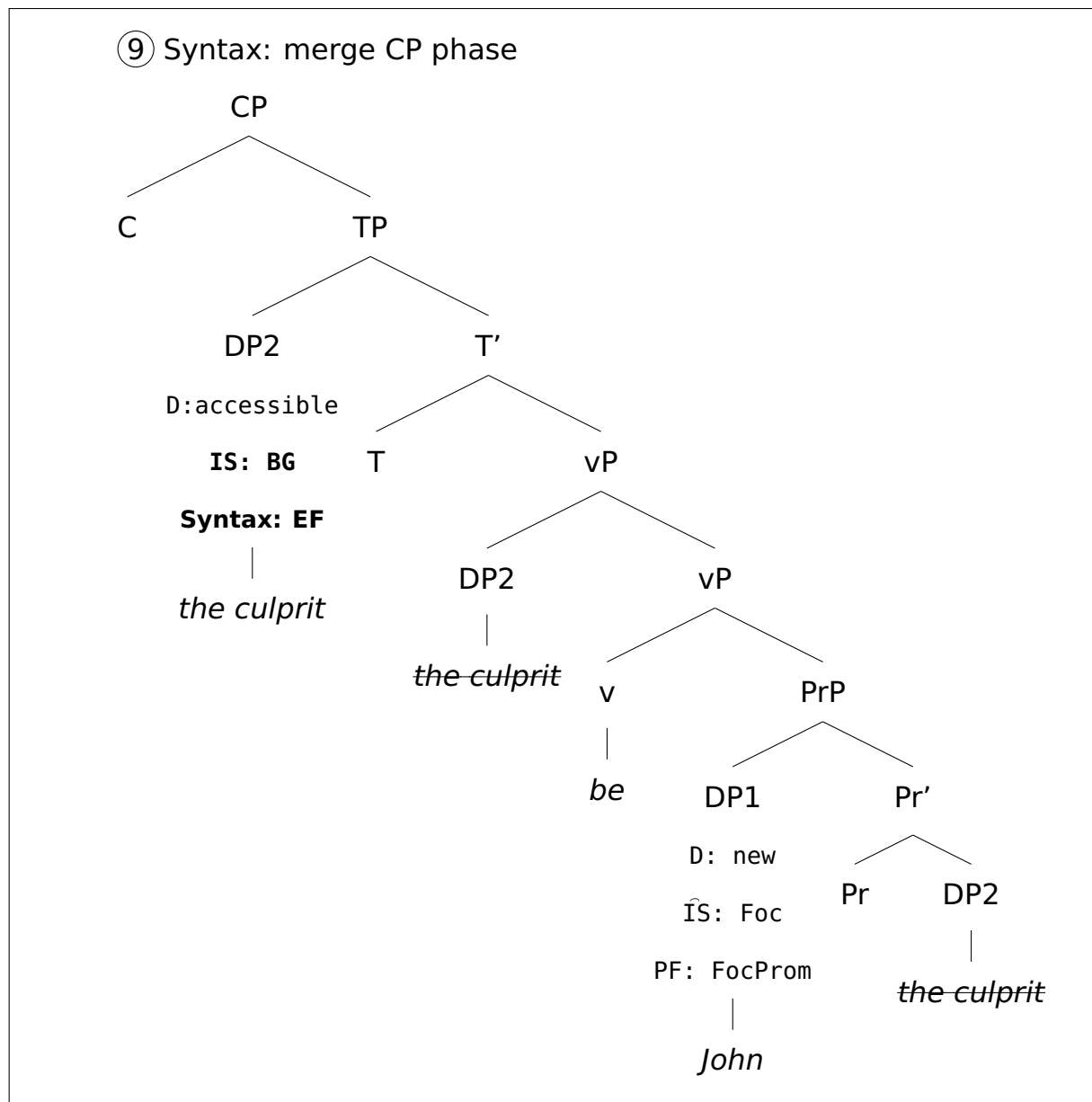


## ⑧ InfS Module: Check vP phase;



The CP phase is merged after the vP phase. As the DP 'the culprit' is now

the higher argument in the structure, this DP moves to Spec,DP.



The final step is for the InfS Module to check the CP phase against the discourse and then send the phase to LF and PF. At LF the proposition is added to the CG and the focus properties of the structure are interpreted.

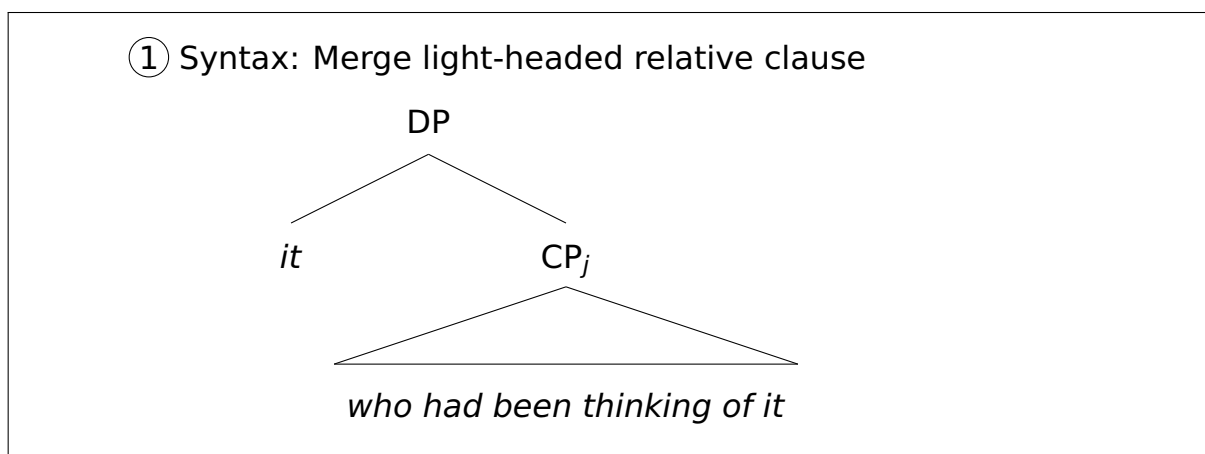
### 2.5.3 It-Clefts

It-clefts can be derived along the following lines.<sup>31</sup> The details of the syntactic and focus semantic analysis are provided in chapters 4 and 5 respectively.

Consider the example in (48). The context provides two alternatives from which one option is selected.

- (48) Context: Who thought of it? Binyon or Pound?  
 Hugh Kenner is no doubt right to suppose that  
*it was Pound who had been thinking of it.*  
 (BNC, A1B, 377)

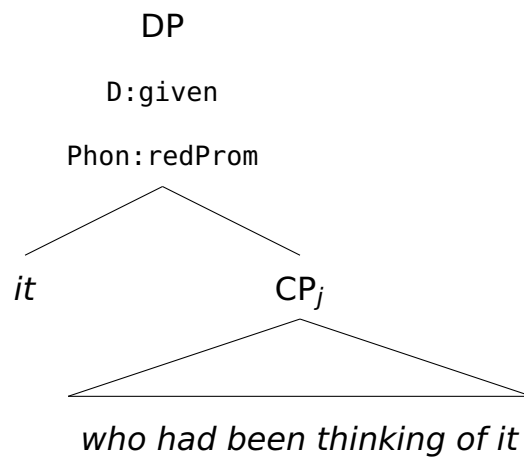
The derivation proceeds in the following steps. First the relative clause is merged together with its DP head - the pronoun *it* (the details of and the motivation for the syntactic analysis of *it*-clefts will be provided in chapter 4). I omit the separate steps in the relative clause as these are not necessary for the exposition of the main point here.



This light-headed relative clause is sent to the InfS module. In the context provided above in (48), the relative clause is given and therefore marked as such. As already specified above, givenness comes with a PF features that reduces prominence of the given constituent.

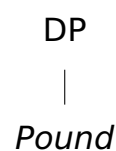
<sup>31</sup>Note that the extraposition of the cleft clause is left out here for simplification purposes.

## ② InfS Module: check DP relative clause

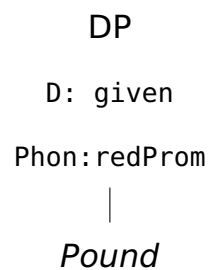


The pivot is generated in parallel as a phase and also analysed. It is also given in the above context.

## ③ Syntax: merge DP phase 'Pound'

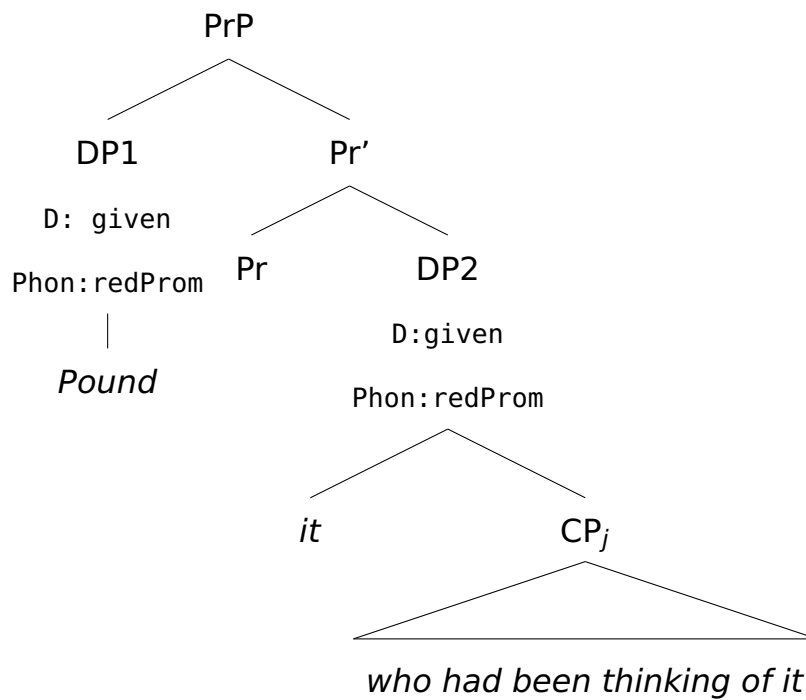


## ④ InfS Module: check DP; assign feature bundle;

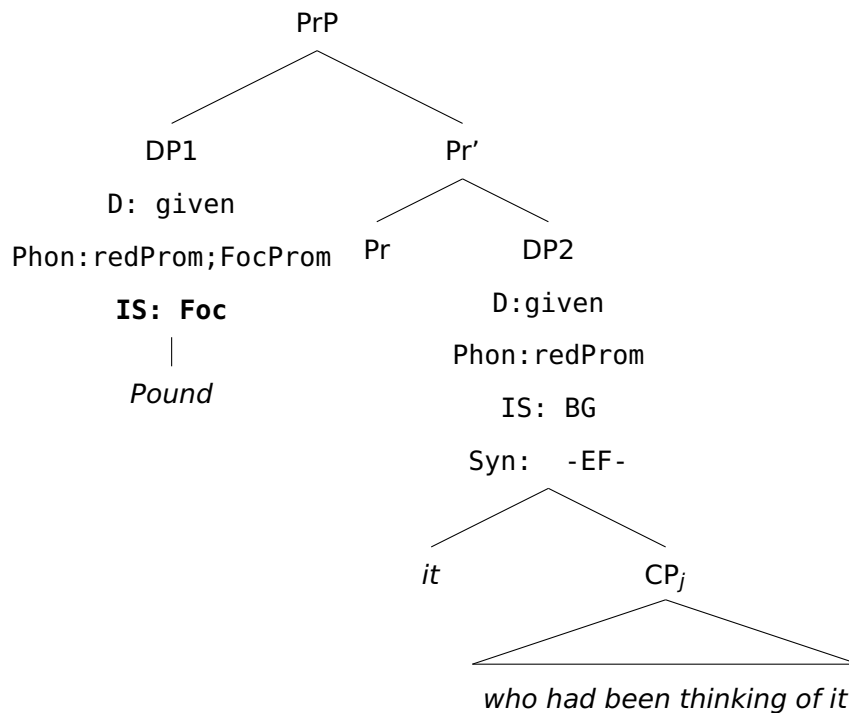


The two DP phases are merged together in the syntactic projection for predication PrP. The next step is the crucial step that results in the focus marking of the pivot.

## ⑤ Syntax: merge PrP;



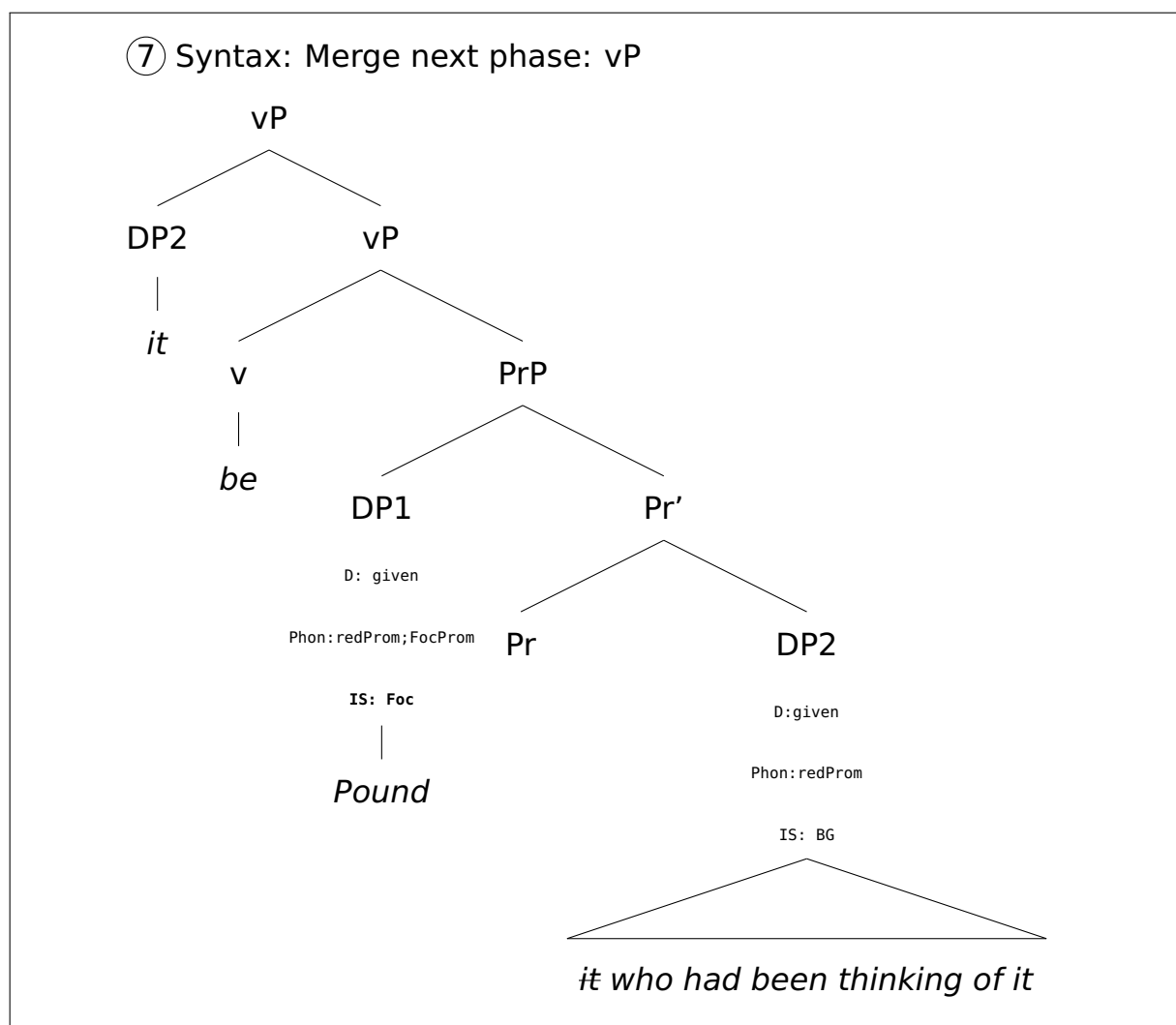
## ⑥ InfS Module: check PrP; assign Mapping according to FMH



As the pivot has been marked given and as it is marked focus now, the pho-

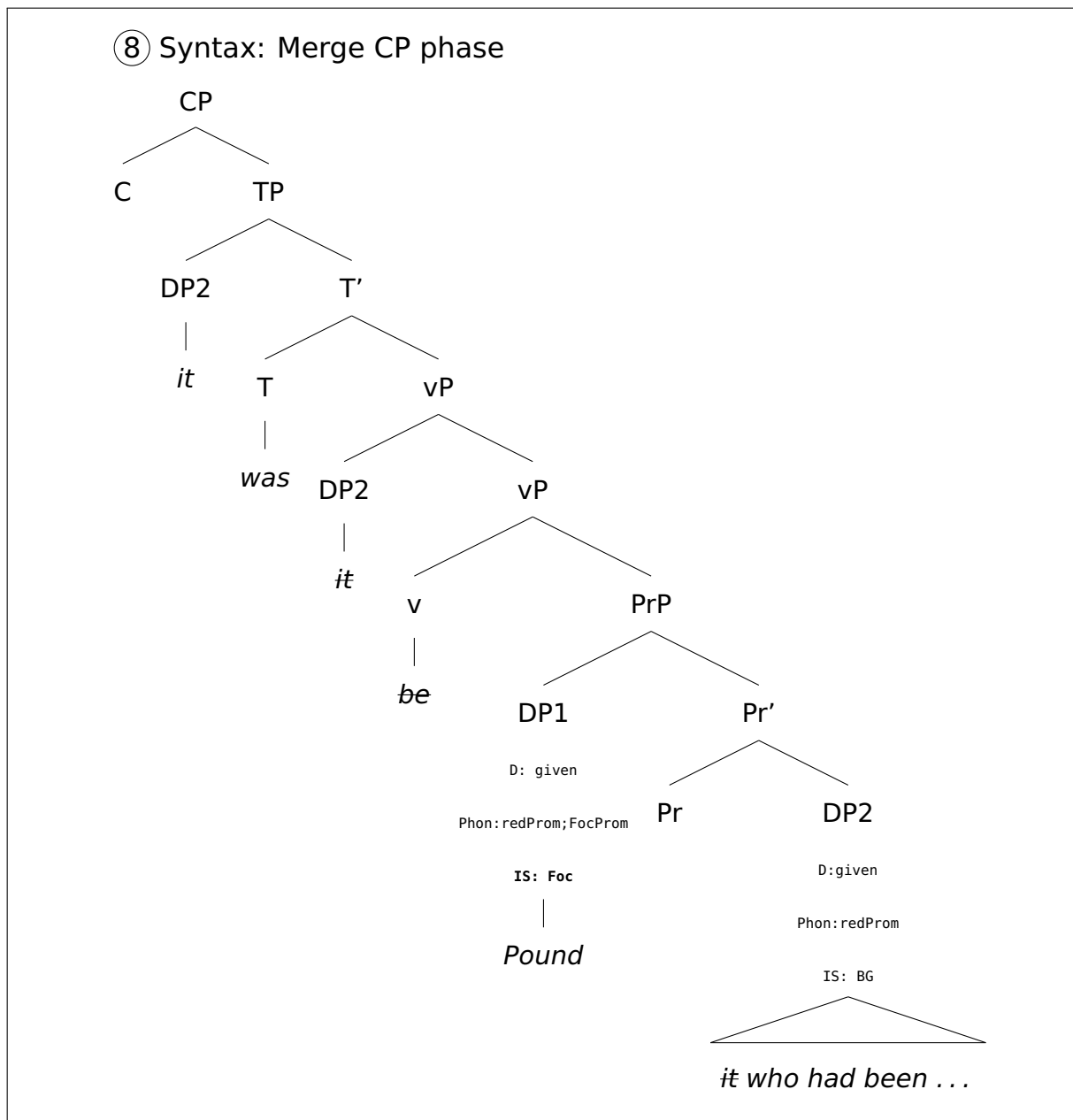
netic component needs to resolve the conflict of assigning reduced prominence, because the DP is given, versus the focus prominence because it is assigned a semantic focus. This can, in principle, be resolved by one specific means.

In the syntax, the next phase, vP is merged. The interesting point in comparison to SCCs is that not the entire relative clause moves to satisfy the edge feature on the background, but just the pronominal head does.



The final step in the syntactic component is to merge the CP phase. The highest nominal element, the pronoun *it* moves to the Spec,TP position.





The completed phase is sent once more to the InfS Module for a final check. It is then sent on to PF and LF for full interpretation. At LF the proposition *Pound had been thinking of it* is added to discourse and common ground. Additionally, as a result of the focus interpretation linked to clefts, another alternative proposition *q* namely *Binyon had been thinking of it* is added to the common ground as false (see chapter 5 for details on the focus analysis of clefts). The phase is also sent to PF where it is pronounced according to the phonetic feature bundles in the structure, plus default rules where no

other features override them.

#### 2.5.4 Specificational Pseudoclefts

In this section, I sketch how the focus mapping hypothesis applies to Specificational Pseudoclefts (=SPCs). SPCs are sentences of the type given in (49).

- (49) a. What John does not eat is food for the dog  
 b. What John is is tall  
 c. Where John finally ended up was in Berkeley  
 (den Dikken, 2006b, 304)

Pseudoclefts can be characterized as copular clauses in which one of the constituents is a free relative clause <sup>32</sup>

A major observation is that we need to distinguish between predicational and specificational pseudoclefts. Pseudoclefts can be ambiguous between the two types of interpretations. (50) is such an example, with the two readings provided below, and I use this example to show the different readings.

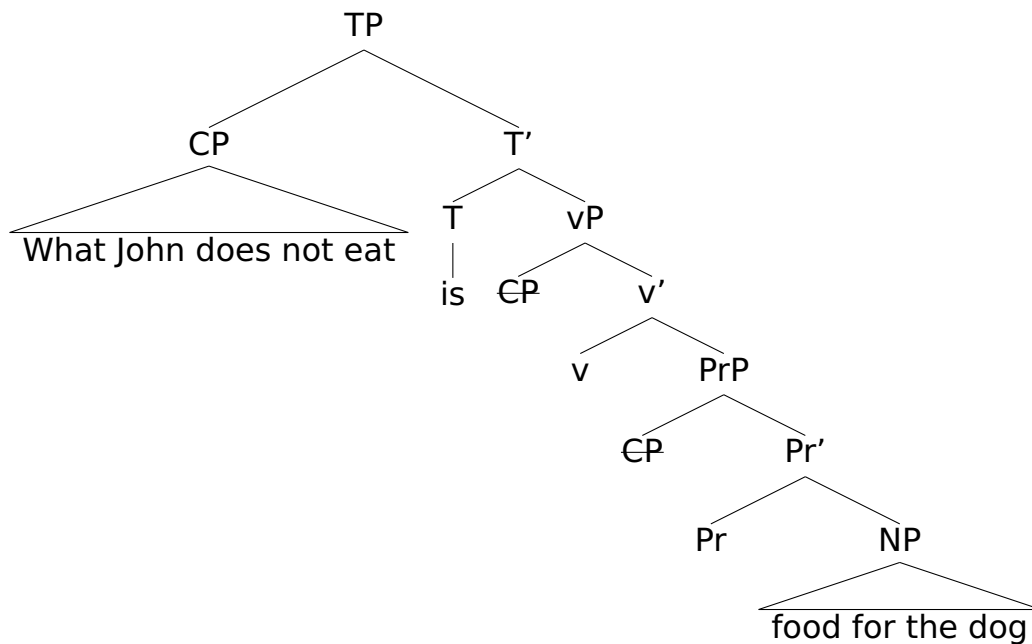
- (50) What John does not eat is food for the dog.
- SPC John does not eat the following: food for the dog
- PPC The things that John does not eat will be fed to the dog.

<sup>32</sup>Some researchers also consider the sentences with a nominal head as in (i) to be pseudoclefts as well. As I analyse SPCs and SCCs in the same way, it is a minor issue whether the sentences in (i) should be considered SPCs or SCCs.

- (i) a. the things John does not eat are food for the dog  
 b. the place where John finally ended up was in Berkeley  
 c. the time at which John arrived was at five o'clock  
 d. the reason why John went to the bookstore was to buy a book about pseudoclefts  
 e. the {one/ person} who John visited was Bill  
 (den Dikken, 2006b, 305)

These two sentence types have different syntactic analyses. In PPCs the post-copular noun phrase is a predicative noun phrase, thus, the wh-phrase is the subject as illustrated in the tree structure in (51).

(51) What John does not eat is food for the dog. [PPC reading]



The SPC reading on the other hand corresponds to the inversion structure also found in SCCs, see (52).<sup>33</sup>

The derivation in a phase-based manner for such a sentences in the following context proceeds in the following steps.

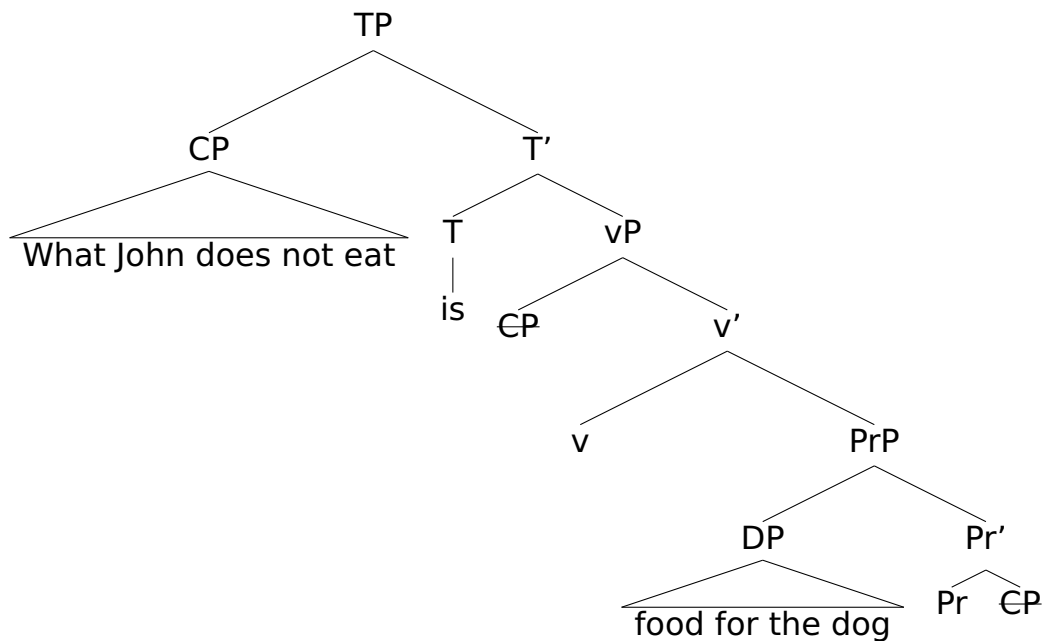
(53) A: Do you know what John does not eat?  
 B: What John doesn't eat is food for the dog.

First the DP and the CP relative clause are merged in the syntax and individually sent to the InfS Module.

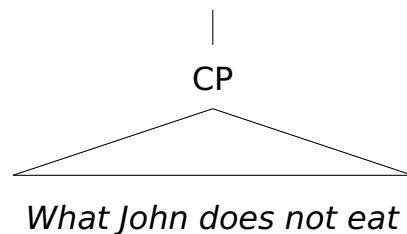
<sup>33</sup>Further details and argumentation for this structure for SPCs will be provided on the basis of data from Hungarian and Serbian in chapter 7 and 8 respectively.

(52) What John does not eat is food for the dog.

[SPC reading]



① Syntax merge CP phase 'What John does not eat'

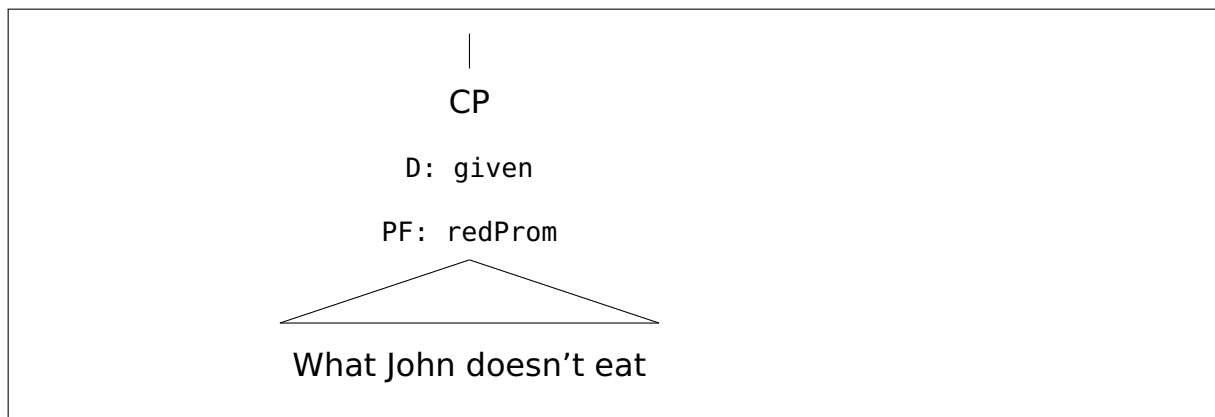


As the context has all the relevant elements already mentioned, the CP is marked as given.

② InfS Module: check CP; assign feature bundle;

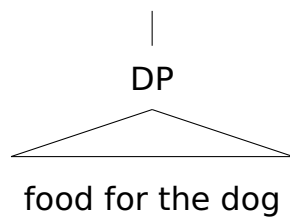
D: CP is given

PF: redProm



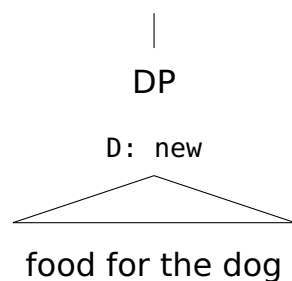
The DP 'food for the dog' is not present in the preceding discourse, thus it is marked as new.

③ Syntax: merge DP phase 'food for the dog.'



④ InfS Module: check DP; assign feature bundle;

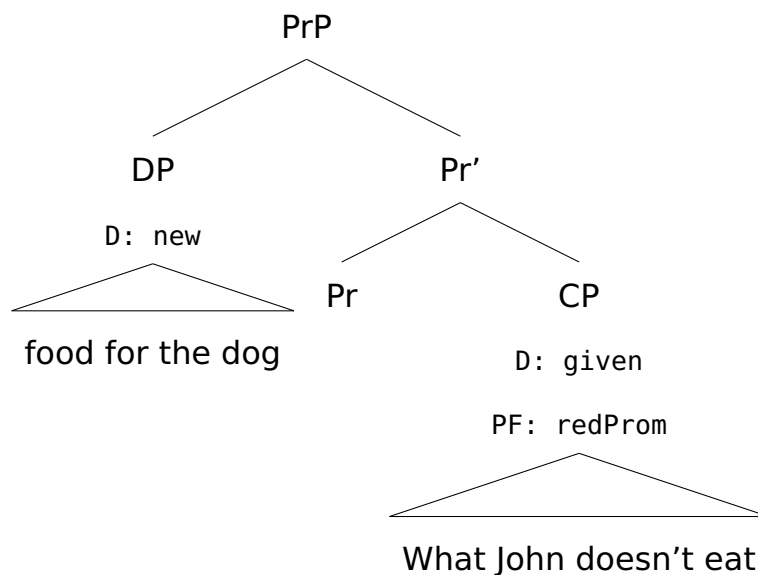
D: new



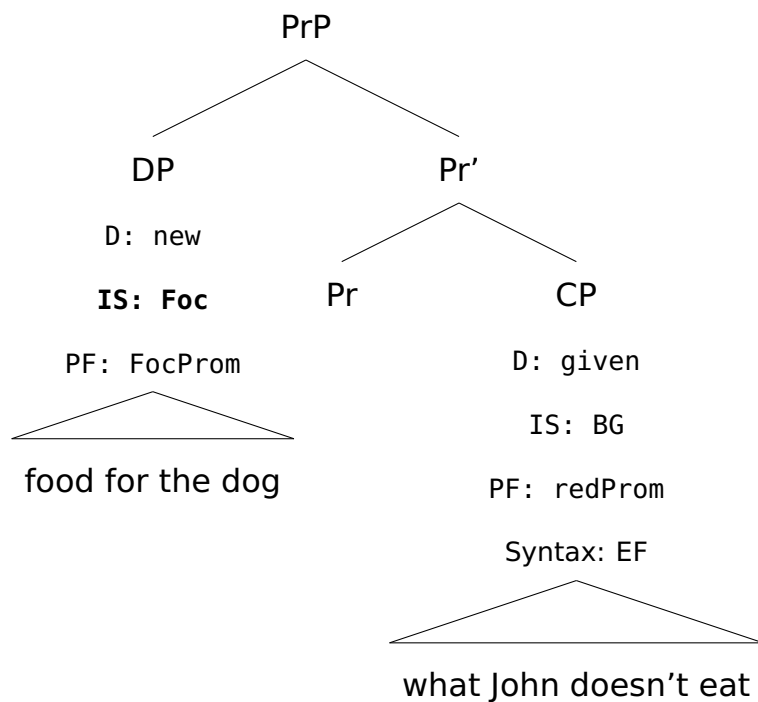
The next step is to merge PrP. I assume PrP to be a phase as proposed in den Dikken (2006a, 2007). When this phase is sent to the InfS Module, the

mapping as hypothesized in the FMH takes place, in the same way as with SCCs. The Background is assigned a formal feature that drives movement.

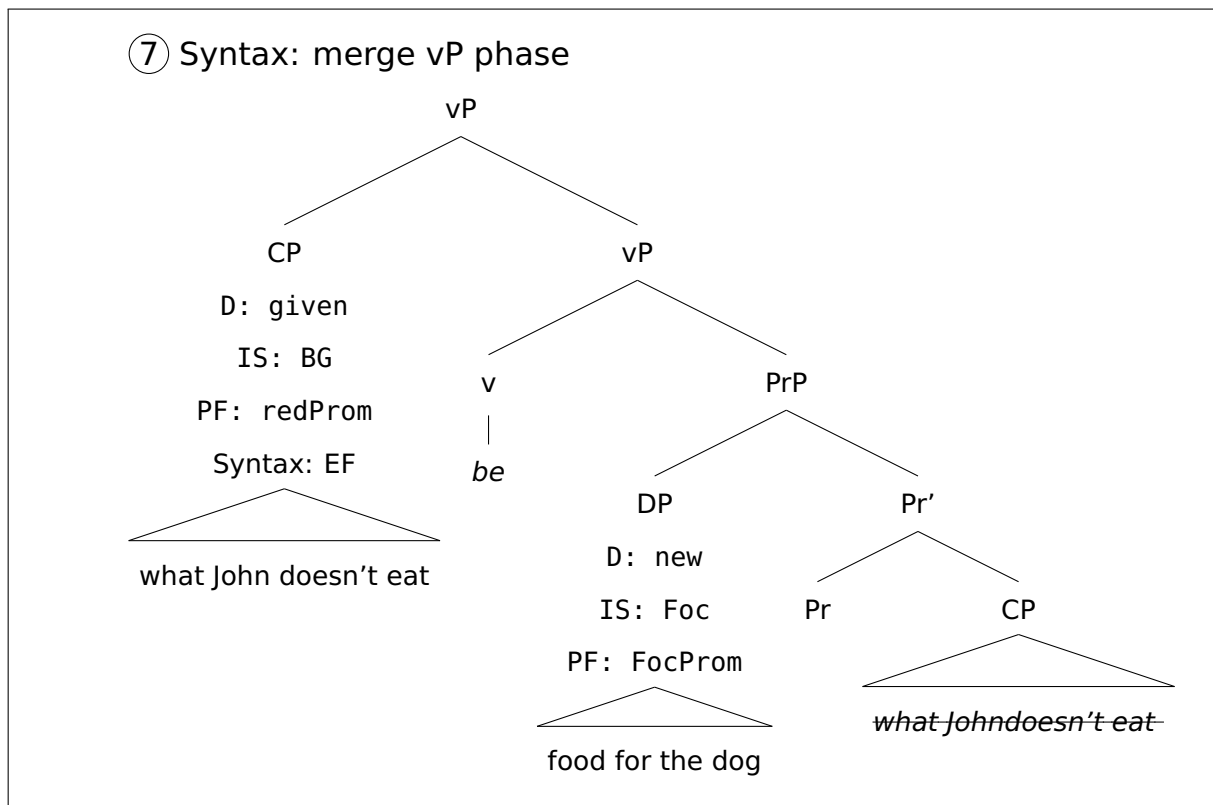
⑤ Syntax: merge PrP;



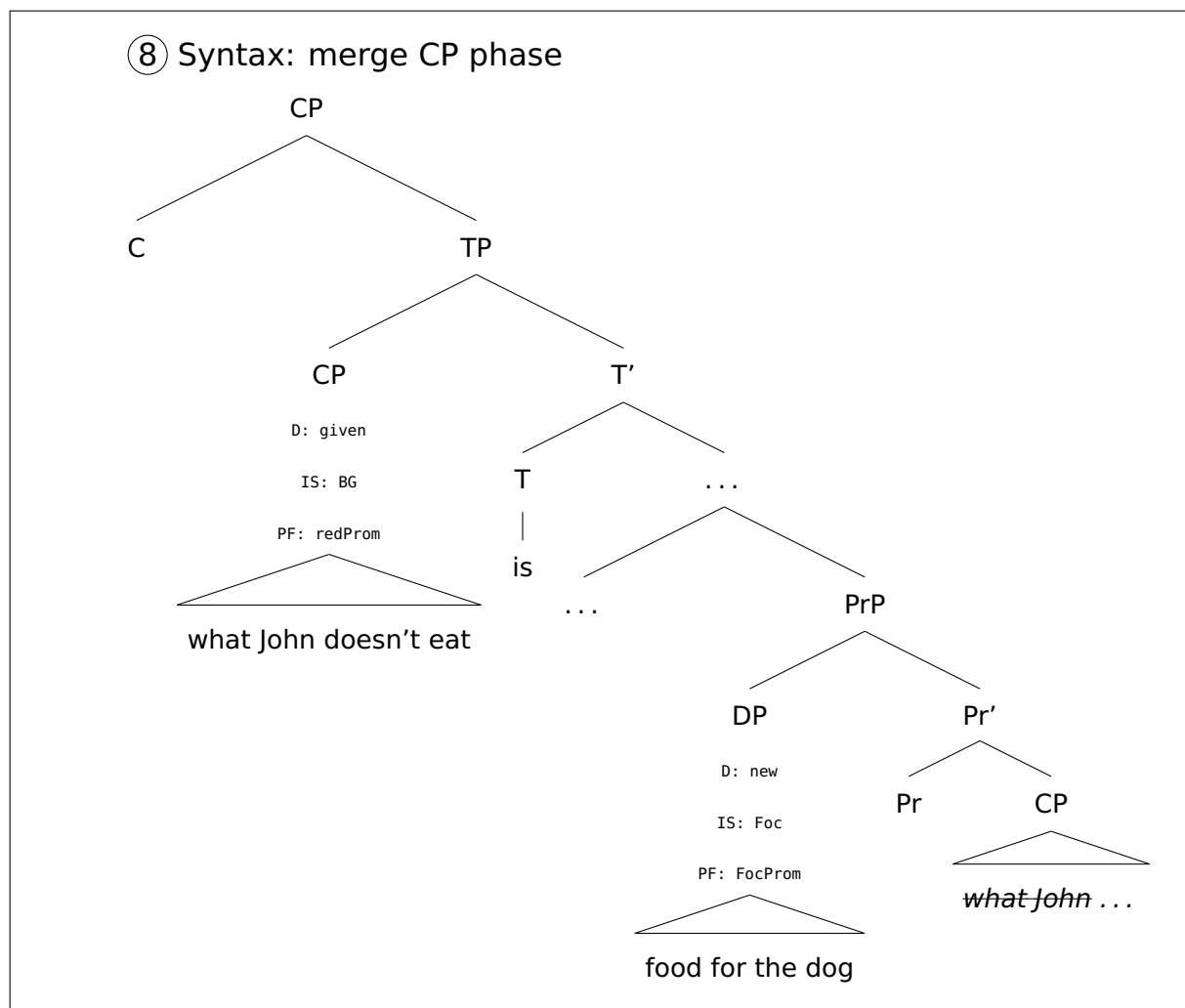
⑥ InfS module: assign mapping according to FMH



At the level of the vP phase the background is moved to the edge. The phase is sent to the InfS module. The derivation proceeds in the same steps as with SCCs before.



The phase is sent to the InfS Module and checked there. The CP phase is merged after the vP phase. As the CP 'what John doesn't eat' is now the higher argument in the structure, it moves to Spec, TP.



The final step is for the InfS Module to check the CP phase against the discourse and then send the phase to LF and PF. At LF the proposition is added to the CG and the focus properties of the structure are interpreted.

Thus, the derivation for SPCs follows along the lines of SCCs. This derivation has been sketched here only briefly. More details on the nature of the relative clause and cross-linguistic differences, will be provided in chapter 7 and 8. The important point to notice here is that the derivation can proceed in the same steps as with SCCs.



### **2.5.5 Conclusion**

This section provides the core of the analyses of the three phenomena under discussion. The focus-mapping hypothesis gives rise to the focus interpretation of SCCs, SPCs and ICs, and at the same time, it makes the complement of PrP shift / invert, so that the focused element (carrying a marked focus) remains in-situ. The individual derivations and motivations for analyses will be provided in the chapters to follow. While all three constructions share the fact that the post-copular constituent is a marked focus, the precise nature of this focus will only be discussed for It-clefts. The nature of the focus of SCCs and SPCs will be treated in less detail. Note that the three constructions might differ with respect to the subtype of marked focus they express. I leave the details of the focus analysis for SCCs and SPCs to future research.

## **2.6 Comparison with other Models of Information Structure**

### **2.6.1 Introduction**

In this section, I present a range of different theories of InfS, and try to disentangle their basic assumptions and their implications both for and in an overall theory of grammar. The ultimate aim is to set the ground for the comparison and evaluation of different theories of Information Structure and its interaction with other modules of grammar.

The Oxford Advanced Dictionary provides the following definition of the term ‘theory’ in the relevant sense. A theory is the ‘set of reasoned ideas intended to explain facts or events.’ (Hornby and Turnbull, 2010, 797). In order to evaluate the different theories in detail, we need to know which facts the respective theories are actually intended to explain and which other facts they might grasp additionally. The empirical facts about InfS in individ-

ual languages has been researched in much detail in the last three decades and the presentation of these facts goes well beyond the scope of this section. What I will try to do in this section here is much more limited. I will first discuss and suggest what a theory of InfS in the frame of grammar should be able to explain minimally. Here I abstract away from language specific facts, which have to be adequately explained, as well. However, a complete survey of all InfS facts goes far beyond the scope of this work here.

The theories on InfS in the generative tradition put different emphasis on some aspect of the interaction of InfS with other modules of grammar. There are theories that are primarily concerned with syntax-InfS mapping, InfS-prosody mapping, syntax-InfS-prosody mapping and syntax-InfS-semantics mapping.<sup>34</sup>

In the following, I will present and compare the different theories of InfS. The criteria of comparison are the major facts that I think a theory of InfS should be able to account for, namely those that I have discussed above in section 2.3.2. These are given in (54).

(54) Five important InfS observations

- (i) Discourse coherence
- (ii) Focus interpretations
- (iii) Association with focus
- (iv) Module interaction
- (v) Cross-linguistic variation

I will discuss a range of different theories in the literature in relation to their

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<sup>34</sup>Note that the theories that I discuss here are all designed to explain what a native speaker needs to know about language in order to felicitously code and decode utterances in a given context. They are not originally designed to model how this knowledge is put to use in online-processing. Recent development in linguistics aims to bring together knowledge about grammar with the way language is parsed, yet there is currently a large gap between processing theories and theories of grammar, which I won't be able to bridge here.

explanation of these facts, highlighting their strengths and weaknesses.

### **2.6.2 The phase-based interface model of grammar**

The model presented here is specifically designed to handle the interaction of syntax and information-structure. At the phase-level the model allows the InfS Module to have an effect on the syntax by assigning feature bundles to individual notes. These feature bundles can include features that are readable to the syntactic component. It has been illustrated above that the model can handle base-generated focus, as well as focus movement.

The model also allows for cross-linguistic variation with respect to focus marking (and the marking of other InfS concepts). A universal set of InfS concepts can be linked to a different set of feature bundles in different languages, similarly to what we find in the domain of lexical and functional meanings, which may or may not be grammaticalized as words/morphemes of sorts. With the model at hand, the central research questions are: what are the universal meanings / categories of InfS? How do individual languages grammaticalize these?

Focus interpretations and association with focus are relevant for the interpretation of clauses. In the model here, these are left to the semantic component, but the interaction with syntax is mediated via the InfS component.

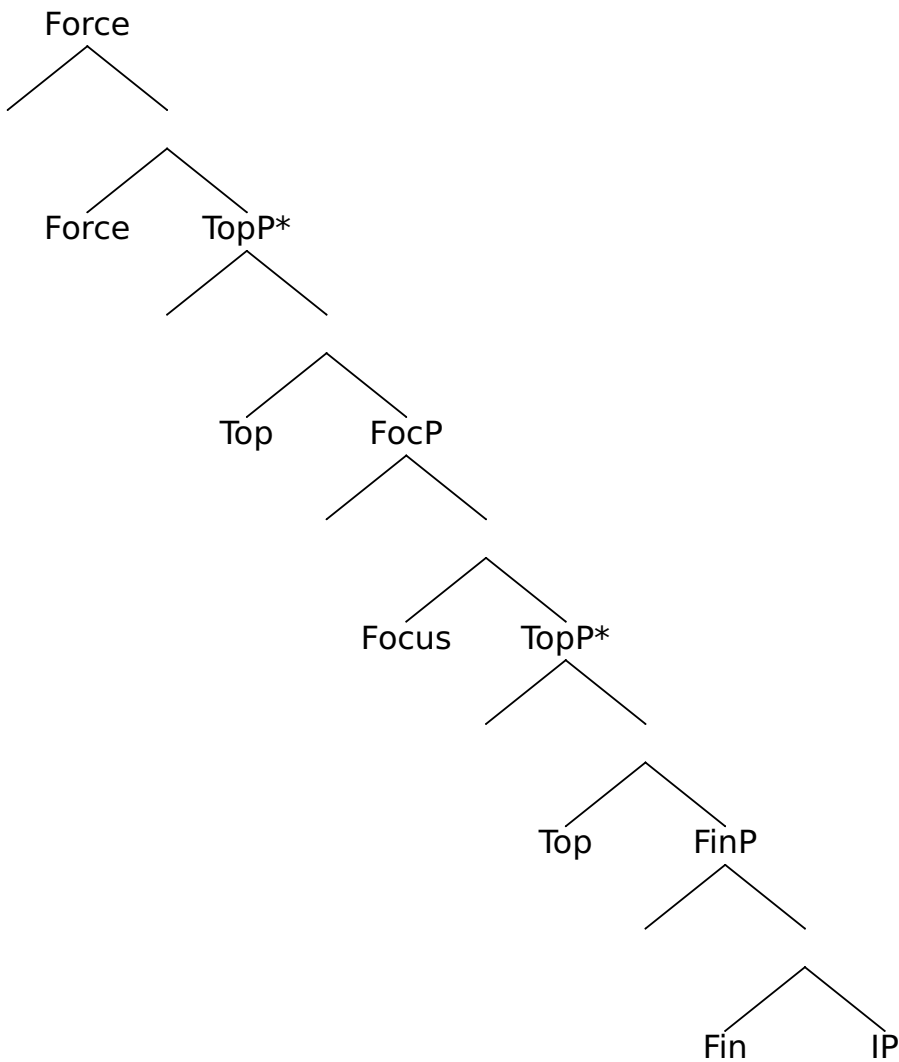
In the analysis here, discourse coherence is not a central part of the investigation. The model provides the tools to account for discourse coherence inside the InfS Module as the module is interacting with the discourse.

### **2.6.3 Syntax-oriented theories: Cartography**

Rizzi (1997) in his influential paper has proposed that there are specific functional projections in the left periphery of the clause that host elements that

are marked for topic and focus as originally presented in (55), see Aboh (pear) for a recent overview.

(55) Rizzi (1997, 297)



These projections have been extended to be also available at the left-edge of vP and DP (see Belletti 2004, Cardinaletti 2004, Aboh 2004, and the contributions in Aboh 2010a). In this view, InfS is already part of the numeration, see Aboh (2010b). The major task in the light of such an approach is to disentangle which projections are necessary in a language and cross-linguistically, and in which orders these positions are available. While these accounts have been quite productively implemented for a range of different languages, they have been criticized both on theoretical and empirical

grounds.

From a theoretical point of view, the cartographic approach introduces a number of formal features that project their own syntactic position plus the corresponding (un)-interpretable features on the respective constituents that are moved to or base-generated in the respective specifier positions. This leads to a general redundancy in the system: a topic constituent is marked by bearing an interpretable feature and by being in a local specifier-head relationship with the same such feature, as well as occupying a specific position in the hierarchical structure of the clause (see Surányi 2011). The approach has been argued to be empirically inadequate, making the wrong predictions for a number of InfS related phenomena. Neeleman and van de Koot (2008), for example, argue that the cartographic approach cannot derive two generalizations, namely (i) that a background (the complement of focus) cannot contain an moved topic, and (ii) that the higher focus cannot be contained in the background of a lower focus. López (2009) argues that Focus-phrases and clitic-left-dislocated constituents have to have a landing site below Fin (in Catalan) contrary to what Rizzi (1997) assumes. Surányi (2011) shows that the cartographic framework cannot handle the interpretation possibilities of multiple focus constructions in which one focus occurs post-verbally in Hungarian.

From the point of view of the basic facts that a theory of InfS should account for, the scope of the cartographic approach is very limited. Its major interest is to account for word order possibilities of phrases that yield InfS-interpretation. This has lead to a large range of descriptive documentation of cross-linguistic variation with different InfS-positions available in narrow syntax in some languages but not others. Beyond that, the cartographic approach has nothing general to say about discourse coherence, interaction of syntax and prosody, association with focus or the nature and interpretation

of marked focus. Having said this, the crucial question is to what extent it can be useful as a starting point for the syntax that the other components build on, especially considering focus movement. The problems with respect to focus movement have been discussed in section 2.3.2.4.

#### **2.6.4 Prosody-driven theories**

There are a number of prosody-driven theories that aim to account for the influence of InfS on the prosody of a clause. This concerns at least four aspects:<sup>35</sup>

- (i) The relationship between focus and its PF expression, either as a relationship of focus and stress (stress-focus-correspondence, see Reinhart 1995, 62, Neeleman and Reinhart 1998, Szendrői 2001, 50, Szendrői 2001, 2003, 2006), of focus and prominence (see the focus-prominence-correspondence (see originally Truckenbrodt 1995, also Zubizarreta 1998, Gussenhoven 2008, Büring 2010 among many others), or of focus and alignment (see Koch 2008, Féry 2013).
- (ii) The relationship between prosody and meaning, which could be a direct mapping of certain types of accents to certain types of InfS-interpretations (see for example Jackendoff 1972, Pierrehumbert and Hirschberg 1990, Büring 2003, Baumann 2006).
- (iii) The influence of InfS on deaccentuation (see for example Chomsky 1971, Féry and Samek-Lodovici 2006, Wagner 2006a).
- (iv) The influence of accentuation on syntactic processes, such as Focus movement (see (Zubizarreta, 1998, Samek-Lodovici, 2005, Szendrői, 2001, Büring, 2013) and other types of accentuation-driven movement (see Fanselow and Lenertová 2011)

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<sup>35</sup>For general theories on the mapping of syntax onto prosody see Selkirk (1995), Ladd (2008) and the references therein.

As the prosodic expression of focus (and other InfS categories) is not the central issue of this work here, I refrain from discussing the strengths and weaknesses of the general theories in (i) to (iii). Yet, there is a strand of research that proposes that syntactic movement can be triggered by PF requirements. One such strand argues that what looks like focus movement is actually movement driven by PF requirements, see Büring (2013) for an overview. There are basically two versions of deriving prosody-driven movements. (i) As Zubizarreta (1998) proposed, p-movement is part of the syntactic component enriched with Stress-Assignment (via the Nuclear Stress Rule and a version of the Focus-Stress-Correspondence) resulting in P-movement if stress-assignment is contradictory (see Winkler and Göbbel 2002 for a review). (ii) The syntax generates a range of alternative structures enriched with InfS-features, containing structures with and without movement. An interface-component selects the best candidate that adheres to prosodic constraints, syntactic constraints, and to constraints that map prosodic-structures with syntactic structures, see for example Samek-Lodovici (2005), Szendrői (2001), Büring (2013).<sup>36</sup>

The phase-based interface model of grammar integrates prosody where prosody is directly linked to a type or subtype of a InfS category, because the features assigned can come in bundles. Thus, the correlation of prosody with specific InfS notions is possible, though a precise analysis of these has not been spelled out in any detail here.

Thus, the theory can handle prosodic requirements as long as InfS categories are involved. This has been claimed to be not the case for left peripheral movement as discussed in Fanselow and Lenertová (2011). They

<sup>36</sup>Szendrői (2001) does not assume InfS-features in the syntax, but rather that there is an interface that maps syntactic structure, conceptual structure and prosodic structure, selecting the optimal candidate in the candidate set. In her framework, a constituent moves in the syntax to adhere to prosodic alignment. As she argues against assuming an F-feature, this movement seems to require some kind of look-ahead. For more detailed discussion of Szendrői's proposal see Horvath (2005), É. Kiss (2009b), Surányi (2011).

argue that the initial position in German and Czech (and cross-linguistically) can be the result of the interaction of linearization with accentuation. The highest accented phrase can be fronted to the initial position in V2 clauses. This accented phrase does not correspond to the focus triggered by the *wh*-question (or any other InfS feature for that matter), see (56).

- (56)      What did you do? What's new? What's happened?      German
- a. [Einen Hasen]<sub>i</sub> habe ich t<sub>i</sub>      gefangen.  
          a.acc rabbit have I caught  
          'I caught a rabbit'
- b. [ZAjće<sub>i</sub> jsem chytil t<sub>i</sub> Czech  
          rabbit.acc aux.1sg caught.sg.ms  
          'I caught a rabbit'

I do agree that the accent here does not give rise to contrastive focus, or any other marked focus. What is striking about these structures, though, is that the rest of the clause has to be deaccented (at least in German). Thus, this type of movement can be viewed as a movement, in which an accented phrase evacuates a domain that is unaccented.<sup>37</sup> Such a movement can be modeled in the system here in the following way. The special property of the sentences in (56), at least in German, seems to be that the non-accented part is accommodated as given.<sup>38</sup> Thus, the accented phrase evacuates the domain of givenness, which is an InfS category, and thus can be part of the InfS module mediating between PF and syntax. If this reasoning is on the right track, the prediction is that these sentences are awkward in contexts in which givenness accommodation is not possible.

This prediction seems to hold: let's assume that two professors talk to each other. One of them looks unhappy, so the other one asks about it,

<sup>37</sup>I think that these cases in (56) are a separate class from cases with multiple accents that Fanselow and Lenertová (2011) discuss. The latter do indeed involve other InfS categories such as focus and the like.

<sup>38</sup>Givenness accommodation has been proposed by Rochemont 2013 for focussed unaccusative subjects in wide-focus contexts.



see (57). Importantly, the sentence with the accent-initial phrase in (57), however, is only felicitous if both professors know Peter, and Peter, thus, in this structure needs to be accommodated as given. This is not the case for the ‘regular’ order in B’.

- (57) A: Was ist los?  
           What’s up?  
       B: Durch die PRÜFUNG ist Peter gefallen.  
           through the exam is Peter fallen  
           ‘Peter failed the exam.’  
       B’: Peter ist durch die Prüfung gefallen.

Judgements can be sharpened by adding an appositive that provides further information about Peter, signaling that the speaker does not believe that the hearer knows Peter, see (58).

- (58) A: Was ist los?  
           What’s up?  
       B: #Durch die PRÜFUNG ist Peter, ein Student von mir, gefallen.  
           through the exam is Peter, a student of mine, fallen  
           ‘Peter, one of my students, failed the exam.’  
       B’: Peter, ein Student von mir, ist durch die Prüfung gefallen.

If accentuation was all that is relevant for this type of movement, this pattern is unexpected. While I believe that this reasoning is on the right track, it requires further empirical testing—especially because judgments are intricate here. At the same time, it is still true, that only the accented part is fronted and not the full VP [durch die Prüfung gefallen], which is not accommodated. Thus, while I think it is possible to spell out an analysis of this data in the phase-based model of grammar presented here, it needs further study, which I leave to future research here.

### 2.6.5 Semantic/Pragmatic theories

#### 2.6.5.1 Introduction

There is also a range of semantic and pragmatic theories of InfS that mostly aim to account for the interpretational properties of InfS - mostly focus - and the presuppositions InfS gives rise to.

#### 2.6.5.2 Alternative Semantics

Rooth (1985, 1992) proposed a semantic theory of focus in which focus is interpreted in situ. He accounts for Association-with-Focus phenomena, Contrast, Scalar implicatures and Question-Answer-Congruence as illustrated in (59) - (62). This theory is called Alternative Semantics (=AS), for a recent overview see Rooth (pear)

(59) Association with focus

- a. Mary only introduced [Bill]<sub>F</sub> to Sue.
- b. Mary only introduced Bill to [Sue]<sub>F</sub>

(Rooth, 1992, 77)

(60) Contrast

- a. An [American farmer]<sub>F</sub> talked to a [Canadian]<sub>F</sub> farmer.
- b. John hit Bill and then HE hit HIM.

(Rooth, 1992, 80)

(61) Scalar implicatures

- a. I [passed]<sub>F</sub>
- b. [I]<sub>F</sub> passed.

(Rooth, 1992, 82)

(62) Question-Answer-Congruence

A: Who cut Bill down to size?

B': [Mary]<sub>F</sub> cut Bill down to size.

B''#Mary cut [Bill]<sub>F</sub> down to size.

(Rooth, 1992, 84)

Rooth (1992) proposes that for each and every sentence, an ordinary semantic value and a focus semantic value is calculated. In the interpretation of the phenomena in (59) - (62) the focus semantic value plays a specific role. Rooth defines an operator  $\sim$  - the squiggle operator - which introduces focus semantic restrictions on the operator.

(63) Focus Interpretation Principle

Adjoin an operator  $\sim u$  to a phrase  $\alpha$  in LF, where  $u$  is a variable with either the same type as  $\alpha$  (individual case), or the type of a set of objects with the same type as  $\alpha$  (set case).

(Rooth, 1992, 95)

Informally speaking, the focus semantic value specifies the semantic type of the focused constituent, while the squiggle operator introduces a variable which is of the type of the focused constituent (individual type), or which is of the type of the set of elements of the focused constituent. This variable can be contextually restricted (or used in the semantic interpretation otherwise). Consider the following example.

(64) John went to a party to meet up with his brothers Peter, Paul, and Sam. The next day, he reports to his Mum.

Only [Peter]<sub>F</sub> was there.

The focus semantic value of Peter is the domain  $D_e$ . However, this domain is not restricted enough in this context. John does not report that Peter was the

only person at the party. He reports that out of the set of his brothers, Peter was there, but not Sam and Paul. The contextual variable introduced by the squiggle operator allows the domain  $D_e$  to be reduced to a pragmatically available set of individuals - John's brothers in this case - to yield the correct result.

The original AS theory has been criticized to not be powerful enough to account for multiple foci that associate with different focus constituents and VP ellipsis, see Krifka (2006) for discussion and see Kratzer (1991) for possible modifications to the theory to deal with some of these problems (see also Beck and Vasisht (2009), Beck (pear) for discussion and further references).

The alternative semantics theory of focus is a strong theory that has found numerous applications in the semantics of focus. With respect to the major facts stated above, the theory accounts for the semantic aspects of focus, such as discourse coherence (at least with respect to QAC), focus interpretations and association with focus. It accounts for the prosody-InfS-syntax-semantics interaction by assuming some F-feature that marks the prosodically focused constituent. Cross-linguistic variation in the meaning and expression of focus is not the central concern of the theory, but I see ways how it can be brought into the theory: on the one hand, focus operators can make use of the focus semantic value in different ways, see for example Beck (pear) for cross-linguistic insights. Second, the expression of the assumed F-feature in syntax and or at PF can vary from language to language.

### 2.6.5.3 *Movement theories*

The movement theory of focus goes back to Chomsky (1971). Stechow (1991) provides a brief overview as to why this theory has been adopted

in semantics. The gist of the analysis is that a phrase like *only Mary* in (65) is not of the type  $\langle e \rangle$  (as required by the verb *invited*), but it is a set of the properties that uniquely hold of Mary.

(65) John invited only Mary.

In order to solve this type mismatch, quantifier raising (=QR) applies to this phrase. The more tricky cases are those in which the focus operator is not adjacent to its associate as in (66), or when two foci associate with *only* in (67).

(66) John only invited [Mary]<sub>F</sub>.

(67) John only introduced [Mary]<sub>F</sub> to [John]<sub>F</sub>.

For this, the F-marked constituent moves and adjoins to *only*, which then is a movement triggered by the focus feature (alone) - not by the type-mismatch created by the focus operator *only*.

Stechow (1991) argues that focus association cannot be related to a kind of QR-focus movement. QR cannot cross finite clause boundaries, see May (1985). This also holds for *only*-XP phrases. The sentence in (68) can only have the reading in (69a) but not the one in (69b).

(68) We complained because Bill had invited only Mary. (Stechow, 1991, 812)

(69) a. LF1: John complained [that [only Mary] Bill had invited].  
 b. LF2: \*[only Mary] John complained [that Bill had invited].  
 (Stechow, 1991, 812)

However, association with focus as in (70) allows a reading such as (69b).

- (70) John only complained because Bill had invited MARY. (Stechow, 1991, 812)

Stechow (1991, 812) concludes that "“focus movement [for association with focus; JH] is a kind of movement different from QR or there is no focus movement at all.”", while "“there is good evidence to assume that Particle-NPs are quantifiers which are LF-moved by QR”".

#### 2.6.5.4 Structured Meaning Theories

Structured Meaning (=SM) Theories go back to Cresswell and Stechow (1982), Jacobs (1983) and have been applied to different phenomena such as association with focus, multiple focus and question answer congruence, see Krifka (1992b,a) as well as phenomena such as polarity items, Krifka (1995). The basic idea is that sentences can be divided into structured meanings  $\langle B, F, A \rangle$ , where B=background, F=focus and A=focus alternatives. Structured meanings can be introduced by certain operators, or be the result of focus (movement). A specific ASSERT-operator makes sure that the background is applied to the focus to receive the ordinary meaning of the structure.

SM approaches are usually treated as theories that require some kind of (LF-)movement of the focused constituent out of the background.<sup>39</sup> With this reliance on syntactic movement, the major problem for SM theories is the lack of island sensitivity with association of focus phenomena. (71) shows that association with focus is possible inside an island, though regular movement of any phrase out of a relative clause is not possible.

<sup>39</sup>In some sense, the target of movement is not necessarily a syntactic position, but the focused constituents ends up in one position of a structured meaning representation. Note, though, that this kind of partitioning need not necessarily be a syntactic movement process. Some other procedure of semantic interpretation could derive structured meanings. There is not much research done on what this procedure could be, and in lack of independent support, it is not clear whether such a procedure can be motivated without being subject to Occam's razor.

(71) Mary only introduced [the man that JILL admires] to Sue.

Drubig (1994) argued that this criticism of movement theories (and structured meanings) does not hold. He claims that *only* in (71) does not associate with the prosodically marked constituent, but with the entire DP, which he calls the focus phrase (=FP). Thereby, the whole constituent moves and no island violation arises.

Krifka (2006) points out however, that reference to alternatives is still necessary, as it makes a truth-conditional difference, which phrase inside the focus-phrase is accented, cf. (72a) vs. (72b). In the first case, John likes a unique man from the set of men that introduced someone to Sue, while in the latter case, he likes a unique man from the set of men that introduced Bill to someone.

- (72) a. John only liked the man that introduced Bill<sub>F</sub> to Sue.  
 b. John only liked the man that introduced Bill to Sue<sub>F</sub>. (adjusted from Krifka, 2006, 113)

So, even if there is a focus phrase that *only* associates with, some version of alternative semantics is still needed to account for the facts in (72).

#### 2.6.5.5 Question under discussion / At-issueness

The so-called question-under-discussion approach goes back to Roberts (1996). The core idea is that a felicitous discourse is structured by the question under discussion (=QUD). The QUD restricts which moves interlocutors can make in the discourse. Thus, this framework was originally designed to account for discourse coherence, but since it has been applied to a range of different phenomena more recently, see Simons et al. (2010), Tonhauser et al. (2013). The core idea is that discourse is structured along the lines of

the question under discussion (=QUD), which in turn can contain subquestions of questions under discussion. The QUD theory has been applied to a range of phenomena such as different types of presuppositions and conventional implicatures (Tonhauser 2011, Tonhauser et al. 2013), the meaning of exclusives (Coppock and Beaver, 2011) and *it*-clefts (Velleman et al., 2013), and it has provided a framework for a cross-linguistic perspective (Tonhauser 2011).

This framework is a promising approach to a range of phenomena. The only problem with this approach is that the QUD is not independent of what the interlocutors contribute. It is rather, that interlocutors have some assumptions about the current QUD at a given point in time, and they can switch to a different QUD at various points in the conversation. It is not obvious then, whether the QUD guides the discourse or whether the discourse gives the interlocutors cues as to what the current QUD is.

Considering the list of basic facts above, the QUD approach can be successfully applied to discourse coherence. A discourse is coherent if it is relevant to the current QUD. It has also been applied to the interpretation of focus, association with focus as well as cross-linguistic variation. While concentrating on the semantics/pragmatics aspects of InfS the QUD has little to say for the domain of syntax-InfS interaction, as well as in the domain of InfS-prosody interpretation.

### **2.6.6 Mapping theories**

#### *2.6.6.1 Introduction*

The basic idea of the mapping theories to InfS is that constituents which are marked prosodically or by a syntactic position are mapped onto certain InfS-interpretations. Mapping theories can be divided along two dimensions: (i) which modules/representations are involved in the mapping, syntax-InfS,



PF-InfS, or multiple layers. (ii) Is the mapping direct (X is mapped onto Y no matter what) or indirect, allowing comparisons between different types of mappings.<sup>40</sup> As the interaction of syntax and InfS is the central concern of this work, I concentrate on the types of mapping theories that involve syntax.

#### 2.6.6.2 *Syntax-InfS mapping theories*

One mapping theory relating syntax and InfS can be found in Drubig (1994, 1997, 1998, 2003), who argues based on the data and insights from the interpretation of indefinites in Diesing (1992) that material in the vP is mapped onto presentational/new information focus. Drubig (2003) argues that the mapping hypothesis predicts that given constituents in the vP are especially encoded, while new ones are not. This asymmetry of marking in the vP-domain can indeed be found cross-linguistically, while different mechanisms of encoding are used.<sup>41</sup> As I am mostly concerned with marked focus here, I will put aside these cases. Note, though, that they raise interesting questions concerning the potential means of markedness, and the asymmetry of marking and default mappings in general.

Another mapping theory relating syntax and InfS can be found in Neeleman and van de Koot (2008, 2010). They argue that once a constituent is moved to the left periphery, it forces an InfS interpretation of

<sup>40</sup>Note that I exclude here those theories that concentrate on how PF interacts with syntax and InfS, as this is not the major concern of this work. The relevant details can be found in work by Reinhart (1995, 2006), Szendrői (2001, 2003) and differently in work by Büring (2013) and references therein, as well as in the approach by Fanselow and Lenertová (2011) among others.

<sup>41</sup>More specifically, Drubig (2003, 5) lists "'in situ deaccentuation in English, [...] displacement in scrambling languages, right dislocation in Catalan (Vallduv?Åt' 1992), clitic doubling in Romance, Modern Greek, and many other languages (Gierling 1996, 1997; Alexiadou and Anagnostopoulou 1997), special-case morphology and various types of agreement markers (Meinunger 2000; Hyman and Katamba 1993), casedrop phenomena in East Asian languages (Masunaga 1988) and the *ba* construction in Chinese (Sybesma 1999), all of which have been claimed to be involved in the marking of givenness, referentiality, or specificity."

both the constituent that is dislocated and the constituent that the moved element is adjoined to. Thus, dislocation gives rise to dichotomies of focus-background and topic-comment. Unmoved constituents can still be foci or topics, however, they do not mark background/comment, respectively. They derive from the observation that in Dutch, an unmoved focus can precede a topic, as in (73), but not when a focus is moved, see (74); in the latter case they give rise to the general InfS restriction that a background cannot contain a topic, see (75).

- (73) A: Hoe zit het met de SOEP? Wie heeft DIE gegeten?  
 How sit it with the soup who has this eaten  
 'What about the soup? Who ate that?'  
 Nou, dat weet ik niet, maar ... - 'Well, I don' know, but ...  
 B: Ik geloof dat WIM\ van de bonen<sup>V</sup> meer gegeten heeft dan  
 I believe that Bill from the beans more eaten has than  
 vorig jaar.  
 last year  
 (Neeleman and van de Koot, 2008, 148)
- (74) A: Hoe zit het met *Fred*? What heeft *hij* gegeten?  
 How sit it with Fred what has he eaten  
 What about Fred? What did he eat?  
 Nou dat weet ik niet, maar ... Well, I don't know, but ...  
 B: #ik geloof dat [<sub>PP</sub> van de BONEN\ ] Wim<sup>V</sup> t<sub>PP</sub> meer gegeten  
 I believe that [ from the beans ] Bill t more eaten  
 heeft dan vorig jaar.  
 has than last year  
 (Neeleman and van de Koot, 2008, 147)
- (75) a. topic [<sub>comment</sub> FOCUS [<sub>background</sub> ... ]]  
 b. \*FOCUS [<sub>background</sub> topic [<sub>comment</sub> ... ]]  
 (Neeleman and van de Koot, 2008, 146)

The gist of the argumentation is that movement is not triggered by any InfS features, but once displacement takes place, it gives rise to a specific

interpretation.

López (2009) proposes a third theory of InfS-syntax interaction. In his analysis InfS is a module of its own. This module assigns InfS-features to constituents at the edge of the phase. The phase enriched with the InfS-features is mapped onto a discourse-structure. ‘The information structure of a syntactic object  $\Sigma$  is  $\Sigma_{[p]}$ , the same syntactic object augmented with the features assigned by pragmatics and which consequently is ready to be mapped onto a discourse structure’ (López, 2009, 22). While this idea allows some interaction of syntax with InfS and PF/LF, López (2009) still needs to assume that there are formal features on the items that make these elements move. So, while he dispenses with syntactic discourse features and projections, some of the features have to be replaced by formal features that drive movement, which will be interpreted in the InfS-component. Still, the phase-based approach assumed here is close to López (2009). The central difference is that in López (2009) the assignment of ISF is restricted to the edge of the phase, while the proposal here allows assignment of features to the phase as well as mappings inside the phase.

#### *2.6.6.3 Representation theory*

Williams (2003) provides another kind of mapping theory, which is embedded in a different kind of syntactic theory. Williams (2003) assumes various layers/structures to be present and expressed in a single sentence: theta structure, case structure, surface structure, quantification structure and focus structure. As they are isomorphic, basically representing some kind of [ X [head Y ] structure, one level can be used to express another, according to the model given in 2.6.6.3.

The basic economy principle of this theory is shape conservation, meaning that there should be as little distortion to the default form at all

The representation model adjusted from Williams (2003, 23)

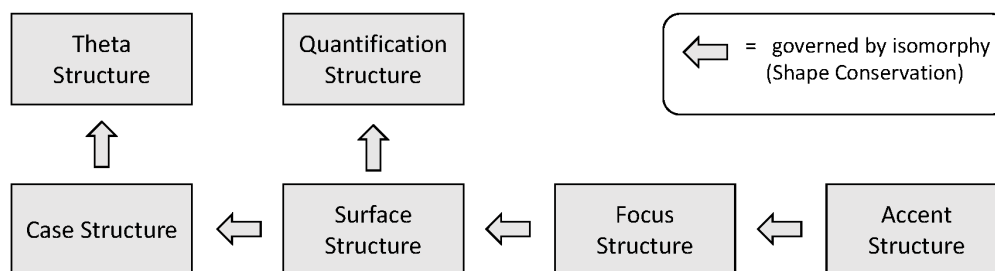


Figure 2.1: Model of Williams' representation theory, adjusted from Williams (2003, 23)

layers. As a result, a distortion of the basic structure on one level is only possible, if it leads to less distortion on another level. Let me illustrate this with the example of HNPS from Williams (2003, 34ff). He starts off with the observation that HNPS is optional, but it is not available when the shifted NP is in focus, thus (76b) is ""essentially ungrammatical"" (Williams)<sup>42</sup> or rather, that the shifted NP contains the focus or allows focus projection from it.

- (76) a. John gave to Mary all of the money in the SATCHEL.  
 b. \*John gave to MARY all of the money in the satchel.  
 c. John gave all of the money in the satchel to MARY.  
 d. John gave all of the money in the SATCHEL to Mary.

(77) A: John gave all the money in some container to Mary. What container?

B: John gave to Mary all of the money in the SATCHEL.

(Williams, 2003, 34)

(78) A: What did John do?

B: John gave to Mary all of the money in the SATCHEL.

<sup>42</sup>This observation in (76b) goes back to at least Rochemont and Culicover (1990), but it has been challenged, see Goebbel (2009).

(Williams, 2003, 34)

Thus, HNPS and hence a mismatch of case structure and surface structure is possible only if this results in a canonical FS→ AS structure (accent at the right edge). A double misrepresentation is not tolerated. In some cases one representation might win out (e.g. in English scope representations are not allowed to permute word order - put differently HNPS cannot apply for disambiguation of quantifier scope), but in some cases (soft constraints in Bobaljik and Wurmbrand 2012), a mismatch in representations might lead to optionality (as in the case of HNPS above).

The advantage of such an analysis is that it can handle cases of what Williams calls ‘shape conservation’, as for example are well-known from object shift in Scandinavian. It is also well suited to cases in which one surface structure is ambiguous (where no displacement took place and a match and mismatch of quantifier scope, etc. is possible) and one which is not (displacement enforces an effect at some other level resulting in disambiguation). Finally, it has a straight forward account of interactions as in German, where an accent can be shifted to a constituent left of the most-embedded DP, or another constituent can be moved away for this constituent to receive main accent. However, it is impossible to shift a DP and shift an accent at the same time.<sup>43</sup>

- (79) a. weil der JOURNALIST die geheimen Dokumente las.  
       b. weil die geheimen Dokumente der JOURNALIST las.
- (80) a. weil der Journalist die geheimen DOKUMENTE las.  
       b. #weil die geheimen DOKUMENTE der Journalist las.

<sup>43</sup>This observation is formulated as “Fokussierte Phrasen dürfen nicht gescrambelt werden.” in Stechow and Sternefeld (1988, 466). The observation goes back to Lenerz (1977, 42), who formulates it as Thema-Rhema-Gliederung, see also Fanselow (1990).

The general idea is that each level of representation gives rise to word order rules. The mapping that is faithful to all or the most levels wins out.

As there is not much work done in the Williams (2003) framework, it is hard to evaluate the proposal with respect to the facts central here. It certainly allows for the modeling of interaction between syntax and information structure (and other levels). Cross-linguistic variation is possible to handle as differences in the decisions to be made at the interface.

### 2.6.7 Conclusion

In this section, I have provided an overview of various different types of theories that model information structure. They have been compared with respect to a set of five core facts about InfS, repeated here in (81).

(81) Core facts to be accounted for in an InfS-model

- (i) Discourse coherence
- (ii) Focus interpretations
- (iii) Association with focus
- (iv) Prosody-InfS-syntax-semantics interaction
- (v) Cross-linguistic variation

An overview of the discussion is provided in the table below.

|                              | (i) | (ii) | (iii) | (iv) | (v) |
|------------------------------|-----|------|-------|------|-----|
| Phase-based interface model  | ✓   | ✓    | ✓     | ✓    | ✓   |
| Cartography                  | –   | ✓    | –     | –    | ✓   |
| Alternative Semantics        | ✓   | ✓    | ✓     | –    | ?   |
| Structured Meanings          | ✓   | ✓    | ✓     | ?    | ?   |
| QuD approaches               | ✓   | ✓    | ✓     | ?    | ✓   |
| Syntax-InfS mapping theories | –   | ✓    | ?     | ✓    | ✓   |
| Representation theory        | ✓   | ?    | ?     | ✓    | ✓   |

Table 2.1: Evaluation of Models of InfS with respect to the basic facts in (81).

## 2.7 Conclusion

This chapter has provided the overall proposal for the interaction of focus and predication. I presented the main assumptions as well as an extension of the T-model that allows to express the observations with respect to the expression of marked focus.

In the next chapters, I will turn to the two main phenomena that I am interested in. I will show how this proposal allows to better understand and explain the major properties of these structures. The discussions to follow will make various aspects of the model here more explicit and discuss a wide range of data.

# 3 The Analysis of Specificational Copular Clauses

## 3.1 Introduction

In this chapter, I lay out my analysis of specificational copular clauses (=SCCs), which provides the basis for the analysis of it-cleft sentences in the next chapters. Typical examples of SCCs are provided in (1).

- (1)    a. The cause of the riot was the announcement of the a pay freeze.  
      b. Her favourite author was Joseph Heller.  
      c. One thing you might consider is psychotherapy.  
      d. The culprit is Jennifer.

(Heycock, 2013, 342)

The class of specificational copular clauses has been difficult to define. SCCs differ from predicative and equative sentences in that the initial noun phrase does not refer to an individual. Additionally, the initial noun phrase does not serve as an aboutness topic. The post-copular noun phrase is typically referential. Thus, SCCs neither predicate a property of an individual - which makes them different from predicational copular clauses (=PCCs), nor do SCCs equate two individuals - which sets SCCs apart from NP-be-NP equatives. Instead the meaning can be described as in (2) (taken from Mikkelsen



2005, 1, who paraphrases Akmajian 1979):

- (2) '[A] specificational clause does not tell us something **about** the referent of the subject NP instead it says **who** or **what** the referent is' [emphasis in original].

Higgins (1979) provides a related description of the meaning of SCCs. The pre-copular constituent establishes the heading of a list for which the listed items are given in the postcopular position (Higgins, 1979, 154). There are a number of criteria that have been applied to test for SCCs - the restriction on A'-extraction, the requirement of focus on the post-copular noun phrase and the non-referential status of the initial DP, among others.

The hypothesis I defend here is given in (3):

- (3) Specification is Focus Hypothesis (=SiFH)  
 Specificational copular clauses are XP-XP-structures in which both XPs are of the same semantic type, which leads to a type mismatch. This type-mismatch is resolved by assigning a focus-background structure. As a result, the non-focus DP can only receive a functional (non-referential) interpretation.

In English (and in Germanic languages more generally), the focus-background mapping gives rise to inversion. Whether inversion is necessary for the specificational interpretation cross-linguistically, is a matter of debate, see (Hartmann et al., 2013) for some discussion on that for Hungarian specificational pseudoclefts).

In this chapter, I first provide the syntactic analysis of SCCs as inversion structures in section 3.2. I will argue that SCCs are inversion structures, but contrary to the main stream in syntactic theory, they are not regular predicate inversion sentences. In section 3.3, I will show how this inversion

is a result of the focus structure of SCCs (in English) and provide the details of the analysis in the phase-based interface model of grammar introduced in the previous chapter. I will report experimental evidence that supports the focus-based view on SCCs taken from Hartmann (prep) in section 3.4. The final section concludes the discussion.

## 3.2 The Syntax of Specificational Copular Clauses

### 3.2.1 A classification of copular clauses

Nominal copular clauses have been divided into three different classes of copular clauses: predicational, specificational and equative sentences (based on the four-way classification of copular clauses by Higgins 1979, cf. Huber 2002, Mikkelsen 2004 among others.)<sup>1</sup>

A predicative sentence is a sentence in which a property is assigned to an individual. The property is typically an adjectival or prepositional predicate - i.e. phrases that are usually interpreted as properties (unsaturated elements), (4).

- (4) a. John is clever.
- b. John is in the garden.

Additionally, it is possible for indefinite and definite noun phrases to be interpreted as such properties as seen in (5) and (6). In these cases, the noun phrase does not introduce or refer back to a salient referent or individual in the discourse.<sup>2</sup>

- (5) John is a doctor.

---

<sup>1</sup>For a more detailed overview of different classifications, see den Dikken (2006b). For a recent subclassification of predicational copular clauses see Roy (2013).

<sup>2</sup>Definite DPs in this analysis can be predicates. This issue will be discussed in more detail below.

- (6) a. The Sea Life Centre is the perfect venue for many a special occasion. (BNC, BPC 59)
- b. Since Edinburgh is the focus of this study, the context will be a Scottish one: ... (BNC, EVJ 14)

In equative sentences, two individuals are stated to have the same referent, see (7).

- (7) a. The morning star is the evening star.
- b. Peter Parker is Superman.

Equative sentences also subsume sentences in which two properties are equated.

- (8) a. Happy is happy.
- b. Slow is slow.

The specificational copular clauses are those sentences in which the initial noun phrase opens a list and the post-copular noun phrase specifies the element(s) on this list.

- (9) a. Mary's husband is John.
- b. The best candidate was John.

Thus, I follow previous classifications in which these three types are differentiated as for example in Mikkelsen (2005) and references therein.<sup>3</sup>

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<sup>3</sup>I remain agnostic with respect to Higgins' 1979 fourth type of identificational sentences. They might be a separate class in their own right, or part of these could belong to the specificational type, partly to the predicational type.

### 3.2.2 Previous analyses of specificational copular clauses

Concentrating on the analysis of specificational copular clauses (=SCCs), there are basically three different approaches to be distinguished:

(i) Analyses that take SCCs to be a type of their own, with special properties, see among others Akmajian (1970), Higgins (1979), Rothstein (2001), Romero (2005).

(ii) Analyses that suggest that SCCs (including specificational pseudoclefts) are a subtype of equative sentences, see among others Jacobson (1995), Sharvit (1999), den Dikken et al. (2000), Heycock and Kroch (2002).

(iii) Predicate inversion analyses, which claim that SCCs are derived from predicative sentences, see Heggie (1988), Moro (1991), Heycock (1992), Moro (1997), Mikkelsen (2005), den Dikken (2006a) and references therein.

#### 3.2.2.1 *Specificational copular clauses as a separate class*

The major proponent of treating SCCs as a separate class is Higgins (1979). He suggests that the initial noun phrase in SCCs provides a variable for which the post-copular noun phrase provides the value. Higgins (1979, 219) therefore calls the initial noun phrase a 'superscriptional' and the post-copular noun phrase a specificational predicate. He does not want to collapse SCCs with equative sentences, because NP1 in SCCs is not referential in the same way as the NP1 in equative sentences is. The main argument relies on the example in (10).

(10) The number of planets is nine. (Higgins, 1979, 215)

Higgins proposes that NP1 cannot be referential because it cannot replace 'nine' in contexts in which nine is referential:

(11) a. Nine is her lucky number.

- b. \*The number of planets is her lucky number.
- (12)
- a. Nine is odd.
  - b. \*The number of planets is odd.

Additionally, Higgins argues that SCCs cannot be reduced to identificational sentences, because these would leave the ambiguity of the following sentence unexplained:

- (13) The girl who helped us on Friday is Mary Gray.

This sentence can be the answer to the identificational question *Who is the girl who helped you on Friday?*, but it can also have the specificational reading paraphrased as *The following girl helped us on Friday: Mary Gray.*

#### 3.2.2.2 Equative analyses

There are a number of analyses that analyse SCCs as equative sentences. In these analyses, the noun phrases in SCCs are base-generated in the order that they occur. Equative analyses differ with respect to what they equate. Concentrating on specificational pseudoclefts, Sharvit (1999) and den Dikken et al. (2000) suggest that SCCs equate a question with its answer. Jacobson (1995) takes specificational sentences to be equations of two functions (thus, both departing from Higgins' notion of identity sentences, which take two referential noun phrases). Again in these analyses the two noun phrases are base-generated in the order that they occur in, which is a crucial difference to the predicate inversion analysis, which I discuss next.

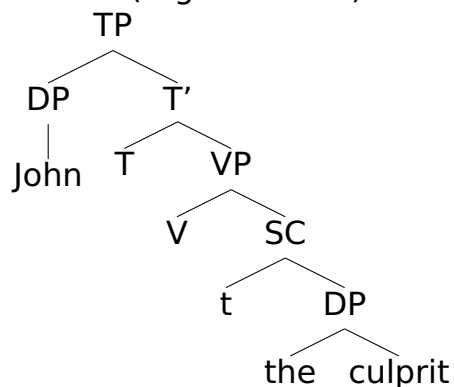
#### 3.2.2.3 Predicate inversion analyses

There are a number of predicate inversion analyses that derive SCCs from their predication counterpart, or rather both PCCs and SCCs share an un-

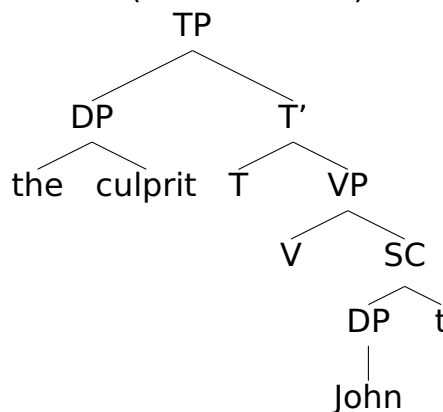
derlying small clause structure. These analysis mostly differ with respect to the target of the inverted noun phrase. Originally, the target has been proposed to be Spec,CP, as in Heggie (1988). Later worked argued that the initial noun phrase occupies Spec,TP, see Moro (1991), Heycock (1994), Mikkelsen (2005). In essence, the predicate inversion analyses suggest that both SCCs and PCCs are derived from a single underlying source. This is illustrated in (14) based on the analysis by Moro (1997).

(14)

a. PCC (regular order)



b. SCC (inverse order)



### 3.2.3 Specificational copular clauses as inversion structures

#### 3.2.3.1 Arguments for inversion

There are a number of arguments in favour of the inversion analysis, both syntactically as well as with respect to the interpretation of NP1 in SCCs (see Heggie 1988, Heycock 1994, 173ff and references therein for collections and the original sources, Mikkelsen 2005 for a more recent overview, Rothstein 2001 for a different perspective).

The first syntactic argument relies on subject verb agreement. Moro (1997) shows that subject verb agreement in Italian in SCCs is governed by the underlying subject, NP2.

- (15) Il colpevole sono/\*è io/\*me.  
 the culprit am/\*is I/\*me  
 'The culprit is me.'

The same holds for German, see (16).<sup>4</sup>

- (16) a. Die Ursache des Feuers waren brennende Kerzen.  
 b. dass die Ursache des Feuers brennende Kerzen waren.

If NP2, in fact, is underlyingly the subject, this agreement pattern can be explained more or less straightforwardly.<sup>5</sup>

Second, the order of SCCs does not occur in the complement of *con-*sider-type verbs, only the predicative order does. If both PCCs and SCCs are base-generated from the same underlying small clause, this observation is expected. SCCs need a target position for inversion, which is not available

<sup>4</sup>S. Löbner (p.c.) pointed out to me that agreement cannot be evidence for inversion as there are cases in German where agreement is with NP2, yet NP2 seems to be the predicate in the structure, see (i).

- (i) Das sind gute Freunde von mir/zwei schlaue Frauen. [Pointing at two people]

Note though, as Higgins (1979, 239) pointed out, the pronoun *that* is a special case. It cannot be used with bare nouns as predicates even when pointing to the respective person. The same holds for German.

- (ii) a. That woman is Mayor of Cambridge.  
 b. \*That is Mayor of Cambridge.  
 (Higgins, 1979, 239)
- (iii) a. Peter ist Pianist / schlau.  
 b. \*Das ist Pianist / schlau.

Higgins (1979) concludes that copular clauses with deictic *that* in pre-copular position are all identificational. Indefinite noun phrases in his analysis then are ambiguous between an identificational reading and a predication reading. Thus, the agreement pattern in identificational sentences seems to be different. *That* seems to be only possible when the predicate nominal is a noun phrase that has enough syntactic structure to express number (adjectives and bare nouns are not possible). To my mind, this indicates that *that* needs to inherit number from the post-copular NP. The agreement pattern in these cases therefore does not question the argument based on agreement for SCCs.

<sup>5</sup>For intricate patterns of intra- and interlanguage speaker variation with respect to agreement in SCCs see Béjar and Kahnemuyipour (2014), Hartmann and Heycock (2014, 2015).

in bare SCs.<sup>6</sup>

- (17) a. I consider John the real culprit.  
 b. \*I consider the real culprit John.  
 (Heycock, 1994, 177).

Third, the focus structure of SCCs is more restricted than in PCCs, see Heggie (1988), Heycock (1994), Williams (1997). While a PCC can have a focus on NP1 or NP2, SCCs require a focus on NP2 (I come back to this point below). If both structures are base-generated in the same way, this fact remains obscure. In an inversion analysis, this restriction is expected, as the focus on the non-inverted DP is a characteristic feature of inversion structures, see Culicover and Winkler (2008).

- (18) A: Who was the culprit? (John or Bill?)  
 B': JOHN was the culprit. [PCC]  
 B'': The culprit was JOHN. [SCC]  
 (Heycock and Kroch, 2002, 148)

- (19) A: What was John? (Was John the culprit or the victim?)

---

<sup>6</sup>Note that this argument needs to be taken with a grain of salt. The type of small clauses (=SCs) *consider* (and other verbs) selects is restricted, see Heycock (1994, 177ff). So there is potentially another semantic reason why the reverse order is ruled out.

- (i) a. \*I consider John off my ship.  
 b. ?I consider John at the peak of his career.  
 (Heycock, 1994, 85).

Additionally, Heycock and Kroch (1999) have argued that specificational small clauses do occur, see (ii):

- (ii) But if what you say is true, that would make the real murderer John!

The restrictions are certainly intricate, however, *make* can select potentially 'larger', namely verbal structures.

- (iii) Mary made Peter leave.



B': John was the CULPRIT. [PCC]

B'': \*The CULPRIT was John. [SCC]

(Heycock and Kroch, 2002, 149)

Fourth, there is also an asymmetry with respect to extraction, which is not observed in PCCs. SCCs disallow extraction of and subextraction from the postverbal NP (see e.g. Moro 1997), which again is a feature that is observed with other inversion structures, see e.g. locative inversion (Bresnan, 1994). (I come back to the details of this restriction below as well).<sup>7</sup>

- (20) a. \*Which wall do you think that the cause of the riot is a picture of \_ ?  
 b. \*Which picture of the wall do you think the cause of the riot is \_ ?  
 (Moro, 1997)

### 3.2.3.2 *The nature of the inverted noun phrase*

There is a range of tests that show that the initial noun phrase in SCCs is not a typical referential noun phrase. The first evidence is that NP1 is usually pronominalized with 'it' and 'that' (property anaphors) (cf. Kuno 1972 cited in Mikkelsen 2005, see also Buring and Hartmann 1998). This can be observed with tag questions, as in (21), left dislocation as in (22), anaphoric reference, see (23).

<sup>7</sup>Heggie (1988) takes the restriction of clefting any of the noun phrases of SCCs to their non-referential/non-argument status. Note though that relativization involves extraction. Thus, I think that the restriction observed with SCCs with respect to clefting, is a subcase of this more general restriction on extraction.

- (i) a. John Smith is my doctor.  
 b. It's John Smith that is my doctor.  
 c. \*It's my doctor that John Smith is.
- (ii) a. My doctor is John Smith.  
 b. \*It's my doctor that is John Smith.  
 c. \*It's John Smith that my doctor is.

- (21) 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?  
 (Mikkelsen, 2004, 64)
- (22) a. The tallest girl in the class, {that/it}'s Molly.  
 b. The tallest girl in the class, {she/\*it/\*that}'s Swedish.  
 (Mikkelsen, 2004, 64)
- (23) a. SCC  
 Q: Who is the tallest girl in class?  
 A: {That/It}'s Molly.  
 b. PCC  
 Q: What nationality is Molly?  
 A: {She/\*It/\*That}'s Swedish.  
 (Mikkelsen, 2004, 64)

Second, NP1 cannot be/control PRO (cf. Heggie, 1988), see (24).<sup>8</sup>

- (24) a. John tried [PRO to be our teacher].  
 b. \*Our teacher tried [PRO to be John].

These facts have lead a number of researchers to propose that SCCs and PCCs are the regular and inverse order of the same underlying SC.

---

<sup>8</sup>Another argument that is often brought up is based on the observation that Intensive Reflexives adjoin to referential arguments only. They cannot adjoin to NP1, thus, so the argument goes, NP1 is not referential.

- (i) a. John himself is the organizer of the group.  
 b. John is the organizer of the group himself.  
 c. \*The organizer of the group himself is John.  
 d. The organizer of the group is John himself.  
 (Rothstein, 2001, 253)

Note however, that intensive reflexives seem to require its host to be focused. Thus, the restriction that we observe in (i) is probably rather due to the focus restriction in SCCs.

However, there have been a number of arguments that suggest that the inversion in SCCs is not predicate inversion, *per se*. First of all, not every PCC has an equivalent SCC variant, see (25).<sup>9</sup>

- (25) a. John is a doctor.  
       b. \*A doctor is John.  
       (Heycock and Kroch, 1999)

A slightly different case is given in (26) and (27). In the relative clause contained in the inverted noun phrase, the gap is undisputably predicative. This seems to force the full noun phrase (*one thing I want a man to be* and *What Dan Blum was last year*) to be predicative as well. Precisely these phrases cannot be inverted, thus, it seems SCCs cannot be derived by inverting a (nominal) predicate (see Heycock and Kroch 1998, Heller 2005).

- (26) a. John is the one thing I want a man to be  
       b. \*The one thing I want a man to be is John.  
       (Heycock and Kroch, 1998, 178)
- (27) a. John Smith is what Dan Blum was last year. Namely, the chair.  
       b. \*What Dan Blum was last year was John Smith. Namely, the chair.  
       (Heller, 2005)

Third, as Heycock (2012) points out, pronominalization shows that NP1 is a type of concealed question, rather than a predicative noun phrase. She

<sup>9</sup>Mikkelsen (2005) argues that this is an information-structural restriction. As soon as the initial noun phrase is more complex and allows to make a link to the preceding discourse indefinite noun phrases are possible.

(i) A philosopher who seems to share the Kiparsky's intuitions on some factive predicates is Unger (1972) ... (cited from Mikkelsen, 2005, 155)

Note though that the additional modification with a relative clause seems to make the indefinite specific. Thus, these NPs are not truly predicative.

observes that concealed questions require a different pronoun, namely *they*, when used with a plural, see (28). True predicative NPs in plural still are pronominalized with *it*, see (29).

- (28) We won't know the winners until they announce \*it/them.  
 Plural concealed question. *it*: \*; *them*: OK  
 (Heycock, 2012)
- (29) They are the winners, although they don't look it/\*them.  
 Plural predicate. *it*: OK; *them*: \*  
 (Heycock, 2012)

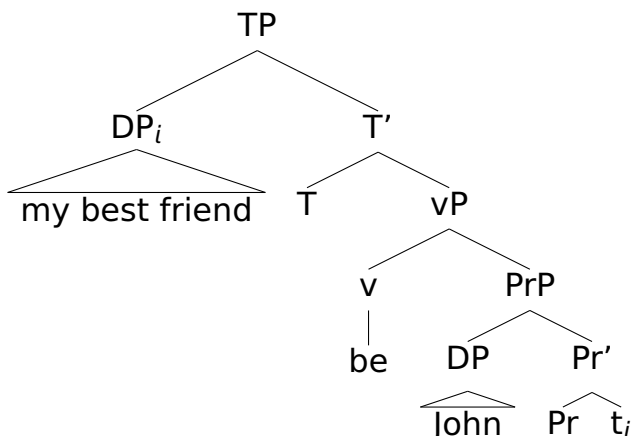
In SCCs, the pronoun used for plurals matches the concealed question interpretation, not the pronoun *it* that is used for predicate nominals.

- (30) The winners were Blanchett and Nyong'o, \*wasn't it/weren't they?  
 Plural DP1 in specificational sentence. *it*: \*; *they*: OK  
 (Heycock, 2012)

### 3.2.3.3 The hybrid analysis

The previous discussion has shown that SCCs should be considered inversion structures, but the initial noun phrase is not a regular predicative noun phrase. SCCs are not predicate inversion analyses. Bringing together these two observations, I follow Heycock (2012) in arguing that SCCs are inversion structures. However, the noun phrase that is inverted is not a predicative noun phrase, but a full fledged DP that receives a functional interpretation. The structure is given in (31).

(31) My best friend is John.



From a syntactic point of view, the inversion analysis gives rise to two fundamental questions.

- What allows the underlying subject in PrP to stay low?
- What makes the complement of PrP move instead?

My answer to these questions is that focus-background mapping is responsible for both processes. The motivation for this position and how this can be implemented in the phase-based model of grammar presented above will be the topic of the next section.

### 3.3 A Focus-Based Analysis of Specificational Copular Clauses

#### 3.3.1 Introduction

In this section, I turn to the role of focus in the derivation of SCCs. First, I will show that SCCs require focus on the post-copular noun phrase. Thus, focus is a necessary condition for inversion. This requirement has been observed for other inversion structures already (see for example Bresnan 1994 for locative inversion, Culicover and Winkler 2008 and references therein).

However, the precise mechanism for inversion has been problematic to state in the derivational model of syntax developed in the last two decades. The problem for SCCs and, more generally, for inversion is that descriptively, the focus on the post-copular subject makes this DP stay low, while the backgrounded DP moves to the initial position. Simplifying strongly, an element moves either (i) because it has a feature of its own that needs to be checked in a specific configuration, or (ii) because the probe has a feature that needs to be checked by the moved element, or (iii) because both probe and target have features that need to be checked in the moved configuration. The surprising fact about SCCs is that the element that stays in-situ is the one that is marked with a specific feature, namely focus, while the element that moves seems to be unmarked.

None of the available mechanisms for movement allow for movement of one element to satisfy the needs of another element to stay in situ. This problem has been handled in various different ways with respect to SCCs and inversion sentences more generally. They share the common trait that inversion is triggered independently of the focus requirement on the NP in-situ. One option is to stipulate another formal requirement for inversion, such as licensing of a *pro*-predicate in den Dikken (2006a) or breaking symmetry in Moro (2000)). Alternatively, the derivational model has been given up in favour of a mixed model of derivation and representation, in which movement is no longer feature-driven, but whether a movement derivation is possible or not is dependent on other constraints on the resulting representation (see for example the derivation and evaluation model in Broekhuis (2008)). In both versions, the focus requirement is an additional licensing requirement (along the lines of Culicover and Winkler 2008) to legitimize inversion after the fact.

The phase-based interface model proposed in chapter 2 allows a dif-

ferent view on the facts of SCCs - InfS and syntax can interact during the derivation. Inversion can be made dependent on focus. In this chapter, I sketch the derivation of SCCs in this model, based on the observation that focus indeed is a crucial factor in the analysis of SCCs.

### 3.3.2 Specificational copular clauses and focus

Heggie (1988) and Heycock (1994) observed that SCCs are information-structurally restricted. The post-copular noun-phrase needs to be focused (see also Williams 1997, Heycock and Kroch 2002). This can be shown by the requirement of a prosodic focus on the post-copular noun-phrase, see (32), a restriction which is absent in equivalent predicative phrases, see (33)

- (32) a. A: Who was the culprit? (John or Bill?)  
       B: The culprit was JOHN.
- b. A: What was John? (Was John the culprit or the victim?)  
       B: \*The CULPRIT was John.
- (33) a. A: Who was the culprit? (John or Bill?)  
       B: JOHN was the culprit.
- b. A: What do you know about John?  
       B: John is the CULPRIT.

The experimental confirmation of this crucial observation is reported in Hartmann (prep) and summarized in section 3.4.

Additionally, Heggie (1988) observed that *only* cannot associate with the initial NP, again in contrast to PCCs.

- (34) a. \*Only the teacher is John.  
       b. The teacher is only John.  
       (Heggie, 1988, 79)

- (35) a. Only John is the teacher.  
 b. John is only the teacher.  
 (Heggie, 1988, 79)

Finally, the post-copular constituent cannot be a weak pronoun, see (36), which is another indication that the post-copular noun phrase is necessarily a marked focus and therefore receive some prominence.

- (36) \*The best student is 'em.

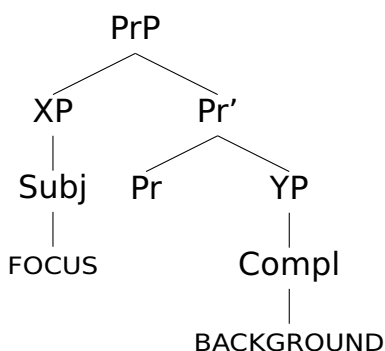
This is crucial evidence that the post-copular constituent in SCCs has to be a marked focus.

### 3.3.3 The proposal: Focus and inversion

The Focus Mapping Hypothesis, as discussed in chapter 2 and repeated here for convenience, also accounts for the focus properties of SCCs.

- (37) Focus Mapping Hypothesis  
 In specificational sentences the predication phrase (PrP) is mapped onto a focus-background division.

- (38) Mapping: Focus-Background





The derivation of a typical SCC as in (39) thus proceeds in the following steps.

- (39) What's new in the murder case?  
The culprit is John.

The syntax generates the two DPs, which are sent to the InfS module independently.

① Syntax: merge DP phase "the culprit"

DP  
|  
*the culprit*

The phrase 'the culprit' can be inferred from the setting of the murder case, and it is thus accessible (see Chafe 1994, Gundel 1996, Baumann and Grice 2006 for the relevant notion of accessibility).

② InfS module: check DP:

DP  
D: accessible  
|  
*the culprit*

The DP phase 'John' is also generated in syntax and sent to the InfS module. As John has not been mentioned in the previous discourse, the DP is marked as discourse new.<sup>10</sup>

<sup>10</sup>In some analyses of definite DPs including proper names, they cannot be new, but need to be identifiable. I take this notion of identifiability relevant for the common ground, not discourse, thus, this property of definites is not part of the InfS module proper, as

③ Syntax: merge DP phase "'John'"

DP  
|  
*John*

④ InfS-module: check DP

DP  
D: new  
|  
*John*

The next stage is to merge the next phase PrP in the syntax. I take PrP to be a phase, see den Dikken (2006a, 2007).

⑤ Syntax: merge PrP;

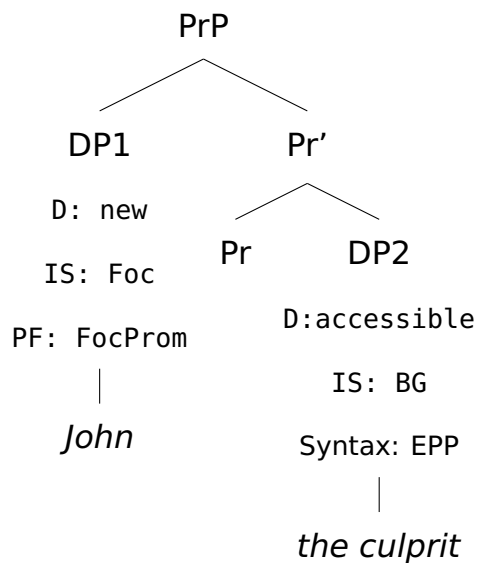
PrP  
├── DP1  
│ D: new  
│ |  
│ *John*  
└── Pr'  
 ├── Pr  
 │ D: accessible  
 │ |  
 │ *the culprit*  
 └── DP2

In the InfS module, the focus mapping is applied. This is the crucial step. In English, this mapping assigns a formal feature to the background, a feature which is readable to syntax.

---

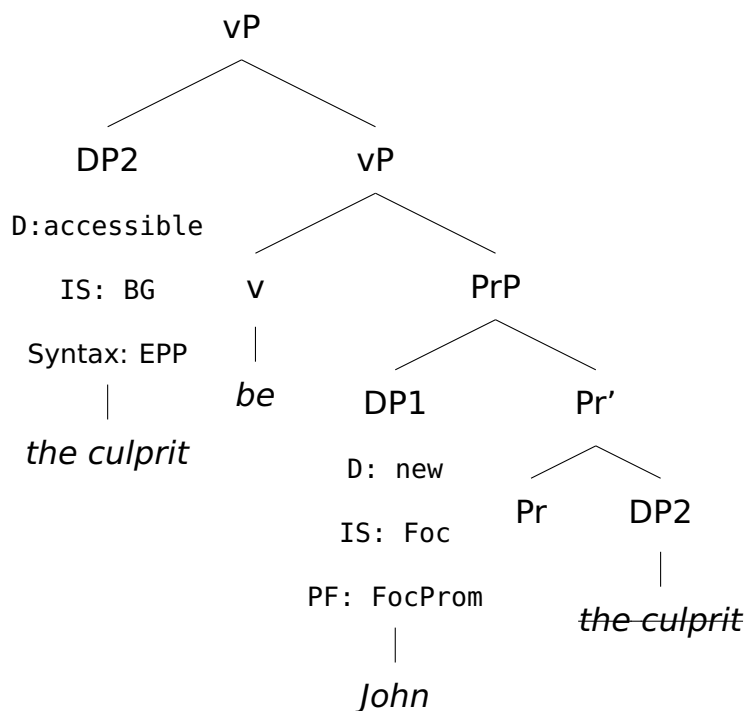
proposed here. Additionally, definite DPs do occur in *there*-sentences outside of the list reading, see Hartmann (2008) for discussion, hence, definite noun phrases are not necessarily known (present in the common ground) or given (mentioned in the discourse).

## ⑥ InfS module: assign mapping according to FMH

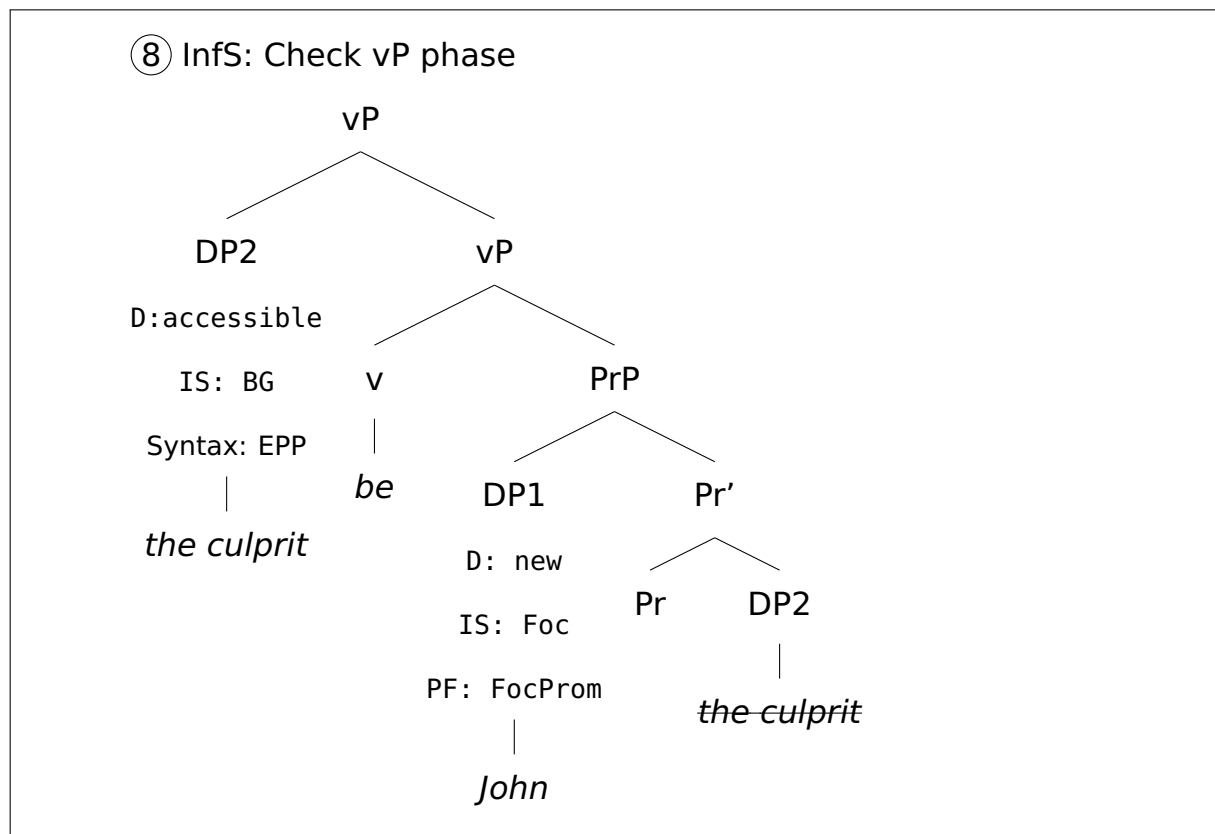


The structure is sent back to syntax. The formal feature on the background makes the background move to the edge. This results in low inversion of the DP, see Heycock (2012) on low inversion.

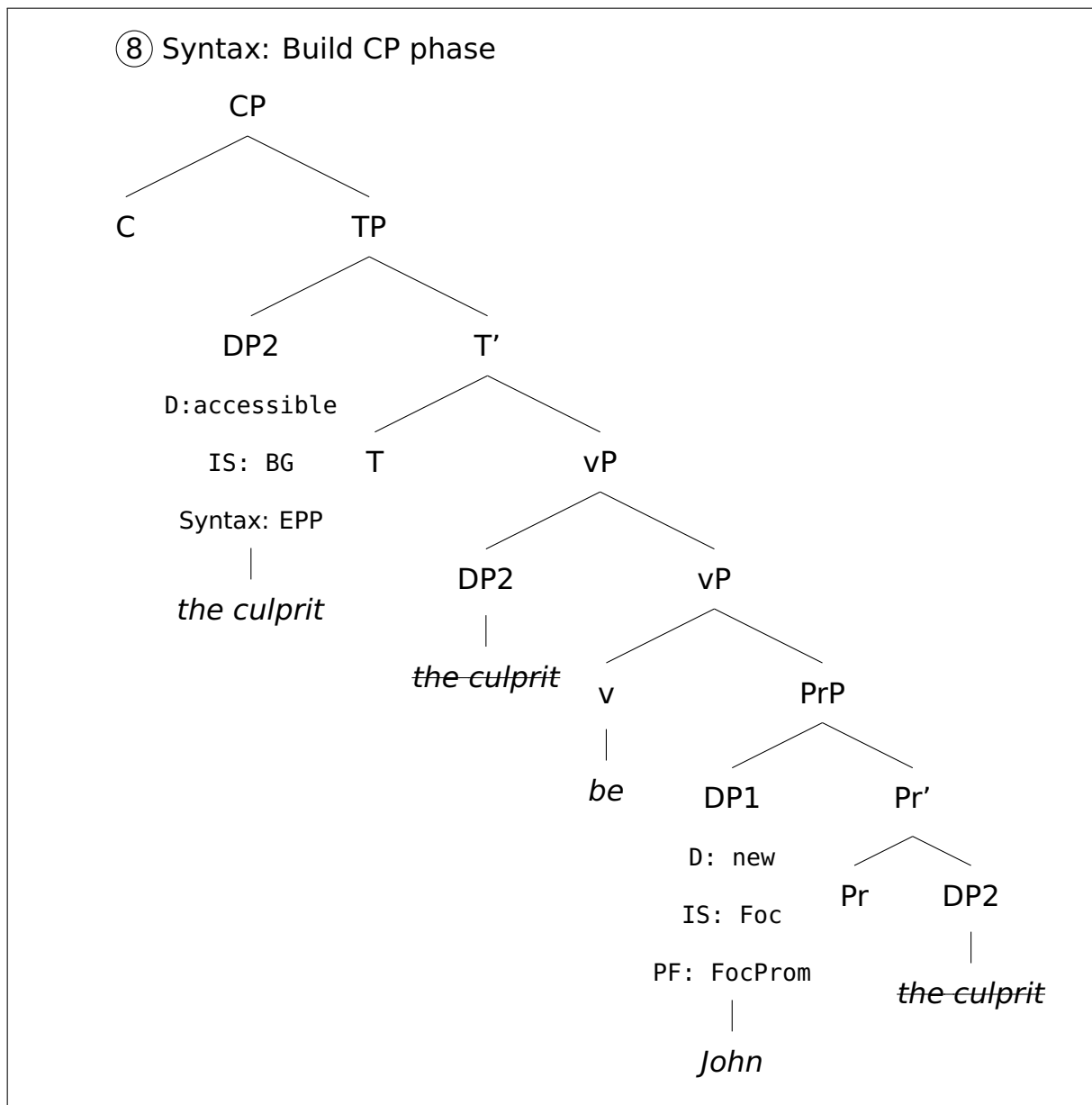
## ⑦ Syntax: Merge next phase: vP



Depending on the precise mechanism of movement, the Pr-head might move to the v-head giving rise to phase-extension, along the lines proposed in den Dikken (2007). The vP phase is sent to the InfS module, where nothing further happens.



After this step, the syntax builds the CP phase.



This phase is then sent to the InfS module, which sends the phase on to LF, where the structure is fully interpreted. The proposition is added to the common ground and discourse. At PF the prosody of the phase is determined on the basis of the phonetic features assigned in the InfS module and default rules.

The crucial step in this derivation is step 6 where Focus and Background is mapped onto the two DPs in PrP, which results in the inversion of the DP *the culprit* in the syntactic derivation of the vP phase. Thus, as

described in chapter 2, information structure can affect and interact with syntax during the derivation of individual sentences.

There are two crucial questions that arise with respect to the focus data presented above:

- (40) Q1: How is the structure with focus on the initial DP ruled out?  
 Q2: Why does focus on the underlying subject not result in inversion in PCCs?

**Q1: No Inversion without Focus** The answer to the first question is straightforward. In the DP-DP configuration above, the mapping of focus - background is the prerequisite for the inversion to occur. If this prerequisite is not given, meaning if the focus mapping does not take place, then, the necessary feature bundle for inversion is not available. As a result, there is no inversion without focus - thus, the core facts from section 3.3.2 are accounted for.

**Q2: Focus without Inversion** The answer to the second question is more intricate. I think that in English, sentences like *JOHN is the culprit* are predicative sentences, with a focus on the subject. The derivation of these sentences is different due to the fact that the post-copular noun phrase in these sentences in my view is not a full-fledged DP, but a predicative noun phrase with the determiner *the* in the specifier of NumP (along the lines of Ritter 1991) or any such projection below the DP-layer.<sup>11</sup> This noun phrase is interpreted as a property with a single member. Thus, I follow the analyses in Hudson (1989), Mandelbaum (1994), Zamparelli (2000) among others that predicate nominals are also syntactically different from regular full DPs. Se-

<sup>11</sup>This phrase has also been called label is count phrase #P in Borer (2005), PredicateP in Zamparelli (2000)), ClassP in Tanase-Dogaru (2006). NumP specifies quantity, quality and possibly kind.

mentally, they are of type  $\langle e, t \rangle$ . Let me spell out the derivation of these sentences in more detail. For explicitness, I assume a question-answer context, as in (41).

- (41) Who is the culprit?  
JOHN is the culprit.

The first step is the syntactic derivation of the DP ‘John’.

① Syntax: generate DP phase ‘John’

DP  
|  
*John*

As a phase, it is sent to the InfS-module. I assume that the intended focus is a marked focus without going into detail in the analysis of this type of focus as contrastive, corrective or exhaustive.

② InfS module: analyse DP

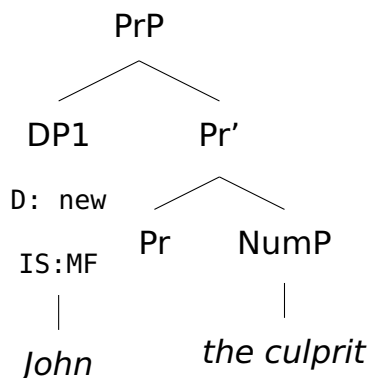
D: Discourse-participant: new

IS: assign marked focus to DP

DP  
D: new  
IS:MF  
|  
*John*

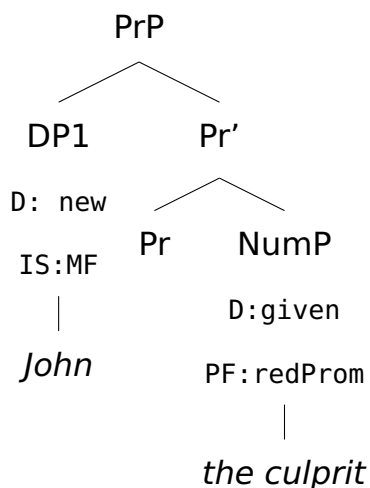
As predicative noun phrases lack a DP-layer, I assume that they are not phases. Thus, the next phase to be built is PrP.

③ Syntax: merge PrP;



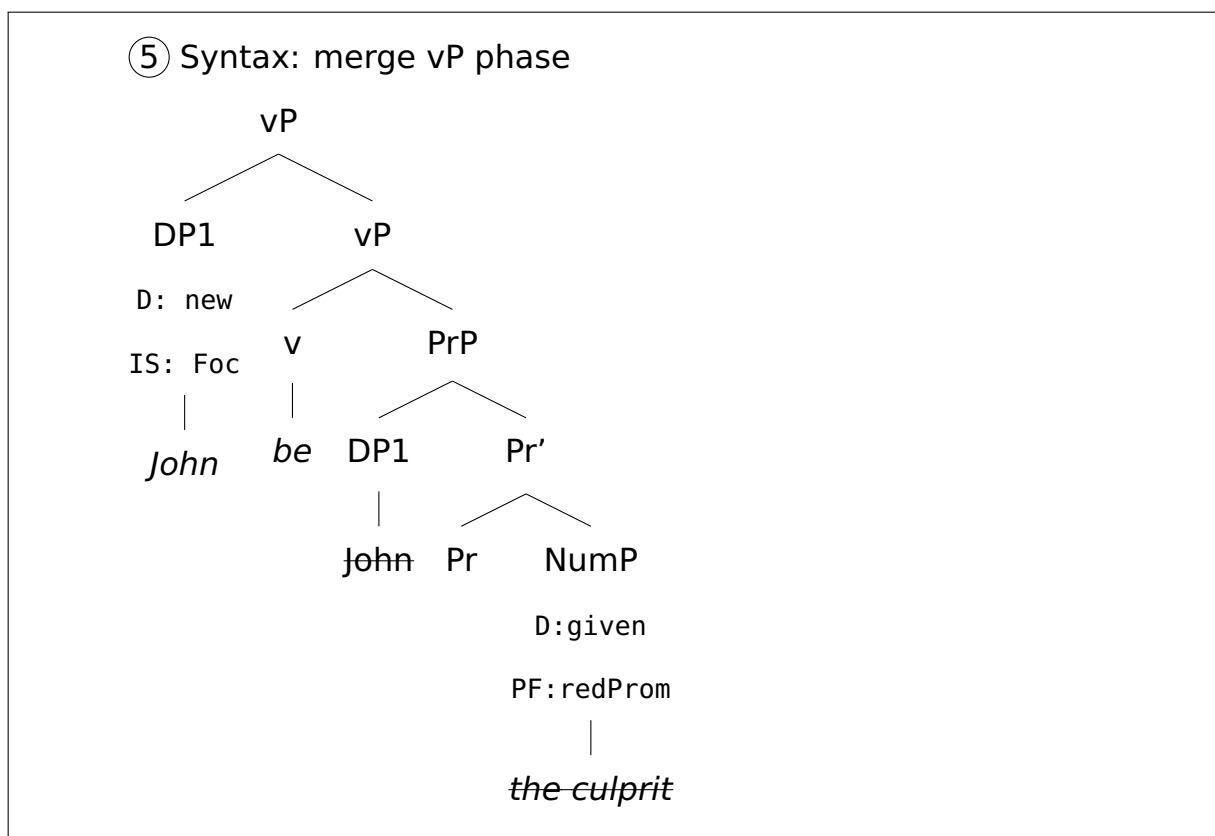
This phase is sent to the InfS module, which assigns appropriate features to the complement of the phase head. At this point, we find the crucial difference to the specificational case: there is no type mismatch between the respective arguments. the NP 'the culprit' is of type  $\langle e, t \rangle$  with the definite determiner providing uniqueness in NumP. As a result, there is no need for focus-background mapping according to the FMH. The background is not marked and without that, no formal feature is assigned to the predicative noun phrase. Inversion cannot arise. Thus, the derivation proceeds further as sketched in the next steps.

④ InfS module: check PrP





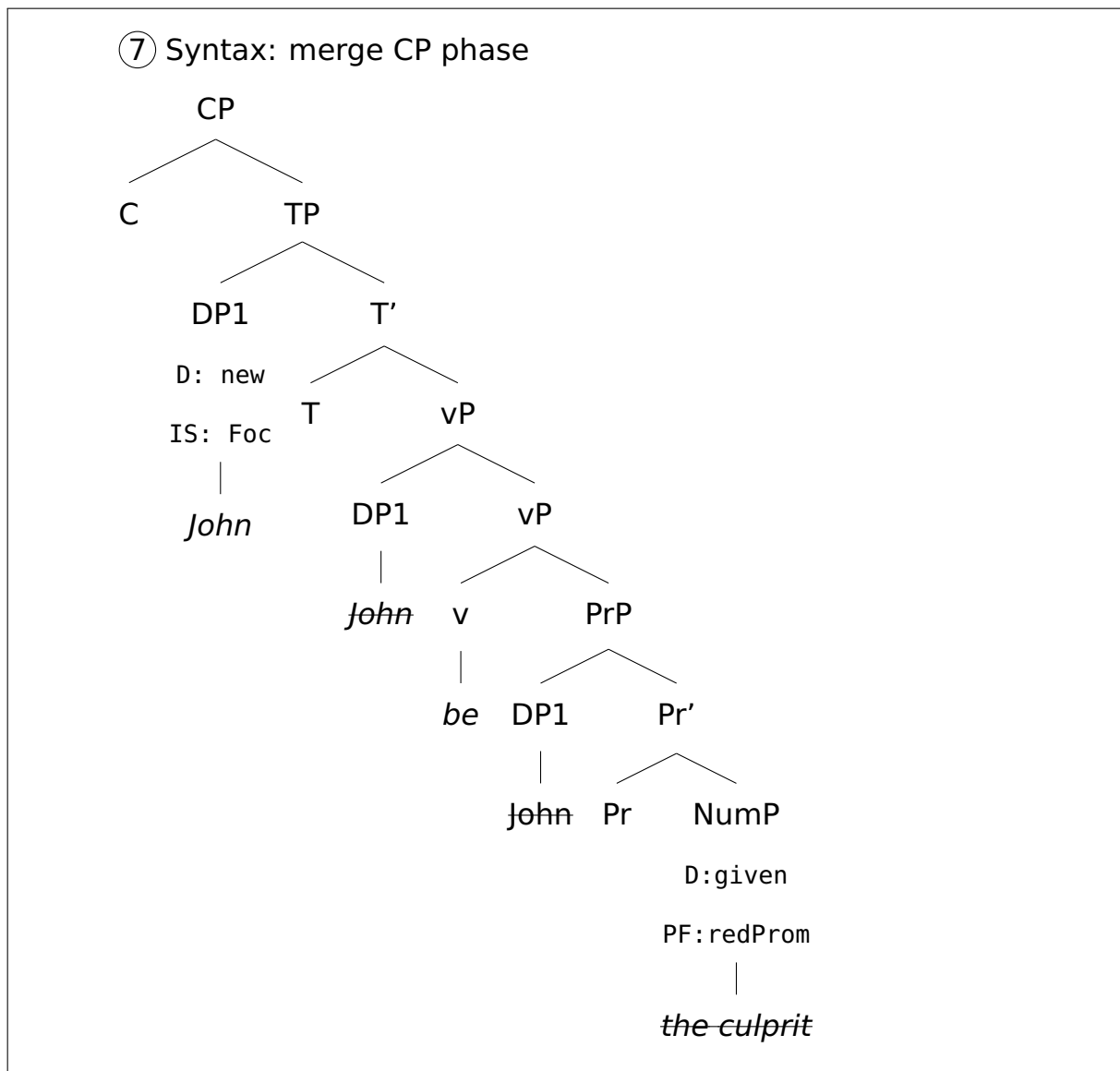
As before, the next step is to merge vP (assuming that there is one with copular *be*). The difference to SCCs at this stage is that as the complement of PrP did not receive an EPP feature, the higher argument, the DP *John*, moves in line with the general mechanism of raising subjects. So as a result of the assignments of the InfS-features to the underlying subject without background marking at the previous phase, there is no low inversion with predicative sentences.



The phase is sent to the InfS module; nothing specific happens here.

⑥ InfS Module: check vP phase

Syntax generates the next phase, the CP. The DP *John* moves to Spec,TP in line with general requirements in English.



The final step is to send this CP phase to the InfS module and from there to LF / FP. The CP is interpreted including its focus properties and the proposition is added to the CG.

This is the derivation that I assume for predicative noun phrases. The last and trickiest question is whether the sentence *JOHN is the culprit* also has an additional specificational reading. It seems to me that this is not the case, even though it is difficult to find a satisfactory argument for this point. Intuitively, sentences like *JOHN is the culprit* is still a statement about *JOHN* (as opposed to some other other person). This is not the kind of inter-

pretation that is generally assumed for specificational clauses. So it seems to me that at least for English, specification is tightly linked to inversion. Note though that in the system here, the central ingredients are that there is a type mismatch in PrP which is resolved by providing a focus-background mapping. In English, this mapping happens to be linked to an inversion process. Whether this is the same in SCCs in all languages is a different question. There might well be cross-linguistic variation in this respect.

### **3.4 Prosody and Focus: Experimental Evidence**

#### **3.4.1 Introduction**

In this section, I provide experimental evidence for the observation that the focus structure of SCCs is restricted. The post-copular noun phrase has to be prosodically prominent and focus marked. In order to test this, two experiments were conducted. The first experiment tested the prosodic contour without context, the second experiment tested the same contours in context. The discussion here is based on Hartmann (prep).

#### **3.4.2 Experiment 1: Nominal copular clauses**

In this section, I will discuss the first rating experiment. In this experiment, I compared the naturalness of different focus locations in predicational copular clauses (=PCC) with the naturalness of focus location in specificational copular clauses (=SCC) out of context.

##### *3.4.2.1 Factors and conditions*

The experiment manipulated two factors. The first one is the type of copular clause, comparing PCCs vs. SCCs. The second factor concerns the type/location of focus and distinguishes three levels, a narrow focus on NP1,

|     | No   | Type | Focus                          | Abbreviation  |
|-----|------|------|--------------------------------|---------------|
|     | i.   | PCC  | Narrow focus on precopular NP  | PCC - NFpre   |
|     | ii.  | PCC  | Narrow focus on postcopular NP | PCC - NFpost  |
| hbt | iii. | PCC  | Neutral topic - focus          | PCC - neutral |
|     | iv.  | SCC  | Narrow focus on precopular NP  | SCC - NFpre   |
|     | v.   | SCC  | Narrow focus on postcopular NP | SCC - NFpost  |
|     | vi.  | SCC  | Neutral topic - focus          | SCC - neutral |

Table 3.1: Conditions experiment 1 (without context)

a narrow focus on NP2 and a rather neutral wide focus in which NP1 receives a topic accent and NP2 a regular new information focus accent. Crossing the two factors results in the 6 conditions given in table 3.1.

The six conditions are illustrated in (42) and (43)

(42) Predicational copular clause

- a. Trevor BAILEY is the wittiest host. [NFpre]
- b. Trevor Bailey is the wittiest HOST. [NFpost]
- c. Trevor Bailey is the wittiest HOST. [neutral]

(43) Specificational copular clause

- a. The wittiest HOST is Trevor Bailey. [NFpre]
- b. The wittiest host is Trevor BAILEY. [NFpost]
- c. The wittiest host is Trevor BAILEY. [neutral]

### 3.4.2.2 Materials

The experimental material consisted of 24 different lexicalization in all six conditions. The lexical items consisted of a definite noun phrase with a superlative adjective and a proper name. The sentences were recorded in a quiet setting. Two native speakers of British English (London Area), one male one female, read the sentences in the context of the corresponding question to facilitate the production of the different types of intonation. A

typical example of the intonation contours for the six conditions are given in figure 3.1 to 3.6.

Figure 3.1: Intonation contour: PCC narrow focus on NP1

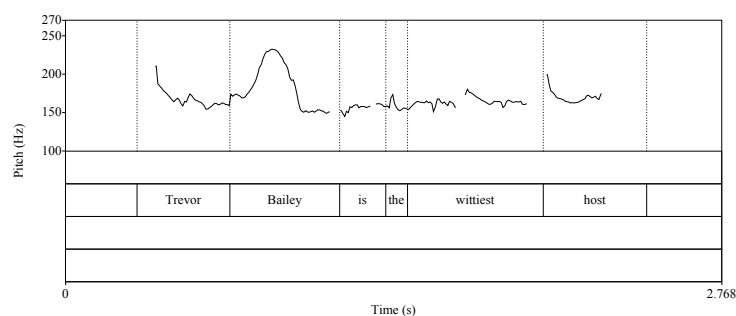


Figure 3.2: Intonation contour: PCC narrow focus on NP2

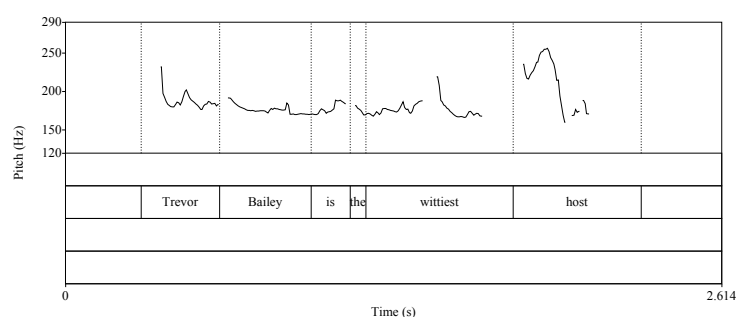
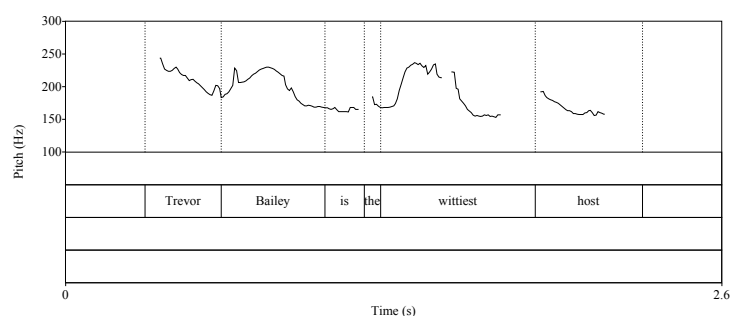


Figure 3.3: Intonation contour: PCC 'neutral' focus



### 3.4.2.3 Method and procedure

The recorded soundfiles were distributed across six lists in a Latin square design. Additionally, 60 distractors were recorded and the test sentences

Figure 3.4: Intonation contour: SCC narrow focus on NP1

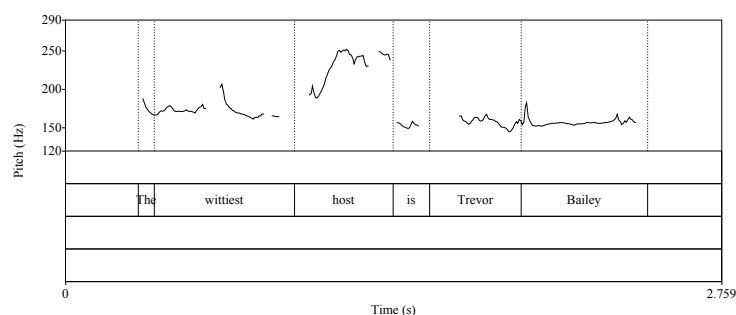
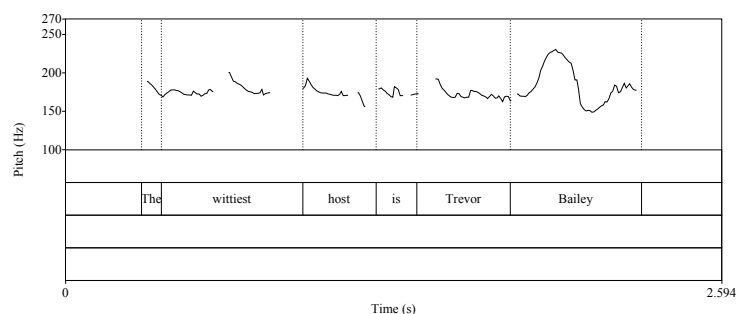


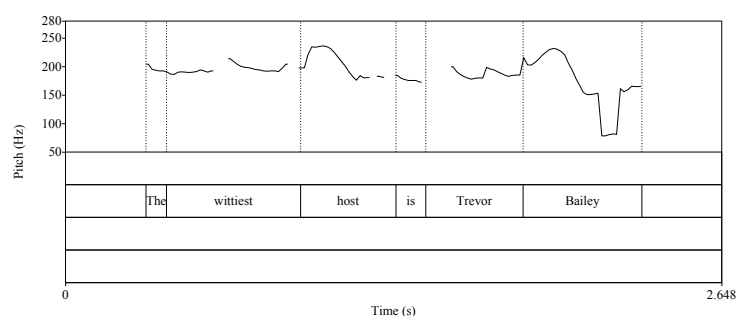
Figure 3.5: Intonation contour: SCC narrow focus on NP2



were randomized per participant. Each participant heard each lexical variant once and all six conditions were tested four times per participant. Half of the items were read by a female voice, the other half by a male voice. The experiment was implemented in OnExp, and run locally in a lab at UCL in London.

The task for the participants was to rate the naturalness of the sentence on a seven-point scale (1 (very unnatural) to 7 (very natural)). Before

Figure 3.6: Intonation contour: SCC 'neutral' focus



the experiment started, participants read the instructions of the experiment. They had to provide some further details about language background (mother tongue and dialect), profession and age. Then they went through a first practice stage. For each test sentence, participants had to click on an icon to hear the soundfile. Then they provided the rating and continued to the next page to get to the next soundfiles. Participants were instructed to listen to the file carefully and also consider how the sentences are said in their naturalness ratings.

#### 3.4.2.4 Participants

There were 30 self-reported native speakers of English, 5 per list, mostly students, but not exclusively. They were aged between 19 and 73 years with a mean age of 30 years. 57% participants were female, 43% male. The majority of speakers have a language background in England, but there were a few exceptions from Scotland, New Zealand, and the US. They were paid £3 for their participation.

#### 3.4.2.5 Results

The raw ratings were normalized per participant (z-score calculation for items and fillers). The overall results are given in figure 3.7.

The normalized data were subjected to two repeated-measures ANOVA, by participants and by items. There is a main effect type of copular clause,  $F(1,29) = 7.16^*$ ;  $F(1,23) = 8.08^{**}$ .<sup>12</sup> On average, predicational sentences are more acceptable than specificational sentences. Second, there is a main effect for focus type,  $F(2,28) = 19.48^{***}$ ;  $F(1,23) = 31.144^{***}$ . Neutral focus is more acceptable than pre-copular focus and precopular focus is more acceptable than post-copular focus. Furthermore, there is a significant in-

<sup>12</sup>I indicate significance levels as follows: \*\*\* for  $p < .001$  \*\* for  $p < .01$  and \* for  $p < .05$ ;

teraction between the two factors,  $F(2,28) = 8.94^{***}$ ;  $F(1,24) = 9.689^{**}$ . Precopular focus is more acceptable than postcopular focus in PCC, while the opposite holds for SCC.

The results here show three major points. First of all, participants are sensitive to different types of intonation in PCC vs. SCC. Second, narrow focus out of context is marked, especially marked focus on the noun phrase that is not a proper name. Both NP2 focus in PCCs, and NP1 focus in SCCs are rated rather low. As narrow focus might need to be licensed by an appropriate context, these results only show that narrow focus on the definite DP is marked - independent of its position. Thus, in order to confirm the original observation, the same sentences need to be tested in context. This is done in the second experiment.

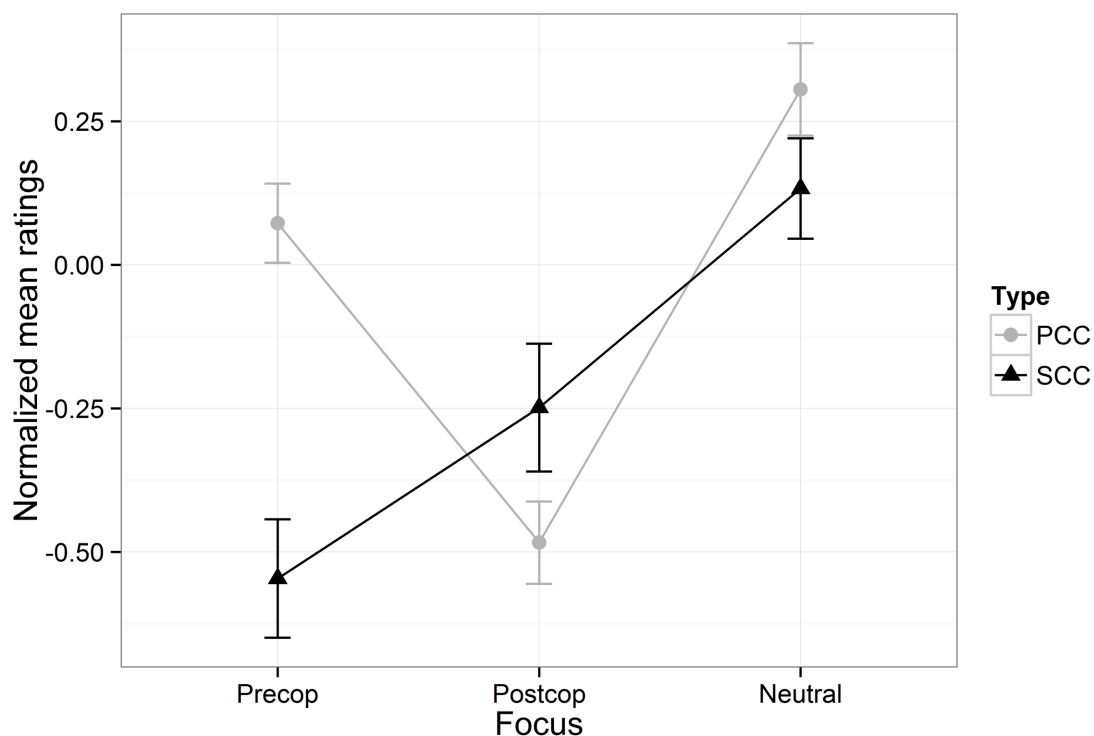


Figure 3.7: Average rating (z-score) per condition



### 3.4.3 Experiment 2: Nominal copular clauses in context

In this section, I introduce the second experiment. Here, the experimental sentences from the first experiment have been presented in a context appropriate to the focus condition of the individual conditions. The comparison of experiment 1 and 2 allows to evaluate the role of context for the naturalness ratings and to what extent context can serve to improve the ratings.

#### 3.4.3.1 Factors and Conditions

The design of the experiment was the same as in experiment four. The only difference was that the conditions were supplemented by appropriate context to support the narrow focus intonation of the files. In effect, context is not an additional factor in the design. For the narrow focus conditions, an alternative question of the form in (44) was provided:

- (44) a. *Do you think that NP is [NP or NP]?*  
 b. *Do you think that [NP or NP] is NP?*

The neural focus question sets up a general what happens question with an additional PP that provides a context frame for the sentence to come. An example for the context questions in all four conditions is provided in (45) and (46)

- (45) a. Do you think that Trevor Bailey or Henry Blofeld is the wittiest host?  
       Trevor BBAILEY is the wittiest host. [NFpre]  
 b. Do you think that Trevor Bailey is the wittiest host or the wittiest actor?  
       Trevor Bailey is the wittiest HOST. [NFpost]  
 c. What's new on ITV?

- Trevor Bailey is the wittiest HOST. [neutral]
- (46) a. Do you think that Trevor Bailey is the wittiest host or the wittiest actor?  
           The wittiest HOST is Trevor Bailey. [NFpre]
- b. Do you think that Trevor Bailey or Henry Blofeld is the wittiest host?  
           The wittiest host is Trevor BAILEY. [NFpost]
- c. What's new on ITV?  
           The wittiest host is Trevor BAILEY. [neutral]

#### 3.4.3.2 *Materials, method and procedure*

The materials consisted of the same 24 lexicalizations as in experiment one, but with the addition of the context question. The questions were recorded in a quiet setting in individual settings per native speakers. The question-answer sequences then were manually cut and pasted together so that the question was provided by a different voice than the answer.

The recorded soundfiles were distributed across six lists in a Latin square design. Additionally, 60 further question-answer pairs were used as fillers. The sentences were randomized per participant. Each participant heard each lexical version once, all six conditions were tested four times per participant. The experiment was implemented in OnExp, but run locally in a lab in London.

The task for the participants was to rate the naturalness of the answer in the context of the question on a seven-point scale (1 (very unnatural) to 7 (very natural)). Before the experiment started, participants read the instructions of the experiment. They had to provide some further details about language background (mothertongue and dialect), gender, profession and age. Then they went through a first practice stage. For each test sentence,

participants had to click on an icon to hear the soundfile. Then they provided the rating and continued to the next page to get to the next soundfile. Participants were instructed to listen to the file carefully and also take into account how the sentences are said.

#### 3.4.3.3 Participants

There were 36 self-reported native speakers of English participating in the study. The age ranged from 17 to 72 years, with a mean age of 33 years. There were 53% female participants and 47% males. The majority of speakers were from England, but there were also a few from Canada and the US. As before, participants were mostly, but not exclusively students. They were paid £3 for the participation which took around 30 minutes.

#### 3.4.3.4 Results

The raw results were normalized per participants. The normalized results of the second experiment are provided in figure 3.8.

The normalized ratings were subjected to two repeated-measures ANOVA. There is a main effect for the type of copular sentence,  $F(1,35) = 11.55^{***}$ ;  $F(2,23) = 93.29^{***}$ . On average, predicative sentences are rated more acceptable than specificational clauses. There is also a main effect of focus type:  $F(2,34) = 64.88^{***}$ ;  $F(2,22) = 6.984^{**}$ ; post-copular focus is rated more acceptable than neutral focus and both are rated more natural than pre-copular focus on average.

Finally, there is a significant interaction:  $F(2,34) = 21.70^{***}$ ;  $F(2,22) = 7.03^{***}$ . specificational copular clauses are rated slightly but significantly worse with a narrow focus on NP2. Additionally there is a clear, large and significant difference between the narrow focus on NP1. In PCC this is the best condition, while in SCCs this is clearly the worst condition.

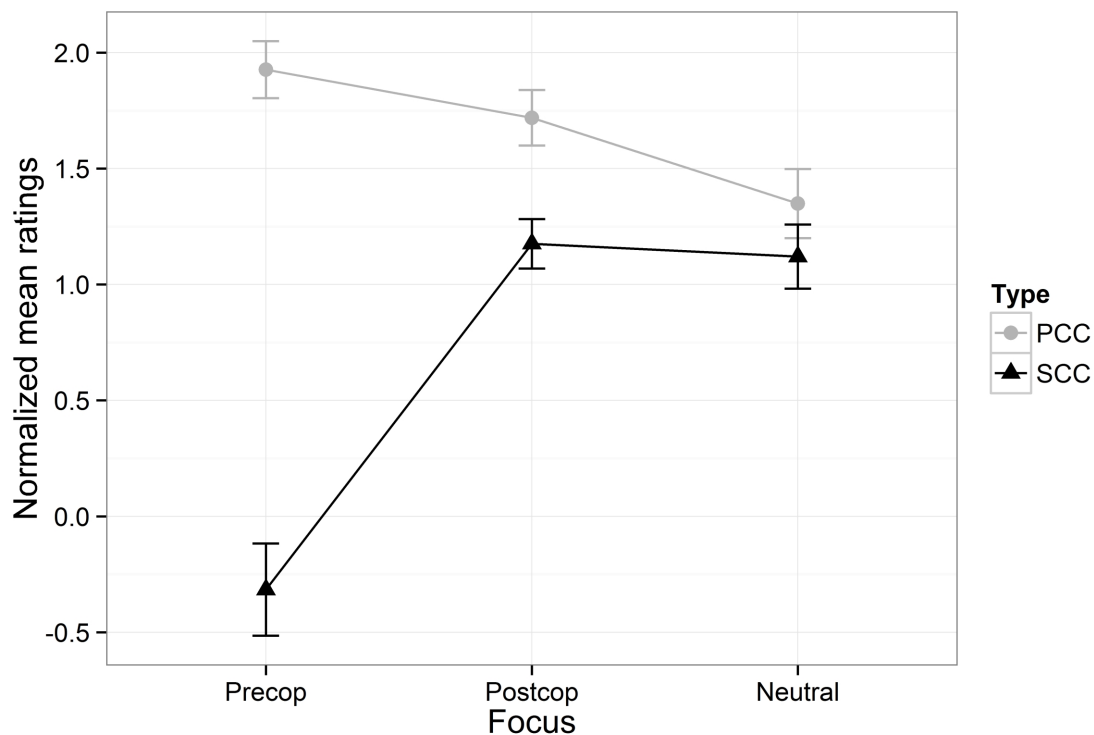


Figure 3.8: Average rating (z-score) per condition

What we can see in these results is that there is a clear difference between SCC and PCC. The former clearly do not allow a narrow focus on the initial NP, as reported in the theoretical literature on this phenomenon. The low rating on the definite DP in PCC could be ameliorated by providing an appropriate context. Such a context did not improve the ratings for the focus on NP1 in SCCs.

Thus, the original observation that SCCs do exhibit a restricted InfS has been confirmed in the two studies presented here.

### 3.5 Conclusion

In this section, I have argued for an inversion analysis of SCCs that is driven by the focus mapping present in SCCs. The focus mapping has been hypothesized to solve the type mismatch created by two definite DPs in PrP.

The post-copular noun phrase is focused and remains in-situ, while the background moves away in order to satisfy the subject requirement of Spec,TP. Thus, the analysis here takes two crucial observations about SCCs serious: (i) SCCs have a specific focus structure - the post-copular noun phrase needs to be focused, and (ii) the syntactic inversion is a direct consequence of the focus structure of SCCs. The model presented in the previous chapter allows for the implementation of (i) and (ii) in a consistent and straightforward manner, because syntax and InfS can interact during the derivation at the phase-level.

# 4 The Syntax of *it*-Clefts in English

## 4.1 Introduction

The aim of this section is to provide an analysis of the syntax of *it*-clefts (=ICs) in English. I will argue that ICs are a subtype of specificational copula clauses (=SCCs). Therefore, I propose that the syntax of ICs is identical to specificational copula clauses with respect to (i) the underlying structure of PrP, (ii) the fact that the DP in Spec,PrP remains in situ in Spec,Pr, and (iii) the specifier of TP is occupied by an element which is (part of) the complement of PrP. Thus, ICs contain a specific syntactic projection for predication, PrP (in the sense Bowers 1993). The pivot is base-generated as the underlying subject, i.e. it occupies the specifier of this PrP. The cleft clause is base-generated as the syntactic predicate, i.e. it is the complement of the predicative head. The major difference between ICs and SCCs is the syntactic position of the cleft clause and its relation to the pronoun *it*. The cleft clause is extraposed (in German obligatorily; in English the evidence is more intricate). The role of the pronoun *it* in these structures is more difficult to determine. I suggest that *it* together with the relative clause forms a DP - a kind of light-headed relative clause.

The chapter is structured as follows. In section 4.2, I review current proposals for the syntax of ICs summarizing their merits and weaknesses.

In 4.3 I outline the overall structure. The analysis of ICs as specificational sentences is motivated in section 4.4. The nature and role of the pivot is discussed in section 4.5, and the role of the cleft clause in 4.6. The cleft clause is analysed as light-headed relative clause. Section 4.7 argues that this clause is base-generated low and extraposed to a adjoined position. The final section concludes the discussion.

## 4.2 State of the Art

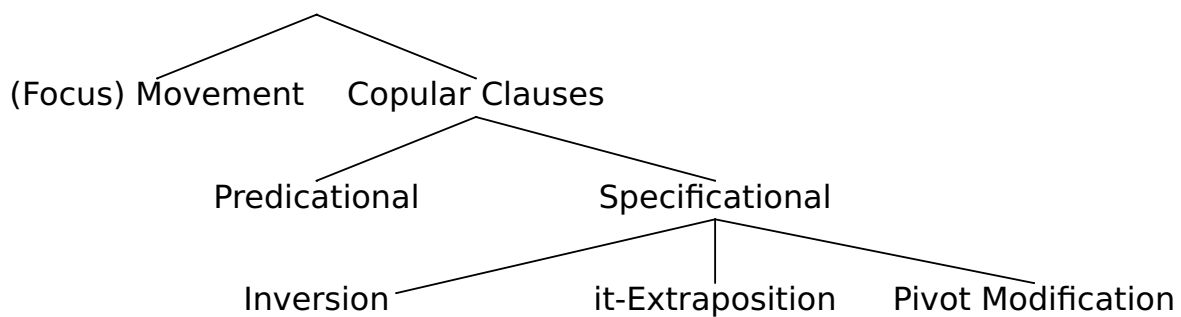
### 4.2.1 Overview

The analyses of *it*-clefts can be classified in various classes along the lines illustrated in (1). Proponents of the **Movement Analysis** propose that the pivot is moved to its surface position from within the cleft clause. The target position is a (left-peripheral) focus related position. *It* and the copula are expletive elements inserted higher up in the structure. Proponents of **Copular Analyses** assume that ICs are a subtype of copular clauses. The copular analyses can be further divided with respect to the subtype of copular clause which ICs are assumed to belong to: **predicational approaches** or **specificational approaches**. In predicational analyses, the pivot and the cleft clause are in a predicative relationship, while *it* is inserted as an expletive into the subject position (see Williams 1980, Delahunty 1982, Heggie 1988;). Specificational analyses assume that *it*-clefts share the major syntactic and semantic features of specificational copula clauses (= SCC). The specificational analyses can be further subclassified with respect to how the three major elements—*it*, pivot and cleft clause—are combined to form a SCC. The inversion analyses by den Dikken (2013) assimilates the analysis of ICs to the inversion analysis of SCCs in general. In *it*-extraposition analyses, *it* takes the position of the subject and is linked to the cleft clause in

extraposed position, either by movement (e.g. Akmajian 1970, Pinkham and Hankamer 1975, Percus 1997, Huber 2002) or indirectly through some interpretive process (see Gundel 1977, Hedberg 1990). In the pivot modification analysis by Hedberg (2000), Reeve (2010, 2011, 2012) the cleft clause syntactically modifies the pivot.<sup>1</sup>

The subclassification is illustrated in (1).

(1) Classification of Cleft analyses



The various different approaches can be diagnosed by the properties of the three main elements in ICs, the pronoun *it*, the pivot, and the cleft clause. The major classes and proponents are sketched in the table in 4.1.

<sup>1</sup>There are also a range of analyses in different frameworks, most prominently in construction grammar, see Lambrecht (2001), Patten (2010). I do not discuss these here separately.



| Approach                 | <i>it</i>                        | Pivot                     | Cleft clause   | Major proponents   |
|--------------------------|----------------------------------|---------------------------|--|--|
| Movement                 | expletive                        | moved from cleft clause   | main clause  | Chomsky (1977), Rochement (1986), É. Kiss (1998), Meinunger (1998), Frascarelli and Ramaglia (2013)          |
| Predicational            | expletive                        | (SC) subject              | Relative clause; (SC) predicate                      | Williams (1980), Delahunty (1982), Heggie (1988)   |
| <i>it</i> -extraposition | it-correlate                     | specificational predicate | extraposed relative clause (moved or base-generated) | Akmajian (1970), Emonds (1976), Gundel (1977), Grewendorf and Polletto (1991), Hedberg (1990), Huber (2002). |
| Modification             | surface subject                  | specificational predicate | relative clause modifier to pivot                    | Reeve (2010, 2011, 2012), Hedberg (2000)   |
| Inversion                | surface subject and SC predicate | SC subject in situ        | relative clause modifier to pivot                    | den Dikken (2013)  |

Table 4.1: Summary of major approaches to the syntax of *it*-cleft sentences

### 4.2.2 Movement analyses

#### 4.2.2.1 Early analyses

The movement analysis has its roots in at least Jespersen (1937) where he proposes that cleft sentences do not contain a bi-clausal structure but *it* plus the pivot undergo “a kind of extraposition”, whereas he treats “the rest of the sentence as if there had been no intercalation” Jespersen (1937, 76) (contrary to his original analysis in Jespersen 1927).

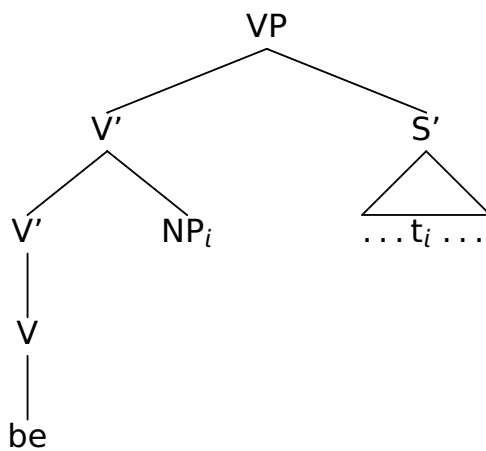
The idea was taken up in the generative syntax tradition by Chomsky (1977, 94ff) (see Huber 2002). Chomsky proposes a related derivation for preposing, inverse pseudoclefts and *it*-clefts. All three structures are derived from *wh*-movement to the specifier of Comp (Spec,CP in modern terms), with the pivot in a left-peripheral position.<sup>2</sup>

- |     |                                |                           |
|-----|--------------------------------|---------------------------|
| (2) | a. the book is what I read     | NP <i>is</i> S'           |
|     | b. the book, I read            | [S'' TOP S']              |
|     | c. it was the book that I read | <i>it is</i> [S'' TOP S'] |

A mono-clausal movement analysis has been proposed by Rochemont (1986). He establishes a connection between the English *it*-cleft construction and Hungarian Focus Movement constructions as analysed in Horvath (1981). In this analysis, the pivot successive cyclically moves from the cleft clause, to a position adjoined to the verb *be*, as illustrated in (3). This movement is in effect movement from an A'-position into an A-position, which is argued by Horvath (1981) to only be possible if the A-position does not

<sup>2</sup>Even though this analysis is a movement analysis it is not strictly speaking a mono-clausal analysis. The parallelism to preposing constructions suggests this, however, the analysis is compatible with an base-generation analysis of the pivot in a high left-peripheral position plus *wh*-movement inside S', parallel to *wh*-movement in relative clauses. This is in fact what Chomsky clarifies later. A footnote in Chomsky (1981, 280) suggests that he intends S' to contain a *wh*-element, that binds the trace. Thus, the pivot is rather base-generated in a high-position.

## (3) Structural analysis of ICs in Rochemont (1986, 145)



c-command the A'-trace (the latter would result in a violation of Principle C).

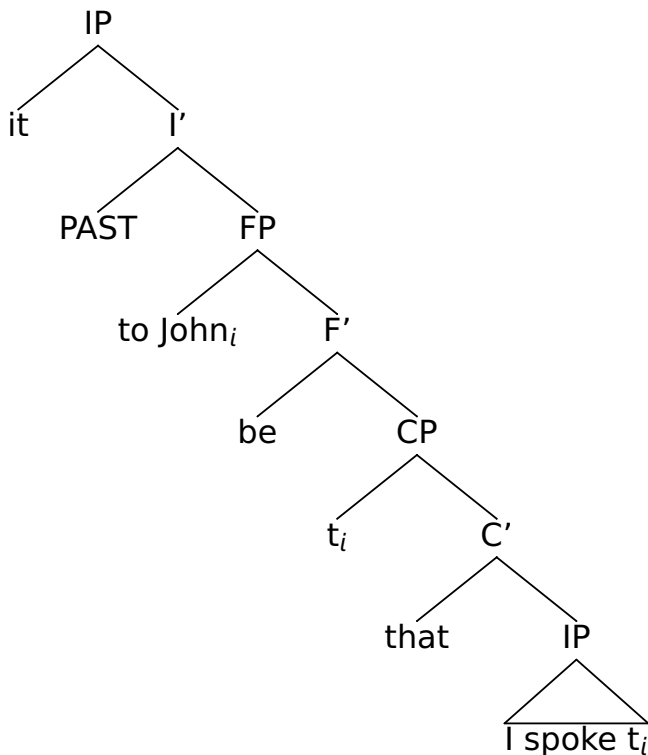
Rochemont hypothesizes that this kind of movement results in a contrastive interpretation. Thus, he links a 'non-default' syntax to a 'non-default' information structure.

## 4.2.2.2 É. Kiss (1998, 1999)

É. Kiss (1998) provides a more recent update of Rochemont's movement analysis. She proposes that English *it*-clefts are parallel to Hungarian focus movement constructions. She concentrates mostly on the focus properties of the two structures, which they share, and which sets them apart from new information focus. Both structures express exhaustive identification and they are incompatible with universal quantifiers, *also* and *even*-phrases (for discussion of the focus properties, see chapter 5). With respect to the syntax, É. Kiss (1998) proposes that both structures are derived by focus movement of the focused constituent to a special focus projection. The structure for English clefts is illustrated in (4).

A major advantage of the movement analysis is that it derives PP clefts straightforwardly. PP clefts differ from regular relative clauses modifying a noun phrase in that they allow a PP gap, see (5). This is not possible in

(4) É. Kiss (1998, 245)



relative clauses (6).

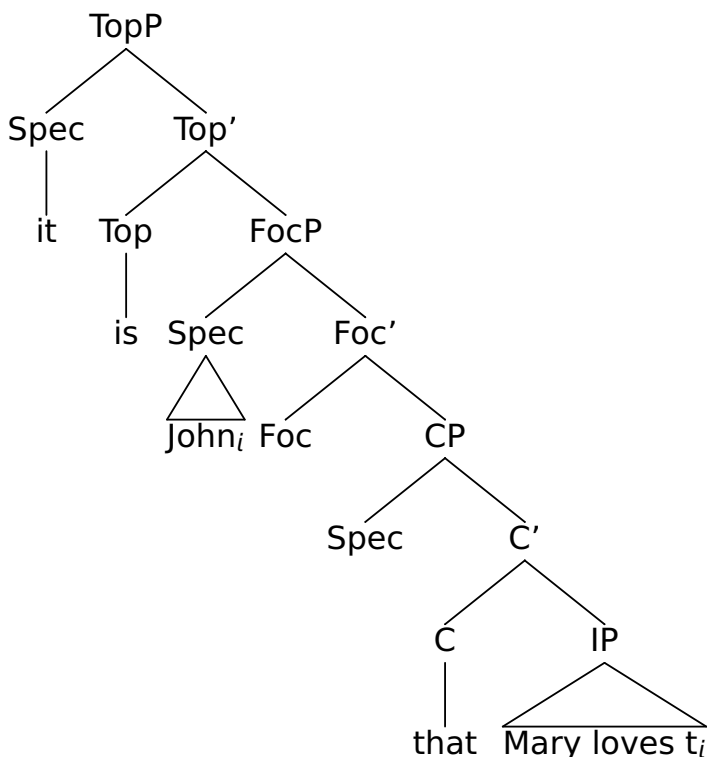
- (5) a. It was to John that I spoke. (É. Kiss, 1998, 258)  
b. \*It was to John that I spoke to.
- (6) \*He gave the book to the man that I spoke.
- (6) \*He gave the book to the man that I spoke to.

This fact is not so obvious to be accounted for in non-movement approaches. I come back to the discussion of this fact in section 4.6.

#### 4.2.2.3 Meinunger (1998)

Meinunger (1998) also proposes a mono-clausal movement analysis in which the clefted constituent moves to a left-peripheral focus position, parallel to a focus fronting position.

(7) Meinunger (1998, 245)



The major argument for this structure of ICs is actually based on pseudoclefts, which Meinunger (1998) takes to be derived from ICs with an additional movement of the cleft clause to the specifier of TopP. With a monoclausal movement analysis, the connectivity effects observed in specificational pseudoclefts, illustrated in (8a), as well as the tense matching effects in (8b) are explained by the mono-clausal structure. In (8a), the anaphor *himself* is licensed in the clefted position, even though it is not in the c-command domain of its antecedent *John* in the surface structure. The movement analysis assumes that underlyingly, the anaphor is base-generated in the complement position of the verb, where it is licensed. Anaphors are only licensed in the specificational reading, and only if the tense of the matrix clause matches the tense of the embedded clause, shown in (8b).<sup>3</sup>

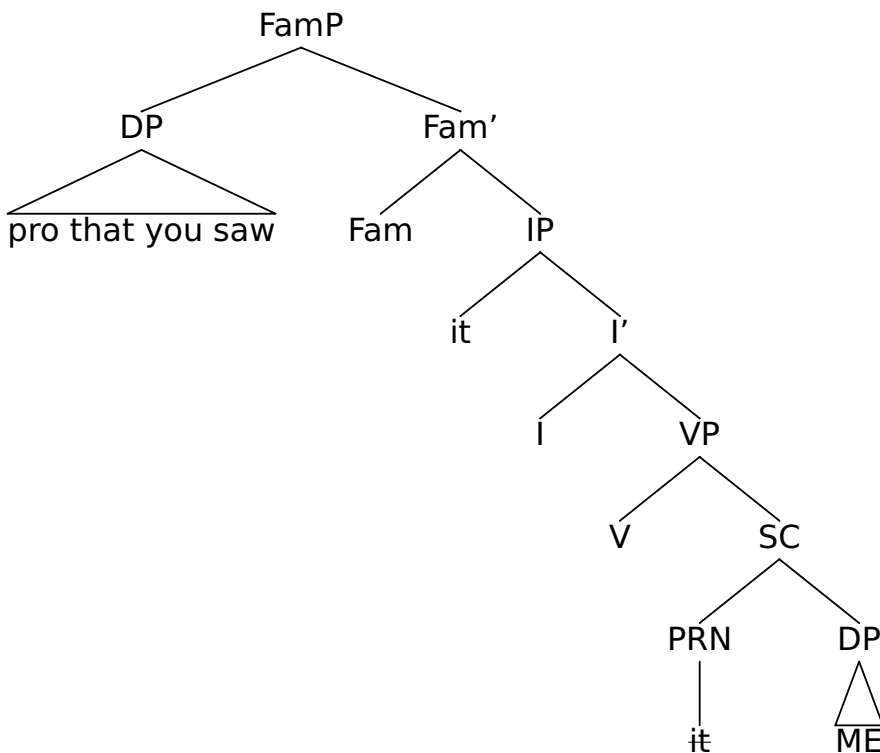
<sup>3</sup>The theory still needs to have an account for how the copula ‘inherits’ the tense of the main predicate in the embedded clause, which is not spelled out in the paper.

- (8) a. What John read was a book about himself.  
 b. What John read is a book about \*himself/him.

#### 4.2.2.4 Frascarelli & Ramaglia (2013)

Frascarelli and Ramaglia (2013) provide the most recent analysis in which the pivot moves from inside the cleft clause to a left-peripheral position. The analysis is actually a mixture of the analysis presented by É. Kiss (1998), Meinunger (1998), with an underlying specificational predication in which the subject of predication is *it* and the pivot is the specificational predicate. They assume Kayne's antisymmetry proposal and therefore require a few more movements to get the word order right. These are illustrated in (9) and (10).

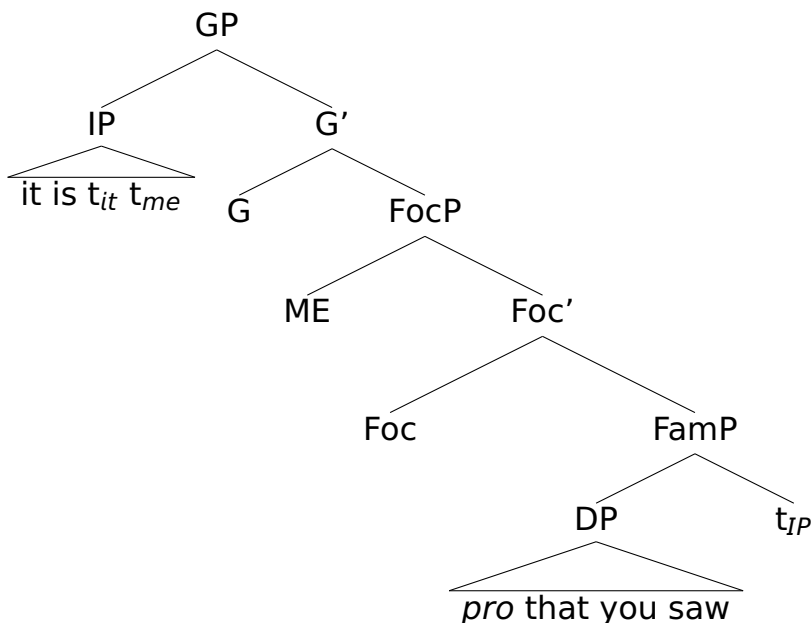
- (9) It is me that you saw. / Sono io che hai visto.



The derivation starts off with a specificational SC in which the pronoun *it* and the pivot form a specificational small clause. It moves to the subject

position of the IP. The cleft clause is base-generated in a higher position, the specifier of the familiarity phrase, see (10). The pivot moves out of the cleft clause to a left-peripheral focus position. After that remnant movement of the IP into Spec,GP [=GroundPhrase] ensures the correct word order, as illustrated in (10).

(10) It is ME that you saw.



Putting aside the details of this analysis, I listed it among the movement analyses, because the major criticism for it is due to the aspect of movement to a left-peripheral position.

#### 4.2.3 Against movement analyses

The discussion above has shown that the movement analysis fares well with two aspects of ICs. First, the analysis of PP clefts as in (11), and the analysis of connectivity effects as in (12).

(11) It is to John that I spoke.

(12) It is a picture of himself<sub>i</sub> that John<sub>i</sub> likes.

I will discuss the former case in section 4.6.5 below. The connectivity effects are certainly interesting to investigate. However, there is reason to believe that a logophoric interpretation is possible. Thus, when another antecedent is available, the logophoric interpretation in (13) is rated higher than the anaphoric interpretation in (14).

(13) Andrew said that it was himself that Tina praised in her speech.

(14) Tina said that it was himself that Andrew praised in his speech.

Second, these types of connectivity effects also occur in specificational DP-be-DP sentences as in (15), where a movement analysis is rather implausible.<sup>4</sup>

(15) His<sub>i</sub> worry is himself<sub>i</sub> (Schlenker, 2003, 159)

While these are (limited) merits of the movement approaches, there is a long list of arguments against movement analyses of *it*-cleft sentences, in which the pivot moves out of the cleft clause to a focus position.

**(i) The occurrence of *it* and the copula remains unexplained.** One of the central problems for the movement analyses as presented above is that it remains unclear why the copula and the pronoun *it* occur in clefts (except for the analysis in Frascarelli and Ramaglia 2013). The presence of the two elements can only be stipulated. This is especially important in the light of the findings that *it* is not expletive in nature (see Hedberg 2000, Reeve 2011, 2012 for details).

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<sup>4</sup>I will not dwell on this issue in detail here. For recent ideas, references and overviews see Hartmann et al. (2013) for pseudoclefts and Fiedler (2014) for Germanic ICs.



**(ii) The relationship between copular clauses and *it*-clefts remains obscure cross-linguistically** ICs exist in many languages, also in languages that do not exhibit focus movement otherwise. Additionally, pseudoclefts do occur even in languages that exhibit focus movement as the preferred choice for expressing marked focus. Thus, there is a fundamental relationship between clefts and copula structures, which the movement analyses miss completely (again with the exception of Frascarelli and Ramaglia 2013).

**(iii) The relative clause structure remains unexplained.** The movement analysis misses the point that ICs also occur with relative pronouns, and that the cleft clause exhibits all the structural properties of relative clauses. Furthermore, Ball (1994) shows that, historically, the cleft clause changes along the lines of relative clauses in general, further supporting the point here that the cleft clause indeed is a relative clause. A further point to be considered here is the relationship between *that*-complement clauses and relative clauses, more generally. It has been suggested that complement clauses to nouns are actually relative clauses (Arsenijević 2009, Kayne 2010, Haegeman 2012), a claim that is disputed on good grounds in Cuba (2014) (and references therein). Especially in ICs containing an adverbial, the presence of the cleft clause formally can no longer be distinguished from a *that*-clause.

- (16) It is with great honor and pleasure that I announce Hilary Putnam.  
(Prince, 1978, 902)

It might be less obvious to argue for a RC analysis here on the basis of synchronic data. However, from a historical perspective, it is rather plausible that *that*-clauses developed from relative clauses, see Axel-Tober (2012) for

insightful discussion. Thus, the similarity to complement clauses in these adverbial clefts cannot be used in favour of movement analyses, either.

**(iv) Lack of that-trace effect remains unexplained.** Relative clauses and regular that-clauses famously differ with respect to the *that*-trace effect. Complement clauses do not allow a trace in subject position, see Perlmutter (1971).

(17) That trace-effect

- a. Who do you think [ \_\_ read the book]?
- b. \*Who do you think [that \_\_ read the book]?

(18) Anti-that-trace effect (Branigan, 1992, 97)

- a. the fellow \*(who/that) called.
- b. the fellow (who/that) we called.

If the that-clause were a complement clause, we would expect to find the that-trace effects contrary to fact.

**(v) Extraction from cleft clause impossible.** It is impossible to extract material from the cleft clause, which means that the cleft clause is an island (see Heestand 2011 for experimental confirmation), a fact which is unexpected if the cleft clause is a regular complement clause. If the cleft clause is a relative clause, as argued for below, the extraction facts are expected.

(19) Subject clefts

- a. It was John who planted that flower in the garden.
- b. \*What was it John that planted \_\_ in the garden?
- c. \*Where was it John that planted the flower \_\_?

(20) PP clefts

- a. It was in the garden that John planted that flower.
- b. \*What was it in the garden that John planted \_\_?

**(vi) Agreement mismatches remain unexplained.** Huber (2002, 73) points out that the movement analyses cannot account for the fact that the verb inside the cleft clause usually does not agree in person with the pivot.<sup>5</sup>

(21) It is you that is/\*are coming.

**(vii) Lack of freezing remains unexplained.** Hartmann (2013a) points out that the lack of freezing in ICs remains unexplained under movement analysis. Focus moved constituents usually do not allow (sub-)extraction. It is possible however, to extract the pivot and subextract from the pivot position, see (22).

- (22)
- a. It was a manipulation of data that the committee criticized.
  - b. What was it a manipulation of that the committee criticized?
  - c. What was it that the committee criticized?

**(viii) Differences to focus fronting remains unexplained.** English also allows focus movement to the sentence initial position. In the movement analysis it remains unexplained as to why English should exhibit both alternatives. Additionally, it cannot explain differences between focus fronting and ICs. For example, Delahunty (1982, 28) observes that those adverbials that require subject-auxiliary inversion in regular clauses do not allow inversion in cleft sentences.

- (23)
- a. Seldom have I seen so many people working so hard.
  - b. \*Seldom I have seen so many people working so hard.

<sup>5</sup>Agreement patterns are not a trivial issue in clefts, especially when considering different dialects, see Akmajian (1970) for further details.

- (24) a. It is seldom that I have seen so many people working so hard.  
 b. \*It is seldom (that) have I seen so many people working so hard.

**(ix) Clefts are not a root phenomenon.** Finally, Haegeman et al. (2013) point out that clefts are not a root phenomenon. They can also occur in embedded contexts, whereas focus fronting is rather restricted in embedded contexts. This criticism is especially important for the approach by Frascarelli and Ramaglia (2013), where clefts have an extended left-periphery including the high projection of GroundPhrase.

Thus, I conclude that movement analyses of ICs are not on the right track.<sup>6</sup>

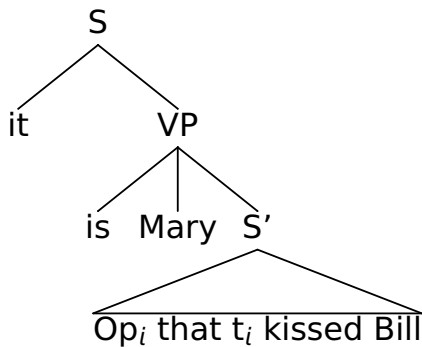
#### 4.2.4 Predicational copular clause analyses

The common feature of the predicational analyses is that the cleft clause is a (complex) sentential predicate that is predicated of the pivot. Williams (1980) is one of the first to make such a proposal. His proposal is not worked out in detail and is implemented in his framework of Representation Theory

<sup>6</sup>The discussion here is indirectly linked to the discussion of raising/promotion analyses of relative clauses in general, a proposal also assumed for a subclass of cleft clauses in Reeve (2011, 2012). The major arguments for such a raising analysis come from idioms and binding facts. First of all, with respect to idioms the argument rests on the assumption that idioms are not separable per se and only interpretable as a single constituent. However, this seems not to hold of idioms per se, and some idioms might actually receive an compositional, though rather metaphorical interpretation, see Nunberg et al. (1994) for early discussion and more recently Fellbaum (2015). Second, the general line of argumentation for the raising analysis in particular, assumes that for binding of anaphors and variables alike, reconstruction presupposes syntactic movement. This is however not a necessary step and there are differences between syntactic reconstruction, which presupposes movement, and semantic reconstruction, which does not, see Sternefeld (2001) for insightful discussion and more recently for discussion in relation to clefts Fiedler (2014). Additionally, the necessity of and correct predictions for a head-raising analysis of relative clauses is generally disputed, see Sternefeld (2012a), Salzmann (2006) and references therein. The major points to be made are the following. (i) Head-raising analyses provide evidence that is meant to show that the head of the relative clause has to have a base-position in the relative clause. However, this evidence can be accounted for independently. (ii) In languages like German, there are conflicting morphological requirements on the head noun in its base-position and in its target position. It is unclear how a head-raising analysis can deal with this.

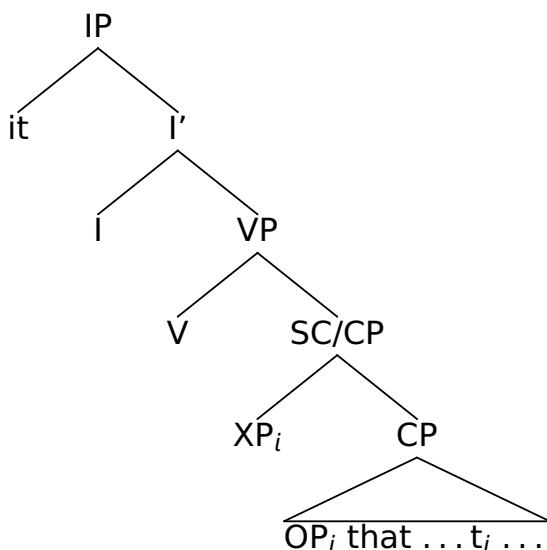
(see chapter 2, section 2.6.6.3). Delahunty (1982, 1984) develops this proposal within the standard framework, see (25).

(25) It is Mary that kissed Bill. (Delahunty, 1982, 129)



Heggie (1988) combines this analysis with the idea that the pivot and cleft clause are part of a small clause structure; : a small clause as proposed in Stowell (1978). Her analysis is provided in (26).<sup>7</sup>

(26) Heggie (1988, 192)



The major problem for the predication analyses is that *it* is considered an expletive element. This is problematic from a cross-linguistic perspective, as Reeve (2012, 10ff) points out. If *it* was a proper Spec,TP expletive, it is

<sup>7</sup>One major concern of Heggie's analysis is the licensing of the null operator by co-indexation with the pivot. I put aside this question here.

predicted to be absent in languages like German in which Spec,TP does not need to be occupied by a nominal element. This, however, is not the case. In German clefts, *es* is obligatorily present. Additionally, predication and specificational copular clauses are not of the same type. Below I will argue that ICs belong to the latter type, therefore a predication analysis is not on the right track.

#### 4.2.5 *it*-Extraposition from subject

Extraposition analyses have their predecessor in Akmajian (1970), who derives ICs from *wh*-clefts:

- (27) a. [It who is sick] is me →  
 b. It is me [who is sick]

The analysis has been challenged on various grounds. A dominant critique is that he had to derive PP-clefts from an ungrammatical D-structure, see Emonds (1976) cited in É. Kiss (1999, 220).

- (28) [It that I spoke] was [to John].

The analysis by Emonds (1976) is very similar to Akmajian analysis with an additional first derivational step in which the pivot is moved from the cleft clause.

- (29) D-structure: [that I spoke to a friend] was

- (30) Transformation I: Movement of pivot

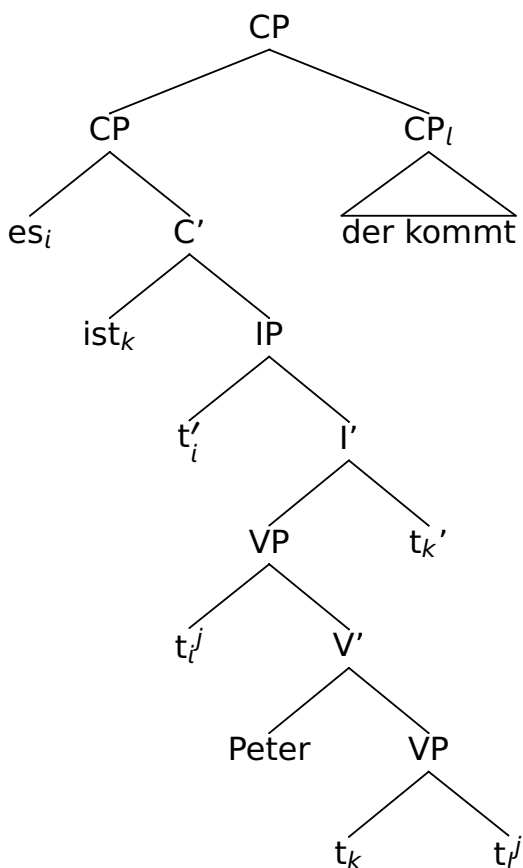
- a. that I spoke was to a friend  
 b. that I spoke to was a friend  
 c. that I spoke to him was a friend.

→ who I spoke to was a friend → to whom I spoke was a friend

(31) Transformation II: Extraposition

- a. It was to a friend that I spoke.
- b. It was a friend that I spoke to.
- c. It was a friend to whom I spoke.
- d. It was friend who I spoke to.

(32) Huber (2002, 192)



#### 4.2.6 Against subject extraposition analyses

Reeve (2011, 2012) reviews a number of arguments against analyses in which the cleft clause is extraposed from subject position. I provide those in the following.

**(i)** Subject relative clauses may be stranded by VP ellipsis, while object relative clauses may not. Clefts pattern with object relative clauses.

(33) a. Although not many people would ride with Fred who knew just him, some would \_\_ who knew his brother. [subj-rel]

b. \*Although he didn't call people up who are from Boston, he did \_\_ who are from New York. [obj-rel] (Reeve, 2012, 29)

(34) \*Although it probably wasn't John who cooked the stew, it might have been \_\_ who baked the cake. (Delahunty, 1982, 200)

**(ii)** In raising constructions, extraposed subject relative clauses have to be part of the clause of the derived position, indicated by the fact that they need to follow *by*-phrases. This is not the case in *it*-clefts.

(35) a. A man was believed to have arrived that I have insulted.

b. ?A man was believed to have arrived by everyone that I have insulted.

c. \*A man was believed to have arrived that I have insulted by everyone. (Reeve, 2012, 31)

(36) a. ??It was believed to be John by everybody that Mary saw.

b. It was believed to be John that Mary saw by everybody.

**(iii)** Raising of the noun phrase head of an extraposed relative clause changes binding conditions. In (37), raising obviates the condition C violation caused by the experiencer. In cleft-sentences binding restriction do not change through raising of the pronoun.

(37) a. ??It seemed to her<sub>i</sub> that a man had arrived that Mary<sub>i</sub> knew from school.



- b. A man seemed to her<sub>i</sub> to have arrived that Mary<sub>i</sub> knew from school.

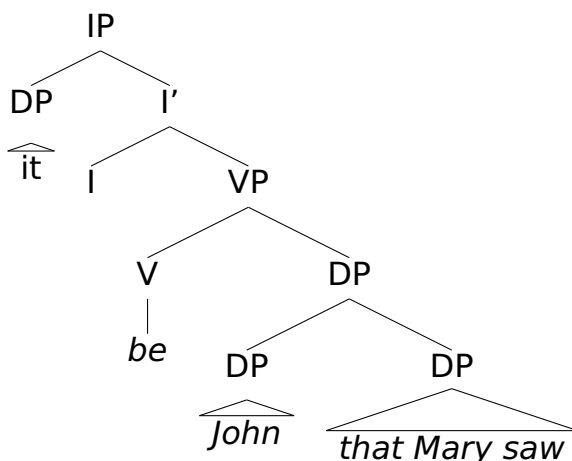
- (38) a.?\*It seemed to her<sub>i</sub> that it was John that Mary<sub>i</sub> saw.  
b.?\*It seemed to her<sub>i</sub> to be John that Mary<sub>i</sub> saw.

I follow Reeve (2011, 2012) and conclude that subject extraposition analyses are not on the right track.

#### 4.2.7 Pivot modification

Hedberg (2000) argues that the cleft clause syntactically modifies the pivot, while semantically, it is interpreted as co-referential with the cleft pronoun. Reeve (2010, 2011, 2012) (henceforth abbreviated as *Reeve*) takes up this analysis. He convincingly argues that the cleft clause cannot be extraposed from the subject position, because syntactically, it does not behave like an extraposed subject relative clause. The core proposal with respect to the syntax of ICs, Reeve proposes along the lines of Hedberg (2000) that the cleft clause acts as a modifier of the pivot. *It* is the subject of predication, which is base-generated in the specifier of TP. The structure is illustrated in (39).

- (39) Analysis by Reeve (2012, 9)



There are two problems for this analysis. First, as I will show below the major problem for this analysis is the modification relationship between cleft clause and pivot. Second, Reeve argues that the syntax of clefts does not match its interpretation. Thus, while he proposes a modification relationship between the cleft clause and pivot syntactically, he assumes that *it* and the cleft clause are interpreted semantically as one constituent. As I will show below, I think it is not necessary to give up on compositionality (contrary to the proposal by Reeve (2012), and also contrary to Lambrecht 2001).<sup>8</sup>

#### 4.2.8 Inversion

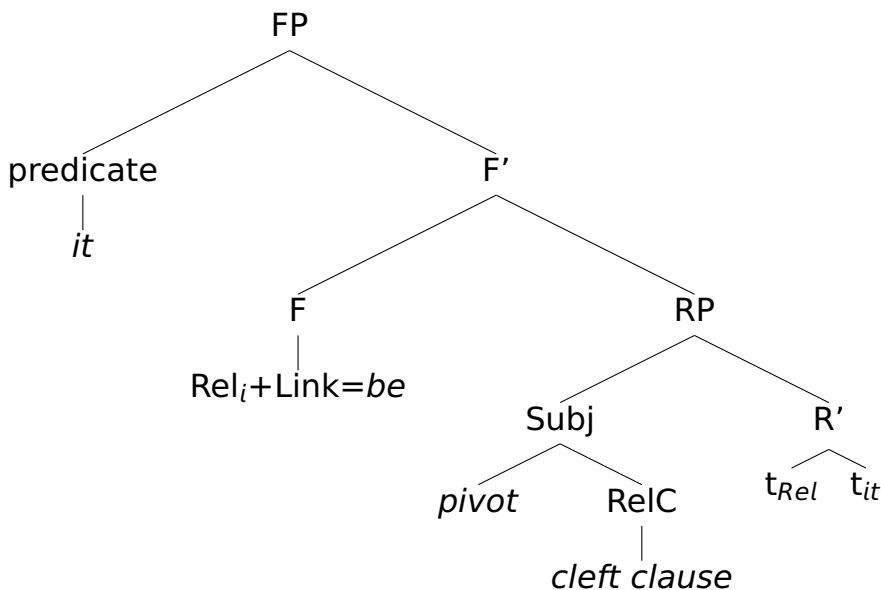
den DikkenDEN DIKKEN (2013) starts off with arguing that ICs are copular clauses that come in two flavours, specificational ICs and predicational ICs, a distinction that has been observed already by Kruisinga and Erades (1953) and is discussed in detail in Declerck (1983), Hedberg (1990). I will postpone the discussion of the predicational type to chapter 5 section 5.8, and concentrate on the analysis of the specificational type here. Den Dikken (2013) proposes that specificational ICs are inversion structures, just as specificational copula clauses in general. He assumes that *it* is the predicate of the structure, while the pivot is the subject of predication. The cleft clause is taken to modify the pivot. The overall structure is given in (40) omitting the details of the relative clause structure.

Interestingly, den Dikken (2013) proposes a correlation between contrastive clefts and comment clause clefts with two different types of relative clause derivations. For the former, he assumes that the relative clause is a headless relative clause in extraposed position. For the latter, den Dikken pro-

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<sup>8</sup>Thus, I think that ICs do not need to be seen as ‘constructions’ as proposed in Construction Grammar. They appear to be constructions in the sense that there is a mapping between syntax and InfS which is specific to a the set of specificational copular clauses. In this sense, my analysis is close to the approach taken in Patten (2010) in a different framework.

(40) Analysis by den Dikken (2013)



poses that the relative clause is a pseudo-relative, i.e. the value occupies the specifier position of the cleft clause. I will come back to the discussion of this issue below in section 4.6.

The major criticism for this analysis lies in the point that the cleft clause is taken to modify the pivot, similarly to what Reeve (2011, 2012) proposes. I turn to this criticism in the next section.

#### 4.2.9 Against a modification relation

Both the pivot modification (see most prominently Hedberg 2000, Reeve 2011, 2012) as well as the inversion analysis (see den Dikken 2013) propose that the cleft clause modifies the pivot. There are several reasons why this suggestion is problematic.

First of all, restrictive relative clauses cannot modify proper names without the determiner ‘the’. This is possible with clefts (see Declerck 1988, 152, Huddleston 1984).

(41) a. \*Do you know John that Mary saw?

- b. It was John that Mary saw.

Second, while a relative clause restricts the domain of the quantifier, this is not the case with cleft clauses (see Davidse 2000, 1114). We are talking about a subset of students in (42a), but about all passengers in (42b).

- (42) a. All students who attended will receive a bonus point.  
b. It was all the passengers who had committed the murder.  
(Davidse, 2000, 1114)

Third, the pivot is not limited to noun phrases, but can also be a prepositional phrase, an adjectival phrase, or even a clause. These cannot usually be modified by a relative clause headed by *that*.

- (43) a. It is to John that I spoke.  
b. \*He turned to the teacher that nobody spoke \*(to).

As a result, it is difficult to maintain that the cleft clause modifies the pivot in the same way as relative clauses modify argument DPs.

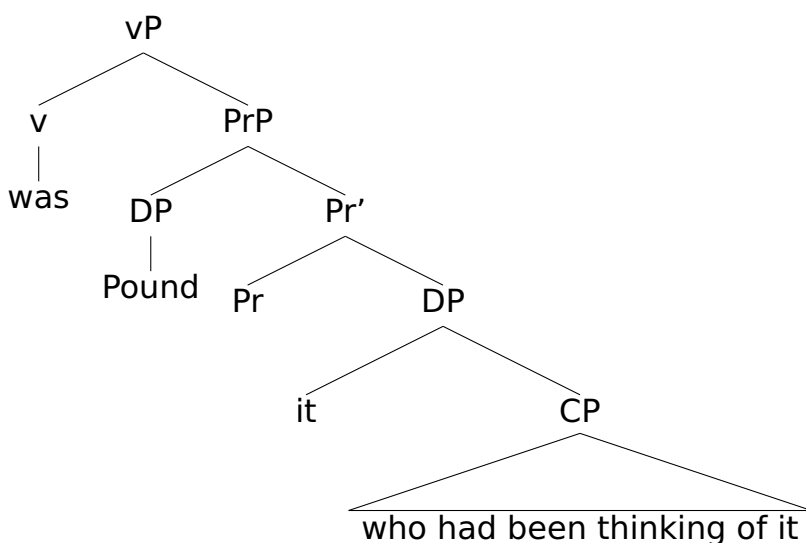
#### 4.2.10 Conclusion

In this section, I have reviewed the major syntactic approaches to cleft sentences. I argued in detail against the Movement approaches, the subject extraposition approaches, and against the analysis of the cleft clause modifying the pivot. Thus, the pivot and the cleft clause need to be independent constituents and part of the predication structure. At the same time, we have seen that *it* is not an expletive pronoun, so there are three constituents that are seemingly part of a copular structure, which usually only hosts two elements. In the next section, I sketch how these elements can be brought together.

### 4.3 The Proposal in a Nutshell

In the following, I will argue for the syntactic structure of ICs as provided in (46). The derivation proceeds in the following steps. First, the PrP with the underlying subject and predicate is merged, see (44).

(44) Step 1: Merger of the core predication

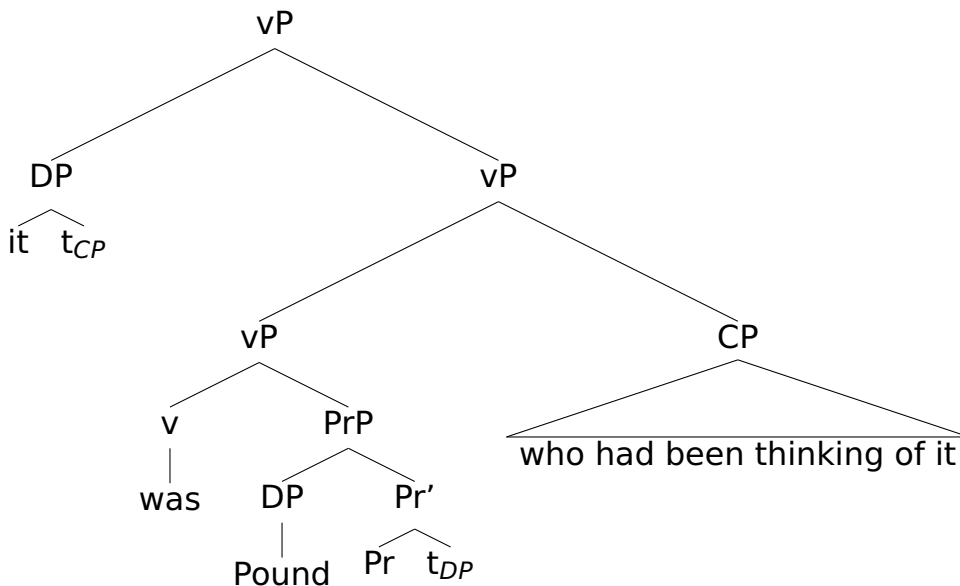


The next relevant step in the derivation is that the cleft clause is extraposed to the right, while the DP containing the pronoun *it* undergoes inversion along the lines of the derivation of SCCs proposed in chapter 3. There are two ways to conceive of this. First, there are two independent movements - (i) of the CP to its extraposed position and (ii) of the DP containing the trace of the CP. Alternatively, the DP containing the CP could be moved to Spec,vP and then the CP is stranded in this position. The latter option requires that the pivot and the cleft clause are linearized in the order *pivot* > *cleft clause* at PF.<sup>9</sup> Such a process of extraposition at PF is argued for in Goebbel (2007), Hartmann (2013b). The final step in the derivation is that the DP containing *it* moves to Spec,TP deriving the final structure in (46).

The proposal combines ideas from different previous proposals in a new and

<sup>9</sup>Alternatively, the cleft clause could be base-generated to the right. I discuss this option below in section 4.7.

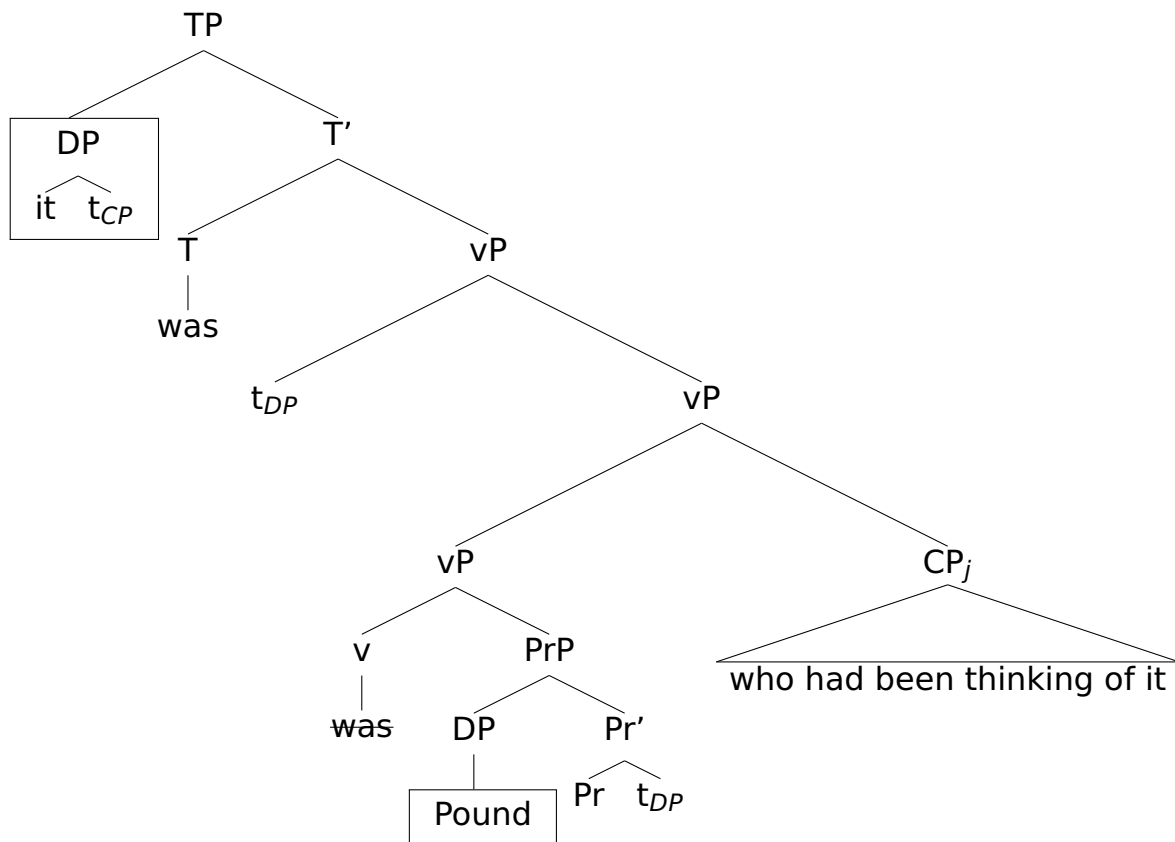
## (45) Step 2: Inversion and extraposition of the cleft clause



hopefully insightful way. Following a large part of the previous literature, I assume that *it*-cleft sentences are specificational copula structures (see Akmajian 1970, Hedberg 1990, Huber 2002, Patten 2010, Reeve 2010, 2011, den Dikken 2013, among others). Along the lines of the analysis of SCCs, I take ICs to be syntactically inversion structures in line with the core idea in den Dikken (2013). I take the pivot to be the subject of predication (see Williams (1980)) that remains in its in-situ position. *It* and the cleft clause are syntactically related and form the syntactic predicate of this structure. The analysis differs from den Dikken (2013) in one important respect: I argue that the relative clause (=RC) does not modify the pivot (directly or indirectly). Instead, the RC is a light-headed relative clause. It functions as the syntactic and semantic predicate in *it*-clefts. Its interpretation parallels that of the underlying predicate in SCCs, namely it has a functional interpretation, such as a concealed question (see Romero 2005, Heycock 2013).<sup>10</sup>

<sup>10</sup>S. Huber (p.c.) objects that the relative clause cannot be the predicate of the structure, because (a) relative clauses are not predicates outside clefts, and, (b) these relative clauses cannot be co-ordinated with other predicates, cf. (i). Note though that as argued above, I take specificational predicates to be different from 'regular' predicates. What is at stake here is the question of the notion of a predicate. The definition adopted here is that the complement of PrP is semantically a function. However, this does not mean that

(46) It was Pound who had been thinking of it.



The following ingredients for the analysis proposed above will be substantiated in more detail in the next sections.

1. Cleft sentences are specificational copula sentences and as such, they are inversion structures. The DP containing the pronoun *it* is inverted to the subject position, while the underlying subject, the pivot, remains low in Spec,Pr.

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the predicate has to be a property (in the sense of Chierchia 1985). Thus, coordination with predicates that express properties is expected to be problematic. Second, relative clauses in Old English seem to exhibit exactly this configuration in which a relative clause occurs as some kind of predicate, see (ii).

- (i) \*It is John who favors Bill, or at least a supporter of Bill's.
- (ii) Min faedr is de me wuldrad.  
My father is Rel me glorifies.  
'It is my father who glorifies me.'  
(Haugland, 2006, 287)

2. The pivot is the underlying subject, i.e. it is base-generated in Spec,Pr.
3. The cleft clause is part of the relative clause predicate, i.e. the complement of Pr. The cleft clause is extraposed from this position.

## 4.4 It-clefts as Specificational Copular Constructions

### 4.4.1 Parallel properties

Huber (2002) provides three criteria for analysing *it*-clefts as specificational copula constructions (=SCC).<sup>11</sup> First, the specificational copula clause in (47a) and the cleft clause in (47b) have the same meaning. The specificational meaning has been characterized as ‘a semantic gap’ for which the post-copular phrase provides the value (Akmajian, 1979, 19) or the heading of a list for which the listed items are given in the postcopular position (Higgins, 1979, 154). The same holds for the ICs: the pivot specifies the individual for which the open proposition in the cleft clause holds.<sup>12</sup>

- (47)    a. John’s murderer was the butler.  
           b. It was the butler who murdered John. (Huber, 2002, 18)

Second, the pivot in both the pseudocleft and the *it*-cleft construction cannot be coordinated with a regular predicative DP, cf. (48).

- (48)    a. ???Who murdered John was the butler and a nice man.  
           b. ???It was the butler who murdered John and a nice man. (Huber, 2002, 18)

Furthermore, SCCs, specificational pseudoclefts and ICs give rise to an exis-

<sup>11</sup>Huber (2002) also includes exhaustivity as a common feature of the two structures. The facts for exhaustivity are more intricate and I will discuss these below in chapter 6.

<sup>12</sup>There are certainly also differences between sentences like (47a) and ICs as in (47b), resulting from the subject-/topichood of the noun phrase/wh-clause in the former.



tential presupposition (cf. among others Halvorsen 1978, Delin 1989, 1992, Hedberg 1990, Percus 1997, Hedberg 2000, Gundel 2002).

- (49) a. It was John who murdered the butler.  
       → someone murdered the butler  
       b. Was it John who murdered the butler?  
       → someone murdered the butler  
       c. It wasn't John who murdered the butler.  
       → someone murdered the butler
- (50) a. The one who murdered the butler is John.  
       → someone murdered the butler  
       b. Is the one who murdered the butler John?  
       → someone murdered the butler  
       c. The one who murdered the butler isn't John.  
       → someone murdered the butler

Note though that this parallelism has to be considered in more detail, as the sources of the existential presupposition might be different in the different types of sentences.

The preceding arguments are rather semantic in nature. There are two syntactic arguments in favour of the analysis of *it*-clefts in (46). First, agreement patterns in clefts show parallels to agreement patterns in SCCs, cross-linguistically. In English SCC, the verb agrees with DP1, the element that occupies Spec,TP. In German and Italian, the verb agrees with DP2, as illustrated in (51).

- (51) a. The cause of the fire is burning candles.  
       b. Die Ursache des Feuers sind brennende Kerzen.  
       c. La causa della rivolta sono le foto del muro.  
           the cause of.the riot are the photos of.the wall

(Moro, 1997, 67)

We find the same agreement pattern in *it*-clefts as in SCCs in the three languages: While we invariably find third person singular agreement with the initial pronoun *it* in English, we find agreement with the post-copular pivot in German and Italian (see Grewendorf and Poletto 1991), illustrated in (52).<sup>13</sup>

- (52) a. It is me who is sick.  
 b. Es waren die Nachbarn, die das getan haben.  
 c. sono io che l'ho fatto  
     am I that that's done  
     (Grewendorf and Poletto, 1991, 179)

A similar pattern holds for case in English and German.<sup>14</sup> English prefers accusative case on a post-copular pronoun both in SCC and in *it*-clefts, while German requires nominative case (see Grewendorf and Poletto 1991).

- (53) a. The murderer is me.  
 b. It is me who is the murderer.
- (54) a. Die Kursleiterin bin ich.  
 b. Ich bin es, die den Kurs leitet.

Finally and importantly, both SCCs and ICs share the fact that the post-copular DP is necessarily focused. This has been shown for SCCs in the previous chapter. I will argue for the same point for ICs in the next chapter. I consider this a crucial commonality for the two structures, which I think is important to grasp.

<sup>13</sup>For some interesting dialectal variation in agreement inside the relative clause see Akmajian (1970) and Buchele (2009).

<sup>14</sup>Italian is more complex with respect to case, as cleft sentences allow both nominative and accusative, see Frascarelli and Ramaglia (2013).

There is one caveat to be considered, though. As den Dikken (2013) acknowledges, SCCs differ from ICs with respect to *wh*-movement: the former disallow *wh*-movement of and from the post-copular noun phrase. In *it*-clefts both extraction of and subextraction from the pivot are possible at least in some cases, compare (55) vs. (56).

- (55) a. \*[Which picture]<sub>i</sub> do you think [the cause of the riot]<sub>j</sub> was [<sub>SC</sub> t<sub>i</sub> t<sub>j</sub>]?  
 b. \*[Which wall]<sub>i</sub> do you think [the cause of the riot]<sub>j</sub> was [<sub>SC</sub> [a picture of t<sub>i</sub>] t<sub>j</sub>]  
 (Moro, 1997, 45,49)
- (56) a. I think it is this book that every linguistics student should read.  
 b. Which book do you think it is t that every linguistics student should read?  
 (den Dikken, 2013, 7)
- (57) a. It was a manipulation of data that the committee criticized.  
 b. ?What was it a manipulation of that the committee criticized?  
 (Hartmann, 2013a, 490)

This lack of parallelism provides an argument against the analysis only if the restriction of movement is a direct consequence of the syntactic derivation. I suspect that the restriction is due to a mismatch of syntactic structure and focus structure in SCCs. Initial evidence for such an approach is provided in Reeve (2012), who shows that the extraction restriction in SCCs is not absolute; extraction is possible in some cases, see (58).

- (58) a. I wonder which person the mayor is t<sub>i</sub>.  
 b. \*I wonder who the mayor is t<sub>i</sub>.  
 (Reeve, 2012, 189)

Further evidence can be found in the following examples from the British National Corpus.

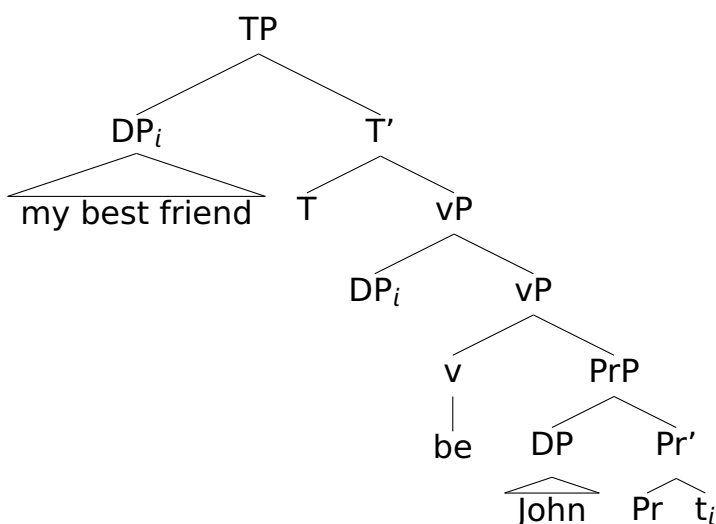
- (59) a. I know who the father is. (BNC, B1X 2421)

Thus, the restriction on extraction in SCCs seems to be intricate, but not syntactic, and the fact that there is a difference to ICs does not in general rule out that ICs and SCCs belong to the same category.

#### 4.4.2 Inversion in it-clefts

So let us adopt the conclusion from the previous section that ICs and SCCs belong to the same class of copula clauses—the specificational ones. I have argued above that SCCs are inverse copula structures in which the syntactic and semantic predicate (the complement of a small clause à la Bowers 2001) moves to the surface subject position Spec,TP (see Williams 1983b, Moro 1997, Heycock and Kroch 2002, Mikkelsen 2004, den Dikken 2006a among others). This is illustrated in (60) along the lines presented in chapter 3.

- (60) My best friend is John.



The same analysis can be applied to *it*-cleft sentences with some modifica-

tion. I suggest that the pivot is base-generated in the specifier position of PrP. As specifier of Pr, the pivot is the semantic subject of predication (see also Williams 1980, Delahunty 1982, Heggie 1988). The complement of Pr is the pronoun *it* and the cleft clause.<sup>15</sup> The pronoun *it* moves from its base-position to the surface subject position, Spec,TP via the phase-edge of vP. The cleft clause is extraposed to (or stranded at) at the right edge of the vP. In this sense, cleft-sentences are inversion structures: the complement of Pr moves to the surface subject position Spec,TP, the full structure is repeated here, see (61).<sup>16</sup>

In the proposed structure, the cleft clause is a relative clause, but it does not act as a modifier. Note that this does not mean that the cleft clause is a semantic property. It can be characterized semantically as concealed question or individual concept, just as with SCCs.

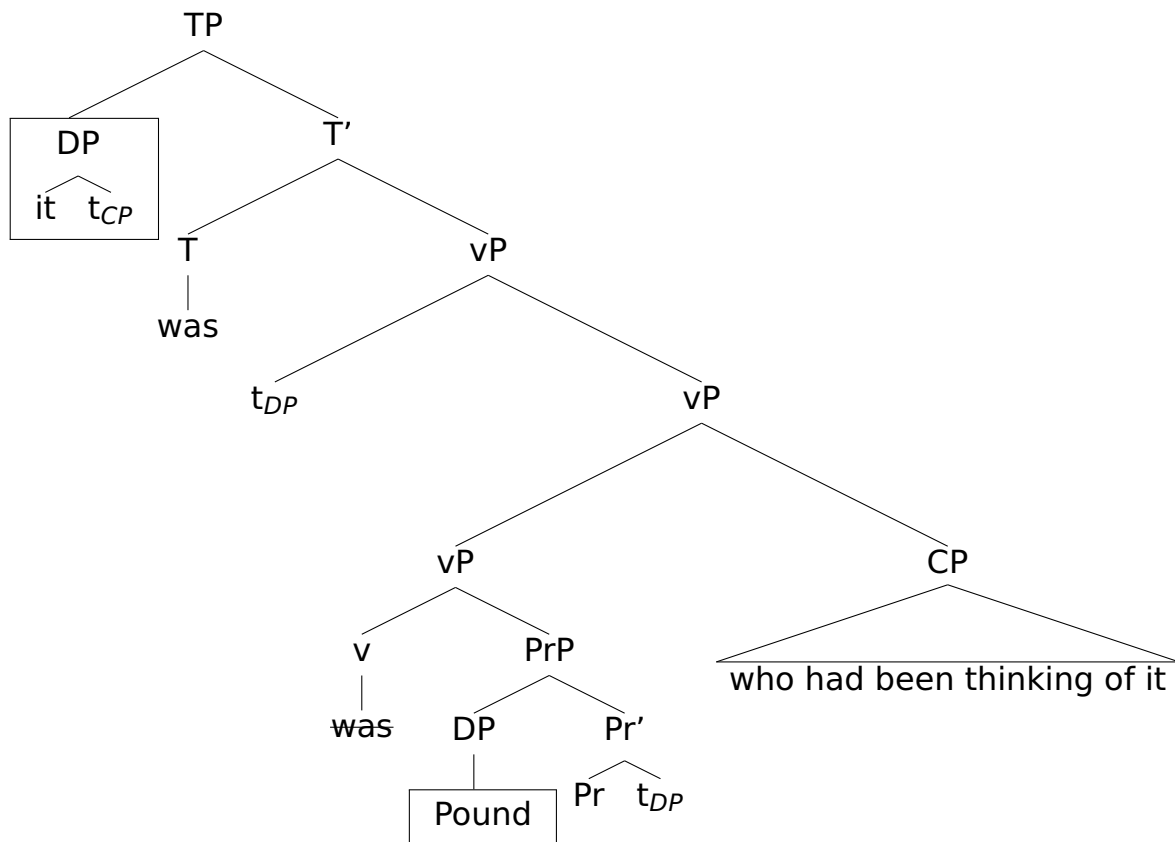
One advantage of the proposed structure is the constituent structure. The cleft clause is adjoined to vP. Thus, the pivot and the cleft clause form a syntactic constituent. This is supported by data from VP-ellipsis, right-node-raising, conjunction and preposing (see Delahunty 1984, Hedberg 1990). In (62a) the vP which includes the pivot and the cleft clause can be elided. Additionally, the two together can undergo right node raising as in (62b). Additionally, the pivot and the cleft clause can be coordinated with another constituent of the same type, cf. (62c). Finally, the two together can be preposed (62d).

(62) a. I said that it should have been Bill who negotiated the new con-

<sup>15</sup>The arguments in Reeve (2011) against linking the cleft clause and *it* are based on the assumption that *it* originates in subject position. This does not hold for the current analysis, so the arguments do not speak against this analysis.

<sup>16</sup>Den Dikken (2013) argues that the cleft clause and the pivot need to agree in specificity. Therefore he concludes that the cleft clause needs to be a modifier of the pivot. In the analysis here, the cleft clause does not modify the pivot directly, however, the semantic relationship between cleft clause and pivot is predication in a broad sense. They are in a configuration in which agreement in principle possible. Thus, the facts presented in den Dikken (2013) can be handled in this way.

(61) It was Pound who had been thinking of it.



tract, and it should have been.

- b. It could have been - and it should have been - Bill who negotiated the new contract .
- c. It must have been Fred that kissed Mary but Bill that left with her.
- d. ?I said that it was Bill that argued the case and Bill that argued the case it was.

(Hedberg, 1990, 98)

Additionally, the pronoun *it* is part of the PrP in the structure in (46). Thus, the presence of *it* does not depend on the 'strength' of the EPP. This is a welcome consequence, the pronoun is obligatorily present in ICs even in languages like German, which are not subject to the EPP in the same way as English.

In sum, it has been shown that *it*-cleft sentences share a number of properties with specificational copula clauses. It was proposed that the two structures should find a common syntactic analysis as inversion structures.

## 4.5 The Nature of the Pivot

### 4.5.1 DP pivots

Delahunty (1982, 1984) lists the different categorial possibilities of cleft sentences. The clefted position certainly allows for DPs, PPs, ADVPs.

- (63)
- a. It was [<sub>DP</sub> a tall man ] that kissed Thumbelina.
  - b. It is [<sub>PP</sub> with the sources of this suspicion ] that the present chapter will primarily be concerned.
  - c. It was [<sub>ADVP</sub> only reluctantly] that he agreed to swim at all.

In this work, I concentrate on DP pivots. I will briefly come back to other types of pivots in the next section.

Delahunty convincingly argues that CP pivots are actually DP pivots with a silent D-head. Thus, only those CPs are allowed as pivots in clefts, that have been argued to be DPs independently, namely factives and complements of *believe*- and *promise*-type verbs. For these CPs a silent (pro)nominal head has been proposed to be present. (64) shows that factive complement CPs can be pivots, but non-factives are ruled out.

- (64)
- a. It was that elephants have long memories that Fred remembered.
  - b. \*It was that elephants have long memories that Fred thought.
- (Delahunty, 1984, 82)

Complements of *believe* and *promise* can be clefted as well.

- (65) a. It is that pigs have wings that we are asked to believe.  
b. It was that we'd take care of the cats that we promised Fred.  
(Delahunty, 1984, 82f)

Extraposed subject clauses cannot be clefted. These can be assumed to form a DP with the correlate *it*. When *it* is present in the cleft clause, the CP in pivot position cannot be assumed to be a DP. Without the correlate clefting is possible.

- (66) a. It is that Bill will ever be late again that is unlikely.  
b. \*It is that Bill will ever be late again that it is unlikely.  
(Delahunty, 1984, 81)

#### 4.5.2 Other types of pivots

Delahunty (1982) observes that APs are possible as pivots, but there are restrictions on these categories. Secondary predicate APs are possible to be clefted as the following examples show:

- (67) a. It was green that he painted his boat.  
b. It is raw that Fred usually eats his meat.

Predicative APs (and predicative NPs) are marked, see Heggie (1988)

- (68) a. ?It is happy that Mary is.  
b. ?It is a teacher that Mary is.  
c. ?It is a teacher that Mary wants to become.

In the analysis presented here, this is not surprising. Predicates can be subjects if they are construed as kinds, see Chierchia (1998), a reading which is incompatible with the predicate gap in the cleft clause. Secondary pred-



icates, on the other hand, have been argued to be larger constituents containing a PRO subject, as such, they are not predicative and can therefore serve as subjects.

PPs can be clefted in English as well (though this option is more restricted cross-linguistically, see Hartmann et al. 2013 for some discussion on this issue). Note, though, that PPs can be subjects in English, as in (69).

(69) Under the bed is a good place to hide.

### 4.5.3 Agreement

In this section, I provide an argument from agreement that supports the analysis of the pivot as the underlying subject. In regular finite clauses the underlying PrP subject and the surface subject usually fall together, thus, it is difficult to distinguish between the properties that are due to the underlying subject nature and those that result from the surface subject position.

However, there is a way to tear the individual positions apart, from a cross-linguistic perspective. In English SCCs, the copula usually agrees with the initial DP (see Moro 1997, Heycock 2012 and references therein), i.e. the surface subject. In German (and Italian, see *ibid.*), the copula shows agreement with the post-copular noun phrase.

- (70) a. The culprit is me.  
b. The real problem is/\*are your parents.

- (71) Das eigentliche Problem \*ist / sind deine Eltern.  
the real problem is / are your parents  
'The real problem is your parents.' (Heycock, 2012, 214f)

Heycock (2012) observes that this is not a result of the surface word order, but seems to be related to the underlying order: in the related *assumed identity* structure, German and English behave the same.

- (72) a. If I were you, I would leave now.  
 b. In that game, I was you and you were me.
- (73) Wenn ich Du wäre / \*wärest, ...  
 If I you be.subj.past.1sg / be.subj.past.2sg ...  
 'If I were you ...'

If this reasoning is on the right track, German agreement can give indications of the underlying subjects. In ICs, the pivot agrees with the copula, the underlying subject.

- (74) Es waren die Gallier, die den Römern Widerstand leisteten.  
 It were the.PL gaelic, who the Romans resistance offered  
 'It was the Gaelic that resisted the Romans.'

Thus, the cross-linguistic pattern of agreement supports the view that the pivot is the underlying subject in ICs.<sup>17</sup>

## 4.6 The Role of the Cleft Clause

### 4.6.1 Introduction

In this section, I argue for the role of the cleft clause as underlying predicate. I will first argue that the cleft clause indeed is a relative clause, more specifically, a light-headed relative clause in the sense of Citko (2004). Then I will argue that the cleft clause serves as the underlying syntactic predicate, i.e. it is the complement of PrP. While the complement of the PrP is the base-position of the cleft clause, I will provide arguments that the cleft clause is moved to an extraposed position, see section 4.7.

<sup>17</sup>S. Huber (p.c.) points out that the lack of control is a counterargument to the subjecthood of the pivot. Note however, that control is not a necessary condition for subjecthood. In the related SCC, neither of the two noun phrases can control PRO (see Huber 2002), yet any analysis of SCC assumes that one or the other is a subject. The question of why control fails is an interesting one, however, I leave will leave it unanswered here.

#### 4.6.2 The cleft clause as the syntactic predicate

In this section, I provide four different arguments for the analysis of the cleft clause as the syntactic and semantic predicate of the main assertion.

First of all, in *it*-clefts, the relative clause does not semantically modify the pivot (i.e. the cleft clause and the cleft constituent are not combined by predicate modification). Examples like (75) can have two readings: a reading in which the *that*-clause indeed acts as a modifier answering a question like (76a), and a cleft reading answering a question like in (76b).

- (75) Es sind die Nachbarn, die sich immer beschweren.  
       it are the neighbors, relPRN self always complain  
       'It is the neighbors that always complain about something.'
- (76) a. Who is at the door?  
       b. Who always complains about something?

In the first reading, (75) is not an IC and the relative clause modifies the noun *neighbours*, restricting the set to those who always complain about something. In the second reading, (75) indeed is a cleft sentence and there is no modification relationship. This ambiguity of (75) is difficult to grasp if the cleft clause also acts as a modifier of the pivot. In the analysis here, the ambiguity is more easily to be dealt with. Second, the cleft clause differs from restrictive relative clauses (RRCs) in a number of ways. (i) While RRCs cannot modify proper names, cleft clauses freely occur with proper names, cf. (77); (ii) In RRCs headed by a quantificational phrase, the content of the relative clause is part of the restriction of the quantifier, while it is part of the scope in *it*-clefts, cf. (78); (iii) RRCs can stack, while cleft clauses cannot, cf. (79); (iv) In German, RRCs are only optionally extraposed, while cleft-clauses are necessarily extraposed, cf. (80); (v) While RRCs only occur with DPs, cleft clauses also occur with PPs, AdvPs and CPs, cf. (81).

- (77) a. \*I didn't like John who spoke first.  
 b. It was Adam who spoke first.  
 (Davidse, 2000, 1111)
- (78) a. All students who attended will receive a bonus point.  
 b. It was all the passengers who had committed the murder.  
 (Davidse, 2000, 1114)
- (79) a. The tiger that I saw that I wanted to buy was very expensive.  
 b. It was the tiger that I saw that I wanted to buy.  
 ≠ It was the tiger that I saw and it was the tiger that I wanted to buy.
- (80) a. dass er den Mann <<sup>ok</sup> der ein Buch kaufte> gesehen hat,  
 that he the man < who a book bought> seen has  
 <<sup>ok</sup> der ein Buch kaufte>  
 < who a book bought>
- b. dass es Peter < \* der angerufen hatte> war, <<sup>ok</sup> der  
 that it Peter < who called has> was < who  
 angerufen hatte>  
 called has>
- (81) a. It was [<sub>DP</sub> a tall man] that kissed Thumbelina.  
 b. It is [<sub>PP</sub> with the sources of this suspicion] that the present chapter will primarily be concerned.  
 c. It was [<sub>ADVP</sub> only reluctantly] that he agreed to swim at all.  
 d. It's [<sub>CP</sub> only because you were her oldest friend] that I'd offer them to you.  
 (Delahunty, 1982, 2)

The current analysis accounts for these facts straightforwardly: the cleft clause is structurally a relative clause (see also Reeve 2011 and references therein), but it is in a subject-predicate relationship with the pivot. Thus, it is not expected to behave like a modifier.

Third, the cleft clause originates in the complement of Pr and is extraposed and adjoined low (vP). Thus, it follows naturally that the cleft clause patterns with extraposed object relative clauses. The low adjunction site is supported by the possibility to front the cleft clause and the pivot as a vP, as in (82).<sup>18</sup>

- (82) I said it'd be A CONSERVATIVE who'd win, and a conservative who won it certainly was. (Reeve, 2011, 157)

A further argument for the low adjunction site relates to the observation that the cleft clause can be followed by circumstantial adverbials that are adjoined high. This is not possible for extraposed relative clauses (see Reinhart 1980).

- (83) a. It shocked Rosa that she lost the case, although she had no reason to believe she would win.  
b. \*A man came in who looked very threatening, although the office was officially closed.

(Reinhart, 1980)

- (84) It is policewomen who deal with both victims and offenders, although the unit also has a male inspector. (BNC, A5Y, 651)

<sup>18</sup>This example admittedly is not perfect, due to (i) the combination of contrastive focus and VP topicalization, (ii) the topicalization of a larger constituent than is left behind and (iii) the fact that the topicalization includes a large constituent that could just as well be left behind or even omitted. Additionally, an anonymous reviewer pointed out that this data cannot be reproduced in German and Dutch and therefore cannot be used as a constituency test. Note, however, that German also disallows extraposed clauses fronted along with the VP independent of cleft structures.

- (i) a. Rosa wird es sicherlich ärgern, dass Du rauchst.  
Rosa will it certainly annoy, that you smoke  
'It will certainly annoy Rosa that you smoke'  
b. ??Ärgern, dass Du rauchst wird es Rosa sicherlich.  
'annoy that you smoke will it Rosa certainly

Fourth, as the cleft clause and the pivot are in a predication relationship, agreement in [ $\pm$  human] is expected. The cleft clause and the pivot need to agree in the same way that predicative noun phrases do with their subject. Thus, *#It is THE TEACHERS which are tired* is as infelicitous as *#John is the thing I like best*.

I conclude that the cleft clause acts as the syntactic predicate in the structure (i.e. it is base-generated as the complement of Pr). The pivot is not modified by the cleft clause, contra Reeve (2011) and den Dikken (2013), but it is the subject of the predication in the sentence.

### 4.6.3 The cleft clause as light-headed relative clause

#### 4.6.3.1 The cleft clause is formally a relative clause

I now turn to nature of the cleft clause and its syntactic relationship with the pivot. The first observation to make is that the cleft clause formally looks like a restrictive relative clause. It has a gap, just as relative clauses do—a subject gap in (85). It can occur with different types of wh-pronouns and with the complementizer *that*, a hall-mark of restrictive relative clauses.

- (85) It is true that in some cases these publications may be of extreme radical tendency, attacking the established practices of academic English teaching, but that is no objection, since *it is the fact of publication that counts*, not its content. (BNC A1A,1080)

Furthermore, ICs are also available with reduced and infinitival relative clauses just as restrictive relative clauses are (see Reeve 2010) illustrated here with additional data from the BNC.<sup>19</sup>

<sup>19</sup>This observation is contra the claim in Declerck (1988). den Dikken (2013) provides the following examples from Declerck (1988). He relates the (apparent) restriction in ICs to the lack of reduced free relatives. The examples in the text show that infinitival relative clauses are in principle possible. The question why some are not possible is a different question, which I leave to future research.

(86) a. It was John (who was) sitting outside.

b. It was John (who was) in the park.

(Reeve, 2010, 56)

(87) Next it was Ethel to make difficulties, because she hadn't been asked to be a bridesmaid. (BNC, FPH 2948)

Third, RRCs do not allow the relative pronoun to be embedded in a larger phrase, see Fabb (1990, 64). This is impossible in ICs, too. (90) is not available with a cleft reading equivalent to *It is John that I met the mother of yesterday*.

(88) a. The man, *the mother of whom* I met yesterday, is a French speaker.

b. \*The man *the mother of whom* I met yesterday is a French speaker

c. The men, *some of whom* I like, arrived yesterday.

d. \*The men *some of whom* I like arrived yesterday.

(89) a. The windows here, the curtains on which I really dislike, let in enough light.

b. \*Few windows here the curtains on which I really dislike let in enough light.

(90) #It was John the mother of whom I met yesterday.

Based on these facts I conclude that the cleft clause shows the hallmarks of restricted relative clauses. However, as discussed above in section 4.2.9,

- 
- (i) a. he was the third man to be arrested  
 b. \*it was the President to be arrested  
 c. it was the President who was (to be) arrested

- (ii) a. what to do was unclear (infinitival wh-question)  
 b. \*what to do was important (free relative)  
 c. what they should/would do was important

the cleft clause and the pivot are not in a modification relation. The cleft clause forms a constituent with the pronoun *it* and acts as the syntactic and semantic predicate.

#### 4.6.3.2 Headed vs. headless vs. light-headed relative clauses

Relative clauses in Germanic can be classified along the following three formal dimensions, (i) headed vs. free relative clauses as in (91) (ii) the nature of the relative operator - null vs. *wh*-phrase vs. complex phrase shown in (92) (in finite headed relative clauses). (iii) finite vs. infinitival relative clauses illustrated in (93).<sup>20</sup>

- (91) a. I spent what(ever) he gave me  
 b. The dog ate what I had left on my plate.  
 (Huddleston et al., 2002, 1069)

- (92) He'll be glad to take the toys
- |                             |                       |
|-----------------------------|-----------------------|
| a. ... which you don't want | <i>wh</i> -relative   |
| b. ... that you don't want  | <i>that</i> -relative |
| c. ... you don't want       | bare relative         |
- (Huddleston et al., 2002, 1034)

- (93) a. I'm looking for an essay question with which to challenge the brighter students  
 b. She's the ideal person (for you) to confide in.  
 c. She's obviously the person to finish the job.  
 (Huddleston et al., 2002, 1068f)

<sup>20</sup>Cross-linguistically, a further distinction is necessary namely between externally-headed relative clauses (as in Germanic), internally-headed relative-clauses (found for example in Japanese), and correlatives (available for example in Hungarian). Bhatt (2015) provides an overview and references.



Additionally, relative clauses can provide different types of semantic modification for their head noun: they can be restrictive/ defining/ integrated, restricting the reference of the noun phrase they are part of; or they can be non-restrictive/ non-defining/ supplementary, providing further information for the head noun, see (94) vs. (95).

- (94) The boys who defended the statue were expelled. integrated  
(Huddleston et al., 2002, 1034)
- (95) My father, who retired last year, now lives in Florida. supplementary  
(Huddleston et al., 2002, 1034)

Huddleston et al. (2002, 1034) list the cleft clause as a special type of relative clause (cleft relative). This is in line with the analysis here: while formally a relative clause, the relationship of the cleft clause to the pivot is not one of modification (restriction or supplementary), but some sort of predication (as argued above).<sup>21</sup>

Citko (2004) introduces an additional type of relative clause - a light-headed relative clause in which the head of the relative clause is a pronoun - they do not pattern with headed relative clauses nor with free relatives. An example from Polish is provided in (96).

- (96) Jan czyta to co Mari czyta.  
Jan reads that what Mary reads  
'Jan reads what Mary reads.'

<sup>21</sup>A further semantic type of relative clause are the so-called amount relatives, see Carlson (1977), Cornilescu (1996), Grosu and Landman (1998), McNally (2008), illustrated in (i).

- (i) a. The people \*who/that/∅ there were at the party were drunk.  
b. They dressed like the eccentric women \*who/that/∅ they were. (McNally, 1997, 85)

The semantic types and their formal expression is not independent. For example in English, non-restrictive relative clauses cannot be *that*- or bare relatives. I will not dwell on this issue here.

This type of relative clause is arguably also present in English, mostly with a universal interpretation as in (97) and to the best of my knowledge scarcely discussed and if at all only in the context of pseudoclefts (see for some discussion Collins 1991, Traugott 2007). This type of relative clause seems to appear also outside of copula sentences, see (98).

- (97) a. [ All that is required ], they feel, is the offer of a scholarship from the Police College, ... (BNC, A0K 452 )  
b. It was partly brought on, I'm sure, by the worry of [ all that was happening ]. (BNC, A0F 1003)
- (98) a. Kermode thinks that this process, with [ all that it implies ], is a fact of life, ... (BNC, A1A 658 )  
b. [ All that liberals cannot tolerate ] is pretension to infallibility. (BNC, A56 204)

Additionally, there are also some cases with non-human antecedents, as the following data from the BNC shows.

- (99) The best criticism is **that which is both amusing and poetic**; not a cold, mathematical criticism which, on the pretext of explaining everything, has neither love nor hate, and voluntarily strips itself of every shred of temperament. (BNC, A04 216)
- (100) Only that which is precise has resonance, he wrote. (BNC, A08 1098)

The hallmarks of this type of relative clause are (Citko 2004):

1. They have a pronominal head (definite interpretation) or a quantificational head (universal or existential).
2. The relative clause is introduced by a short form of the wh-pronoun.

3. They are not subject to the same matching requirements as free relatives.
4. They do not allow the same range of *wh*-pronouns as headed relatives do.

I consider these properties for the cleft clause in ICs.

As suggested above, the cleft clause and the pronoun *it* form a constituent. Apart from *it*, *that* can occur in ICs (see Ball 1977). It is clear though that no quantificational head is available in ICs. I think the reason for this restriction lies in the nature of the cleft clause as complement of PrP, which is not a position for quantification but for predication as proposed above.

Second, ICs do occur with *wh*-relatives, but they are not restricted to these: *that*-relatives and null-relatives are also possible. This might be an indication either for (i) a distinction between different types of clefts depending on the type of relative clause, or (ii) the range of light-headed relative clauses in English is broader than in the languages discussed in Citko (2004). For the point here, it is relevant that at least a subclass of cleft clauses in ICs fulfills this criterion. I discuss potential differences between *that*- vs. *wh*-relative clauses in section 4.6.4. As the examples above show, English seems to allow light-headed RCs with *that* anyway. Thus, to find these in ICs is not that surprising.

For the *wh*-RC in ICs we also observe that they differ from head-less relative clauses in two respects. First, the range of *wh*-operators in *wh*-RC in ICs differs from the range of *wh*-operators in FR. First of all, ICs do not occur with *what*, whereas these are typically available in FRs.

- (101) a. \*It is marmelade [what I like]. [IC]  
       b. Peter put [what I like] on the table. [FR]

Second, free relative clauses show matching effects with respect to their phrasal category. The category of the free relative (gap) has to match the category of the position of the relative clause. In (102) the felicitous options are when both the position of the FR and the gap is an NP position.

- (102) a. We should talk to whom/whoever he dates. [NP-NP]  
 b. \*We should interview with whom he goes out [\*NP-PP]  
 c. \*We should talk to with whom he goes out [\*PP-PP]  
 (van van Riemsdijk, 2006, 343)

The two constituents can share a preposition if it matches both the matrix clause and the gap in the FR as in (103) (Bresnan and Grimshaw 1978, Groos and van Riemsdijk 1981, Grosu 1996, for discussion and references, see van Riemsdijk 2006)

- (103) We should talk to whom he talks [PP-PP] van Riemsdijk (2006, 343)

We do not find the same matching requirements in ICs as can be observed in (104). The NP-PP combination is out with free relatives, but it is possible with light-headed *that*-relatives in ICs. Thus, clefts do not require a matching category in the same way as free relatives do.<sup>22</sup>

- (104) a. It's John to whom I spoke [NP-PP]  
 b. \*It's John that I spoke [\*NP-PP]

The third point is that light-headed RCs differ from headed RCs in the range of wh-pronouns they allow. This is indeed true. The range of wh-pronouns in headed RC includes wh-pronouns like *where*, *when*.

- (105) a. It was a time in my life [when everything seemed to be going

<sup>22</sup>There is an issue with PP clefts, though. I discuss these briefly in section 4.6.5.

right].

- b. They want to go to the place [where they went last year ]
- c.

In ICs these *wh*-pronouns are not available:

- (106)
- a. It's upstairs \*where/that she keeps her records.
  - b. It's in September \*when/that you should plant them.
  - c. It' before you get married \*when/that you should travel.
- (Davidse, 2000, 1116)

Thus, again the cleft clause seems to behave like a light-headed relative clause.

So I conclude from this discussion that the cleft clause is a light-headed relative clause at least when it contains a *wh*-operator. As most of the hallmarks presented in Citko (2004) are actually presented with *wh*-RC, the aim of the next section is to investigate whether there are reasons to believe that we are dealing with two different types of relative clauses in English. The answer I will reach is a tentative *No* - the light-headed RC-analysis can be extended to *that*-RC, bare RC and *wh*-RC.

#### 4.6.4 Wh- vs. that-relative clauses in clefts

##### 4.6.4.1 The issue

The idea that ICs exhibit more than one syntactic derivation goes back to at least Pinkham and Hankamer (1975) and Chomsky (1977), based on differences between NP and non-NP clefts. In Pinkham and Hankamer (1975), NP-clefts are derived from pseudoclefts. However, some non-NP clefts do not have a corresponding PC structure:

- (107) a. It was with George that she eloped.  
 b. \*(The one) who she eloped was with George. (Gundel, 1977, 548)

Chomsky (1977) suggested that ICs are either derived by topicalization (for clefted NPs) or adverbial preposing for other types of constituents, illustrated in (108).

- (108) a. It was [<sub>S</sub>'' this book [<sub>S</sub>' which/that I read t]]  
 b. It was [<sub>S</sub>'' to a friend [<sub>S</sub>' that/∅ I spoke t]]

Non-NP types of clefts are usually introduced by *that*, whereas NP-type clefts can be introduced by either a *wh*-relative pronoun or by *that*. So the crucial question is whether the cut will need to be made between NP-type clefts vs. other type clefts, or whether the cut is to be made between *that* vs. *wh*-RC clefts.

É. Kiss (1999) proposes that the relevant cut is between *wh*-RC and *that*-clauses. In the former the pivot is base-generated in Spec,FocP, while in the latter the pivot is moved from within the cleft clause. More recently, Reeve (2011, 2012) and den Dikken (2013) also argue for two types of *it*-clefts and relate them to two information-structural interpretations. Reeve (2011, 2012) proposes that there are two derivations of the relative clause and its head (i.e. cleft clause and pivot in my terms here), a promotion and a matching analysis. The promotion analysis is available for ICs both with *that*- and *wh*-RCs, while the matching analysis is only available for *wh*-relative clauses. The promotion analysis, Reeve suggests, necessarily leads to a contrastive interpretation of the pivot. den Dikken (2013) proposes that the relative clause of contrastive ICs is a head-less RCs, i.e. headed by a radically empty null-head “devoid of both phonological and semantic features” (den Dikken, 2013, 59), while the RCs in informative-presupposition

ICs is a pseudorelative.

Independent of the analysis of the potentially two types, the first questions I want to explore are: how do the two types of relative clauses differ (if they do), and are these differences such that two different analyses can be motivated?

#### 4.6.4.2 Differences between *wh*-RC and *that*-RC

Reeve (2012) argues that the two formal types differ with respect to the extent to which they allow idioms to be clefted. He suggests that ICs with a *that*-RC allow subparts of idioms to be clefted, cf. (109). According to Reeve, this is not possible in ICs with a *wh*-relative clause, cf. (109b).<sup>23</sup>

- (109) a. It's CAREFUL TRACK that she's keeping of her expenses.  
       b. ?\*It was careful track which she kept of her expenses. Reeve (2012, 48)

<sup>23</sup>Idioms of this type are available in regular relative clauses, *wh*-movement and A-movement as in (i), but clefting is restricted in specificational pseudoclefts illustrated in (ii).

- (i) a. [What kind of track]<sub>i</sub> was she keeping t<sub>i</sub> of her expenses?  
       b. [Careful track]<sub>i</sub> was being kept t<sub>i</sub> of her expenses.  
       c. [The careful track]<sub>i</sub> that she's keeping t<sub>i</sub> of her expenses pleases me. (Reeve, 2012, 46f)
- (ii) a. \*What she is keeping of her expenses is CAREFUL TRACK.  
       b. \*CAREFUL TRACK is what she is keeping of her expenses. (Reeve, 2012, 47)

The argumentation here implies that the idiomatic expression *keeping careful track of something* can only be interpreted in the gap position. However, idioms vary with respect to how accessible/decomposable the interpretation of the individual elements is, independent of the different constructions under discussion. The data here show, that there is a difference between SPCs, ICs and RCs with respect to whether the DP object can be interpreted separately from the verb. However, to what extent these are derivable from reconstruction and movement is not obvious to me. If optional or obligatory reconstruction was all that is relevant to these cases, we would expect all kinds of idiomatic expressions to be possible in clefts, which is clearly not the case:

- (iii) a. #It was the bucket that he kicked.  
       b. #I am aware of the bucket that he kicked.

Note, though, that the examples in (109) are not entirely parallel. As soon as the tense is adjusted to *it's careful track which she's keeping of her expenses*, the contrast is no longer as sharp and might just reflect a general preference for *that*-relative clauses in general and in particular in *it*-clefts. Thus, on the basis of this observation, a separate analysis cannot be motivated.

A different set of data comes from scope effects. Reeve (2012) argues that a quantifier can scope out of the cleft clause with a *that*-RC but not with a *wh*-RC.

- (110) a. It's a chicken that every dog ate. [a>every, every>a]  
 b. It's two patients who every doctor will examine. [two>every, \*every>two]  
 (Reeve, 2012)

Again, the examples are not entirely parallel and judgments are intricate here. So consider the parallel pair of examples with an indefinite pivot. My native-speaker informants allow for both the narrow scope and the wide scope reading for both structures.

- (111) a. It's a low-income patient that every doctor will struggle with.  
 b. It's a low-income patient who every doctor will struggle with.

Den Dikken (2013) takes a different route. He proposes that the two information-structural types of *It*-clefts—contrastive ICs, and continuous topic ICs (see Prince 1978; details are presented below in chapter 5)—have a different syntactic structure. The so-called continuous-topic ICs involve a pseudo-relative, whereas the cleft clause in contrastive ICs is a head-less relative clause. The main syntactic evidence he looks into is the difference with respect to the availability of a bare RC without *wh*-pronoun and without *that*. Consider the data in (112). The cleft clause in continuous topic ICs, see (112b) needs to



be introduced by *who* and it cannot be introduced with *that* or as bare cleft clause.

- (112) a. I want you to agree with me, no matter who it is {that/∅} you think is right  
 b. The leaders of the militant homophile movement in America generally have been young people. It was they {who/\*∅} everyone knows fought back during a violent police raid on a Greenwich Village bar in 1969.

Note, however, that the restriction might be due to some other factor, as the corresponding relative clause is equally unacceptable outside an ICs, see (113).

- (113) \*Mary admires the students everyone knows fought back.

Thus, this restriction, whatever its source might be, seems not to be specific to ICs, nor to continuous topic ICs.

Without further strong evidence for the distinction between *that*-RC and *wh*-RC that force a separate analysis, I assume the null hypothesis, i.e. that both *wh*-relatives and *that*-relatives in ICs are light-headed relative clauses.

#### 4.6.5 A note on non-DP clefts

So far, my main emphasis was on clefts containing a DP cleft. However, as pointed out above, other constituents can be clefted as well. In this section, I briefly consider, how this analysis can be extended to other types of clefts, namely PP, AP or AdvP clefts. My starting point for the analysis was to assume that clefts are SCCs. If parallel to equatives, we expect that the subject and predicate are of the same kind. This seems to be not the case:

all of these clefts are only grammatical with a bare or that-RC but not with a wh-pronoun.

- (114) a. It is to John that I spoke.  
b. \*It is to John to who I spoke
- (115) a. It is with great pleasure that I announce Hillary Putnam.  
b. \*It is with great pleasure how I announce Hillary Putnam.
- (116) a. It is raw that Fred usually eats his meat.  
b. \*It is raw how Fred usually eats his meat.

Movement analyses can handle these cases more or less straightforwardly. The pivot is moved out of a complement clause - therefore only *that* is available. In the analysis here, two options of analysis are possible. (i) The restriction has to be due to a restriction on light-headed relative clauses: these are incompatible with complex operators such as *to who* or *how* - a restriction that Citko (2004) argued for on the basis of Polish. Thus, specification seems to allow a mismatch in category. In the previous examples, the cleft clause is a kind of DP (assuming the analysis of light-headed RCs in Citko 2004), while the pivot is a PP/AdjP (or potentially some other kind of some clause). In this respect, specification seems to differ from equation. As specification is treated as a separate type of copular clause, this is not surprising. The exact details of these other types of clefts is left to future research here. (ii) These clefts require an analysis which is similar to what has been proposed for the cases of free relatives with a missing preposition, see (103) repeated here for convenience. The proper analysis of these cases in either of the two options has to be considered in the larger class including pseudoclefts. I leave this project to future research.

## 4.7 Cleft Clause Extraposition

### 4.7.1 Introduction

In this section, I discuss the extraposition of the cleft clause. First, I will review the evidence that the cleft clause indeed is obligatorily extraposed. Then, I discuss the evidence that this extraposed position is indeed a derived position as proposed above.

### 4.7.2 Evidence for extraposition: the target position

The cleft clause in ICs has been argued to be obligatorily extraposed (originally Gundel (1977), more recently Reeve (2011, 2012), den Dikken (2013) and references therein). While the extraposition is usually string-vacuous in English, the major argument comes from Germanic SOV languages like Dutch or German: in ICs the cleft clause cannot occur in the middle field but follows the finite verb.

- (117) a. Jutta sagt, dass es DIESER WAGEN war, den sie kaufen  
 Jutta says that it this car was REL-PRN she buy  
 wollte.  
 wanted

- b. \*Jutta sagt, dass es DIESER WAGEN, den sie kaufen  
 Jutta says that it this car REL-PRN she buy  
 wollte, war.  
 wanted was  
 (Smits, 1989, 282)

- (118) dat het een modeltrein <\*die ik gekocht heb> was <<sup>ok</sup>die ik  
 that it a model train <REL I brought> have was <REL I  
 gekocht heb>  
 brought>  
 (den Dikken, 2013)

A somewhat different argument for English is that when an IC contains two relative clauses as in (119), the second is necessarily interpreted as the cleft

clause, even though in principle, relative clause can be extraposed. If cleft clauses are necessarily extraposed, this order is not surprising.

- (119) a. It is Peter [who by the way is in a bad mood] [who is coming].  
 b. #It is Peter [who is coming][who by the way is in a bad mood] .  
 (Huber, 2002, 143)

I conclude that the cleft clause indeed is extraposed in English as well. As argued above already, the extraposition sight is low (vP) (see Rochemont and Culicover 1990 for other instances of low adjunction). In the next section, I turn to the question, whether there is evidence for the cleft clause being base-generated in the complement of PrP position.

#### 4.7.3 Evidence for a different base-position: c-command

So far, the evidence discussed shows that the relative clause ends up in an extraposed position. In this section, I turn to some evidence that the cleft clause is base-generated in a lower position, namely, the complement position of Pr. The main evidence comes from c-command of the pivot into the cleft clause. I will first present two non-arguments based on the discussion in Reeve (2012) and then provide one argument in favour of c-command of the pivot and the cleft clause.

Reeve (2010, 2012) argues that the pivot c-commands into the clefted clause. The first evidence he provide on the basis of binding data. Reeve claims that pronouns may not c-command their antecedents on the basis of the data in (120).

- (120) a. Bill<sub>i</sub> asked Sue to wash HIM<sub>i</sub>.  
 b. \*HIM<sub>i</sub>, Bill<sub>i</sub> asked Sue to wash.  
 c. \*HIM<sub>i</sub> was who Bill<sub>i</sub> asked Sue to wash.

(Reeve, 2012, 45)

The same holds for cleft sentences as in (121). A clefted pronoun cannot be co-referential with a proper name in the cleft clause (see originally Delahunty 1984, 69).

(121) \*It was HIM<sub>i</sub> that Bill<sub>i</sub> asked Sue to wash. (Reeve, 2011, 163)

Reeve suggests that (120b) and (120c) are ungrammatical due to a principle C violation, with the pronoun *him* c-commanding the co-indexed antecedent *Bill*. As (121) also does not allow the indicated reading, Reeve concludes that the pivot c-commands into the cleft clause. However, the data is more intricate, I believe. First, Barss (1986) provides an example very similar to (120b) as acceptable, arguing that the distance between *John* and the trace matters. Here Reeve would also expect a c-command violation, but Barss judges this sentences as grammatical.

(122) Him, John thinks Mary likes t (Barss, 1986, 413)

Second, Reeve's c-command restriction does not explain why an anaphor is possible in this position in all three instances, as in (123) (at least not in the standard definition of Principle C). We would also expect a principle C violation here if that was at stake.

- (123)
- a. HIMSELF<sub>i</sub>, Bill<sub>i</sub> asked Sue to wash.
  - b. HIMSELF<sub>i</sub> is who Bill<sub>i</sub> asked Sue to wash.
  - c. It was HIMSELF<sub>i</sub> that Bill<sub>i</sub> asked Sue to wash.

Third, one needs to consider reconstruction possibilities. As argued above, the cleft clause is extraposed, and thus, at the surface structure there is no c-command relationship. For the ungrammaticality of the IC in (121) the cleft

clause needs to be reconstructed obligatorily. For the topicalisation structure in (120b) reconstruction of the moved pronoun needs to be blocked in order for the condition C violation to hold. To cut the discussion short here, the interaction of binding and reconstruction in the relevant cases seems to me to be more intricate than Reeve suggests. Thus, I think this argument does not allow a conclusion with respect to a c-command relationship between pivot and cleft-clause.<sup>24</sup>

The second argument Reeve provides comes from Negative Polarity Item (=NPI) licensing. Reeve proposes that the unacceptability of (124) is due to the anti-c-command requirement on negative polarity items (Heycock and Kroch 2002): NPIs cannot c-command their licenser. This is claimed to be the source of ungrammaticality in (124).

(124) \*It's any bread that I don't have. (Reeve, 2010, 22)

However, the reason for the unacceptability of the example in (124) rather lies in the focus and presupposition properties of IC sentences: the cleft clause gives rise to an existential presupposition, but the pivot contradicts this presupposition, similar to the example in (125) (Rochemont 1978, Percus 1997).

(125) \*It was nobody that came.

This alternative explanation seems to be on the right track, as (126) shows. The NPI does not c-command its licenser, but still the examples are ungram-

<sup>24</sup>There is another factor that all of these constructions share—the position of the pronoun needs to be (contrastively) focused. Reflexives act as intensifiers. Thus, they might be the preferred option for the intended reading in combination with focus.

An alternative explanation might be that linearity plays a role in these cases, see Culicover (2013). However, the contrast between (121) and (i) shows that linearity cannot be the only factor involved.

(i) It was the picture of HIM<sub>i</sub> that Bill<sub>i</sub> asked Sue to wash. (Reeve, 2011, 163)

matical.

- (126) a. \*It's not any bread that I have.  
 b. \*If it is any bread that you want, I cannot help you.

Thus, this second argument in favor of c-command is not conclusive either.

We can test for c-command on the basis of bound pronoun readings. On standard analyses, the bound pronoun reading is only available if the quantifier c-commands the bound pronoun (Reinhart 1983, but cf. Sternefeld 2012b, Barker and Shan 2008 for a different point of view). While the pronoun can be bound in (127), the respective reading is not available in (128), (see Szabolcsi, 2011, 1616).

- (127) Every boy is in his room.  
 $\forall x[\text{boy}'(x) \rightarrow \text{in}'(\text{room-of}'(x))(x)]$  (Szabolcsi, 2011, 1616)

- (128) That every boy was hungry surprised his mother.  
 '#for every boy, that he was hungry surprised his own mother'

If the pivot can take scope over quantificational material in the cleft clause, the pivot must c-command this element. Note that judgments here are intricate, as universal quantifiers are not readily available in the pivot. To the extent that these sentences are acceptable at all, the relevant bound reading is available according to my informants.

- (129) Context: I heard that every linguistics student sued his professor last year.  
 No, it was every LITERATURE student who sued his professor.

Based on these arguments, I tentatively conclude that the cleft clause indeed is base-generated in the complement of PrP position.<sup>25</sup>

## 4.8 Conclusion

In this section, I have argued for a syntactic analysis of *it*-clefts as specificational copular clauses. I have proposed that the cleft clause together with the pronoun *it* constitute the syntactic predicate, i.e. they are base-generated as the complement of the predicative head. In line with my analysis of SCCs, the predicate *it* is inverted to the initial Spec,TP position. The pivot is base-generated as the subject of predication, i.e. the specifier of PrP, and it remains in-situ in this position.

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<sup>25</sup>There is another alternative, namely that the cleft clause is actually base-generated in the extraposed position, whereas the cleft pronoun is base-generated in the complement position of PrP (similarly to what has been proposed for Gaelic constructions proposed in Adger and Ramchand 2003). I consider this a plausible alternative, too. The major problem that I see for this analysis is that one needs to propose a different kind of relative clause, some kind of pseudorelative or a relative clause with an empty head as proposed in den Dikken (2013). As there is no real evidence for such a kind of relative clause in English outside the domain of cleft sentences, I found it preferable to choose for the light-headed relative clause analysis, even though the evidence for the base-position of the relative clause in PrP presented in this section is not too strong.





# 5 The Information Structure of *it*-Clefts

## 5.1 Introduction

In this chapter I will be concerned with the information structure of *it*-clefts. The main research questions that I want to address here are given in (1):

- (1) Research questions on the information structure of *it*-clefts
  - a. What is the unifying information-structural contribution of *it*-clefts?
  - b. Can the different sub-types of *it*-clefts be subsumed under such a notion?
  - c. What is the nature of the existential presupposition in *it*-clefts? And how does it relate to the information structure of *it*-clefts?
  - d. What is the nature of exhaustivity in *it*-clefts? And how does it relate to the information structure of *it*-clefts?

The main claims that I am defending here are the following:

1. *It*-clefts are focus-background structures, with the pivot as the focus and the cleft clause as the background.
2. *It*-clefts express Contrasting Focus (=CF) as defined below on the pivot.
3. The different sub-types of *it*-clefts can be subsumed under the notion

of CF. The pragmatic subtypes vary with respect to the discourse status of the pivot and the cleft clause.

4. The existential presupposition in *it*-clefts results from the CF interpretation.
5. Exhaustivity is derived from the contrasting focus interpretation of *it*-clefts in combination with the uniqueness interpretation of the cleft clause.

The structure of this chapter is as follows: In the next section, I will review previous proposals for the focus analysis of *it*-clefts (=ICs) in English (and more generally). Section 5.4.2 shows that ICs in English are indeed focus-background structures with a focus on the pivot and the cleft clause expressing the background. Section 5.3 will provide the assumptions and definitions about focus that I assume. The major concern here is to set apart marked focus from new information focus. Then I will argue that marked focus involves alternatives sketching how different subtypes of focus can be subsumed under this very broad notion of focus. The idea is that marked focus requires some special marking in grammar in general, however, the kind of marking as well as the nature and interpretation of marked foci can vary. In section 5.4, I turn to the special type of marked focus present in ICs and introduce the Contrasting Focus Hypothesis. It states that *it*-clefts assert both the proposition expressed by the cleft clause plus an additional alternative contrasting proposition. This alternative proposition is added to the common ground as false. The Contrasting Focus Hypothesis will be illustrated with a range of different types of ICs in different contexts. Section 5.5 and 5.6 provide experimental support for the Contrasting Focus Hypothesis. The final section discusses how the existential presupposition in ICs can be derived from the CFH. The facts and analysis of exhaustivity in ICs will be dealt with separately in chapter 6.

## 5.2 Previous analyses

### 5.2.1 Introduction

In this section, I discuss previous approaches to the information structure of ICs. These can be divided into three general classes. The **Focus Semantic Approaches** concentrate on the semantic contribution of focus in *it*-clefts. I concentrate here on the proposals that explicitly consider the focus semantics of clefts. The semantic approaches that are dominantly concerned with the exhaustivity and the existential presupposition in ICs such as e.g. Percus (1997) will be discussed in the respective sections. **Pragmatic Approaches** relate the information structure of ICs to the discourse status in different ways. The unificational pragmatic approaches suggest that there is a uniform information status of cleft clause/ pivot that leads to a contrastive interpretation, see Rochemont (1986). Additionally, there is a range of pragmatic analyses that distinguish different subtypes of clefts. These distinctions are orthogonal to the question raised here – namely the question of what is the unifying focus aspect of clefts. As I will argue below, once a clear distinction is made between new information focus and marked focus as I do in section 5.3.2, the existence of pragmatic subtypes and *it*-clefts as marked focus constructions is no longer a contradiction: The pivot in ICs expresses a marked focus (namely contrasting focus, see below). A marked focus can be new, accessible or given. And the fact that the pivot can be given does not mean that it cannot be focused.

I discuss the three types of approaches in turn.<sup>1</sup>

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<sup>1</sup>In this section, I concentrate on the major approaches for English. However there are a number of other works that distinguish different pragmatic subtypes in other languages and/or from a comparative point of view, see among others Huber (2002) on German and English. I refer to these works where relevant without reviewing them in detail.

### 5.2.2 Focus semantic approaches

In this section I discuss the main focus semantic approaches proposed for ICs in English, i.e. analyses that consider the focus semantics of the construction explicitly. Semantic approaches to clefts that concentrate on exhaustivity and/or the existential presupposition in clefts without considering focus, most prominently Percus (1997) will be dealt with in the respect sections on these presuppositions.

É. Kiss (1998) proposes to analyse English it-clefts as the syntactic and semantic counterpart of Hungarian focus sentences. An example for a Hungarian focus movement sentence is given in (2).

- (2) Mari egy kalapot nezett ki maganak.  
 Mary a hat.Acc picked out herself.Acc  
 'It was a hat that Mary picked for herself.'  
 (É. Kiss, 1998, 249)

In É.Kiss' analysis, both express identificational focus, as defined in (3).

(3) Definition of Identificational Focus

Identificational focus identifies the subset of a relevant set for which the predicate holds, excluding the complementary subset for which the predicate does not hold. (É. Kiss, 1998, 267)

This definition has two subparts: identification of the subset of elements for which the predicate holds, and at the same time, exclusion of those elements for which the predicate does not hold. In creating these two subsets, the subset established by the focused phrase is interpreted as the exhaustive subset of contextually relevant elements for which the background holds (see also Umbach 2004).

Thus, both Hungarian focus movement sentences and English ICs express exhaustivity as a result of their focus properties.<sup>2</sup> The problem with this analysis seems to be the analysis of negative clefts as in (4). Let us assume that the context is such that there are three relevant alternatives, a hat, a coat and a dress. Intuitively then, the cleft in (4) states that *a hat* is not in the set of things that Mary picked for herself. Mary might have picked either of the alternatives—a dress, or a coat or, a dress and a coat. It is not specified what exactly she picked.

(4) It wasn't a hat that Mary picked for herself.

The question is whether the analysis in (3) brings out this interpretation. There are two options to interpret the negation in É. Kiss' system. First, we could assume the negation to change the relations in the definition above. Thus, the cleft picks out the set of things for which the predicate does not hold, namely a hat, and it excludes all the other elements for which the predicate holds. As a result we would interpret the sentence in (4) to mean that Mary picked both the dress and the coat. A reading which is too strong in the context here, I believe. Alternatively, the negation could be interpreted only with respect to the pivot. In this case the IC in (4) states that the set of things that Mary picked are non-hat things, whereas what she didn't pick are hat things. As the identification requires exclusion, again I think the resulting interpretation is that Mary picked both the coat and the dress. Thus, it seems to me that the definition of identificational focus is too strong.

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<sup>2</sup>Thus, a major aspect of the analysis in É. Kiss (1998) is that focusing is inherently exhaustive. There is a long discussion in the literature about the source of exhaustivity in Hungarian focus movement (see Szabolcsi 1981, Kenesei 1986, É. Kiss 1998, 2009a, Horvath 2000, 2005, Surányi 2011 among others for discussion). Exhaustivity has been claimed to be the result of a semantic operator independent of focus. Alternatively, it has been argued to be part of the focusing properties. The same discussions arise with respect to ICs. These questions will be dealt with in more detail in 6.

Velleman et al. (2013) provide a strong argument for the position that clefts indeed are (conventionally) focus-sensitive. They show that the exhaustive interpretation depends on the focus alternatives. The cleft in (5) expresses that from the set of eldest daughters, one was at the party—namely John’s eldest daughter. It does not assert that John’s eldest daughter was the only person at the party, nor is there an inference in this direction involved. Thus, the interpretation of exhaustivity depends on the available focus alternatives.

- (5) It was JOHN’S eldest daughter who attended the party. . .
- a. . . and 200 of her closest friends were there.
  - b. . . and John’s YOUNGEST daughter was ALSO there.
  - c. #. . . and MARY’S eldest daughter was ALSO there.

(Velleman et al., 2013, 448)

Based on this observation that focus is relevant, Velleman et al. (2013) propose an semantic analysis of focus in ICs based on the semantic analysis of exclusives like *only*. They follow Coppock and Beaver (2011) for their analysis of *only*. According to them, a sentence expressing *only* presupposes  $\text{MIN}_S(p)$  and asserts  $\text{MAX}_S(p)$ , where  $\text{MIN}_S(p)$  is a focus sensitive operator expressing that there is a true answer at least as strong as  $p$  and  $\text{MAX}_S(p)$  is a focus sensitive operator that means that no true answer is stronger than  $p$ .<sup>3</sup>

<sup>3</sup>The formal definitions are given in (i)

- (i)  $[[\text{only}]] = \lambda w. \lambda p: \text{MIN}_S(p)(w). \text{MAX}_S(p)(w)$ , where
- a.  $\text{MIN}_S(p) = \lambda w: \exists q \in \text{CQ}_S [q(w) \wedge (q \not>_S p)]$   
‘There’s a true answer at least as strong as  $p$ .’
  - b.  $\text{MAX}_S(p) = \lambda. \forall q \text{ in } \text{CQ}_S [(q >_S p) \rightarrow \neg q(w)]$   
‘No true answer is strictly stronger than  $p$ .’

(Velleman et al., 2013, 451)

A answer A is stronger than an answer B if A entails B. Let me illustrate this with an example from Velleman et al. (2013). Given a context with three relevant individuals, Mary, Susan, and Jane, the strongest answer for the question *Who laughed?* is Mary, Susan and Jane laughed, because this answer entails all of the following alternatives: { laughed(M), laughed(S), laughed(J), laughed(M $\oplus$ S), laughed(M $\oplus$ J), laughed(J $\oplus$ S)}. These answers can be ordered in an entailment scale represented in figure (5).

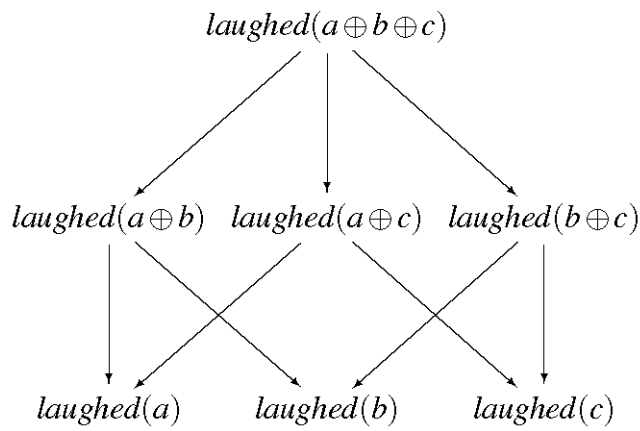


Figure 5.1: The structure of an entailment scale, corresponding to the question ‘Who laughed?’ with a three-person domain, cited from Velleman et al. (2013, 452)

The sentence (6) asserts that laughed(M) is true, but none of the stronger answers is true; i.e. none of the following is true: { laughed(M $\oplus$ S), laughed(M $\oplus$ J), laughed(J $\oplus$ S), laughed(J $\oplus$ S $\oplus$ M) }. Additionally, it presupposes that at least one of the following minimal answers is true, namely, { laughed(M), laughed(M $\oplus$ S), laughed(M $\oplus$ J $\oplus$ S)}. As a result, the options laughed(S) and laughed(J) are inferred to be excluded as well.

(6) Only Mary laughed.

- a. Assertion (Max<sub>S</sub>): There is no true answer which is stronger than *Mary laughed*.
- b. Presupposition (Min<sub>S</sub>): At least Mary laughed.



(see Velleman et al., 2013, 443)

In the analysis of Velleman et al. (2013, 448), ICs are the mirror image of *only*, as ICs assert  $\text{MIN}_S(p)$  and presuppose  $\text{MAX}_S(p)$ .<sup>4</sup> Thus, in a given context with the three relevant individuals, *Mary*, *John* and *Susan*, the cleft sentence in (7) asserts that at least one of the minimal answers { *laughed*(M), *laughed*(M⊕S), *laughed*(M⊕J⊕S) } is true, and it presupposes that none of the stronger answers is true.

(7) It was Mary who laughed.

- a. Assertion ( $\text{Min}_S$ ): At least Mary laughed.
- b. Presupposition ( $\text{Max}_S$ ): There is no true answer strictly stronger than Mary laughed.

(see Velleman et al., 2013, 443)

While this analysis is certainly interesting for showing how the alternatives are relevant, it is not clear to me how sentences like (8) could be treated in which *only* occurs in an IC.

(8) It was only John who called.

Simply combining the meaning of ICs and *only* is problematic as in this case both  $\text{Min}_S$  and  $\text{Max}_S$  are asserted and presupposed at the same time - a combination which is usually excluded. Thus, I think that this analysis is cannot be entirely correct for ICs.<sup>5</sup>

<sup>4</sup>The formal definition is given in (i):

(i)  $\text{CLEFT}_S = \lambda w. \lambda p: \text{MAX}_S(p)(w). \text{MIN}_S(p)(w)$

<sup>5</sup>The analysis and data will also be relevant for the discussion of exhaustivity in chapter 6 and I will come back to this analysis then.

### 5.2.3 Pragmatic unificational approaches

The most relevant proponent of a pragmatic analysis that unifies clefts under a single pragmatic notion is Rochemont (1986). In his *Cleft Focus Principle* in (9) he links the focus properties of ICs to the pragmatic properties of the cleft clause.<sup>6</sup>

(9) Cleft Focus Principle

A cleft focus must receive a contrastive focus interpretation.

(Rochemont, 1986, 133)

A contrastive focus arises if the complement to the focus is c-construable, which means that it has an antecedent in the discourse. For nominal expressions, this means that there is another nominal expression in the discourse and the two have ‘the same referent as a matter of knowledge’ of the interlocutors (whether they really do have the same referent is a different issue). A proposition is c-construable if the preceding discourse (formally or informally) entails this proposition.<sup>7</sup> In Rochemont’s work, discourse is a rather broad notion going beyond the immediate preceding conversation / text. A referential expression has an antecedent in discourse if the antecedent is

<sup>6</sup>The Cleft Focus Principle was revised later to incorporate his analysis that the pivot in clefts is actually a moved focus. The initial version of the definition will do here.

<sup>7</sup>Here are the formal definitions that Rochemont (1986) provides:

(i) Contrastive focus

If  $\alpha/S$  is directly c-construable, where  $\alpha/S$  is the result of extracting  $\alpha$  from  $S$  and  $S$  is not c-construable, then  $\alpha$  is a Contrastive focus. (Rochemont, 1986, 174)

The formal definition of c-construability is given in (ii).

(ii) C-construability I

A string  $P$  is c-construable in a discourse  $\delta$  if  $P$  has a semantic antecedent in  $\delta$ .

(iii) Semantic antecedent

A string  $P$  has a semantic antecedent in discourse  $\delta$ ,  $\delta = \{\phi_1, \dots, \phi_n\}$ , if, and only if, there is a prior and readily available string  $P'$  in  $\delta$ , such that the uttering of  $P'$  either formally or informally entails the mention of  $P$ . (Rochemont, 1986, 47)

part of the discourse. Thus, the main claim for ICs is that the pivot expresses a contrastive focus. For the pivot to be a contrastive focus, the cleft clause ( $\alpha/S$  in the definition above) has to be c-construable.<sup>8</sup>

The most obvious critical cases for this analysis are those in which cleft sentences are discourse-initial, on the assumption that discourse initial means that there is no prior discourse to be assumed. Under Rochemont's analysis, such sentences should not occur. Hedberg (1990) provides a range of these examples, which are used discourse-initially. However, as she rightly points out, these clefts still can be seen to 'link the material of the discourse up with something that the addressee is familiar with [...]'. Additionally, the fact that initial sentences in novels, books, newspapers etc. are usually following a heading means that the reader has a setting that he can work with, a setting in which information in the pivot and/or cleft clause can be construable without being given.<sup>9</sup>

Let me illustrate this with the example from Hedberg (1990) in (10).

- (10) [BEGINNING A STORY ON BACK OF RESTAURANT WINE LIST]  
 It was the Greeks who first made wine, around 1500 BC. They then took this unique art to all the corners of the ancient world, including Italy, Spain, Russia, and, in about 600 BC, France ...  
 (Hedberg, 1990, CH7:23)

The fact that this sentence appears on a wine lists provides a setting in which a proposition like *There is wine* is given. Given this and our knowledge about wine, there is an entailment that someone makes wine. This might be enough for the cleft clause to be c-construable in this case.

<sup>8</sup>Here, I gloss over the additional requirement that the pivot is moved out of the cleft clause in Rochemont's proposal.

<sup>9</sup>Thanks to Susanne Winkler for providing this idea.

However, the notion of entailment and c-construability in Rochemont (1986) seems to be problematic for the case in (11).

(11) [BEGINNING OF A LINGUISTICS BOOK]

It was Sapir, the great American linguist, who said: 'It must be obvious to anyone who has thought about the question at all, or who has felt something of the spirit of a foreign language, that there is such a thing as a basic plan, a certain cut, to each language.' This is undoubtedly true, but it is quite another matter to draw out the basic plan, and describe the cut of a language to those who are ignorant of it.

(Hedberg, 1990, CH7:22)

Here, it is less obvious how to draw an entailment relationship between the existence of linguistics and the fact that someone provides the statement of the detailed information contained in the quote by Sapir. I conclude from this that the discourse-status of the cleft clause as c-construable is not a precondition for the focus arising in ICs. ICs certainly need to be relevant in the discourse in ways that all regular sentences need to be, but that is not something specific to ICs. Yet, there is some further focus property in ICs that goes beyond simple discourse conditions.

#### 5.2.4 Pragmatic splitting approaches

In this section, I turn to those pragmatic approaches that distinguish between different subtypes of ICs depending on their discourse status.

The distinction of various subtypes of it-clefts goes back to Prince (1978). She was the first to suggest that there are two different InfS-types of ICs in English. In *stressed-focus ICs*, the pivot typically presents new information (though it need not always be the case), while the cleft clause

presents known or old information (given information in the sense of Halliday 1967b). In (12), the information in the cleft clause, namely that something is rotten, can be derived from the information that the speaker sews books.

- (12) I learned to sew books. They're really good books. It's just the covers that are rotten. (Prince, 1978, 896)

A second InfS-type of cleft sentences are the *informative-presupposition ICs*. The defining feature is that the information in the cleft-clause is not given, but presents new information. By using an IC, the information in the cleft clause is marked as a generally known fact, possibly unknown to the listener.

- (13) a. It was just about 50 years ago that Henry Ford gave us the weekend. On September 25, ...
- b. 'The leaders of the militant homophile movement in America generally have been young people. It was they who FOUGHT BACK DURING A VIOLENT POLICE RAID ON A GREENWICH VILLAGE BAR IN 1969, AN INCIDENT FROM WHICH MANY GAYS DATE THE BIRTH OF THE MODERN CRUSADE FOR HOMOSEXUARL RIGHTS' (PG, p. 16)
- c. 'It was also during these centuries that a vast internal migration (mostly by the Galla) from the south northwards took place, a process no less momentous than the Amhara expansion southwards during the last part of the nineteenth century and the beginning of the twentieth century.' (Challenge, p. 39) (Prince, 1978, 898)

While it is true that in ICs the cleft clause can be new information, these clefts are still contrastive in the sense that they assert that there is another individual/time/manner for which the cleft sentence does not hold. This can

be illustrated with the example in (13a). (13a) asserts that the time when Henry Ford introduced the weekend was 50 years ago—the introduction did not take place in some other time period. This contrastive interpretation is further supported by the use of the focus-sensitive particle *just*. The particle adds the additional information that the alternative time is part of a set of times that are longer ago than 50 years ago. Thus, the standard example of an informative-presupposition IC is actually an example that shows that ICs indeed express a marked focus, which the focus-sensitive operator *just* associates with.<sup>10</sup>

Following-up on this work by Prince (1978), Declerck (1984, 1988) proposes a more fine-grained distinction for the informative-presupposition *it*-clefts, further distinguishing between *unstressed-anaphoric ICs* and *discontinuous clefts*. The former are those in which the cleft clause is new but the information is presented as if known. The pivot is a pronoun or given in the discourse. This type is illustrated in (14).

(14) Unstressed-anaphoric IC

- a. I asked her what was the matter with John and she answered that it was he who had been the victim of the robbery.
- b. But why is everybody so interested in uranium? – Because it is uranium that you need to produce atomic power.

(Declerck, 1984, 264)

*Discontinuous ICs* are those in which the information both in the cleft clause and in the pivot is new and the cleft clause is not presented as something known to the hearer. According to Declerck (1984), the Henry Ford example in (13a) belongs into this class.

Hedberg (1990) in her detailed study of ICs in English based on a cor-

<sup>10</sup>The analysis of this sentence profited greatly from discussions with Susanne Winkler.

pus of 700 naturally occurring cleft-sentences in spoken and written discourse, makes a slightly different distinction between two types: *topic-clause clefts* vs. *comment clause clefts*. Topic clause clefts are those in which the cleft clause is given with respect to an (implicit) question, while in comment clause clefts, the cleft clause says something about the (given) pivot.

A few examples of different types of topic clause clefts are provided in (15). All of these examples share the feature that the cleft clause is activated directly, reactivated or activation is implied. So the notion that Hedberg uses here as topic is rather a notion of activation instead of the notion of aboutness.

- (15) a. ...our intention was to make the Sandinistas cry uncle. It was the CONTRAS who have cried uncle.
- b. At Millington Bridge, for example, he asked all sorts of questions about the Burtells – how long they stayed and whether they saw much of each other and so on. It was the maid he asked, not the landlady.
- c. ‘The woman’s got no more sense than a hen. No - don’t you go, Sheila – I won’t have you carrying coal.’  
 ‘Nonsense,’ said his wife, rather acidly. ‘What a hypocrite you are, George. It’s only because there’s somebody here that you’re so chivalrous all at once.’ (Hedberg, 1990, 117)
- (Hedberg, 1990, 116f)

Again, we can see that the notion of focus is relevant in all of these examples. The first and second example provide an overt contrast between the Contras and the Sandinistas on the one hand and the maid and the landlady on the other. The third examples involves the focus-sensitive particle *only*.

Hedberg contrasts topic clause clefts with comment clause clefts, illustrated in the examples in (16) and (17). The hallmark of this subtype is that the cleft clause contains new information, while the pivot is usually given/accessible.

- (16) a. On the contrary. She saved your neck and my reputation. It was she who found your overcoat. (Hedberg, 1990, 139)  
 b. What does John have to do with the affair of the letter?  
 It was John who wrote the letter. (Hedberg, 1990, Ch5:13)
- (17) It was the Greeks who first made wine . . . .

I will show below in section 5.4.8 that the pivot is still focused in these clefts, too.

Delin (1989, 1992) has a slightly different approach to the subclassification of cleftsm as her starting point is the prosody of the different subtypes. As prosody and information-status are dependent upon each other (in intricate ways that I do not discuss in detail here), she argues for subtypes of Prince's (1978) classification based on intonation, and arrives at a distinction of four types. Delin (1992) distinguishes two accentual patterns, STRONG-WEAK vs. WEAK-STRONG and additionally distinguishes those that have just one intonational phrase from those that have two. Cross-classification gives rise to four different classes of ICs sketched in table (17).

| Type | No of IPs | main accent  | accent pattern |
|------|-----------|--------------|----------------|
| A    | 1         | pivot        | Strong-Weak    |
| B    | 2         | pivot        | Strong-Weak    |
| C    | 1         | cleft clause | Weak-Strong    |
| D    | 2         | cleft clause | Weak-Strong    |

Table 5.1: Subtypes of ICs in Delin (1989, 1992)

Type A of the stressed-focus ICs is characterized by the nuclear accent on the pivot (marked by SmallCaps) followed by a deaccented cleft clause.



- (18) It's HERE I look like Mina Davis. (Delin, 1992, 3)

Type B of the stressed focus ICs again exhibits the nuclear accent on the pivot, however, the cleft clause is pronounced with secondary accents (indicated by t').

- (19) a. This coffee is really yukky.  
b. It was you who put the mÍlk in.  
(Delin, 1989, 4)

Delin (1989, 1992) distinguishes two subtypes of informative-presupposition ICs, which in her analysis expose the WEAK-STRONG accentual pattern. Type C ICs show an unaccented pivot and the nuclear accent occurs in the cleft clause.

- (20) a. And does the head know?  
b. No. Oh, wait a minute. It was the head who ARRANGED it.  
(Delin, 1992, 6)

According to Delin (1992), this type is not contrastive on the pivot. Note though that even though the pivot is not accented, it cannot be deaccented completely, a fact which Delin (1992) also notes. Delin (1992) suggests that this is due to the syntactic structure of clefts, but this minor accent is equivalent to a zero accent in terms of signaling accentual focus.

- (21) \*It was 'em that TOLD me. (Delin, 1992, 7)

I interpret this fact such that there is still some kind of focus interpretation relevant. I will come back to the discussion of this type below in section 5.4.8.

Type D ICs exhibit a weak accent on the pivot and the nuclear accent

falls on a constituent in the cleft clause, see (22)

- (22) a. (seeing a mistake in a transcript of some elicited linguistic data in B's thesis). Did the subject really make this error?  
b. No, it's me that can't TYPE properly.

As I will show below, these clefts contain a double contrast (subject vs. me; error vs. type properly), which again I think shows that some notion of contrast is involved in ICs.

Delin (1992) provides an analysis of these four types of ICs in terms of Gussenhoven's (1983) account of accent placement. In this analysis, the sentence is divided into Focus Domains (=FD), which in turn are subject to accent assignment rules. Once the Focus Domain is set, accent placement is automatic. Thus, the important part is to assign FDs in a sentence. Type B/D have two accents, thus they require two focus domains, while type A/C only have one.<sup>11</sup>

The relevant point to be stressed here is that while I think that it is interesting to distinguish these subtypes, I think it is not defining for cleft sentences. Rather, the difference between given/new is a difference that can be cross-classified with F-marking. As intonation is influenced by both, the cases of SW are those in which the main accent falls on the pivot, the marked focus, and the default cases. The cases with a WS intonation are cases of second-occurrence focus or multiple focus constructions, which I will discuss below in sections 5.4.6 and 5.4.7.

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<sup>11</sup>Lambrecht (2001) also provides a classification of different types of clefts. As he includes a range of different structures in his class of cleft sentences, I do not discuss these here in detail. For the class of ICs assumed here, his major distinction is between predicational and specificational clefts, a distinction which I discuss below in section 5.8.

### 5.2.5 Conclusion

In this section, I have discussed three different classes of approaches to the information structure of cleft sentences. For the focus-semantic approaches I concluded that they are too strong (E.Kiss 1998) or they cannot (straightforwardly) account for the availability of the combination of clefts with *only*. For the unificational pragmatic approach by Rochemont (1986), I conclude that the information-structural status of the cleft clause is not definitional. Finally, with respect to the pragmatic subtypes defined over the information status of pivot and cleft clause, I showed that while the distinction of these subtypes is interesting, it is not the common feature of clefts. I will show below that once the distinction between marked focus (contrastive focus, identificational focus, alternative focus) and new information focus is made, we can understand the common focus of ICs - a marked focus - without contradicting the individual subtypes, which are based on new information focus.

## 5.3 The Notion of Marked Focus

### 5.3.1 Introduction

In this section, I turn to the notion of Marked Focus (=MF) and its interpretation. The notion of 'focus' has received various different interpretations and has been used for various different such as new information, contrast, correction and exhaustivity. The term focus is often also used to refer to the nuclear accent of a sentence, thus the prosodic aspect of focus is considered definitional. While this certainly is a terminological issue, it probably is not only so. There is an underlying disagreement as to whether focus is a result of *form-to-function* mapping, or whether the (syntactic) form serves the needs of prosody and does not directly express function (see Verho-

even and Skopeteas 2015 for discussion and references).<sup>12</sup> The approach taken here and worked out in some detail in chapter 2 allows an interaction of Interpretation/Function - Form / Syntax - Prosody as the InfS module can assign feature bundles relevant to both the syntactic component and PF interpretation. In this way, different subtypes of focus interpretations can be grammaticalized in different ways. The major aim of this section is first to introduce the core concept of focus interpretation - the relevance of alternatives (Krifka, 2008a) - and second to separate this notion of focus interpretation from the pragmatic status of individual constituents, new information focus. I call the former 'marked focus' as it requires a non-default expression, either through some aspect of prosody or syntax or both (or in other languages other means such as morphological marking). I will show how this notion relates to another important InfS concept - contrast - in section 5.3.4. Section 5.3.5 will discuss whether focus is the counterpart to givenness (and therefore not the marked option) - a position which I will reject. This section therefore provides an analysis of marked focus which will be the basis for the analysis of the subtype of marked focus present in cleft sentences and analysed in detail in the rest of the chapter.

### 5.3.2 Marked focus vs. new information focus

#### 5.3.2.1 Introduction

In this section, I discuss the general definition of focus assumed here. The main point that is relevant for this chapter is the distinction between new information focus and marked focus. The distinction between two differ-

<sup>12</sup>The form-to-function mapping is assumed in the functional literature such as Dik (1997) and references therein, cartographic approaches such as Rizzi (1997) and follow-up work, or work on Hungarian focus movement such as É. Kiss (1998) and follow-up work, but also in cross-linguistic studies such as Drubig (2003). The alternative line of research proposing that form serves prosodic requirements can be found in the work by Reinhart (1995, 2006), Szendrői (2003) and more recently in Hartmann and Zimmermann (2007b), Wedgwood (2007), Büring (2010), Fanselow and Lenertová (2011)

ent types of focus has been present in the linguistic literature for several decades (Halliday (1967a), Rochemont (1986), Drubig (1994, 2003), É. Kiss (1998), Winkler (2005), Rochemont (2013)), though it received various different labels, as, for example: contrastive focus versus presentational focus, identificational focus vs. information focus, wide focus versus narrow focus, to name just a few. In the following, I will present some of the arguments to distinguish between New Information Focus (=NIF) and what I will call Marked Focus (=MF) (for reasons which will become clear below). (23) is an example of new information focus. The *wh*-question asks for some general information and the answer is an all-new answer. (24) on the other hand shows an example of MF, both in the question, where the question operator has to associate with the accented constituent JOHN, and in the answer, in which the relevant information is corrected.<sup>13</sup>

- |      |  |     |
|------|--|-----|
| (23) | What happened?<br>John ate the beans.              | NIF |
| (24) | Did JOHN eat the beans?<br>No, BILL ate the beans. | MF  |

NIF and MF have been distinguished with respect to the following properties.

1. Focus sensitive operators are sensitive to MF, but not to NIF (Kratzer and Selkirk, 2010, Rochemont, 2013).
2. MF and NIF differ in prosody (Selkirk, 2002, Katz and Selkirk, 2011, Rochemont, 2013) (contra Gussenhoven 2004, Ladd 1996)

<sup>13</sup>Note that this distinction does not entirely match the distinction between wide-focus/all-new focus vs. narrow focus. A narrow focus is not necessarily contrastive. Thus, in (i), the constituent that is new is a narrow-focus in the sense that only part of the sentence is focused, however, the focus is still a NIF. For discussion on NIF vs. MF in answers to *wh*-questions in general, see section 5.3.2.6 below.

- (i) What did Mary do? She [<sub>F</sub> left ].

3. MF can trigger movement, NIF does not (É. Kiss, 1998).
4. MF gives rise to intervention effects (discussed in Beck 2006), NIF does not (Rochemont, 2013).

I will consider these differences in turn.

#### 5.3.2.2 Association with focus sensitive operators

One argument in favour of the distinction between NIF and MF comes from the semantics of focus sensitive operators. Focus sensitive operators associate with MF not with NIF. This argument provided in Kratzer and Selkirk (2010) cited in Katz and Selkirk (2011) can be nicely illustrated with the following examples from Katz and Selkirk (2011, 774), see also Rochemont (2013). The examples illustrate that when there are two phrases in the scope of *only* and when both are new information, *only* can associate with one or the other. *Only* does not necessarily associate with both.

- (25) a. Gary is a really bad art dealer. He gets attached to the paintings he buys. He acquired a few Picassos and fell in love with them. The same thing happened with a Cezanne painting. So he would only offer [that Modigliani] to [MoMA]. I bet the Picassos would have fetched a much higher price. (Katz and Selkirk, 2011, 774)
- b. F-marking  
So he would only offer [that Modigliani]<sub>F</sub> to [MoMA].
- (26) a. Gary is an art dealer. Lately he's been very picky about which museum he deals with; he doesn't do business with the Metropolitan or the Guggenheim. He would only offer [that Modigliani] to [MoMA]. He says that's the only place with a good enough space to hang it in. (Katz and Selkirk, 2011, 774)

b. F-marking

So he would only offer [that Modigliani] to [MoMA]<sub>F</sub>.

Katz and Selkirk (2011, 775) conclude that ‘it is not the presence of *only* or its position in the sentence that distinguishes these cases. It must be the syntactic representation of the constituent with which *only* associates that provides the distinction.’ A theory in which there is no distinction between MF and NIF cannot make such a distinction, because both constituents would be F-marked in the same way, giving rise to the wrong set of alternatives.<sup>14</sup>

### 5.3.2.3 Differences in Prosody

Selkirk (2002) provides experimental evidence in which she shows that the prosody of contrastive FOCUS (MF here) vs. presentational focus (NIF here) differs. MF shows a L+H\* pitch accent and a phonological phrase break after the contrastive focus marked by a L- phrase accent and temporary disjuncture. NIF, on the other hand, shows an H\* pitch accent and no phonological phrase break. She compared the prosody of the contrastive verbs in Right Node Raising sentences with the prosody of the verb in a corresponding SVO sentence, as in (27).

- (27) a. We’ve managed to [ remaster ]<sub>MF</sub> without [ remanipulating ]<sub>MF</sub>  
the recordings on the Black Cat label.
- b. We’ve been [remanipulating]<sub>NIF</sub> the recordings on the Black Cat  
label.

<sup>14</sup>Given the context provided, one might think that the distinction between the different readings is a function of the context. In such an analysis, *only* would need to be underspecified with respect to the constituent it associates with, and context provides the relevant alternatives. Note though, that such an approach merely based on context is not sufficient, once the results from the prosodic interpretation is considered, which show that the associate of *only* is prosodically marked.

Note that the general conclusion of the difference between NIF and MF in this study relies on a specific syntactic analysis of RNR in which the RNR constituent (*the recordings on ...* in (27)) is syntactically part of the preceding material.<sup>15</sup> It is not obvious whether the comparison between RNR and regular SVO sentences as done in this study actually tells us something about marked focus vs. new information focus.

Breen et al. (2010) provide three different experiments to investigate the acoustic correlates of focus. They use *wh*-questions to investigate differences in wide-focus (all-new) focus, and narrow focus on the subject, verb or object of the target sentence. The materials they use are given in (28)-(30) for the target sentence in (31).

(28) Wide Focus

What happened this morning?

(29) Noncontrastive Focus

- a. S: Who fried an omelet this morning?
- b. V: What did Damon do to an omelet this morning?
- c. O: What did Damon fry this morning?

(30) Contrastive Focus

- a. S: Did Harry fry an omelet this morning?
- b. V: Did Damon bake an omelet this morning?
- c. O: Did Damon fry a chicken this morning?

(31) Damon fried an omelet this morning.

<sup>15</sup>Such an analysis has been proposed in ellipsis approaches to RNR such as Wexler and Culicover (1980), Hartmann (2000), Bartos (2001), Abels (2004), Ha (2007, 2008). In the movement approaches to RNR as in Ross (1967), Postal (1998) the RNR-constituent is not syntactically the complement of the preceding verb / preceding constituent. The third class, of approaches, multi-dominance approaches such as McCawley (1982), Wilder (1999), Bachrach and Katzir (2009) might also be compatible with the assumptions made in Selkirk (2002), though the rules that govern the prosody of such multi-dominance structures are far from obvious.



Breen et al. (2010) find that speakers mark focus location with greater intensity, longer duration and higher F0 mean and F0 maximum. Speakers also use the same means to distinguish between the wide focus condition and the narrow focus on the object (contra the traditional assumption of focus projection in Selkirk 1984 and follow-up work). Breen et al. (2010) also look at the difference between contrastive focus with an overt alternative provided in the context, see (30), and non-contrastive focus when such an alternative is not provided, see (29). Speakers only made a measurable distinction when instructed to do so (Experiment 2 and 3). Listeners on the other hand did not reliably perceive this difference. The difference between broad focus and narrow focus in the studies here might be a relevant difference between NIF and MF, however, the lack of a distinguishable difference between contrastive vs. non-contrastive focus does not speak against a difference in MF vs. NIF. First of all, the use of *wh*-questions vs. *yes-no* questions in my view does not indicate the difference between NIF and MF, rather both might be instances of MF, but not necessarily (Section 5.3.2.6). Second, the use of *wh*-questions gives rise to a confounding effect of givenness on the non-focused constituent, which in turn also influences prosody (and might be grammatically marked as well, see Rochemont 2013). Thus, the set-up of this study does not provide convincing enough evidence for prosodic marking of overt alternatives in the background.

Katz and Selkirk (2011) provide a detailed study that investigates the differences between MF and NIF in regular sentences, without the interference of givenness. They compare the phonetics of MF and NIF in sentences that have the same structure, while context and the use of a focus-sensitive particle controls for the position of MF and NIF. Thus, they compare the prominence of the two marked constituents in the following three conditions (labels adjusted to MF and NIF according to the terminology here).

- (32) a. Focus-new: So he would only offer [that Modigliani]<sub>MF</sub> to [MoMA]<sub>NIF</sub>  
 b. new-Focus: So he would only offer [that Modigliani]<sub>NIF</sub> to [MoMA]<sub>MF</sub>  
 c. new-new: So he would offer [that Modigliani]<sub>NIF</sub> to [MoMA]<sub>NIF</sub>

The respective contexts that control the location and MF and NIF are given in (33).

- (33) a. Condition A: Focus-new  
 Gary is a really bad art dealer. He gets attached to the paintings he buys. He acquired a few Picassos and fell in love with them. The same thing happened with a Cezanne painting. So he would only offer [that Modigliani] to [MoMA]. I bet the Picassos would have fetched a much higher price.
- b. Condition B: new-Focus  
 Gary is an art dealer. Lately he's been very picky about which museum he deals with; he doesn't do business with the Metropolitan or the Guggenheim. He would only offer [that Modigliani] to [MoMA]. He says that's the only place with a good enough space to hang it in.
- c. Condition C: new-new  
 Gary was a successful art dealer, and could afford to be pretty demanding with his clients. He would never make a deal unless the price was right and he respected the buyer. He will probably offer [that Modigliani] to [MoMA]. But only for a six figure sum.

Katz and Selkirk (2011) find that MF and NIF do not differ with respect to tone. Both are marked by H\* pitch accents followed by phrase-final L-tone. However, they do find differences with respect to duration, (relative) focus pitch scaling and (relative) focus intensity. Thus, the phonetic prominence of MF and NIF differ. The careful design and analysis of this experiment

strongly supports such a distinction also on the prosodic level.<sup>16</sup>

#### 5.3.2.4 *Intervention effects*

Rochemont (2013) adds another argument for the difference between MF and NIF. He shows that MF gives rise to intervention effects (see Beck 2006) while NIF does not. Intervention effects in English can be investigated with D-linked wh-phrases (see Pesetsky (1987), as these are not ruled out by superiority independently. The contrast in (34) results from the intervention of negation in (34b).

- (34) a. Which boys did Mary introduce which girls to?  
       b. ??Which boys didn't Mary introduce which girls to?  
       (Rochemont, 2013, 46)

In (35) the first question by B involves a NIF on *Mary*. The question in B's reply however, involves a MF on *Bill*, which gives rise to an intervention effect, see Rochemont (2013, 46):

- (35) A: Why do you look so puzzled?  
       B: You were at the party last night so I wonder if you can tell me,  
           because I can't remember.  
           Which BOYS did MARY introduce which GIRLS to?  
       A: I can tell you that if you can tell me this:  
           ??Which boys did BILL introduce which girls to?

<sup>16</sup>Note though that their notion of newness also includes accessible referents, which can be seen in their materials. Thus, the contrast they have in mind is really new/accessible vs. discourse-given.

## 5.3.2.5 Movement

É. Kiss (1998) also proposed the distinction between MF (what she calls identificational focus) and NIF (new information). She argues that a moved focus in Hungarian (and the pivot in English clefts) has a special semantics, namely identification/exhaustivity. Thus, a MF can give rise to a syntactic process while NIF does not. Focus movement has not just been reported for Hungarian but also for a range of other languages, including English focus preposing. Focus preposing is infelicitous with NIF and requires a specific (focus) interpretation on the moved item.

The following examples from Hungarian show the distinction. (36a) illustrates the basic word order. *Egy kalapot* 'a hat' is new information and is accented in its base position. In (36b) the constituent *Egy kalapot* 'a hat' is moved to the preverbal position and as a result is interpreted exhaustively.

- (36) a. Mari ki nezett maganak EGY KALAPOT.  
 Mary out picked herself.Acc a hat.Acc  
 'Mary picked for herself A HAT'
- b. Mari egy kalapot nezett ki maganak.  
 Mary a hat.Acc picked out herself.Acc  
 'It was a hat that Mary picked for herself.'

(É. Kiss, 1998, 249)

A similar case is focus preposing in English, as illustrated in (37). The preposed constituent *coffee* receives the main stress and a contrastive interpretation.<sup>17</sup>

- (37) A: Did you want tea?

<sup>17</sup>Note that preposing in English can also express other InfStruc categories such as topics. The major distinction can be made with the help of accentuation patterns. In focus preposing, the main accent falls on the preposed constituent while the rest of the sentence is deaccented. In topicalization, the main accent is in the main clause, while the preposed constituent receives a topic accent, see Ward et al. (2002, 1381), Ward and Birner (2001) for the basic distinction.

B: COFFEE, I ordered.

(Ward et al., 2002, 1381)

Thus, I take movement to be another argument in favour of the distinction between MF and NIF, as made here.<sup>18</sup>

#### 5.3.2.6 A note on MF/NIF in answers to *wh*-questions

The distinction between NIF and MF is not always as clear as in the two examples provided above. In the answer to *wh*-question asking for a single constituent, as in (38), the constituent *The six brothers of JOHN* is certainly new information. Whether this focus is a NIF or MF or both is not obvious.

- |      |   |          |
|------|---|----------|
| (38) | Who ate the beans?                      | MF / NIF |
|      | The six brothers of JOHN ate the beans. |          |

So let me consider this question here briefly, though only exploratively. Considering the prosodic pattern, we can observe that both in the case of MF and NIF, the main accent falls on John. Thus, the answer in (38) can in principle be ambiguous. The constituent *The six brothers of John* can be a marked focus, with the main accent falling on *John*. Additionally, however, if the same constituent is a NIF, and thus unmarked, the main accent of the sentence would still fall on *John* due to deaccentuation rules in English. As English is a language that employs deaccentuation, and the latter part of the sentence is given, the accent is shifted to the initial constituent and falls on the most deeply embedded element, namely *John*. Thus, accent position does not provide a clue for the distinction of MF and NIF here. As far as I know, there is no detailed prosodic study that investigates whether the

<sup>18</sup>Sardinian seems an exception because according to Mensching and Remberger (2010) it allows/requires NIF to move. A detailed investigation of this apparent exception goes beyond the scope of this work.

prosody of MF and NIF would or should differ phonetically in these cases. Thus, there is no prosodic evidence available to decide on this question.

A related issue might be that answers to *wh*-questions in English are frequently interpreted as exhaustive answers as in (39), although *mention-some* answers are certainly possible as in (40) (for an overview and references see Hagstrom 2003 and references therein).

- (39) a. Who attended the class?  
b. Peter, Paul and Mary attended the class.
- (40) a. Who can help me with my computer problem?  
b. Peter can help you.

Thus, answers to narrow focus questions in English might express both NIF and MF. This is important to bear in mind when the *wh*-question test is applied to actually investigate focus in English.<sup>19</sup>

### 5.3.2.7 Conclusion

In this section, I have discussed the distinction of marked focus (MF) and new information focus (NIF). Based on the arguments in the literature I concluded that the two types of foci need to be distinguished on the basis of the following four criteria:

1. Focus sensitive operators are sensitive to MF, but not to NIF.
2. MF and NIF differ in prosody.
3. MF can trigger movement, NIF does not.

<sup>19</sup>This is also important for the findings in Skopeteas and Fanselow (2011). They discuss experimental evidence concerning question-answer congruence and exhaustive interpretations with respect to SVO vs. OVS orders in four different languages. If narrow focus questions are indeed ambiguous between an exhaustive interpretation and a non-exhaustive interpretation, and if OVS orders are not necessarily a result of semantic focus as argued in Fanselow and Lenertová (2011) it is not surprising that OVS orders are not as exhaustive as their pseudocleft condition.

4. MF gives rise to intervention effects, NIF does not.

The last section included a discussion of answers to wh-questions, which are usually used as a test for the focus domain of a given sentence. However, (narrow focus) answers to wh-questions seem to be ambiguous between MF and NIF. Two major concerns are relevant: first, wh-questions allow both exhaustive answers and mention-some answers. The former are sensitive to alternatives indicating that indeed marked focus is involved, while the latter isn't. The second consideration concerned the prosody of narrow focus answers - the main accent always falls on the constituent under discussion, however, this might be both a result of the marked focus attracting stress, or the result of givenness marking and deaccentuation of the non-questioned part of the answer. In short, this section argued for a distinction between marked focus and new information focus. I turn to the nature of marked focus in the next section.

### 5.3.3 Marked Focus involves Alternatives

#### 5.3.3.1 *Starting Point: Krifka (2008)*

The broadest definition of focus is provided in Krifka (2008a) originally going back to Rooth (1992).

(41) Definition of focus

Focus indicates the presence of alternatives that are relevant for the interpretation of linguistic expressions. (Krifka, 2008a, 247)

The important result from the preceding discussion is that alternatives are relevant for marked focus not new information focus. Therefore, I restrict my attention to marked focus now. The definition (41) is broadly accepted and frequently cited. One reason (and a good one) is that the this general

definition allows for the definition of a number of subtypes of focus. These can be derived depending on (i) the nature of the alternatives, and on (ii) the way they are relevant for the interpretation.<sup>20</sup>

### 5.3.3.2 *The type and delimitation of alternatives*

Marked focus is defined by the relevance of alternatives. Thus, in principle, subtypes of focus might be based on different types of focus alternatives. In principle, the types of alternatives can be at least individuals, properties, propositions and possibly more. The question whether all semantic types, simple and complex can count as alternatives, or whether there should be restrictions on this has not been discussed much. In Rooth (1992), the focus semantic value for a sentence is calculated compositionally, so that each node has a focus semantic value, and thus, all semantic types do. The squiggle operator proposed in Rooth (1992, 1996) binds and interprets the set of focus alternatives. Thus, in this theory, there is no restriction as to which types can produce focus values. In a framework like Drubig (1994), Krifka (2006), the existence of a focus phrase suggests that at least some domains are singled out as potential source for alternatives. Thus, a given language or rather a grammatical expression in a language can involve/signal different types of alternatives. One such case could be the alternatives relevant for contrastive topics as analysed in Constant (2014) as set of sets of propositions (based on the CT-value of Büring 2013).

Another source for different subtypes of foci can be based on the delimitation of the alternatives. First, they might be delimited ‘from inside’ by

<sup>20</sup>Note that the concentration on alternatives raises the question of whether alternatives are a sufficient criterion for establishing focus. This seems not the case, as alternatives can also be involved in the interpretation of topics. Neeleman and Vermeulen (2012, 18) propose that the distinction is in the nature of the alternatives: ‘In the case of foci the function introduced by the lambda operator generates propositions, whereas in the case of topics it generates utterances. These utterances vary only in the value for the position occupied by the topic.’



indicating in which respect alternatives differ. Thus, a focused constituent [*the sister of John*]<sub>F</sub> might include every relevant individual in the alternatives, as in {Bill, Peter, the sister of Mary, the brother of John, the father of Peter, ...}. A constituent like [*the sister of [John]*]<sub>F</sub> presumably only includes alternative individuals that are in a sisterhood relationship to someone, so {the sister of Mary, the sister of John, the sister of Peter, ...}. In contrast to that [*the [sister]<sub>F</sub> of John*] contains alternatives that stand in a specific relationship to John, namely {the brother of John, the sister of John, the father of John, ...}.

Second, alternatives can be further delimited as to whether or not they are present in the linguistic context/common ground. It is perceivable that a subtype of focus, such as for example corrective focus, relies on the presence of an alternative proposition in the preceding discourse or common ground.

Third, alternatives can vary as to whether they constitute a closed set consisting of a finite set of entities or an open set of entities for which the entire membership cannot be established. An example for the former is that if there is a superset of parents, the subset is closed consisting of father and mother. The same can happen in a discourse when all the relevant alternatives are known to both interlocutors (for example the set of students in a class). An open set can be a set that is underspecified in the context.

Fourth, alternatives might be delimited by the relationship that they have amongst each other. For example, Wagner (2005, 2012), Spathas (2010), Büring (2012) propose that the focus alternatives have to be ‘mutually exclusive’. A car can be both blue and expensive at the same time, but it cannot be a blue car and a red car simultaneously. Thus, the alternatives in the set {a blue car, a red car} count as mutually exclusive, but the alternatives in a {a blue car, a expensive car} are not. While the previous three

criteria are such that languages

The first three dimensions along which alternatives might differ (semantic type, relation to context/common ground, type of set) can give rise to different subtypes of focus that languages might or might not express with specific means, or make use of. For the fourth dimension (relation between alternatives) it is not clear to me whether this is defining for focus alternatives in general, or whether that is subject to variation. This is an empirical question which needs further cross-linguistic investigation and I leave it to that here.

#### 5.3.3.3 *Alternatives' Relevance for Interpretation*

In the definition of focus in (41) alternatives have to be relevant to the interpretation of the sentence. In which ways alternatives are relevant, is unspecified. We can certainly distinguish (at least) three types of this kind of relevance:

(i) The focused alternative replaces another alternative present in the discourse, i.e. in cases of correction, see (42).

- (42)    A: John likes ice cream.  
          B: No, PETER likes ice cream.

(ii) The focused constituent associates with a focus-sensitive operator. One such case is the case of *only* and a range of other lexical items (see Beaver and Clark 2008 for a detailed study of these kinds of operators). The depending on the focus-alternatives, the truth-conditions changes (the observation goes back to at least Jackendoff 1972, who coined the term *association with focus*).

- (43)    a. John only introduced BILL to Sue.

- b. John only introduced Bill to SUE.

There certainly is a range of other such operators, overt or covert, whose interpretation depends on the available focus alternatives. These can be the more general ASSERT-operator in Krifka (1992a) or the squiggle operator in Rooth (1992, 1996), but also more specific kinds such as the CT-operator proposed in Constant (2014), or the exhaustivity operator as proposed in Horvath (2000) have to be listed here, to name just a few.

(iii) Focus alternatives are relevant in the sense that only one alternative from the set of alternatives is asserted, leading to an exhaustive interpretation either by implication or by a semantic operation, see chapter 6 for more discussion.<sup>21</sup>

Thus, in which ways the alternatives are relevant to the interpretation of the sentence can in principle vary, too. They might just be necessarily present in the context, or there might be different types of operators or lexical items that make use of a marked set of alternatives. The important questions for research then are: which are the universally available operators and how do languages express these operators and mark/derive the relevant set of alternatives. In the chapter here, I investigate which subtype of marked focus is relevant for ICs sentences in English and more generally in specificational copula clauses in English and cross-linguistically. Before I do that, I will discuss two issues that are relevant for marked focus - the notion of contrast and the relationship to givenness. As marked focus has been also labeled 'contrastive' it is necessary to make clear how I take the two to relate to each other. Second, some studies take marked focus to be the constituent that is not-given in a specific sense. Thus, I will discuss the

<sup>21</sup>Note that focus marking plays an important role in the discourse appropriateness of sentences, as for example in question-answer congruence, or with respect to InfS-related word order variations. To what extent the alternatives to the focused constituent play a role in these constructions is not entirely clear though, see 5.3.2.6 for further discussion.

relationship between those two notions in section 5.3.5.

### **5.3.4 Marked Focus vs. Contrast**

#### *5.3.4.1 Introduction*

Marked focus has also been labeled ‘contrastive focus’ (see e.g. Rochemont 1986, Rooth 1992, López 2009) or contrast has been claimed to be relevant for the interpretation of focus. Therefore, I turn to the discussion of the notion of contrast and its relation to the term marked focus as used here. I will distinguish different notions of contrast defined in the literature. We will see that a subset of these notions should be treated as relevant for marked focus. Additionally, contrast has been argued to be an independent concept of InfS, as contrast can be present with both topic and focus (see Molnár (2006) for discussion). While the latter point is not relevant to be settled here (it largely depends on the analysis of the phenomenon of contrastive topic cross-linguistically), I will show how the former should be subsumed under the notion of marked focus.

#### *5.3.4.2 Definitions of Contrast*

The notion of contrast has found numerous definitions in the literature, ranging from the broad definition of highlighting to a very narrow notion of exclusion of overtly stated alternatives (for recent overviews, see Molnár 2006 and Repp 2010, *passim*). Contrast is a relational notion, i.e. it describes the relationship between two or more entities. At least three different notions of contrast can be distinguished, depending on the source of elements that are opposed and on the nature of the relationship between them. (i) Contrast is dependent on the context (see, for example, É. Kiss 1998), i.e. an entity in a sentence is opposed to other entities in the context. (ii) Contrast derives from a comparison of elements within the sentence (see for

example the contrast established in parallel structures such as gapping or right node raising, see Winkler 2005, Repp 2009, Hartmann 2000). (iii) Focus alternatives are in a contrast relationship with each other; (iv) Contrast is established on the basis of mutually exclusive alternatives, see Wagner (2005, 2012), Spathas (2010), Büring (2012).<sup>22</sup> I discuss these notions in turn. (i) According to the first definition, a phrase *X* contrast with any other phrases of the same type *Y* that are present/mentioned in the context. The ‘strength’ of the contrast then depends on the nature and type of the contrasting phrases in the context, whether it is a closed or an open set and whether the contrasting alternatives are overtly present or not. *Bill* in (44) is one alternative from a closed overtly mentioned set provided in the context. *His father* is a member of the closed set parents mentioned in the context in (45). In (46), *Peter* is the member of an open set (we do not know how many kids Mary knows, nor who they are) provided in the context.

- (44) a. Context: John, Bill and Mary are suspects in the disappearance of Mary Gable.  
b. Bill has an alibi.
- (45) a. Context: Peter’s parents are both working for the police.  
b. His father is a sergeant.
- (46) a. Context: Mary knows lots of kids from school.  
b. She invited Peter to her party.

(ii) The second definition refers to (mostly) parallel examples in which a contrast is established between elements within the sentence. In the gapping example in (47), *John* and *Mary* contrast with respect to the buying prop-

<sup>22</sup>Note that Wagner includes this notion of contrast in the establishment of focus alternatives per se. Thus, the focus alternatives of the phrase *cheap* are {high-end, cheap}, but not {blue, cheap, ...} (as in Rooth (1992), Schwarzschild (1999) because a thing can be cheap and blue at the same time. See Katzir (2013) for discussion.

erty. *John* has the property of buying apples, while *Mary* has the property of buying bananas.

(47) JOHN bought APPLES and MARY BANANAS. (Winkler, 2005, 192)

In the right-node-raising example in (48), the two activities arriving and leaving are juxtaposed, being the opposite activities—an aspect which seems relevant for this type of right-node-raising, see Hartmann (2000).

(48) Mary arrives and Peter leaves at 5 p.m. (Hartmann, 2000, 54f)

(iii) In the third definition, the notion of contrast is very closely related to the notion of marked focus as discussed in 5.3.2. The focus gives rise to a set of alternatives and the focused member contrasts with the other members of this set. Therefore, some researchers call marked focus contrastive focus (see for example Rochemont 1986, Rooth 1992, López 2009).

(iv) The fourth definition, based on mutually exclusive alternatives is similar to (iii) in that it takes focus alternatives to be contrastive. However, in this definition of contrast, the sets of alternatives only consist of *mutually exclusive* alternatives. Most referring expressions are mutually exclusive because (at least in the usual case), a referent cannot be *John* and *Bill* at the same time. As soon as the focused constituent contains a property, however, the set of the alternatives can, in principle, be restricted to those properties that are mutually exclusive. Consider the example in (49). Here, the focus on *red* is infelicitous because, according to Wagner (2012), *red* and *expensive* are not mutually exclusive, thus, they cannot be part of the set of alternatives (see Katzir 2013 for discussion of this issue).

(49) Mary's uncle, who is very rich and makes expensive convertibles, came to Mary's wedding. I wonder what he brought as a present.

- a. He brought a CHEAP convertible.
- b. #He brought a RED convertible.

(Wagner, 2006b, 297)

As we can see from this overview, the notion of contrast has been naturally included in the notion of (marked) focus.<sup>23</sup>

#### 5.3.4.3 Contrast as grammatically marked concept

There are two major phenomena that are discussed with respect to grammatical encoding of contrast independent of focus. The first is the special intonation for contrastive topics (I-CONTRAST in Molnár 2006), the second is contrast inducing movement in Finnish (S-KONTRAST in Molnár 2006) going back to Vilkuna (1995), Vallduví and Vilkuna (1998)). A third type is contrast in parallel constructions, such as gapping.<sup>24</sup>

Contrastive topics as *Fred* in (50) are marked with a special rising accent named a B-accent in Jackendoff (1972, 258ff).

- (50) A: What about Fred? What did he eat?  
 B: Fred<sub>CT</sub> ate the beans<sub>F</sub>

<sup>23</sup>Despite the large amount of literature on contrast, the nature of the relationship between the entities that are contrasted has been largely neglected in the investigation of the phenomena involving contrast. While in the gapping and RNR examples above, both the individuals, as well as different properties are specified (i.e. Mary+arriving vs. Bill+leaving), yet the difference between a focused entity and its alternatives is less straightforward. So, for example, *Bill* in (44) is juxtaposed with the other alternatives in the context with respect to the property of having an alibi. Whether or not that implies that the others do not have an alibi is a tricky question (see chapter 6 on exhaustivity). Note that both continuations in (i) are possible, though the prosody is different. In (ib), Bill receives a fall-rise, while this is not the case in (ic). I think that this suggests that contrast cannot be a function of the context alone. However, a more careful investigation of the prosody and the interpretation of these cases is required to reach this conclusion.

(i) a. Context: John, Bill and Mary are suspects in the disappearance of Mary Gable.  
 b. Bill has an alibi. I don't know about the other two.  
 c. Bill has an alibi. The other two do not.

<sup>24</sup>These are certainly not the only ones though, see Molnár and Winkler (2010), Molnár 2006, Konietzko and Winkler 2010 and the papers in Repp (2010) for further discussion.

(Büring, 2003, 522)

There are basically two approaches to the analysis of these contrastive topics. On the hand, Büring (2003), Steedman (2000), Krifka (2008a) propose that contrastive topics are actually topics containing a focus. The second position is that contrast is an independent concept that can combine with topics or focus.

One piece of evidence brought forward in favour of analysing contrastive topics as containing a focus is the decomposition of the B-accent into an A-accent (high tone) plus a high boundary tone (see Büring 2003). However, the issue here is rather intricate for two reasons. The definitions of contrast and focus are sometimes too close to actually be differentiated. Second, the accoustics and phonology of marked focus have recently been scrutinized.

The important point concerning this section here is whether the B-accent is restricted to contrastive topics or can be used generally with contrastive foci, as well. An example of such a B-accent with a contrastive focus is provided in (51) going back to Steedman (1991) and discussed in Molnár (2006, 224).

- (51) A: Does Marcel love operas?  
       B: Marcel likes MUSICALS.  
                                 L+H\*                LH%  
       (cited from Molnár, 2006, 224)

To the best of my knowledge, there is no empirical study that investigates the acoustic correlates of contrast both in topic and focus. If such a concept can be empirically confirmed, the prosody supports a separate concept of contrast independently of the two other concepts.

The second argument in favour of taking contrast as a separate gram-



matically relevant concept relates to movement triggered by contrast. The central idea comes from the work on Finnish by Vilkuna (1995), Vallduví and Vilkuna (1998) (see also Molnár and Järventausta (2003), Molnár (2006)). They argue that Finnish shows a distinguished left-peripheral position that can host both topics and foci.<sup>25</sup> The constituent that occupies this position has to contrast with its alternatives in a contextually given set. Thus it is either used with focus in a corrective statement as in (52) or as contrastive topic, when an additional focus is present as in (53).

- (52) A: Pekka lens Tukholmaan.  
Pekka flew Stockholm.to  
'Pekka flew to Stockholm'
- B: [*KONTRAST* Reykjavikiin ] Pekka lensi.  
Reykjavik.to Pekka flew  
'Pekka flew to REYKJAVIK'
- (Molnar, 2001, 110)
- (53) a. [*KONTRAST* Tukjolmaan] Pekka lensi [*FOCUS* Finnairilla ].  
Reykjavik.to Pekka flew Finnair.with  
'To Stockholm, Pekka flew by Finnair.'
- b. [*KONTRAST* Reykjavikiin ] Pekka lensi [*FOCUS*  
Reykjavik.to Pekka flew Icelandair.with  
Icelandairilla ].
- 'To REYKJAVIK, Pekka flew by Icelandair.'
- (Molnar, 2001, 111)

A further argument for the distinction of contrast from focus and topic, relies on the fact that contrast is relevant in parallel constructions like gapping, see Winkler (2005), Molnár and Winkler (2010). In a gapping structure, both remnants—the constituents that are not elided—have to be contrasted with the corresponding antecedent in the correlate clause. Thus, pronouns and

<sup>25</sup>See Molnár and Winkler (2010) for a related claim. They suggest that a feature set +C is responsible for such movement to the edge also in Swedish, English and German (split) topicalization.

epithets require a disjoint reading when being part of the remnant.

- (54) A: Wer hat welche Rose gekauft? - Who bought which roses?  
 B: MANDY<sub>i</sub> hat ROTE Rosen gekauft aber \*er<sub>i</sub> / der DUMMKopf<sub>\*i/j</sub>  
 Mandy has red roses bought but he / the stupid-person  
 WEISSE  
 white  
 'MANDY bought RED roses, but he/the stupid-person WHITE ones.

(Molnár and Winkler, 2010, 1410)

What I conclude from the discussion here is that the different notions of contrast indeed are relevant for languages. The evidence presented here suggests that contrast is a separate notion. It can give rise to complex interpretations, like Contrastive Topic constructions, others refer to the relation of the alternatives to a given set in the discourse. To what extent contrast is a subclass of focus or a notion entirely independent of topic and focus largely depends on the analysis of contrastive topics, in general and the nature of correction in the Finnish data. As we will see below, neither is relevant for the cleft sentences under discussion, thus I leave this issue here.

#### 5.3.4.4 Conclusion

As has become clear in the preceding discussion, the notion of contrast figures prominently in the analysis of marked focus, especially in the definitions (iii) and (iv) that take contrast to be an inherent relationship between focus alternatives. This notion of contrast is superfluous here as it is naturally subsumed under the general class of marked focus.

To what extent contrast is a concept in its own right, independent of both topic and focus, is not relevant for the discussion here. This decision depends largely on the analysis contrastive topics, which is not relevant for the discussion to come.

### 5.3.5 Marked Focus vs. Givenness

#### 5.3.5.1 Introduction

Focus in some cases has been defined to be relevant to marked focus in the sense that the material that is not focused has to be given in some sense. Therefore, I discuss this notion of givenness in this section. The discussion of givenness is as varied as the discussion of focus, due to at least three different lines of investigation. (i) Depending on the perspective, researchers start with a semantic, pragmatic or discourse-defined notion of givenness and look for the grammatical marking of this concept in individual languages. Others start with the observation that lack of prosodic prominence indicates givenness and search for a uniform notion of givenness that can explain all the cases of lack of prominence. (ii) A different issue of discussion is whether givenness is one element in a hierarchy of accessibility of discourse referents or whether givenness is part of a dichotomy of given-new, or given-focused. (iii) In some analyses, givenness and presupposition overlap to some degree and the question is how these two notions are conceptually different and how they are grammatically marked. As a result, the term givenness is used to refer both to elements that are 'shared knowledge' and elements that are actually present in the current discourse. Accessible is taken to be present in the speaker's and hearer's consciousness. Prince (1985) distinguishes these two as different types of givenness. *Clark-given* are expressions that are "taken by the speaker to be part of the hearer's general knowledge-store"; *Chafe-given* are expressions that are "taken by the speaker to be currently in the hearer's consciousness" (Prince, 1985, 66).

In the following, I will take up these various issues in turn. I will first turn to the notion of activation, which I limit to be relevant to discourse participants only (not to the common ground). Activation is in princi-

ple a gradable notion and can (and probably should) be related to the processing of discourse. Then, I will turn to the discussion of givenness as a semantic notion defined over a discourse, briefly looking into its expression via deaccentuation in English. I call this semantic notion of givenness Schwarzschildian Givenness or S-Givenness for short, taking the seminal work by Schwarzschild (1999) as the basis for such a definition. I will proceed to discuss how this notion of givenness relates to the notion of presupposition and why I think that focus marking cannot be dispensed with by only marking givenness.

#### 5.3.5.2 *Givenness-A: Activation*

Givenness as activation refers to the question whether a discourse referent is given, new or accessible in the discourse (see the notion of Saliency in Prince (1981), and Chafe's distinction of information states in Chafe 1994, 73). Look at the mini-discourse in (55).

(55) Context: John and Mary recently went to the beach.

- a. They brought some picnic supplies, but they didn't drink the beer because it was warm.
- b. They brought some beer, but they didn't drink the beer because it was warm.

(cited from Rochemont, pear, 2, originally going back to Chafe (1976))

In the sentence in (55b), the phrase *the beer* is given as it has been mentioned in the immediately preceding clause. The definite DP in (55a) is not directly mentioned in the preceding clause, however, it is *accessible* as it can be derived from the notion of *picnic supplies* - where beer can be a natural subpart of this set. In this sense, a discourse participant X is accessible if it is inferable from the preceding discourse (see Prince's (1981) Inferables,

bridging inference in Clark 1977).<sup>26</sup> As the notion of accessibility/activation does not play a central role in the work here, I do not go into further detail here. The important point here that I put aside this notion of givenness entirely.

#### 5.3.5.3 *Givenness-S: Schwarzschildian Givenness*

Schwarzschild (1999) considers the question whether prominence is related to newness or lack of prominence is related to givenness, arguing for the latter version. More generally, Schwarzschild defines Focus as lack of givenness and he does not distinguish NIF from MF.

Schwarzschild (1999) defines givenness as a relation of co-reference (between two discourse antecedents of type e) or entailment between two expressions, which are type-shifted by existential closure of their arguments. Thus, givenness in this theory relates a given expression to another expression in the discourse (not the common ground).

(56) Definition of GIVEN (final informal version):

An utterance U counts as GIVEN iff it has a salient antecedent A and

- a. if U is type e, then A and U corefer;
- b. otherwise: modulo  $\exists$ -type shifting, A entails the Existential F-Closure of U

(Schwarzschild, 1999, 151)

Schwarzschild (1999) defines the notion of givenness in order to indirectly account for the distribution of F-marking, which he takes to be a prosodic concept for prominence marking, by requiring (57). Thus, a discourse referent A is given, if it has a co-referent salient antecedent in the discourse.

<sup>26</sup>For more details on accessibility, see Baumann and Grice (2006), Lambrecht (1994, 93ff) and references therein.

For other constituents in a sentence, existential type-shifting applies. As the requirement in (57) would always be trivially satisfied when all constituents are F-marked, an additional constraint, AvoidF in (58), needs to reduce F-marking to a minimum.<sup>27</sup>

(57) Non-F-marked constituents are given.

(58) AvoidF

F-mark as little as possible, without violating Givenness.

Spathas (2010) illustrates the workings of Schwarzschild's system with the following examples (where # marks infelicitous F-marking). In the context A, the reaction in B1 is felicitous while B2 is not.

(59) A: John introduced Mary to Bill.

B1: No, PETER introduced HELEN to Bill.

B2: No, PETER introduced Helen to Bill. # (Spathas, 2010, 15)

The calculation of B1 is given in 5.2. As all entailment relationships hold, the sentence is a felicitous reaction in this discourse.

|    | Constituent   | Existential F-closure                                       | Given |
|----|---|---|-------|
| a. | [ <sub>IP</sub> Peter <sub>F</sub> introduced Helen <sub>F</sub> to Bill] | $\exists x \exists y. \text{introduced}(x)(\text{Bill})(y)$ | ✓     |
| b. | [ <sub>VP</sub> introduced Helen <sub>F</sub> to Bill]                    | $\exists x \exists y. \text{introduced}(x)(\text{Bill})(y)$ | ✓     |
| c. | [ <sub>VP</sub> introduced Helen <sub>F</sub> ]                           | $\exists x \exists y \exists z. \text{introduced}(x)(y)(z)$ | ✓     |
| d. | [ <sub>V</sub> introduced]  | $\exists x \exists y \exists z. \text{introduced}(x)(y)(z)$ | ✓     |
| e. | [ <sub>DP</sub> Bill]   |   | ✓     |

Table 5.2: Illustration of Givenness from Spathas (2010)

<sup>27</sup> AvoidF requires givenness marking when possible. Thus, B1 wins over B2, and B2 is ruled out by AvoidF even though Givenness is not violated.

(i) A Helen's mother introduced Mary to Bill.

B1 No, PETER introduced HELEN to Bill.

B2 No, PETER introduced HELEN to BILL.

#

(Spathas, 2010, 16,18)

The reaction in B2 is not felicitous because the discourse in A does not entail that  $\exists x \exists y. \text{introduced}(\text{Helen})(x)(y)$  and all other propositions in which Helen is an argument of the verb.

|    | Constituent  | Existential F-closure  | Given |
|----|--|--|-------|
| a. | [ <sub>IP</sub> Peter <sub>F</sub> introduced Helen to Bill] | $\exists x. \text{introduced}(\text{Helen})(\text{Bill})(x)$ | *     |
| b. | [ <sub>VP</sub> introduced Helen to Bill]                    | $\exists x. \text{introduced}(\text{Helen})(\text{Bill})(x)$ | *     |
| c. | [ <sub>VP</sub> introduced Helen]                            | $\exists x \exists y. \text{introduced}(\text{Helen})(x)(y)$ | *     |
| d. | [ <sub>V</sub> introduced]                                   | $\exists x \exists y \exists z. \text{introduced}(x)(y)(z)$  | ✓     |
| e. | [ <sub>DP</sub> Helen]                                       |  | *     |
| f. | [ <sub>DP</sub> Bill]  |  | ✓     |

Table 5.3: Illustration of Givenness from Spathas (2010)

Schwarzschild's proposal has been criticized on the grounds that it cannot account for a number of phenomena, mostly relating to marked focus on given constituents.

Wagner (2006b) shows that Schwarzschild's analysis cannot account for the infelicity in (60b) and the assignment of F-marking in (60c), the so-called sister effect. In Schwarzschild's approach, (60b) is treated like (60a). However, even though the context entails  $\exists x \exists Y. Y(x) \& \text{car}(x)$ , the two properties *high-end* and *red* are not easily construable as contrastive. As contrast (or any other type of marked foci) does not play a role in Schwarzschild's theory, he cannot distinguish the two readings.

- (60) Mary's uncle, who produces high-end convertibles, is coming to her wedding. I wonder what he brought as a present.
- a. He brought a [CHEAP convertible].
  - b. #He brought [a RED convertible].
  - c. He brought [a red CONVERTIBLE]

The same holds for association with focus cases. Rochemont (2013) shows that the sentence in (61) is multiply ambiguous, as the possible continuations show.

(61) Did John do anything odd at the reception?

Yes – He only introduced BILL to SUE.

- a. ... He didn't introduce anyone else to Sue.
- b. ... He didn't introduce Bill to anyone else.
- c. ... He didn't make any other introductions.
- d. ... He didn't do anything else.

(Rochemont, 2013, 44)

Schwarzschild only predicts the F-marking in which all constituents are F-marked, as in (62) as none of them is given. Thus, he cannot distinguish the various readings. If F-marking is independent of Givenness (and newness), as argued for in Rochemont (2013), the different readings can be distinguished by F-marking, as in (63).

(62) He only [introduced<sub>F</sub> BILL<sub>F</sub> to SUE<sub>F</sub>]<sub>F</sub> (Rochemont, 2013, 44)

- (63)
- a. He only [introduced BILL<sub>F</sub> to SUE].
  - b. He only [introduced BILL to SUE<sub>F</sub>].
  - c. He only [introduced BILL<sub>F</sub> to SUE<sub>F</sub>].
  - d. He only [introduced BILL to SUE]<sub>F</sub>.

(Rochemont, 2013, 44)

Wagner (2006b, 2012) aims at providing a uniform theory of givenness and (contrastive) focus-marking. He argues for such a uniform theory because they seem to be two variants of the same coin. He provides two main pieces of evidence for this position. First, both are compatible with wide-focus in focus association. Second, both must make reference to alternative propositions in  $\Delta$ , the set of all salient propositions and entities (which crucially need not be assumed to be true).



The first argument relies on the parallelism between contrastive focus-marking / givenness marking in a constituent that is larger and that a focus sensitive operator associates with. Consider the first example in (64).

- (64) Many students in the program are in trouble because of the language requirement, even though they know some foreign language. The requirement explicitly calls for knowledge of Latin or Russian. Jim only knows Ancient Greek. So he was told to either drop out or take Latin classes. And he's not the only one who is in trouble.
- a. Mary only knows MODERN Greek.
  - b. ??Mary only knows MODERN GREEK.

So she's got the same problem. She'll have to learn Latin. (Wagner, 2012, 11f)

For the discourse to make sense, *only* has to associate with the full DP [*modern Greek*] (it would not be enough for Mary to know ancient Greek). Yet, the DP contains a contrasting adjective (*modern*) and *Greek* is deaccented and marked as given. The same holds for cases in which *only* associates with a VP, as in (65).

- (65) In order to pass this class, you had to present or review an article, and you had to write a final squib. Bill only reviewed an article. So he didn't pass, since he didn't write the squib. And similarly Maria:
- a. She only PRESENTED an article.
  - b. ?She only presented an ARTICLE.

So she also didn't pass, since she didn't write the squib. (Wagner, 2012, 12)

The second argument relies on the data in (60). Shifting the accent requires that the element that the accent is shifted to receives an interpretation that makes reference to ‘appropriate’ alternatives. Wagner (2012) proposes that given constituents move, so that the remaining constituent has a variable that can be bound via Universal Closure. Universal Closure is needed to evaluate whether the constituent has a contrasting proposition in  $\Delta$ . The universal closure of the relevant constituent has to exclude the existential closure of the antecedent.

Whether this theory in the long run proves to be on the right track, I leave open at this point. The judgments for the data that Wagner presents are rather intricate and tricky to evaluate (as he acknowledges). Additionally, while focus seems necessary in some cases as presented above, this is not generally the case as the example from Rochemont (pear) in (66) shows. The same point can be made with the example in (67) from Buring (2013).<sup>28</sup>

(66) Mary, Sam, and John were sitting on the couch. Then Mary KISSED John. (Rochemont, pear, 16)

(67) A: Why don't you have some French toast?  
B: I've forgotten how to MAKE French toast.

The major difference between (66), (67) vs. (60) above seems to me to be the discourse relationships construed between the context sentence and the utterance. The context provides a relationship between the aunt and X type convertibles (she produces them) and the target sentence under discussion does the same (she gives them as a present), which is adversative, thus, it inherently requires a semantic contrast (While she produces high-end convertibles she gave a cheap convertible as present). This might give rise to

<sup>28</sup>Note though that these examples are not a problem for Schwarzschild (1999) as he does not require an F-marked constituent to be related to alternatives.

this strengthening effect. In effect, I agree with Spathas (2010, 83f) that the example in (60) is more complex, than just givenness marking. The background provides a potentially contrasting DP. Taking contrast as a notion that the alternatives are mutually exclusive, only *cheap* contrasts with *high-end*, while *red* does not. If, additionally, the stronger statement is forced (if possible), the infelicity of (60b) can be explained: the context forces a mutually exclusive contrasting set, which cannot be construed with the set {red, high-end}. If convertible is accented as well, this relationship is not forced and as a result the answer is more felicitous.

Additionally, while givenness might give rise to focus alternatives, the opposite does not hold. In cases in which *only* associates with a subject, the VP cannot be deaccented if the context does not provide a salient proposition (not surprisingly so in Wagner's theory). Yet, I take this to mean that we need a notion of F-marking independent of givenness.

- (68) Peter, Mary and John came late.
- a. Only JOHN had done his HOMEWORK.
  - b. #Only JOHN had done his homework.

Thus, I conclude that givenness marking is not enough to derive focus marking. Givenness gives rise to deaccentuation, while F-marking gives rise to sentence-level accentuation (except in second occurrence focus). The two interact because deaccentuation can lead to a shift of the sentence-level accent. Thus, the interactions here are rather intricate. However, I think that both concepts are necessary: marked focus cannot be derived from givenness and givenness cannot be derived from a marked focus.<sup>29</sup> Both

<sup>29</sup>Note that some scholars use the notion of givenness to refer to the concept of presupposition, see e.g. Clark and Haviland (1977). However, to use the words of Wagner (2012, 7), for the InfS-notion of givenness it is "neither sufficient nor necessary" that a truth-conditional presupposition is satisfied, a point made in Allerton (1978) already. I take the notion of presupposition to be a notion relevant for the common ground, while givenness as defined here is a notion that depends on the discourse. For more details about the dis-

concepts are needed and as I will argue below, the common aspect of ICs is a marked focus, while givenness can be used as a concept to distinguish subtypes of ICs.

### 5.3.6 Conclusion

In this section, I have argued first that we need to distinguish between marked focus (MF) and new information focus (NIF). The former is grammatically marked while the latter is the unmarked case. MF is defined along the lines of Krifka (2008a) (see also Rooth 1992) repeated here in (69).

(69) Definition of focus

Focus indicates the presence of alternatives that are relevant for the interpretation of linguistic expressions. (Krifka, 2008a, 247)

In my view, this general notion of focus allows for the differentiation of subtypes along two dimensions: the types of alternatives involved, and how these alternatives are relevant for the interpretation. Thus, a single language can express different subtypes of focus using different means of expressions (for example prosody or syntax, etc.) and we might find that languages grammaticalize different subtypes and that they use different means to express them. The research agenda that results from this discussion is concerned with the investigation two core questions: what are the universal concepts of focus that languages can express?; and (ii) how are these concepts expressed in the grammar of an individual language? In the next section, I contribute to this endeavour by investigating the focus interpretation of *it*-clefts in English.

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tinction of presupposition and givenness, see Dryer (1996). As argued above, givenness is independent of marked focus. To what extent focus gives rise to an existential presupposition is a different question. Discussion can be found in Geurts and van der Sandt (2004) and the reactions to that proposal in the same volume of *Theoretical linguistics* (Beaver, 2004, Büring, 2004, Eckardt, 2004, Gawron, 2004, Jacobs, 2004, Kratzer, 2004, Schwarzschild, 2004). I take up some of the discussion in section 5.7 below.

## 5.4 The Contrasting Focus Hypothesis

### 5.4.1 Introduction

In this section, I provide my analysis of the focus structure of *it*-clefts in English. The main claim here is that ICs introduce a type of focus which is relevant on the level of propositions. Thus, the cleft sentence asserts the proposition expressed by applying the cleft clause (background) to the pivot (focus), and additionally, a further proposition taken from the set of focus alternatives is added to the common ground as false. Thus, the sentence in (70) asserts that *John left* and an additional proposition is added to the common ground that expresses that some relevant alternative to John did not leave.

(70) It is John who left.

Proposition 1: John left.

Proposition 2: Someone relevant alternative to John did not leave.

In this section, I first motivate that ICs in English indeed are sentences in which focus is relevant, i.e. whose interpretation depends on the presence of alternatives. Then, I present the contrasting focus hypothesis in section 5.4. This hypothesis will be applied to a range of different kinds of ICs examples: positive ICs, negated ICs, Multiple Foci in ICs, and Second Occurrence Focus in ICs. Finally, I will show how focus in ICs relates to other notions like topic and subjecthood.

### 5.4.2 *It*-clefts as Focus-Background structures

Before I actually consider the main hypothesis with respect to the specific focus structure of clefts, I want to address the question of whether cleft sentences are indeed focus-background structures. Clefts are sometimes

considered to be exhaustivizing or presuppositional constructions, or both. Here, I argue that clefts, indeed, should be considered to be focus constructions, i.e. focus alternatives are relevant to the interpretation of ICs. One of the strongest arguments in favour of the relevance of focus are examples of the type discussed in Velleman et al. (2013) already introduced above, and repeated here for convenience. In this example, the focus alternatives clearly play a role—the cleft sentence is not exhaustivizing over the pivot, but over the focus alternatives to the pivot, i.e. the set of eldest daughters of a set of relevant parents {Mary’s eldest daughter, John’s eldest daughter, Peter’s eldest daughter, ... }.

- (5) It was JOHN’S eldest daughter who attended the party. . .
- a. . . . and 200 of her closest friends were there.
  - b. . . . and John’s YOUNGEST daughter was ALSO there.
  - c. #. . . and MARY’S eldest daughter was ALSO there.

(Velleman et al., 2013, 448)

The second major argument for taking focus to be involved in the cleft sentence is the fact that the pivot can never be a weak pronoun/ completely deaccented, see Delin (1992), even when it is given, see (71).

- (71) \*It was ‘em that TOLD me. (Delin, 1992, 7)

Third, when cleft sentences are followed by an explicitly contrasting phrase, this phrase has to contrast with the pivot not with material inside the cleft clause, see (72) (except for second-occurrence focus and multiple focus).

- (72) a. It was PETER who taught semantics, not John.  
 b. #It was PETER who taught semantics, not syntax.

Fourth, when cleft sentences are embedded below focus sensitive expressions, these expressions necessarily associate with the pivot, not with a constituent in the cleft clause. This can be illustrated with the emotive factive *be glad* (a case of free association with focus in Beaver and Clark 2008). In (73) the students' happiness concerns the selection of the teacher Brady as opposed to some other teacher.

(73) Peter was glad that it was BRADY who taught semantics.

From these facts, I conclude that it-clefts indeed do involve a focus-background structure.<sup>30</sup>

I now turn to the question of what kind of focus cleft sentences express.

<sup>30</sup>There is potentially a fifth argument relying on polar questions. Polar questions seem to be sensitive to the focus properties of the proposition under discussion. The three pronunciations of the polar question in (i) operate over different sets of alternative answers, which can be seen in the (in)felicity of the corrections.

- (i) a. Did [JASON]<sub>F</sub> bring the wine?  
       {Jason brought the wine.; Bill brought the wine.; Mary brought the wine.}  
       No, JOHN did. / No, #(he brought) the snacks.  
       b. Did Jason bring the [WINE]<sub>F</sub>?  
       {Jason brought the wine.; Jason brought the snacks; Jason brought the salad}  
       No, (he brought) the snacks. / No, #JOHN did.

In cleft sentences the polar question operator usually associates with the pivot and the relevant alternatives are calculated over the pivot. Again, this can be seen in the (in)felicity of the correction.

- (ii) Was it [Brady]<sub>F</sub> who taught semantics?  
       a. #No, he taught syntax.  
       b. No, John taught semantics.

Note, though, that this argument relies on the idea that the question operator in polar question is indeed focus-sensitive. To what extent this is indeed true needs further investigation into the interaction with givenness in polar questions, an issue that goes beyond the scope of this work.

### 5.4.3 The main hypothesis

As has become clear from the discussion above, I take a marked focus to be different from new information focus. Additionally, I have proposed that Krifka's general definition of focus in terms of alternatives can be made more specific with respect to the types of alternatives available (which in principle might vary) and how these alternatives are relevant for the interpretation. For ICs I argue that they assert a proposition  $p$  and that there is an alternative proposition  $q$  which contrasts with  $p$ . This is formulated in the contrasting focus hypothesis in (74).

(74) **Contrasting Focus Hypothesis (=CFH)**

ICs express Contrasting Focus, i.e. there is an asserted proposition  $p$  and an alternative proposition  $q$  such that

- (i)  $p = \alpha(\beta)$ ; where  $\alpha$  corresponds to the background/cleft clause and  $\beta$  to the focus phrase/pivot
- (ii)  $q = \alpha(x)$  where  $x \in \{ \text{ALT}(\beta) \}$ ;
- (iii)  $q \neq p$ ;
- (vi)  $p$  and  $q$  are mutually exclusive, i.e. they have opposite truth-values;

The idea is that cleft sentences assert a proposition  $p$  which is generated by functional application of the background (cleft clause) to the focus (pivot). The proposition  $q$  is one proposition of a set of propositions that are derived by applying the background to the focus alternatives of the pivot. I follow Wagner (2005, 2012), Spathas (2010), Büring (2012) in taking contrast as being mutually exclusive alternatives - two propositions contrast if they are mutually exclusive. For propositions, I take 'mutually exclusive' to mean that they have opposite truth values. Thus, the claim is that there are actually



two propositions that are added to the common ground.<sup>31</sup>

Let me illustrate this with the basic example in (75). The idea is that by stating (75) the speaker also requires the hearer to add to the common ground, that there is some relevant person who did not leave. An informal analysis is provided in (76)

(75) It is John who left.

(76)  $p = \text{left}(\text{John})$

$q = \text{left}(x)$  where  $x \in \{ \text{John}, \text{Bill} \}$

$\rightarrow q = \text{left}(\text{Bill})$

$p$  and  $q$  are mutually exclusive:  $p$  is true  $\rightarrow q$  is false.

Without a context, the selection of alternatives in (76) is random. So let me consider an example from the British National Corpus (=BNC).. In (77), the context provides two alternatives *Binyon* and *Pound*. The cleft clause asserts that Pound thought of it (*it* refers to the idea 'slowness is beauty').

(77) Who thought of it? Binyon, or Pound? Hugh Kenner is no doubt right to suppose that *it was Pound who had been thinking of it*. (BNC, A1B, 377)

The idea of the CFH is that meaning of the IC both asserts the original proposition and additionally adds the alternative proposition, namely *Binyon thought of it*, to the common ground as false.<sup>32</sup> The informal analysis is provided in (78).

<sup>31</sup>Thus, the assertion of ICs itself is not exhaustive, I come back to the analysis of exhaustivity in chapter 6. The main reason for the weak approach taken here is that negated clefts are exhaustive in a different sense, see below in section 5.4.5.

<sup>32</sup>Depending on one's theory of the common ground this can mean that the proposition  $q$  is added to the common ground as false, or in a theory of the common ground along the lines of Krifka (2015) this can be modeled as a restriction on the development of the common ground. I leave the details of this question to future research.

- (78) It was Pound who had been thinking of it.  
 $p = \text{thought-of-it}(\text{Pound})$   
 $q = \text{thought-of-it}(x) \text{ where } x \in \{ \text{Pound, Binyon} \}$   
 $\rightarrow q = \text{thought-of-it}(\text{Binyon})$   
 $p$  and  $q$  are mutually exclusive:  $p$  is true  $\rightarrow q$  is false.

The relevant alternatives are not only restricted by the context, but also by the focus assignment inside the the pivot. Thus, the alternatives to the pivot can be more restricted and, as a result, the proposition  $q$  is, too. Thus the example from above receives the analysis in (79).

- (79) It was JOHN's eldest daughter who attended the party. (Velleman et al., 2013, 447)  
 $p = \text{attended-the-party}(\text{John's-eldest-daughter})$   
 $q = \text{attended-the-party}(x) \text{ where } x \in \{ \text{John's eldest daughter, Peter's eldest daughter, Paul's eldest daughter} \}$   
 $q = \text{attended-the-party}(\text{Peter's eldest daughter}); q$  is false;

Note the alternative that I picked from the set of focus alternatives is random here. Thus, context plays an important role for the interpretation of ICs. So these initial examples are rather too simple. In the next sections, I will go through a number of further examples illustrating the same point again and again for different types of contexts (affecting the newness/givenness of the pivot and cleft clause as well as the overtiness of potential alternatives), and for different types of cleft sentences (positive statements, negative statements, ICs involving second occurrence focus, or multiple foci.)

#### 5.4.4 CF in positive statements

The first class of cleft sentence that I want to look into are the regular positive clefts with the main accent on the pivot. The first example is a case in which the pivot is given and the alternatives are provided. The cleft clause is not given in this case.

The context in (80) establishes two pairs of matches in the semi-finals of the Pilkington Glass World Chess Championship, the match by Karpov against Yusupov and the match by Speelman versus Timman. These are the four alternatives to the pivot. After the first semi-final is discussed, the attention switches to the second semi-final with the cleft. The scene establishes a multilayered contrast: (i) between the two matches, (ii) between the winner of the first match, Karpov, and the winner of the second semi-final Timman, and (iii) a contrast between the two opponents in the respective semi-finals, Timman vs. Speelman, and Karpov versus Yusopov. The IC sentence picks out Jan Timman and provides additional new information about the special relevance of Timman for the Dutch audience.<sup>33</sup>

- (80) Context: In the Pilkington Glass World Chess Championship semi-finals at Sadler's Wells, the former world champion, **Anatoly Karpov**, has taken a 2-1 lead after his opponent, **Artur Yusupov**, resigned the adjourned third game of their match yesterday. In the other semi-final, **Jan Timman** leads **Jonathan Speelman**, also by 2-1. [...] The scene as the game was adjourned on Thursday night told the whole story: **Yusupov**, head buried in hands, glumly contemplated the ruins of his previously wonderful position; **Karpov** stood impassively behind his own chair, surveying the battleground with quiet authority.

<sup>33</sup>For the analysis of the BNC sentences, I provide first the context, then the target IC and additionally some text following the cleft, as this helps to understand what q is. This text is abbreviated as PoT (Post-IC-text).

IC: But **it is Jan Timman who has gained the attention of the Dutch.**

PoT: The Netherlands' chess tradition dates back to 1935 when Dr Euwe won the world championship. [. . . ]  
(BNC, A3G, 267-280; Title: Karpov discovers fear is the key to winning ways, By WILLIAM HARTSTON, Chess Correspondent)

The choice of *q* depends on the contrast the interlocutors pick to be the most relevant one. This *q* is accommodated as false. In (80) the switch in attention from the winner Karpov to the winner Timman seems to be the most relevant one. The cleft clause provides additional information and introduces new information about the relevance of the game for the Dutch and the Dutch chess tradition.<sup>34</sup>

(81) *p* = gained-attention(Jan Timmann)  
*q* = gained-attention (*x*) where *x* ∈ {Yusupov and Karpov, Speelman and Timman, Speelman, Timman, Yusupov, Karpov, }  
*q* is false: ¬ gained-attention(Karpov);

A second case is (82). Here, the alternatives are not provided in the context, while the pivot is still given and discussed in the preceding context. The context is about the relevance of (good) design for the success of a company. 'Design' is the pivot and it is asserted that it decides about the success or failure of a product. Thus, design is implicitly contrasted with implicit alternatives that one might think to be relevant for the success or failure of a product.

(82) Context: Ever since Conran converted a struggling furniture-manufacturing

<sup>34</sup>In this light, it is very difficult to maintain that the sentence *Someone gained the attention of the Dutch* is entailed by the preceding discourse as would be necessary in Rochemont (1986) or slightly differently in Schwarzschild (1999).

business into a unique chain of retail shops called Habitat and set in motion a high-street revolution, **good design** has been at the core of everything he has done. [...] Until fairly recently I don't think people have understood the design process or what **it can do for the success of their companies**. Design is about the way a product not only looks, but also functions, and for anybody in manufacturing industry or retailing to say they don't take an interest in it would be perfectly ludicrous,

IC: because at the end of the day it is **design** that causes a product either to be successful or unsuccessful.

PoT: There is nothing manufactured by man that has not been designed, because whether it's a Rolls-Royce engine or a piece of printed paper, there's always a decision to be made not only about what it's going to look like but about how it is going to be made and how it is going to operate.

(BNC, A6L, 272-280)

Two options arise for the interpretation. One might think that an obvious candidate—for example quality—is the relevant derived alternative. This is illustrated in (83).

(83) Analysis I (simplified)

$p$  = causes-a-product-to-be-successful(design)

$q$  = causes-a-product-to-be-successful( $x$ ) where  $x \in \{\text{design, promotion, quality, ...}\}$

$q$  is false:  $\neg$ causes-a-product-to-be-successful(quality)

When the alternatives are not entirely obvious, the weakest form is that the

variable is existentially bound, as illustrated in (84).<sup>35</sup>

(84) Analysis (simplified)

$p = \text{causes-a-product-to-be-successful}(\text{design})$

$q = \text{causes-a-product-to-be-successful}(x)$  where  $x \in \{\text{design, promotion, quality, ...}\}$

$q$  is false:  $\exists x \neg \text{causes-a-product-to-be-successful}(x)$

The next case is an example of a unstressed-anaphoric IC (Declerck) or Comment-Clause Cleft (Hedberg), see (85). The pivot again is given, and the cleft clause provides entirely new information. Note that in my analysis the answer to the *wh*-question is not a marked focus (at least it doesn't have to be), so that the cleft clause is not the focus in the IC.

(85) But why is everybody so interested in uranium? Because it is uranium that you need to produce atomic power. (Declerck, 1984, 263)

The question inquires about uranium. Thus, uranium is given and the topic of this utterance. The cleft clause asserts that everyone is interested in uranium, because uranium is the one element that is needed for producing atomic power. This is not the case for other elements, such as gold. The semi-formal analysis is given in (86).

(86)  $p = \text{need-to-produce-atomic-power}(\text{uranium});$

$q = \text{need-to-produce-atomic-power}(x)$ , where  $x \in \{\text{uranium, gold,}\}$

$q$  is false:  $\neg \text{need-to-produce-atomic-power}(\text{gold})$

<sup>35</sup>The implementation in a framework like Krifka (2015) might be most useful here as well. In this framework the common ground has an internal structure including expectations of how the common ground is expected to develop. With the ICs in (82), developments of the common ground that assert that some other aspect of production is decisive for the success or failure of the product are excluded.

### 5.4.5 CF in negative ICs

In this section, I turn to negative ICs and the interaction with Contrasting Focus. Consider the initial example in (87).

(87) Context: In retrospect it can be seen that the most fatal blunder of the campaign was John Smith's Budget – proclaimed at the time as 'an unparalleled act of honesty by any opposition party going into an election' . As is now clear , it was this totally unnecessary act of hubris that more than anything else frightened the voters away.

IC: In the end it was not Mr Kinnock who lost the game for Labour .

PoT: It was the supposed election-winner , Mr John Smith .

(BNC, AK9 1792-1795)

As before, the focus semantic analysis is provided in a semi-formal simplified way in (88).

(88) Analysis (simplified)  
 $p = \text{lost}(\text{MrKinnock})$ ;  $p$  is false;  
 $q = \text{lost}(x)$  where  $x \in \{\text{Mr Kinnock, Mr Smith, }\}$   
 $q$  is true:  $\text{lost}(\text{Mr Smith})$ ;

Assuming that the negation of the cleft here is high, i.e. negating  $p$ , the effect of negation is that the truth values of the two propositions switch. Thus, the sentence in (87) asserts two things: first, it asserts that *it is not the case that MrKinnock lost the game for labour* and it implies that *it is the case that Mr Smith lost the game for labour*.

When the set of alternatives is larger, or underspecified, the negative cleft leads to an existential statement as in (89). In this context, the set of alternatives encloses everyone watching or hearing the scene that is

reported.

- (89) Context: 'Have you heard what's happened?' She almost spat out the words. 'When we got back, that fool of a gendarme practically arrested Dieter on the spot. It's all Dora's fault — I'll never forgive her, never!'

IC: 'She didn't intend ... I mean, it wasn't Dora who rang the police.'

PoT 'If she hadn't been screaming all that nonsense at the top of her voice, it would never have happened. I just hope she gets arrested herself for wasting police time. It'd serve her right!'

(BNC, GVP 2911-2917)

The simplified analysis is given in (90). The sentence asserts that it is not the case that Dora rang the police, and it implies that it is the case that someone rang the police.

- (90) Analysis (simplified)  
 $p = \text{rang-police}(\text{Dora}); p \text{ is false};$   
 $q = \text{rang-police}(x) \text{ where } x \in \{\text{Dora}, \dots\}$   
 $q \text{ is true: } \exists x. \text{rang-police}(x);$

Hedberg (1990) discusses cases in which there is an additional negation in the cleft clause. So let me look at one of these examples, see (91).

- (91) Context: I had so many doubts about my work. I'd think, Oh God, the doctor doesn't see what I'm doing as important. I finally learned it didn't matter what he thought ... Now I find it exciting, more important than the other matters. I see it as a kind of thing missing in a lot of people's lives.



IC: It wasn't the people higher up who didn't recognize the importance of our work.

PoT: It was I who didn't recognize it.

(Hedberg, 1990, Ch5,131)

In my analysis, this example is analyzed as in (92). The meaning of the cleft clause is that it is not the case that the people higher up did not recognize the importance of our work. And it implies that it is the case that some other relevant person did not recognize the importance of our work.

(92)  $p = \text{not-recognize-importance}(\text{people-higher-up})$ ;  $p$  is false;

$q = \text{not-recognize-importance}(x)$  where  $x \in \{\text{Dora}, \dots\}$

$q$  is true:  $\exists x.\text{not-recognize-importance}(x)$ ;

A similar example from the BNC is provided in (93). In the context here, two sisters, Rachel (R) and Jennifer (J) are discussing what happened to Jennifer in the past. Jennifer broke up with David to marry Paul. Paul at the time was still married to Sonja. But before Paul and Jennifer married, she was diagnosed as having Multiple Sclerosis.

(93) J: But the real reason, I knew, was because he[Paul] couldn't face up to my being ill. Soon after, he and Sonia moved down south.

R: *So it wasn't David who couldn't face up to your illness at all?*

J: No, it wasn't David .

(BNC, JXY, 2620)

The two negations do not cancel each other out, so there is no inference that there is someone who could face up to J's illness.

This means that the negation is indeed high and it affects the full proposition (here paraphrased as *it is the case that ...* ) and it does not

interact with the negation in the cleft clause. Negation in the cleft clause is indeed part of the proposition *p* in my analysis. Thus, the two negative operators cannot cancel each other (contra Halvorsen 1978, 17 for example.)<sup>36</sup>

#### 5.4.6 CF and Multiple Focus

Concerning multiple marked foci in clefts, we need to distinguish (at least) two types (see Hedberg 2013 for clefts and Krifka 2008a for focus in general): (i) ICs that have two marked foci that are interpreted as pair; (ii) ICs that have two marked foci which are interpreted independently, or which ‘associate’ with different operators. I address the two types in turn.<sup>37</sup>

##### 5.4.6.1 One operator - two foci: Paired Foci

The first type of multiple focus is the paired focus or ‘complex’ focus, as illustrated in (94):

(94) It’s not John<sub>F</sub> that shot Mary<sub>F</sub>, but Mary<sub>F</sub> that shot John<sub>F</sub>.

A simplified analysis is provided in (95). (• stands for the combination of two individuals in a list, see Krifka (1992b)).

(95) *p* = shot(John,Mary); *p* is false;  
       *q* = shot(*x*,*y*) where *x*•*y* ∈ {John•Mary, Mary•John, }  
       *q* is true: shot(Mary,John);

<sup>36</sup>Hedberg (1990) suggests that the negation in clefts is meta-linguistic negation in the sense of Horn (1985). In my view, the interpretation of negation is a question of the scope of negation. In the syntactic analysis of ICs presented in chapter 4, the proposition is calculated already at the level of PrP/vP and the negation is higher up, taking scope over the full proposition. I leave the question of whether this type of negation should be related to metalinguistic negation to future research.

<sup>37</sup>I omit Hedberg’s Emphatic repetition clefts, as most of them involve one marked focus, while the accent in the cleft clause is mostly due to a new information focus accent, but see footnote 38.

In order to arrive at such a pair-list reading in the analysis presented here, the cleft-clause presumably has its own focus-background structure (independent of the mapping induced at the level of PrP). When there is no additional operator that associates with the background-focus structure, the mapping at the level of PrP maps the background on the existing background in the cleft clause. The result is a structure in which the background contains two variables that are filled by the list of the two marked foci. The alternative set is then a set of (ordered) lists, including at least the pair stated in the cleft sentence and the alternative reverse ordered pair.<sup>38</sup>

#### 5.4.6.2 Two operator - one focus

A second instance of multiple foci is the case in which there are two focus operators that associate with one and the same focus phrase, the pivot, see (96). This is the case in many instances of *only* in cleft sentences in the BNC (assuming that there is an operator for the IC, then the second one is *only* or an operator that binds *only*).

- (96) Context: The ploughed field they were passing was speckled with brilliant-green shoots . Damn Peter . Damn him for disassembling ; for pretending to Daniel that he was n't wounded to the core at being

<sup>38</sup>Hedberg (2013) labels these types vice-versa clefts apparently assuming that there are only two options with two foci, <Mary,John> and <John,Mary>. It is not clear to me whether this is defining. It depends on the question to what extent examples like (i) are equally felicitous.

- (i) It's not JOHN that shot MARY, but it's BILL that shot PETER.

One example of such a type could be one from Hedberg's emphatic repetition clefts, see (ii). In this example we get a pair of husband - gained vs. wives - lost, possible a case of a pair-list that is not a vice-versa cleft.

- (ii) The women who went were almost all married. But it was husbands who were captured by the glowing descriptions of the West, wives who were skeptical. Husbands who thought of what could be gained; wives who thought of what would be lost. Hedberg (1990)

passed over,

IC: pretending that *it was only Anna who was suffering*,

PoT: as if it were she who could not bear the lack of advancement, of increased prosperity . She glanced sideways at Daniel 's profile .

(BNC, CMJ 1606)

The contribution of the marked focus in the cleft clause without *only* is given in (97).

- (97)     $p = \text{suffering}(\text{Anna});$   
            $q = \text{suffering}(x) \text{ where } x \in \{\text{Anna, Peter, Daniel}\}$   
            $q \text{ is false: } \text{suffering}(\text{Daniel});$

Following the idea by Coppock and Beaver (2011) that the meaning of *only* excludes all stronger alternatives, the set of relevant alternatives changes for the IC. Additionally, the meaning of *only*—namely that all stronger alternatives are excluded—is added (along the lines of Velleman et al. 2013, Coppock and Beaver 2011).

- (98)     $p = \text{suffering}(\text{Anna});$   
            $q = \text{suffering}(x)$   
           where  $x \in \{\text{Anna, Anna+Daniel, Anna+Peter, Anna+Peter+Daniel}\}$   
            $q \text{ is false: } \text{suffering}(\text{Anna+Peter});$   
           contribution of *only*: No true answer is strictly stronger than  $p$ .

In the literature there are also a few examples in which *also* associates with the pivot (seemingly contradicting exhaustivity).<sup>39</sup> Consider the example

<sup>39</sup>(out of the 14 DP clefts with *also* that I found in the BNC, there was not a single occurrence of such a type. In the cases I found, *also* scopes over the full proposition, as in the example in (102) below.

from É. Kiss (1998):

- (99) A: Bill danced with Mary.  
 B: No, it was Sam that danced with Mary.  
 C: It was also John that danced with her.  
 (É. Kiss, 1998, 252)

The set of relevant alternatives changes between the two types of clefts, as É. Kiss (1998) correctly points out. In my analysis these are the following for the first sentence.

- (100) It was Sam that danced with Mary.  
 $p = \text{danced-with-Mary}(\text{Sam});$   
 $q = \text{danced-with-Mary}(x) \text{ where } x \in \{\text{Sam}, \text{Bill}\}$   
 $q \text{ is false: } \text{danced-with-Mary}(\text{Bill});$

In the second sentence, the relevant alternatives seems to me to include the additive particle *also*, so that informally speaking the relevant alternatives are *only Sam* vs. *Sam and John*.

- (101) It was also John that danced with Mary.  
 $p = \text{danced-with-Mary}(\text{John});$   
 $q = \text{danced-with-Mary}(x) \text{ where } x \in \{\text{Sam-only}, \text{John-only}, \text{Sam+John}\}$   
 $q \text{ is false: } \text{danced-with-Mary}(\text{Sam-only});$   
 contribution of *also*: there is another person, besides John, that danced with Mary.

Thus, the relevant alternatives are changing from (99) to (99). The speaker in (99) points out the fact that the previous speaker did not consider all the relevant alternatives.

### 5.4.6.3 *Two operator, two foci: 'True' Multiple Foci*

The third type to be considered are the 'true' multiple foci constructions in which there is an additional focus operator, independent of the cleft structure, that associates with some other element than the pivot. Consider a case with the particle *also* in (102), see Hedberg (1990, 2000), Hedberg and Fadden (2007), Hedberg (2013) for more examples of this type.

(102) Context: Jacob Epstein had been the unwitting means of introducing Nina Hamnett (Miss Hamlet to Montparnasse) to Modigliani by recommending Rosalie's restaurant to her.

IC: By coincidence it was also Epstein who brought Modigliani together with a woman writer who was to have a profound effect upon his life – Beatrice Hastings.

PoT: At a party in Soho in 1914 Epstein was talking to Beatrice, who made it clear that she was at a loose end in her life. 'Go to Paris', he advised, 'there is a painter there who is a beautiful man and a genius – Modigliani.'

(BNC, ANF 127-131)

The focus interpretation of the cleft clause is the same as argued before, a simplified analysis is given in (103). The sentence asserts that Epstein brought Modigliani together with Hastings and there is no other relevant individual that did the same.

(103)  $p = \text{bring-together-Modigliani-with-Hastings}(\text{Epstein});$   
 $q = \text{bring-together-Modigliani-with-Hastings}(x) \text{ where } x \in \{\text{Epstein}, \dots\})$   
 $q \text{ is false: } \exists x. \text{bring-together-Modigliani-with-Hastings}(x);$

Besides this cleft focus, the particle *also* introduces an additional requirement that Epstein has another relevant property besides bringing Modigliani and Hastings together. This additional property is the one given in the preceding context: Epstein was ‘the unwitting means of introducing Nina Hamnett (Miss Hamlet to Montparnasse) to Modigliani’. This kind of reading is predicted to be available—the cleft clause is the syntactic and semantic predicate which is predicated of the pivot.<sup>40</sup>

The second question to answer is whether the cleft clause can be a marked focus (associating with *also*) and, at the same time, the background for the cleft focus. It is unproblematic for a background to contain a focus-background structure. So, presumably, it is not a problem for the full background to be a (marked) focus. However, it is not obvious whether *also* necessarily associates with a **marked** focus, or just some element within its scope, as Reis and Rosengren (1997) propose.<sup>41</sup>

#### 5.4.7 CF and Second Occurrence Focus

The last point that I want to address is cases of it-clefts that seem to me to involve second occurrence focus (=SOF). A typical example for a SOF is given in (104).

<sup>40</sup>As *also* does not associate with the pivot in these examples, it is unproblematic for the exhaustivity inference, see chapter 6 for details on exhaustivity.

<sup>41</sup>That the ‘associate’ of *also* needs to be in its scope can be seen in a set of data reported in Hedberg and Fadden (2007). They report a case of *also* which associates with the cleft clause. The interesting fact is that while *also* is fine with a reverse pseudo cleft but not with a wh-initial pseudocleft:

- (i) a. ?It was also LOCATION work that gave Sheen his first acting break.
- b. ?LOCATION work was also what gave Sheen his first acting break.
- c. \*What gave Sheen his first acting break was also LOCATION work.

The same can be seen in the pair in (ii):

- (ii) a. Peter is also the one that found the body.
- b. \*The one that found the body is also Peter.

- (104) a. Many people only drank juice at John's party.  
 b. Even [JOHN]<sub>FOF</sub> only drank [juice]<sub>SOF</sub> at his party.  
 (Baumann, pear)

The particle *only* with its associate are given in the preceding discourse, and an additional focus operator *even* is introduced with a separate associate. In this context *juice* counts as a SOF. While most researchers agree that this is a case of SOF, there is some disagreement on what counts as the major unique property of SOF - deaccentuation or givenness of the associate, nested relations of two operators, a specific type of reduced prominence, to name just a few, see Baumann (pear), Büring (2014), Beaver and Velleman (2011), Féry and Ishihara (2009), Partee (1999), Selkirk (2008) for discussion and references therein.

While I did not find a case of SOF in my BNC examples, Hedberg (2013) discusses one in which the pivot is repeated, while there is an additional operator which seems to associate with the cleft clause.

- (105) A: Why do you think that John is the murderer?  
 B: It was John who had the motive. It was John who had the opportunity.  
 It was even JOHN who found the BODY.

#### 5.4.8 CF, Topichood and Subjecthood

Hedberg (1990), Hedberg and Fadden (2007), Hedberg (2013) propose a separate type of comment-clause cleft, in which they argue that there is a specific subtype of cleft in which the pivot is the topic and the cleft clause presents the comment. As it is not obvious how this observation relates to the General Mapping Hypothesis and the Focus Mapping Hypothesis for it-clefts, I address this issue here.



The main point that I want to make is that the examples of comment clause clefts in Hedberg (1990) can be subsumed under the CFH as presented above. Thus, even if the discourse status and the perceived ‘aboutness’ of clefts can be reasonably used to define a subtype of IC, this subtype still expresses contrasting focus.

Hedberg (1990) uses mainly two criteria to distinguish topic-clause clefts from comment-clause cleft: the discourse status of the cleft clause—it provides the new information in comment clause clefts, and the notion of aboutness.<sup>42</sup>

However, as I have argued above, the distinction new-given is cross-classifying with marked focus. So a marked focus can be given or new, just as the background can. Second, the notion of aboutness is relevant for ICs from a different angle. As argued above, the pivot in cleft-sentences is the underlying subject, and the cleft clause is the underlying syntactic predicate. As a result, the cleft clause assigns a property in a very broad sense to the pivot, and in that sense, there is a idea that a IC sentence asserts something about the pivot. This can be illustrated with the comment clause cleft in (106) and analysed in (107).

(106) ... On the contrary. She saved your neck and my reputation. It was she who found your overcoat. ...

(Hedberg, 1990, Ch6:(2))

(107)  $p = \text{found-your-overcoat}(\text{she})$

$q = \text{found-your-overcoat}(x)$ , where  $x \in \{ \text{she}, \dots \}$

$q$  is false:  $\exists x \text{ found-your-overcoat}(x)$

<sup>42</sup>The definition of topic is generally a delicate issue as there is no obvious one-to-one correspondence between topichood and givenness/definiteness, topichood and aboutness, topichood and subjecthood, etc., see Halliday (1967a), Reinhart (1982), Gundel (1985, 1988), Lambrecht (1994), Vallduví (1992), Jacobs (2001), Büring (pear) and references therein for discussion and overviews.

The specific and unique property of the individual referred to with the pronoun *her* is that this person is the one who found the listener's overcoat. In this sense, the IC in (106) is about the person *she*. Nevertheless, the contrasting proposition is present, meaning that this property singles out the person referred to by *her* from the others.

A similar case is (108) which is provided in Huber (2002).

- (108) Peter ist mein bester Freund. Er war es, der mir half als ich  
 Peter is my best friend. He was it REL me helped when I  
 krank war. (Huber, 2002)  
 ill was

Again Peter is singled out because he helped, as opposed to other relevant alternatives.

- (109)  $p = \text{help-speaker}(\text{he})$   
 $q = \text{help-speaker}(x)$  where  $x \in \{\text{he}, \dots, \}$   
 $q$  is false:  $\exists x.\text{help-speaker}(x)$

These types of examples are related to the WS cases in Delin (1992). Consider (110).<sup>43</sup>

- (110) a. And does the head know?  
 b. No. Oh, wait a minute. It was the head who ARRANGED it.  
 (Delin, 1992, 6)

This is a case of an IC with one intonational phrase (=IP) only. Within this IP, the main accent falls on the single new word in the whole clause. In my

<sup>43</sup>This type of example goes back to Halliday (1967b) where he discusses that accent can fall in a part of the clause that is usually not accented, see (i).

- (i) A: Have you told John that the window got broken?  
 B: It was John who BROKE it.  
 (Halliday, 1967b, 237)

analysis here, the pivot is F-marked and gives rise to the contrasting focus. The informal representation is given in (111).<sup>44</sup>

- (111)     $p = \text{arranged-meeting}(\text{head})$   
            $q = \text{arranged-meeting}(x)$  where  $x \in \{\text{the head, the secretary, the team leader, } \dots, \}$   
            $q$  is false:  $\text{arranged-meeting}(\text{the secretary});$

The IC still transports the message that some other person, who the interlocutors might have expected to arrange the meeting, did not, which is plausible in the conversation above. Thus, (111) also falls under the CFH.<sup>45</sup>

#### 5.4.9 Conclusion

In this section I have proposed that ICs express contrasting focus as defined in (74). The core idea is that contrasting focus adds an additional proposition to the common ground. This proposition is an element in the set of propositions derived by applying the background to the focus alternatives of the pivot. As the context is decisive for establishing the relevant set of alternatives, I have illustrated the application of the contrastive focus hypothesis to a range of different types of examples from the BNC, which have the advantage that these examples have a natural context. Additionally, I have discussed a range of different types of ICs, positive ICs, negative ICs, cases with multiple foci as well as SOF. While this section so far showed how the CFH can be successfully applied to real examples, I turn now to experimental evidence that supports the CFH.

<sup>44</sup>The context provided in Delin 1992 is too short to actually decide on the alternative set for sure, so I provide some plausible options.

<sup>45</sup>Nevertheless, it is an interesting and relevant question why there is only one IP in this example, with the result that the marked focus "the head" does not bear primary accent. This case is similar to instances of SOF as it would not be possible (as in clefts in general) to have a weak pronoun in this position, *\*It was 'em who arRANGed it.* I leave the intonational analysis and details to future research.

## 5.5 Experiment 3: Contrast in It-Clefts in English

### 5.5.1 Introduction

So far I have provided a range of contexts and examples that show how the CFH, repeated for convenience here, can be successfully applied to different types of ICs in a range of different contexts.

#### (74) **Contrasting Focus Hypothesis (=CFH)**

ICs express Contrasting Focus, i.e. there is an asserted proposition  $p$  and an alternative proposition  $q$  such that

- (i)  $p = \alpha(\beta)$ ; where  $\alpha$  corresponds to the background/cleft clause and  $\beta$  to the focus phrase/pivot
- (ii)  $q = \alpha(x)$  where  $x \in \{ \text{ALT}(\beta) \}$ ;
- (iii)  $q \neq p$ ;
- (vi)  $p$  and  $q$  are mutually exclusive, i.e. they have opposite truth-values;

The aim of this section is to provide some experimental evidence for the correctness of this hypothesis. The rating study reported here used recorded data and tested the felicity of ICs in question-answer-pairs. The CFH requires that there is a relevant alternative proposition  $q$ . Thus, ICs are expected to be more felicitous if the relevant alternatives are provided. Second, the most natural case for the CFH is actually correction. Thus, ICs are expected to be more felicitous in such contexts.

### 5.5.2 Design and Predictions

The idea of the experiment is to test two predictions of the CFH. First, if the CFH is correct, ICs should be more acceptable in a context in which the alternatives to the cleft are explicitly under discussion. Second, explicit

contrast is expected to be more acceptable than implicit contrast, as there is less/no accommodation of the contrasting proposition needed.

These predictions were tested with crossing two factors. The first factor is the type of context, whether or not explicit alternatives are under discussion. The second factor concerns the cleft sentence - whether or not it provides an explicit contrast. In order to keep the materials as similar as possible, the context consisted of a yes-no question which varied with respect to the pronunciation. The first option was a rather neutral all-new intonation. In the second option the same yes-no question had a narrow focus on the subject of the question. The answer was manipulated with respect to whether or not it was a yes-answer, confirming the content of the question with a cleft. The second was a *no*-answer where the cleft provided an explicit correction to the content of the question.

The four conditions are presented in (112) - (115).

(112) AllNew - Yes

A: Did Jason buy a history book? (all new intonation)

B: Yes, it was JASON that bought a history book.

(113) AllNew - No

A: Did Jason buy a history book? (all new intonation)

B: No, it was DANIEL that bought a history book.

(114) NarrowFocus - Yes

A: Did JASON buy a history book? (narrow focus question)

B: Yes, it was JASON that bought a history book.

(115) NarrowFocus - No

A: Did JASON buy a history book? (narrow focus question)

B: No, it was DANIEL that bought a history book.

If the CFH is right, we make two predictions:

- (116) Prediction I: It-clefts are more acceptable when the contrasting propositions are under discussion than when they are not. → narrow-focus yes-no questions are more acceptable than all-new intonation of yes-no questions
- (117) Prediction II: It-clefts are more acceptable when the contrasting proposition is negated overtly. → no-answers are more acceptable than yes-answers.

### 5.5.3 Materials

There were 16 different sets of experimental sentences in all four conditions, following the pattern illustrated in (112) - (115). The sentences were recorded with two native speakers of British English from the London area, one male, one female, in a quiet setting in locations in Tübingen and Mannheim. The recorder used is a Zoom H4N recorder using the inbuilt microphone, recording stereo 96kHz/36bit. The soundfiles were cut and cross-spliced so that there was a switch in speakers between question and answers. Half of the questions and half of the answers were spoken by the male, the other by the female speaker, balancing across conditions as well. Wide versus narrow focus in the question was controlled by the intonation contour. The two different question contours are illustrated with an individual sentence in figure 5.2.

The wide focus answer had no rises across the question and a fall at the end, while the narrow focus question shows a clear rise on the constituent under discussion, which is picked up by the pivot in the cleft answer. The materials were controlled explicitly to show this difference in the question.

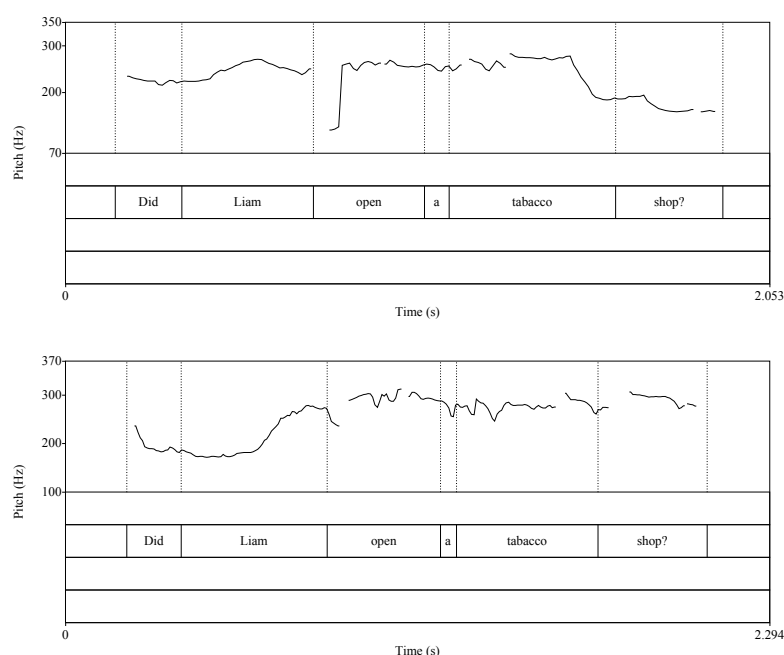


Figure 5.2: Example contour for wide vs. narrow focus questions in experiment 3

The two different answers, *yes* vs. *no*, were pronounced with the most natural contour per answer. Therefore the two answers differ in the accent on the pivot - with the *no*-answer the pivot shows a rise-fall contour, while in the *yes*-answer there is just a(n early) fall. This is illustrated with the contours in figure 5.3.

The materials were distributed across four lists in a Latin square design with an additional set of 60 filler sentences.

#### 5.5.4 Procedure and Participants

The experiment was set-up with the help of OnExp Göttingen and run locally in a lab at UCL London. Participants were asked to listen to the soundfiles carefully and judge the naturalness of the answer in the context of the question on a 7 point scale. Participants went through a short practice phase before they saw the test sentences and fillers in randomized order per participant.

There were 36 participants in the study mostly with a British English

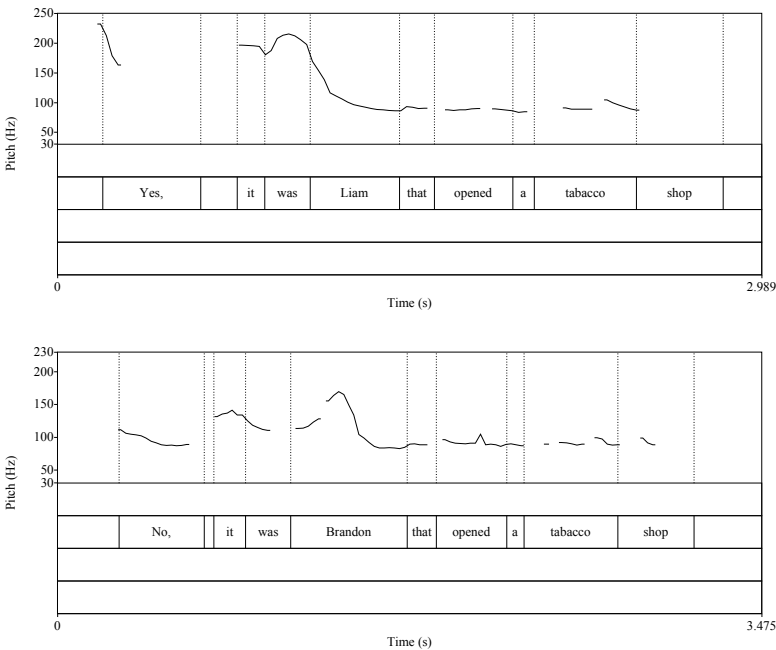


Figure 5.3: Example contour for yes vs. no answers in experiment 3

background, predominantly the London Area and Southern England. The age of the participants ranges from 17 to 72 with a mean age of 33 years. There were 17 male and 19 female participants.

5.5.5 Results and Discussion

The raw ratings were z-transformed per participant (with fillers included) and aggregated within conditions for each participant (F1) or item (F2). The overall results of the study are illustrated with the normalized mean ratings in figure 5.4.

The average raw ratings (on a scale from 1-7, 7 being the highest rating) are given in table 5.4.

| Condition        | Example | Rating | Z-Score |
|------------------|---------|--------|---------|
| all-new_yes      | (112)   | 4.44   | 1.11    |
| all-new_no       | (113)   | 5.01   | 1.64    |
| narrow-focus_yes | (114)   | 4.59   | 1.28    |
| narrow-focus_no  | (115)   | 5.38   | 1.98    |

Table 5.4: Average rating per condition (experiment3



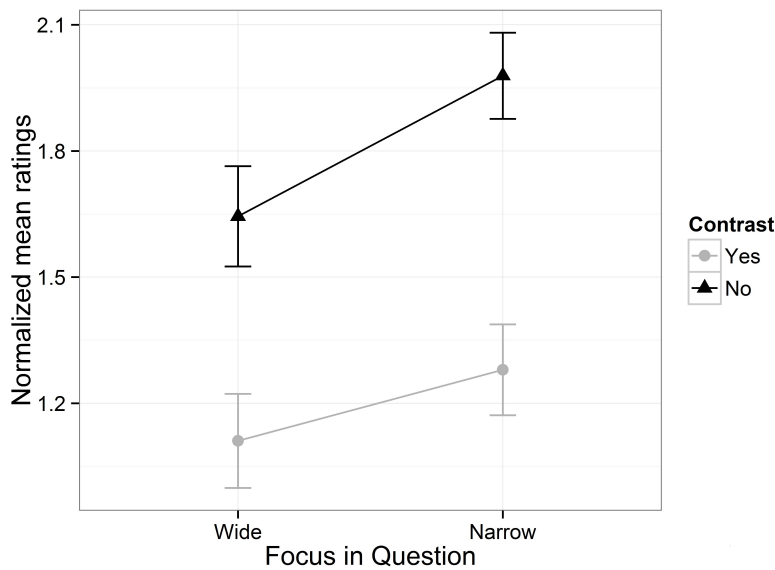


Figure 5.4: Normalized mean ratings pre condition (experment 3)

The data was analysed with two repeated-measures ANOVA, one by subjects and one by items. There was a significant main effect for answer type ( $F_1(1,35) = 16.1$ ,  $p < .0001$ ,  $F_2(1,15) = 41.9$ ,  $p < .0001$ ). *It*-clefts are more acceptable when they are used with a no-answer. Additionally, there is a significant main effect for the factor focus in question ( $F_1(1,35) = 4.3$ ,  $p < .05$ ,  $F_2(1,15) = 4.1$ ,  $p < .06$ ). IC answers are more acceptable when the contrasting proposition is explicitly under discussion, i.e. when there is a focus on the subject in the question. Thus, both predictions are confirmed.

The results from this experiment support the CFH in (74). When the contrasting proposition is overt, as in corrections, and additionally under discussion (in narrow focus Yes-No-Answers), ICs are rated best. ICs are comparably less felicitous when the contrasting proposition has to be deduced.

## 5.6 Experiment 4: The Role of Alternatives

### 5.6.1 Introduction

The proposal on the focus interpretation of ICs assigns a significant role to the alternative proposition  $q$ . Overt alternatives in the context provide the best clue for specifying the alternative proposition. The idea of the fourth experiment is to test the presence and relevance of this alternative proposition. In order to do that I chose for rating task to judge the appropriateness of a target sentence in a specific context. The context is established such that the alternative proposition  $q$  should be easily derivable. The target sentence is either compatible with  $q$  or creates a mismatch. The prediction is that the mismatch condition should get lower ratings. In order to control for the effect of context and plausibility independent of the cleft sentence, the context is manipulated such that it either contains a IC or an SVO sentence. As will be shown below, the results support the view that indeed participants are sensitive to the alternative proposition  $q$  in the expected ways.

### 5.6.2 Design and Predictions

In order to test for the relevance of the proposition  $q$ , two factors were manipulated: a. the type of target sentence - matching with  $q$  or creating a mismatch, and second whether the context contains an IC sentence or just an SVO sentence. The context establishes two alternatives in a superset, in (118) these are Sarah and Paul as PhD students of a specific professor. The cleft clause makes a statement about one of the two alternatives, Sarah in this case. In my analysis, the cleft gives rise to an alternative proposition, which is rejected as false. The target sentence that follows the cleft can either be compatible with the alternative proposition  $q$  or provide an indirect mismatch. Thus, the alternative proposition  $q$  accommodated as false for

the cleft in (118) is: Paul does not talk to the professor every week. Target 1 is compatible with *q*, while Target 2 is not.

(118) Context:

This year, the professor of politics is supervising two PhD students. Sarah works on democratization in South America. Paul concentrates on the role of non-governmental organization in Argentina. Both students need close supervision.

Cleft: It is Sarah that talks to the professor every week.

Target 1: Paul discusses his questions with the professor once a month.

Target 2: Paul discusses his questions with the professor every Monday.

In order to investigate whether the mismatch is just a function from the contrasting set-up in the context and pragmatic inferences by the speakers, I also tested the same context and target with a regular SVO sentence in the position of the IC.

Thus, the experiment investigates two factors. The first factor is the construction type, varying ICs versus SVO sentences as the last sentence in the context. The second factor varies the continuation: the target sentences matches the contrasting proposition or it results in a mismatch. Crossing these two factors results in the four conditions in (119) presented together with the context in (118).

(119) a. IC-match

It is Sarah that talks to the professor every week.

Paul discusses his questions with the professor once a month.

b. IC-mismatch

It is Sarah that talks to the professor every week.

Paul discusses his questions with the professor every Monday.

c. SVO-match

Sarah talks to the professor every week.

Paul discusses his questions with the professor once a month.

d. SVO-mismatch

Sarah talks to the professor every week.

Paul discusses his questions with the professor every Monday.

The main expectation is that with the cleft sentence the mismatch should be perceived stronger than with the SVO sentence, because the alternative proposition *q* is part of the meaning of the cleft. Thus, the expectation is to find an interaction of the two factors.

### 5.6.3 Materials

24 lexical variants were created along the lines of the example in (118) and the different conditions in (119). All lexical variants set-up a context in which two overt alternatives are introduced. The last sentence of the context is either an SVO sentence or an IC. The target sentence provides a matching or a mismatching continuation. The mismatch is created by establishing a superset in the context in the IC/SVO (*every week* above), and whereas the target contains an element in this superset (*every Monday* above).

### 5.6.4 Procedure and Participants

The 24 items were intermixed with a set of 28 distractors, and distributed across four lists in a Latin square design. The experiment was implemented with the help of the OnExp Software running on a server at the University of Tübingen.

The task for the participants was to rate the naturalness of the continuation of the target sentence in the provided context. The context consisted of four sentences plus the IC/SVO. The target was a single SVO sentence.

After reading the instructions and going through a short practice phase, participants were shown a context and a target sentence on the screen. They had to indicate their intuitive assessment by choosing a value on a 7-point scale from 1 (very unnatural) to 7 (very natural).

Participants were recruited via the platform Mechanical Turk and paid for their participation. 56 self-reported native speakers of English took part in the study (9 per list).

### 5.6.5 Results and Discussion

The results of the experiment are provided the graph in 5.5.

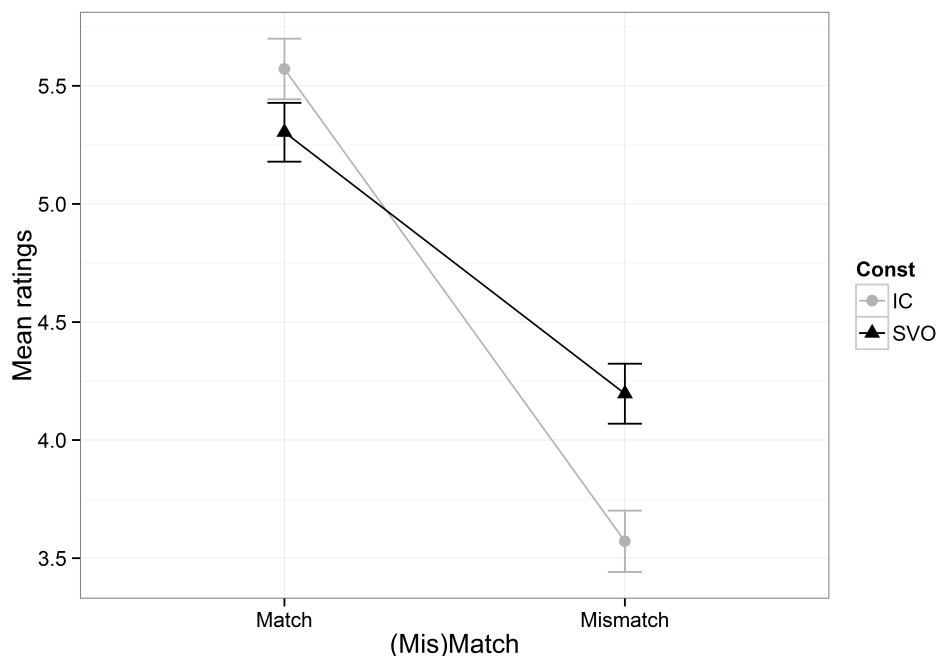


Figure 5.5: Rating study testing influence of mismatch in ICs vs. clefts

The raw ratings were subjected to two repeated-measures ANOVA (by subject and by items). There is a significant main effect for the factor Mismatch

( $F_1(1,55)=61.2$ ,  $p < .0001$ ;  $F_2(1,23)=43.6$ ,  $p < .0001$ ). Mismatch sentences are rated much less acceptable in the context. This clearly shows that the intended mismatch worked very well. There is no significant main effect for the factor construction (SVO vs. cleft) ( $F_1(1,55)=2.2$ ,  $p = .14$ ;  $F_2(1,23)=1.1$ ,  $p = .31$ ). Thus, on average both IC and SVO sentences are sensitive to the mismatch condition - which is not surprising. Crucially though, there is a significant interaction ( $F_1(1,55)=17.7$ ,  $p < .0001$ ;  $F_2(1,23)=9.2$ ,  $p < .007$ ). The mismatch leads to a larger decrease in ratings with ICs compared to the mismatch in SVO sentences. Thus, the main result comes out as expected.

Thus, we conclude that the general context is set up such that the mismatch also leads to a significant lowering in the ratings with SVO sentences. Considering the inherently contrastive set-up (two alternatives from a superset introduced in the preceding discourse), this is not surprising. The important finding is that this effect is clearly and significantly stronger with ICs. Thus, the mismatch is not just a function of the context, but there is an additional strengthening effect with ICs. This is what we expect under the CFH. Thus, I take this experiment to be further support for the CFH

## 5.7 Contrasting Focus and Existential Presupposition

### 5.7.1 The issue

Cleft sentences have been argued to be associated with an existential presupposition on the cleft clause, see Schachter (1973), Halvorsen (1978), Gazdar (1979), Atlas and Levinson (1981), surviving negation and question formation.

- (120)
- a. It was John who arrived late.
  - b. It wasn't John who arrived late.
  - c. Was it John who arrived late?

Presupposition: Someone arrived late.

Additionally, ICs do not allow negative quantifiers as pivots. If there is a existential presupposition associated with the cleft clause, these sentences are unacceptable because they lead to a contradiction of assertion (*Nobody likes Mary*) and presupposition (*Someone likes Mary*).

(121) \*It's nobody that likes Mary. (Delin, 1992, 25)

The questions that I want to address here are the following:

1. What is the nature of the existential presupposition in ICs?
2. What is its source?
3. And how does the existential presupposition relate to the CFH proposed above?

### 5.7.2 Existential presupposition and focus

A major concern in the literature on the existential presupposition in clefts is the question whether this presupposition should be directly linked to focus, i.e. whether focus comes with an existential presupposition in general, see Geurts and van der Sandt (2004) and references therein, or whether the existential presupposition is specific to clefts, see Percus (1997), Rooth (1999). Let me consider this question briefly here.<sup>46</sup>

Dryer (1996) discusses this question in more detail, distinguishing between pragmatic presupposition and activated proposition.<sup>47</sup> Dryer (1996) shows that in prosodically-marked focus-sentences, the non-focus part of

<sup>46</sup>An in-depth investigation of this issue goes beyond the scope of this work.

<sup>47</sup>Dryer (1996, 478) defines pragmatic presupposition as follows:

- (i) An utterance A pragmatically presupposes a proposition B iff A is appropriate only if B is mutually known by participants.

the sentence is activated, but not presupposed. In ICs, on the other hand the proposition in the cleft clause is pragmatically presupposed. The first argument against taking non-focus to be pragmatically presupposed can be seen in (122). If the context establishes that an existential presupposition is under discussion, prosodic focus is fine, while cleft sentences are infelicitous. In (122) and (123), the question overtly states that it is not clear whether someone saw John or not. Thus, the question is incompatible with a presupposition that someone saw John. In this context, the narrow focus sentence is felicitous, while a cleft sentences is not.

(122) Who, if anyone, saw John?

a. MARY saw John.

b. #It was Mary that saw John. (Dryer, 1996, 487f)

(123) Did anyone see John?

a. MARY saw John.

b. #It was Mary that saw John. (Dryer, 1996, 489)

The same holds for answers that challenge/reject a (potential) existential presupposition, as in (124), see Rochemont (1986) for the original argument.

(124) Who saw John?

a. NOBODY saw John.

b. #It was NOBODY that saw John. (Dryer, 1996, 487f)

The second argument comes from presupposition tests. Prosodically marked focus sentences do not pass the tests for presupposition, while clefts do. The first test is negation. ICs are infelicitous under negation if the existential

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A proposition is activated if it has been mentioned in the immediate linguistic content. In some definitions, activation counts as discourse given. In Dryer's analysis, activation is graded, i.e. the further back the proposition the less activated it is.



presupposition is under discussion.

(125) Did anyone see John?

- a. I don't know. I know MARY didn't see him.
- b. I don't know. #I know it wasn't MARY that saw him.

(Dryer, 1996, 490)

The same holds for question formation. The question of the prosodically-marked focus sentence is felicitously uttered independent of whether the speaker believes that someone is in the house. With the cleft sentence in (127), speaker B's utterance is only felicitous if he believes that someone is in the house.

(126) A: John thinks that Bill is in the house, but I know that he isn't.

B: Is SAM in the house?

A: NOBODY is in the house. (Dryer, 1996, 491)

(127) A: John thinks that Bill is in the house, but I know that he isn't.

B: Is it SAM that is in the house?

A: NOBODY is in the house. (Dryer, 1996, 491)

The third test, conditional clauses, shows the same pattern. There is an existential presupposition with ICs but not with prosodically-marked focus sentences.

(128) a. I don't know whether anyone saw John, but if MARY saw him/John,  
I will be very angry.

b.??I don't know whether anyone saw John, but if it was MARY that  
saw John, I will be very angry.

(Dryer, 1996, 491)

The distinction that Dryer (1996) is making for the two types of presupposition in some sense parallels the distinction that is made between marked focus and new-information focus above in section 5.3.2. The complement to the activated presupposition is NIF. Once the distinction between NIF and MF is drawn clearly, it might be possible that the complement to the MF is a pragmatic presupposition in Dryer's sense. If a MF in and of itself would give rise to an existential presupposition, we would expect an existential presupposition to be present with focus-sensitive operators. While this seems to hold for the cases with *only*, or *always*, the presupposition apparently does not survive negation with *even*.

- (129) a. Only JOHN saw Mary  
b. Only JOHN didn't see Mary.  
c. Did only JOHN see Mary?  
Intended presupposition: Someone saw Mary.

- (130) a. John always fed Fido NUTRAPUP.  
b. John didn't always feed Fido NUTRAPUP.  
c. Did John always feed Fido NUTRAPUP?  
Intended presupposition: John fed Fido something.

- (131) a. Even JOHN saw Mary  
b. Even JOHN didn't see Mary.  
c. Did even JOHN see Mary?  
Intended presupposition: Someone saw Mary.

I tentatively conclude from this section that marked focus does not give rise to a presupposition generally, but there is an interaction between type of focus operator and availability of/interaction with a presupposition (see also Rooth 1999).

### 5.7.3 Deriving the Existential Presupposition

Given the tentative conclusion from the preceding section that a marked focus cannot be the source of the existential presupposition reported in clefts, what is the source of this presupposition?

Percus (1997) proposes that the existential presupposition in clefts is related to definiteness. In his analysis, *it* and the cleft clause form a constituent, and *it* is a definite determiner for the cleft clause. Definite determiners come with an existential presupposition.

- (132) a. The king of France is bald.  
       b. Ed meets the king of France every week.  
       Presupposition: There is a king of France.

In the analysis proposed here, the cleft clause and *it* also form a constituent, a light-headed relative clause. So the source of the existential presupposition in the cleft can be accounted for along these lines. However there are a few observations that show that this is not the complete story.<sup>48</sup>

Büiring and Križ (2013) provide the example in (133) against a simple existence presupposition of clefts. In the provided context, the sentence in (133b) does not presuppose that *Someone called Mary*.

- (133) a. Did John call Mary, or Mary John?  
       b. It was JOHN, who called MARY.

<sup>48</sup>Delahunty (1982) argues against an existential presupposition in ICs. He claims that if (ia) presupposes (ib), then (ic) should be an impossible implication, contrary to fact.

- (i) a. It was an apple that John ate.  
       b. John ate something  
       c. If it wasn't an apple that John ate then John ate nothing.  
       (Delahunty, 1982)

Note though that judgments are tricky here and it is not clear to me to what extent (ic) is felicitous.

Note though that this example is an example of a multiple focus structure see section 5.4.6 above. On top of the IC focus, there is another focus embedded in the cleft sentence and the two can interact. The focus inside the cleft clause gives rise to an existential presupposition that there is an *x*, such that *x* was called by someone.<sup>49</sup> I do think, though, that this example shows that the existential presupposition on the cleft clause interacts with the focus structure of the full clause.

The next observation points to the same direction. The existential presupposition seems to go beyond just the cleft clause, at least in those cases in which the pivot contains the focus, as in (134). There is a presupposition that John went to a meeting last night, so apparently, there is an existential presupposition that is related to the focus structure.

- (134) a. It was an INTERESTING meeting that John went to last night.  
 b. It wasn't an INTERESTING meeting that John went to last night.  
 c. Was it an INTERESTING meeting that John went to last night?  
 Presupposition: John went to a meeting last night.

This is independent of the indefiniteness of the pivot (or its supposedly status as predication cleft, see 5.8). The same holds for the case in (135).

- (135) a. It was John's ELDEST daughter that attended the party.  
 b. It wasn't John's ELDEST daughter that attended the party.  
 c. Was it John's ELDEST daughter that attended the party?  
 Presupposition: One of John's daughters attended the party.

<sup>49</sup>On first sight, this might be a problem for the analysis in Percus (1997), however the same seems to hold for the DP counterpart (at least in its uninverted order).

- (i) a. Did John call Mary, or Mary John?  
 b. JOHN is the one who called MARY.

What these examples show is that the existential presupposition in clefts interacts with focus. The proposal here opens a new possibility to account for this kind of (apparent) presupposition. This kind of presupposition can be related to the CFH. In light of the more general discussion presented in the preceding section, the point is that an existential presupposition is not derivable from (marked) focus in general, but it is from contrasting focus, where an alternative proposition plays a significant role. I have argued that the focus in ICs introduces a contrasting proposition *q* which is added to the common ground as false (or as true in the case of negative clefts). In order for this to happen, there needs to be an alternative contrasting proposition *q* to begin with. And this is the kind of presupposition that we see in the clefts above. Thus, the fact that IC introduce a contrasting focus leads to the presence of an alternative proposition. For this proposition to be added, it is to be present to begin with. And this is the existential presupposition that we observe in ICs.

#### **5.7.4 Conclusion**

In this section I have briefly considered the nature and source of the existential presupposition in clefts. I have argued that while not all types of marked foci introduce an existential proposition on the background, contrasting focus does. The reason lies in the relevance of the alternative proposition *q* for the interpretation of the focus of clefts.

### **5.8 Apparent Predicational *It*-Clefts**

#### **5.8.1 Introduction**

In this section, I am concerned with the so-called predicational *it*-clefts, introduced as a separate class of clefts in Ball (1977) and studied in more

detail in Declerck (1983, 1988) and Hedberg (1990). A few examples are provided in (136).

- (136)
- a. It would be a bold minister who would embark on such fundamental changes. (Declerck, 1983, 12)
  - b. It'll be a lucky man who marries her, won't it? (Kruisinga and Erades, 1953, 145)
  - c. It's a subtle distinction you are making. (Hedberg, 1990)
  - d. Was it an interesting meeting that you went to last night. (Declerck, 1983, 16)

Arguably the proverbial clefts noted in Jespersen (1927, 89) also belong into this class.

- (137)
- a. It's a poor heart that never rejoices.
  - b. It's an ill bird that fouls its own nest.
  - c. It's a long lane that has no turning.
- (Jespersen, 1927, 89)

Declerck (1983) provides some twenty criteria to distinguish these so-called predicational clefts (=PrICs) from the specificational clefts. In this section, I address the question to what extent these clefts should be considered a separate class. I will show that the core cases of predicational *it*-clefts seem to be special because they exhibit three characteristics that interact: (i) the pivot is usually an indefinite expression, and (ii) a subpart of the pivot receives prominence, and (iii), a subset of examples (the proverbial clefts) express a generic statement. As a result, I believe that these PrICs create the 'illusion' of a predicational construction.

### 5.8.2 A contrasting focus analysis of predication clefts

In this section, I provide an analysis of PrICs, that shows how these can be included in the overall proposal provided in the preceding chapters. I will show how this focus analysis can explain most of the special properties of PrICs.

The focus analysis provided in above can also be applied to PrICs. The main intuition that led Declerck (1983), Hedberg (1990) to separate this type of clefts is that they are easily paraphrased with a predication statement.

- (138) a. It's a subtle distinction you are making. (Hedberg, 1990)  
 b. The distinction you are making is subtle.

I think that this observation is due to the specific focus structure of the pivot: it contains an adjective that is focused. Following the contrasting focus hypothesis the example can be analysed as in (139).

- (139) p = you-make(subtle-distinction)  
 q = you-make(subtle-distinction) where  $x \in \{\text{subtle distinction, clear distinction, ...}\}$   
 q is false:  $\neg$ you-make(clear-distinction)

As the focus alternatives differ only with respect to the property modifying the noun, the predication paraphrase is possible. What makes predication clefts special is that they naturally occur without a preceding context and that they easily give rise to a focus-reading on the adjectival modifier. I think that this effect arises because these sentences do not easily allow for a different plausible set of alternatives in most cases. This can be illustrated with some of the examples in (136).

In (136c), the verb *make* is used figuratively in combination with the

noun *distinction*. Thus, it is not obvious what a relevant set of alternatives to the noun *distinction* could be. In (140), the obvious alternative to *man* is *woman*, and a contrasting reading is not expected in a cultural background where the default is that men marry women. Again deriving the alternatives on the basis of the adjective is therefore initially more plausible.

- (140) It'll be a lucky man who marries her, won't it?  
(Kruisinga and Erades, 1953, 145)

Changing the context slightly, the same sentence loses its predicational meaning, see (141).

- (141) For years Mary was in a relationship with Susan. But now it'll be a lucky man who marries her.

The correlation is maybe most prominent with proverbial clefts. By default birds and nests belong together, as do roads and turnings, etc. Again the most plausible alternatives out of context are the ones based on a variation of the adjective.

### 5.8.3 Accounting for the properties of apparent predicational It-clefts

In the following, I concentrate on Declerck's tests and show how they can be explained with the specific focus structure.<sup>50</sup>

In order to facilitate reading in the following, I refer to those examples

<sup>50</sup>Note that I put aside the remaining criteria that cannot be taken as arguments for a differentiation between specificational and predicational ICs. Some of the criteria that Declerck provides do not hold up to closer empirical scrutiny: (a) negation with 'no', modification with 'no longer' 'anymore' is possible both in specificational and predicational ICs. (b) The mismatch in coordination of specificational ICs with predicational ICs is rather the lack of a 'common integrator' (cf. Lang 1991) in the specific examples Declerck provides. It does not indicate a systematic difference between two types. (c) The tense interpretation facts are more intricate and do not lead to a clear cut differentiation.



that Declerck calls predicational as PrICs and those that he takes to be specificational sentences as SpICs. Note however, this does not mean that the distinction is necessary. Infact, I will argue for the contrary.

#### 5.8.3.1 Answer to predicational questions

Declerck (1988)'s PrICs can be used as answers to predicational questions, as in (142).

- (142) A: The car you saw in front of the house, was it a red one or a green one?  
 B: It was a GREEN car that I saw in front of the house.  
 (Declerck, 1988, 159)

The question explicitly asks to choose from two alternatives for the modifying adjective. However, this criteria does not lead to a predicational structure in the narrow sense: rather we are dealing with a cleft clause in which only a subpart of the pivot is focussed, the adjective 'green'.<sup>51</sup>

A similar case is the question 'What kind of NP is NP' that Declerck brings forward as support for the predicational nature of PrICs.

- (143) A: What kind of person is it that you are looking for?  
 B: It is a fat man that we're looking for.

First of all, the question itself is already a cleft-sentence. Second, the focused part is the adjective 'fat' in the answer. Again we are considering alternatives of the type *a P man*, so again this gives rise to a specific set of alternatives, not to a difference in the structure and interpretation of the cleft per se.

<sup>51</sup>Declerck is aware of the fact that these clefts have a specific focus structure. However, he is incorrect in considering this difference in terms of new vs. old information. The subconstituent is focused in the sense discussed above.

### 5.8.3.2 *Specificity*

The next point is related to the specific vs. non-specific interpretation of the pivot. The specific reading of a noun phrase can be forced by adding ‘particular’. Declerck shows that as soon as there is such a specific noun phrase, the cleft becomes specificational. A focus on a subconstituent makes these sentences sound extremely awkward.

- (144) Was it a particular interesting/#INTERESTING meeting that you went to last night?

The reason for this restriction on the non-specificity can be derived from the focus properties of the structure. With the P-cleft, the alternatives are {an interesting meeting, a boring meeting, an exciting meeting, ... }, but with the whole noun phrase being specific, these alternatives are not available. With the specific interpretation, the alternatives should be { the meeting at 2 o'clock, the meeting at 3 o'clock } all of which were interesting meetings. However, in this case the adjective cannot be accented. Thus, focus marking and the interpretation of ‘particular’ clash. This does not mean that we are dealing with a separate type of cleft.

### 5.8.3.3 *Negation and contrast*

Declerck (1983, 1988) argues that regular negation in predicational clefts does not give rise to a contrast, as it does in regular cleft sentences.

- (145) a. It's not John who murdered Smith [but someone else]  
b. It was not an important decision that was made yesterday.  
(Declerck, 1988, 166)

However, this observation is not quite true. There is still a contrast present in (145b): it is not the entire referent that is contrasted with some other referent. The focused part plays an essential role leading to the contrast of ‘important decisions’ vs. ‘irrelevant decisions’. As discussed above, the focus marking inside the cleft is relevant for the selection of the alternatives. This can be clearly observed in the following example which provides the alternative overtly:

- (146) ... But we are thrown a hint that his triumph is hardly long-lived, for when he stands, alone, high above the still forms of the dead below, *it is not a look of satisfaction that he throws us, but one of puzzlement at his own work.* (BNC, ASC, 795)

Additionally, Declerck claims that contrast is not present in PrICs such as (147b), whereas it is strong in specificational clefts like (147a).

- (147) a. It was John who killed Smith (not Bill or Ted).  
b. It was an interesting thing that he told us.

The reason, I believe, is not a difference in presence or absence of contrast. Rather, it is a difference of a set available in context (e.g. John, Bill, Ted in (147a) ) versus a set not further specified in (147b).

#### 5.8.3.4 Indefinite plurals

On the basis of the examples in (148), Declerck claims that PrICs but not SpICs can occur with indefinite plurals.<sup>52</sup>

- (148) a. \*It wasn't things that he told me.

<sup>52</sup>Edward Goebbel (p.c.) points out (148) are ruled out independently: *people* and *things* resist accentuation (cf. Kingdon 1958, Bolinger 1972 ). As mentioned above, it might be difficult to find relevant alternatives to these general nouns, that is probably what makes it difficult for them to be interpreted as marked foci.

- b. It wasn't INTERESTING things that he told me.
  - c. \*It wasn't people that told me that.
  - d. It wasn't IMPORTANT people that told me that.
- (Declerck, 1988, 167)

The problem, however, is not that we are dealing with indefinite plurals, but rather that it is difficult to find an appropriate context in which 'things' or 'people' are members of a set of alternative values. The additional adjective immediately provides the possibility to construe a set of alternatives. In an appropriate context, SpICs can occur with indefinite plurals as well.

- (149) This type of 'topic' is unlikely to be identifiable as one part of a sentence. Accordingly, we agree with Morgan that "*it is not sentences that have topics, but speakers*" (Morgan, 1975 : 434 ).  
(BNC, F9V, 1214)
- (150) That it was established reflects both an enlightened commitment on the part of senior management and a recognition that the problem is pervasive in Northern Ireland. Although the unit has a male inspector , *it is policewomen who deal with both victims and offenders*. (BNC, A5Y, 651)
- (151) Often it does not occur to them that they can speak up, raise their voices in front of people. Personally I don't think *it is traditions which are weighing them down* but the fact that they have no support at home .(BNC, A6V, 1449)

In sum, the special properties of predicational clefts are due to the fact that a predicative subconstituent of the pivot is focused. These facts can be explained under the analysis of focus presented here. There is no reason

for taking these clefts to be different from regular clefts.<sup>53</sup>

#### 5.8.4 Conclusion

In this section, I have argued that the so-called predicational *It*-clefts (PrICs) can also be subsumed under the contrasting focus hypothesis proposed above. PrICs are special with respect to their focus structure, however, there is no reason to assume that these constitute a separate class of ICs altogether.

### 5.9 Conclusion

In this chapter I have provided an analysis of the focus structure of ICs. I started off with showing the weaknesses of earlier proposals about the nature of focus in ICs, both for pragmatic as well as semantic approaches. I have argued that ICs are focus sentences, that show a partition into focus - the pivot - and background - the cleft clause. Furthermore, I have argued that this focus-background distinction is a type of marked focus, i.e. it has to be distinguished from new information focus. As a result the sub-classification provided by the pragmatic splitting approaches based on the

<sup>53</sup>One argument in support of the analysis as predicative structures that is independent of focus is embedding under predicates like *seem*, *consider* and *become* without the copula supports his analysis that these clefts are predicational. SpICs and specificational copula structures in general cannot occur without the copula.

- (i)
  - a. It seemed an interesting subject that he was working on. (Declerck, 1988, 162)
  - b. I consider it an interesting subject that they are discussing tonight. (Declerck, 1988, 171)
  - c. A couple of weeks ago it seemed clear which candidate deserved voting for, but now many people think that it has become a difficult choice they have to make.  
(Declerck, 1988, 163)

I suspect that 'it' is a referential pronoun in these cases, definitely in example (ic) where 'it' can refer back to the voting. This is less clear for the cases in (ia) and (ib) as these are presented out of context. As the analysis of these sentences as *it*-clefts is not compelling, the data do not necessarily lead to a distinction of PrICs from SpICs.

notions of givenness / accessibility / newness are possible and interesting, but they do not provide a way to account for the common feature of IC focus. I argued that this common feature of ICs is a subtype of marked focus - namely contrasting focus as defined in the CFH, repeated here for convenience in (152).

(152) **Contrasting Focus Hypothesis (=CFH)**

ICs express Contrasting Focus, i.e. there is an asserted proposition  $p$  and an alternative proposition  $q$  such that

- (i)  $p = \alpha(\beta)$ ; where  $\alpha$  corresponds to the background/cleft clause and  $\beta$  to the focus phrase/pivot
- (ii)  $q = \alpha(x)$  where  $x \in \{ \text{ALT}(\beta) \}$ ;
- (iii)  $q \neq p$ ;
- (vi)  $p$  and  $q$  are mutually exclusive, i.e. they have opposite truth-values;

As the sets of alternatives is prominently relevant for the application of the CFH, I have provided the analysis of a range of different types of ICs () in different contexts based on naturally occurring data from the BNC. Additionally, I provided experimental evidence for the CFH. Experiment 3 shows that ICs are more acceptable when alternatives are under discussion and when the alternative proposition is present in the context and can therefore easily be accommodated as false. Experiment 4 showed that in ICs a mismatch with  $q$  leads to a lower ratings of discourse appropriateness. This mismatch is not just a function of the context, but it is significantly stronger mismatch than just derived from the context in SVO sentences.



# 6 Exhaustivity in it-Clefts

## 6.1 Introduction

One major aspect in the discussion of the properties of focus in ICs is the nature and role of exhaustivity. Clefts have been argued to have an exhaustive interpretation. The idea is that the cleft sentence in (1) asserts that John left, and additionally expresses that only John left. I will call this observation the exhaustivity effect.

- (1) It was John who left.
- a. Assertion: John left.
  - b. Exhaustivity effect: Noone else left.

Theoretical pragmatic and semantic research since the 1970s has concentrated mainly on the nature and source of the exhaustivity effect. More recently, its empirical foundation has been challenged, not only for clefts, but also for marked focus in general. This chapter contributes to the ongoing debate theoretically and empirically.

Section 6.2 provides an overview of the main data that has been discussed in the theoretical and experimental literature on the exhaustivity effect, summarizing the main observations. Section 6.3 introduces the range of theoretical approaches to the exhaustivity effect in clefts (and other focus structures). Most of the semantic approaches are too strong for the



empirical findings, while most pragmatic approaches cannot account for the differences between ICs and regular sentences. In light of this discussion, I will provide the details of two experiments on exhaustivity in English ICs, and one on German in section 6.4. The data shows that while clefts clearly show exhaustivity effects as compared to the corresponding SVO structures, they are unexpectedly flexible in their interpretation. This flexibility will be accounted for in my analysis of exhaustivity effects in section 6.5. I will argue that ICs imply exhaustivity on the set of focus alternatives. As the alternative set is subject to contextual restrictions, different sets of focus alternatives can be accommodated. This latter point is the reason for the observed flexibility of exhaustivity in ICs.

## **6.2 Data Issues**

### **6.2.1 Introduction**

The empirical basis for exhaustivity in clefts has been a major topic in the discussion of the phenomenon. In recent years, exhaustivity in ICs has also been tested experimentally, raising a number of theoretical questions. In this section I address these issues and studies and try to summarize the gist of the available data, against which the theoretical proposals can be evaluated in section 6.3.

### **6.2.2 Tests for exhaustivity**

Most tests for exhaustivity of focus go back to the work on Hungarian focus (for recent overviews see É. Kiss 2009b, 2010). These tests were applied to English it-clefts in É. Kiss (1998).

The first test works with logical inferences and goes back to Szabolcsi (1981). From the cleft sentence in (2a), the cleft sentence in (2b) cannot be

inferred. This is in contrast with the regular SVO order given in (3).

- (2) a. It was a hat and a coat that Mary picked for herself.
  - b.  $\neq$  > It was a hat that Mary picked for herself.
- (É. Kiss, 1998, 250)

- (3) a. Mary picked a hat and a coat.
- b.  $\Rightarrow$  Mary picked a hat.

A second related test that is frequently used to test exhaustivity is based on positive versus negative answers. The main idea is that in a situation in which Mary bought both a hat and a coat, the question in (4a) can be answered with *no*. Answering (4a) using *yes* answer (and providing the complete information) is claimed not to be felicitous. The opposite holds for regular SVO sentences as in (5).

- (4) a. Was it a hat that Mary picked for herself?
  - b. No/#Yes, she picked a coat for herself, too.
  - c. No/#Yes, it was a hat and a coat that Mary picked for herself.
- (5) a. Did Mary pick a hat for herself?
  - b. Yes/#No, she also picked a coat for herself.
  - c. Yes/#No, she picked a hat and a coat for herself.

The third test concerns the interpretation of numerals. É. Kiss (2009b) argues that numerals need to receive an exact interpretation both in the Hungarian focus position and in English ICs. Thus, the statement in (6a) is not true in a context in which John actually earns four million a month.

- (6) a. It is one million that John earns in a month.
- b. John earns one million in a month.

É. Kiss (2010) discusses this test in more detail, showing that even in a context in which the exact interpretation of the numeral is unlikely, a numeral receives an exact interpretation when it is in the focus position.

- (7) Aki [<sub>FP</sub> KÉT GYEREKET [nevelt fel]], az 15% nyugdíjemelésre jogosult.  
 ‘Who brought up [exactly] two children is entitled to a 15% pension raise.’  
 (É. Kiss, 2010, 77)

Note though that this test has to be applied with care, at least for English. In a context in which the number of kids that one needs to raise is under discussion, (8) is felicitous even though the intended interpretation is not an exact interpretation.

- (8) It is two children that you need to raise in order to receive a 15% bonus, not three.

Note, however, that when the number for the minimum amount is under discussion, I think we do not necessarily have a scalar interpretation for the numeral to begin with. Instead the statement contains discrete values. In these circumstances, it might be possible that the exact interpretation is not forced, though still possible in an appropriate context.

The fourth test for exhaustivity is the incompatibility with additive particles. They cannot usually associate with the pivot in ICs (see É. Kiss 1998, 253, Rooth 1999, 240).<sup>1</sup> If clefts are exhaustive by nature, this is expected.

- (9) a. It was ?also/\*even JOHN that Mary invited to her birthday party.  
 b. Mary invited also/ even JOHN to her birthday party.  
 (É. Kiss, 1998, 253)

<sup>1</sup>É. Kiss (1998) notes that additive particles are possible in a corrective context as in (i). I come back to that below in sections 6.2.6 and 6.5.4.

- (10) a.??It was even the case that it was John<sub>FOC</sub> that saw Mary.  
 b.??It was also the case that it was John<sub>FOC</sub> that saw Mary. (Percus, 1997, 253)

### 6.2.3 The role of alternatives

These tests and the data presented in the preceding section have been central for arguing that clefts are not exhaustive on the pivot in general. However, there is an additional restriction: exhaustivity effects are dependent on the relevant set of alternatives to the pivot. Thus, the sentence in (11) does not state that only one person went to the party. Instead, it states that from the relevant focus alternatives { John's eldest daughter, John's youngest daughter, ... } the only one present at the party is John's eldest daughter (Velleman et al. 2013, 447). Thus, exhaustivity effects depend on the set of focus alternatives.

- (11) It was John's ELDEST daughter who attended the party. (Velleman et al., 2013, 447)

Additionally, (11) shows that exhaustivity effects do not target the focus exponent *eldest*, in effect, it is not the property of being the eldest of John's daughter (apart from being his most beautiful daughter) that is under discussion.<sup>2</sup> This point is even more evident in the example in (12) from Rochemont (2011).

- (12) It was [the man who offered a BEER to Sue] that I met.

The cleft provides an exhaustive list of the relevant alternatives to the pivot, (relevant people that I met), and not an exhaustive set of drinks that the

<sup>2</sup>By focus exponent I mean the element that carries sentence-level accent in the focused phrase.

man offered to Sue.<sup>3</sup>

Thus, alternatives play a crucial role for the set on which an IC is exhaustive. As the alternative set is usually not explicitly stated, but has to be derived from the context and the internal structure of the noun phrase, exhaustivity effects expose a certain flexibility.<sup>4</sup>

#### 6.2.4 It-clefts vs. only

Clefts are sometimes treated analogously to exclusive particles like *only*, as they are taken to assert exhaustivity in the same way. Horn (1981) has shown that the two cannot be exactly the same as *only* easily allows for an assertion of exhaustivity, whereas clefts do not, see (13).

- (13) a. #Bob knew she invited Fred, but he didn't know it was Fred she invited.  
b. Bob knew she invited Fred, but he didn't know she only invited Fred.

É. Kiss (2010) points out that the example in Horn can be improved by putting stress on a subpart of the pivot, *one* in (14).

- (14) I knew that Mary ate a pizza but I have just realized that it was ONE pizza that she ate.

While I agree that this improves the sentence, I do not think that it shows that *only* and clefts (or Hungarian Focus for that matter) can be considered

<sup>3</sup>This observation is relevant for the discussion of whether the concept of a focus phrase (FocP) is necessary as proposed in Drubig (1994) and Krifka (2006), which the data above suggests. In the frame of Rooth's theory, this can be expressed by assuming that the adjunction site of the squiggle operator matters for its interpretation (see Riester and Kamp 2010). In the case of ICs, the squiggle operator must adjoin to the pivot or a higher position.

<sup>4</sup>Note that the phrase 'and your intelligence' could also be interpreted as an afterthought. How this is relevant for the discussion here is not obvious to me.

to assert exhaustively in the same way. First of all, *only* does not need such a special intonation. Second, with the change in accent, a more specific assertion becomes available, namely that it provides the quantity of pizza that Mary ate. As a result, the IC asserts the quantity and thus, new additional information. Therefore, it is more felicitous. This is not necessary of *only*. Thus, I take the data from Horn to mean that exhaustivity is not part of the assertion in ICs while it is with *only*.

This early observation is important to recent experimental investigations, as these often build on a specific analysis of clefts as asserting exhaustivity. And in this case, they are expected to behave like sentences with *only*. This reasoning can be found in the series of experiments by Onea (2009), Onea and Beaver (2011), Beaver (2012), on English, Hungarian and French. They basically used the positive versus negative answers test as a reaction to an SVO-sentence, or a cleft / focus movement structure and a sentence including *only*.

The experiments by Onea and Beaver (2011), Beaver (2012) are claimed to show that ICs are different from *only*-sentences. They tested this by a selection task, in which participant had to select the most appropriate answer out of a set of three. The three conditions are illustrated in (15) - (17). Thus, participants saw a question-answer context and they had to select the most appropriate reaction to this set, by selecting a sentence that contains a *yes and*, *yes but* or *no* statement. The context varied as to whether the sentence contained a SVO sentence a cleft or a *only* structure. The continuation provides an additional element, which is not compatible with an exhaustive interpretation of the previous sentence. In essence, the question-answer test in (4) above is used, though with a slight change in context.

(15) Regular SVO

A: What did Philip buy his sister?

B: Philip bought his sister a NECKLACE.

A1: Yes, and Philip also bought his sister a bracelet.

A2: Yes, but Philip also bought his sister a bracelet.

A3: No, Philip also bought his sister a bracelet.

(16) It-clefts

A: What did Philip buy his sister?

B: It was a necklace that Philip bought his sister.

A1: Yes, and Philip also bought his sister a bracelet.

A2: Yes, but Philip also bought his sister a bracelet.

A3: No, Philip also bought his sister a bracelet.

(17) only

A: What did Philip buy his sister?

B: Philip only bought his sister a necklace.

A1: Yes, and Philip also bought his sister a bracelet.

A2: Yes, but Philip also bought his sister a bracelet.

A3: No, Philip also bought his sister a bracelet.

For English, Beaver (2012) reports that the preferred reaction to SVO sentences is the answer with *Yes, and ...*, while it-clefts preferably are used with the *yes, but ...* answer, and sentences containing *only* are preferentially continued with a *no* answer. Interestingly, the *no* answer is the 'worst' option both for the IC and SVO sentence, contrary to what has been expected from the question-answer test in the theoretical literature. I come back to this point when I discuss the results of experiment 5 below.

The results can be taken to show that clefts do not pattern in the same way as *only* does. In the light of the finding by Horn (1981), this means that clefts indeed do not assert exhaustivity. It does not mean, though, that clefts are not exhaustive in general: they still might have an exhaustiveness

presupposition or implicature. Thus, even though clefts are clearly different from *only*-sentences, they also differ from SVO sentences. Both are not well-formed with a *no* answer, but the *Yes, but* answer is preferred with clefts, while the *Yes, and* answer is preferred with SVO sentences. It is not obvious which part of a conversational move is targeted by *Yes, but*, and more generally, by *Yes* itself. Destruel et al. (2015) suggest that the *Yes, but* answer targets not-at-issue content, further supporting the approach proposed in Horn (1981).

The data presented in Beaver (2012) nevertheless raises a number of interesting theoretical and empirical questions. The empirical observation of the availability of yes answers is surprising in the light of the theoretical literature. It might even question the usefulness of the question-answer test for exhaustivity to begin with. However, a few comments are in order in light of the investigation of focus in it-clefts here.

First of all, in the context of the *wh*-question of the preceding context, the *no* answer is naturally interpreted such that the proposition that was provided in the preceding sentence is wrong, and the continuation is expected to provide the correct alternative.<sup>5</sup> However, the sentence *Philip also bought his sister a bracelet* does not provide an obvious correction - *also* presupposes that Philip bought his sister something else. If participants interpret *no* as *it wasn't a necklace that he bought for his sister*, the continuation with *also* is not natural. This might be salvaged by providing a cleft answer as correction.

Second, the yes answers in the experiment are not just a confirmation and repetition of the previous statement: *yes, and* signals that there is an addition. This is an important change to the original test with yes vs. *no* answers as test for exhaustivity.

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<sup>5</sup>Schmeh et al. (2015) provide some discussion on the discourse ambiguity of yes- vs. *no*-answers.



Finally, I have two rather methodological points to make. As I have shown above, clefts in English are not perfect answers to *wh*- questions – rather they are more felicitous when the alternatives are under discussion. In the set-up for the experiment by Beaver (2012), clefts are used in this non-ideal context, which might or might not have an effect on the outcome of the experiment. Additionally, the full interchange is slightly odd, as the first interlocutor asks for information, for which he/she presumably provides more information in the third sentence. As this affects all conditions in the same way, this might not be a central point.

Despite these weaknesses, I conclude from this section, that ICs indeed are different from *only* sentences. The former assert exhaustivity while the latter do not. However, it is also important to understand the differences between SVO sentences and clefts better. I will come back to this issue in the discussion of experiment 5 below. The experiment aims to test exhaustivity in clefts with the negative vs. positive answer test, but with some changes that address the critical points provided above. We will see that with these changes, clefts come out significantly more exhaustive than SVO sentences in the respective conditions.

### **6.2.5 The (non-)obligatoriness of exhaustivity**

Washburn (2013), Washburn et al. (2013) present the results of an experimental study that tested to what extent it-clefts are interpreted exhaustively in different contexts. The task for participants was to rate the acceptability of it-clefts in a given context. The context was presented as written text, while the target sentence was presented auditorily only. The context set up a set of alternatives to the pivot, either explicit or implicit (factor 1). Additionally, these alternatives are relevant or irrelevant (in the sense that a more informative statement is relevant or irrelevant) (factor 2). These non-exhaustive

clefts are compared to two baselines contrastive and non-contrastive clefts.

The two baseline sentences are provided in (18) (contrastive cleft) and (19) (non-contrastive cleft). The first sentence in the context (S1) establishes a unique alternative of the things that Tom painted. The second sentence (S2) sets up a statement that is contrasting with the pivot in the target sentence (T) in (18). In the non-contrasting condition no such contrast is established, see (19).

(18) Contrastive cleft

S1: Jane and Tom painted furniture. Tom painted a chair.

S2: Later, Kevin remarks: 'I bet Tom painted only lamps again, didn't he?'

S3: Jane responds: 'He doesn't always paint lamps.'

T: Yesterday, it was a chair that he painted.'

(19) Non-Contrastive cleft

S1: Jane and Tom painted furniture. Tom painted a chair.

S2: Later, Kevin remarks: 'I bet Tom painted only a chair again, didn't he?'

S3: Jane responds: 'Yes,

T: Yesterday, it was a chair that he painted.'

Washburn (2013), Washburn et al. (2013) find a clear and statistically significant effect: the non-contrastive cleft is rated lower than the contrastive cleft (which further confirms the finding and analysis in chapter 5). This base-line is compared to a set of non-exhaustive clefts illustrated in (20) - (23). The different conditions vary with respect to two factors: S1 establishes a set of alternatives explicitly (*Tom painted a chair, a desk, and a table*) in (20) - (21) or implicitly (*Tom painted a variety of furniture*), see (22) vs. (23). In

S2, exhaustivity of the cleft in the target sentence is made relevant or irrelevant. For the statement *I bet Tom painted only lamps again*, it is enough to mention one alternative in the target. This is called the irrelevant condition. For the statement *I bet Tom painted lamps again*, all relevant alternatives need to be mentioned – this is the relevant condition.

(20) Nonexhaustive, Explicit, Irrelevant

S1: Jane and Tom painted furniture. Tom painted a chair, a desk, and a table.

S2: Later, Kevin remarks: 'I bet Tom painted only lamps again, didn't he?'

S3: Jane responds: 'He doesn't always paint lamps.'

Target: Yesterday, it was a chair that he painted.'

(21) Nonexhaustive, Explicit, Relevant

S1: Jane and Tom painted furniture. Tom painted a chair, a desk, and a table.

S2: Later, Kevin remarks: 'I bet Tom painted lamps again, didn't he?'

S3: Jane responds: 'No, he didn't.'

Target: Yesterday, it was a chair that he painted.'

(22) Nonexhaustive, Implicit, Irrelevant

S1: Jane and Tom painted furniture. Tom painted a variety of furniture.

S2: Later, Kevin remarks: 'I bet Tom painted only lamps again, didn't he?'

S3: Jane responds: 'He doesn't always paint lamps.'

Target: Yesterday, it was a chair that he painted.'

(23) Nonexhaustive, Implicit, Relevant

S1: Jane and Tom painted furniture. Tom painted a variety of furniture.

S2: Later, Kevin remarks: 'I bet Tom painted lamps again, didn't he?'

S3: Jane responds: 'No, he didn't.

Target: Yesterday, it was a chair that he painted.'

Washburn (2013), Washburn et al. (2013) find that all of the non-exhaustive clefts are rated significantly better than the non-contrastive cleft, while the difference to the contrastive cleft, which is rated best of all conditions, is not significant. They conclude that speakers do not reject non-exhaustive clefts.

Additionally, they tested the same contexts with the corresponding SVO sentences with a narrow focus intonation and find the same pattern as with clefts: the non-exhaustive interpretations do not differ statistically from their grammatical base-line (contrastive), while they do from the ungrammatical baseline (non-contrastive). Washburn (2013), Washburn et al. (2013) take this evidence to show that exhaustivity in it-clefts is a conversational implicature, and can be derived from Grice's Maxims of Quantity and Quality.

The findings presented by this work are interesting and important. However, the conclusions to be drawn from them have to be considered carefully. There are three methodological points that I want to raise. First, I think it is a major step forward to actually work with material that is auditorily presented as it makes sure that we compare clefts with true marked focus sentences. However, the mixture of a written context that includes a quote, with the auditorial presentation of the target sentence might have distracted the participants. As a result, they might have been invited in only considering the interaction of Kevin (quote in the context) and Jane (auditorily presented target), possibly disregarding the larger context.

Additionally, participants got a general set-up for the relationship be-

tween Jane, Kevin and Tom. 'Jane and Tom are best friends, who do everything together, but Kevin is Jane's boyfriend and he's sometimes upset by their friendship.' This set-up was chosen to provide the most natural context for clefts. However, this set-up might lead participants to take into consideration that Mary might not be fully truthful to Kevin to avoid getting into long discussions. As participants were not asked about Mary's truthfulness, this also might have affected the ratings.

Third, and in my view most importantly, the data are not entirely convincing concerning the lack of a difference between exhaustive contrastive and non-exhaustive clefts. While there is a clear difference between exhaustive non-contrastive clefts (ungrammatical baseline) and non-exhaustive clefts, it is less clear from the reported data and statistics, whether there is indeed no systematic difference between non-exhaustive clefts and exhaustive contrastive clefts (grammatical baseline). The raw data shows a small but possibly systematic difference between the two conditions in the experiment on ICs (though not in the one with SVO sentences). The individual Bonferroni-adjusted t-tests comparing the individual conditions to the grammatical baseline suggest the lack of such a difference. However, the threshold for statistical significance with the Bonferroni adjustment is really low. Since the conclusion that the non-exhaustive clefts are not systematically less acceptable rests on a failure to statistically confirm the opposite ( $H_0$  is accepted because  $H_1$  must be rejected), it would be desirable to gather more data from different sources to really draw the conclusion that non-exhaustive clefts are equally acceptable as exhaustive contrastive clefts.<sup>6</sup>

Thus, even if the conclusion from these experiments could be that ICs are not necessarily exhaustive, there might still be differences in degree between ICs and SVO sentences. Such a difference remains unaccounted

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<sup>6</sup>Thanks to Robin Hörnig for discussing this point with me.

for in an analysis where the context is the sole decisive factor concerning exhaustivity. And even though this difference is not part of the design of the two experiments, the evidence in Onea and Beaver (2011), Beaver (2012) point into this direction. Thus, I think that more evidence is needed to decide on this issue. And I will provide further evidence below, which rather points to a difference between SVO and ICs with respect to the interpretation of exhaustivity.

### 6.2.6 Restrictions on additive particles

There is one more observation that needs to be taken into consideration, the fact that additive particles cannot regularly associate with the pivot (Horn, 1969, 106) as in (24).

- (24)    a. \*It's also Muriel who voted for Hubert.  
          b. \*It's even Muriel who vote for Hubert.

They are only acceptable in a very restricted way. The data in (25) taken from É. Kiss (1998) shows that it is possible to use *also* in a corrective context, even though *also* cannot usually associate with the pivot (see also Hedberg 1990, 2000, Hedberg and Fadden 2007, Hedberg 2013 for more examples, and the discussion on multiple focus clefts in chapter 5 section 5.4.6).

- (25)    A: Bill danced with Mary.  
          B: No, it was Sam that danced with Mary.  
          C: It was also John that danced with her. (É. Kiss, 1998, 252)

The additive particle *even* is more difficult to integrate in a cleft sentence, but is marginally possible in a similar context.

- (26) A: Bill danced with Mary.  
 B: Oh, I thought it was Bill and Sam that danced with Mary.  
 C: Yes, and it was even Max that danced with her.  
 (É. Kiss, 1998, 252)

If exhaustivity is part of the (not-at-issue) meaning of the cleft, it is not surprising that there is a restriction on additives. However, this seems not to be a strict requirement, as the availability of such examples as in (26) and (25) shows. Thus, any theory of exhaustivity in clefts, must be able to account for these facts, too.

### 6.2.7 Summary

From my point of view, the discussion here has brought out several empirical points that need to be considered with respect to exhaustivity in *it*-clefts. First, the interpretation of exhaustivity clearly depends on the relevant alternatives to the pivot. As the establishment of relevant alternatives is context-dependent, exhaustivity is too. Second, I think that the examples from Horn (1981) show clearly, that clefts and *only* differ. I take this to mean that exhaustivity is asserted in clefts. Third, some experimental findings and theoretical insights suggest that clefts differ from regular SVO sentences with respect to exhaustive interpretations (see though the results by Washburn 2013, Washburn et al. 2013). Fourth, the use of additive particles like *also* and *even* is restricted in clefts, yet possible.

- (27) Major observations concerning exhaustivity in it-clefts
- a. Exhaustivity in clefts differs from exclusive particles like *only*.
  - b. Exhaustivity in clefts depends on the relevant focus alternatives.
  - c. It-clefts seem to be more exhaustive than regular SVO sentences.
  - d. Additive particles (e.g. *also*, *even*) are restricted but possible.

## 6.3 Previous Approaches

### 6.3.1 Introduction

There are several explanations for exhaustivity in clefts in the literature. There are approaches that take exhaustivity to be part of the truth-conditional meaning of focus in it-clefts (É. Kiss, 1998). Exhaustivity has been suggested to be a uniqueness or maximality presupposition (Delin and Oberlander, 1995, Percus, 1997), a conditional presupposition (Büring and Križ, 2013), an inference from other presuppositions (Delin, 1990), an entailment (Atlas and Levinson, 1981), a conventional implicature (Halvorsen, 1978), or a conversational implicature (Horn, 1981, Wedgwood, 2005, Drenhaus et al., 2011).<sup>7</sup>

### 6.3.2 Exhaustivity as truth-conditional effect

É. Kiss (1998) proposes that exhaustivity in it-clefts is part of the truth-conditional meaning of clefts. In line with Hungarian preverbal focus constituents, she shows that it is not possible to combine clefts with additive particles like *also* or *even*.

- (28) a. It was ?also John/\*even John that Mary invited to her birthday party.  
       b. Mary invited ALSO JOHN/ EVEN JOHN to her birthday party.  
       (É. Kiss, 1998, 253)

Second, for ICs the positive vs. negative question answer test applies, according to É. Kiss (1998).

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<sup>7</sup>A cross-cutting distinction is whether the exhaustivity effect is true exhaustivity as with *only*, or rather a uniqueness effect or some kind of maximality operator. In this section, I mainly concentrate on the general explanation while glossing over the details of individual proposals and operators.



- (29) a. It was a hat and a coat that Mary picked for herself.  
 b.  $\neq$  It was a hat that Mary picked for herself.  
 (É. Kiss, 1998, 250)

There are two central problems for the truth-conditional approach. First, Onea and Beaver (2011) and Beaver (2012) have argued that this test does not show the expected results when tested experimentally.

A second problem for the truth-conditional approach are the examples from Horn (1981) in (30), which show that the exhaustivity cannot be part of the asserted content; this is the major difference to *only*.

- (30) a. #Bob knew she invited Fred, but he didn't know it was Fred she invited.  
 b. Bob knew she invited Fred, but he didn't know she only invited Fred.

### 6.3.3 Exhaustivity as presupposition

Exhaustivity in ICs has been argued to be presuppositional, as given in (31).

- (31) It was Mary who laughed.  
 $\forall x [\text{laughed}(x) \rightarrow (x = m)]$  Exhaustive presupposition

On first sight, this is not obvious as presuppositions usually project in negative sentences. This is not the case for exhaustivity in it-clefts (Halvorsen 1978, 15, Atlas and Levinson 1981, 24f, Horn 1981). (32) does not presuppose that  $\forall x [\text{laughed}(x) \rightarrow (x = m)]$ .

- (32) It wasn't Mary who laughed; it was Bill.

This problem has been addressed in previous work in various ways. Delin (1992), Delin and Oberlander (1995), Percus (1997) have proposed that exhaustivity is a uniqueness/maximality presupposition also present with definites. Thus, the cleft in (31) has the presupposition that the  $x$  that satisfies the existential presupposition of the cleft clause is a unique set. This also covers sums of individuals and plurals, as in (33), which originally have been taken by Atlas and Levinson (1981) as evidence against a uniqueness presupposition.<sup>8</sup>

(33) It wasn't Fred she invited. She invited Bob and Gord.

In Delin's approach the uniqueness presupposition is satisfied as there is a unique set  $X$  such that she invited  $X$ . Whether this unique set is a singleton set {Fred} or a set containing two individuals {Bob, Gord} is not a problem in her analysis.

Büring and Križ (2013) address the lack of projection of exhaustivity by making the presupposition conditional. Thus, the presupposition of (31) and (32) is *If Mary laughed, it was only Mary who laughed*. The problem with this account is that it is not obvious how the set of alternatives can play a role for defining the conditional presupposition.

Velleman et al. (2013) argue that the exhaustivity in *it*-clefts is part of the non-at-issue meaning, namely that there is a presupposition that there is no true answer that is maximally stronger than the answer provided by the cleft. So in the case of (31), the presupposition is that there is no stronger answer, i.e. it is presupposed that *Mary and Peter laughed* is not true.

Note though, that this predicts that the discourse in (34) is not felicitous, as the particle *no* presumably addresses truth-conditionally relevant content.

<sup>8</sup>More precisely, Delin (1992, 61) proposes a maximality operator ranging over sets  $X$ , such that  $\max(X, \lambda y \phi) \equiv_{df} \forall x [x \in X \Leftrightarrow \lambda y \phi(x)]$ .

(34) It is Mary who laughed. - No, it is John and Mary who laughed.

In the data provided in Beaver (2012), this continuation was not tested. The *no* answer was *No, it was also John who laughed*. As I consider the discussion of this data as central to the analysis and investigation of exhaustivity in it-clefts, I present some further experimental results to contribute to the ongoing debate.<sup>9</sup>

Thus, simple presuppositional accounts face a challenge with the lack of projection in negated clefts. These can be overcome though. Additionally, the one crucial empirical question is whether negation can target exhaustivity in clefts, see (34).

#### 6.3.4 Exhaustivity as conventional implicature

The exhaustivity effects have been claimed to be derivable from a conventional implicature, most prominently by Halvorsen (1978). He argues that the cardinality of the cleft clause is conventionally implicated to be the same as the cardinality of the pivot. Apart from specific problems discussed in Atlas and Levinson (1981) already, this approach faces two major challenges.

The first criticism is the same as for the presuppositional approaches above: conventional implicatures are expected to survive in negative and question contexts, but this is not true in clefts, see (32) above.

The second criticism for the conventional implicature approaches is that the exhaustivity effect in clefts differs from conventional implicatures: the former is local, while the latter is not (Büring and Križ, 2013, 6:12). The exhaustivity effect cannot be ascribed to the speaker in (35). It 'can't be interpreted to mean that Peter believes that Fred and Sue and Gord were invited, whereas the Exhaustivity Claim – that if Fred was invited, no one

<sup>9</sup>The specific details of the analysis of only and ICs in Velleman et al. (2013) leads to the assertion and presupposition of the very same proposition, when ICs contain *only*, see section 5.2.2 in chapter 5 above.

else was – would be ascribed to the speaker.’ Speaker-orientation is possible in the case of conventional implicatures, such as an appositive, as in (36) (Potts 2007, 477).

(35) I think only one person was invited. Peter believes that it was Fred who was invited, #and that Sue and Gord were, too.  
(Büring and Križ, 2013, 6:12)

(36) Sheila says that Chuck, a confirmed psychopath, is fit to watch the kids. (Büring and Križ, 2013, 6:12)

### 6.3.5 Exhaustivity as conversational implicature

There are a number of approaches to clefts that propose that exhaustivity is a result of a conversational implicature. Horn (1981), Wedgwood (2005), Washburn (2013), Washburn et al. (2013). The idea is that interlocutors make use of Grice’s Maxim of Quantity and Quality, see (37) and (38).

(37) Grice’s maxim of Quantity

- a. Make your contribution as informative as is required (for the current purposes of the exchange)
- b. Do not make your contribution more informative than is required.

(Grice, 1975, 45)

(38) Grice’s Maxim of Quality  
Try to make your contribution one that is true.

By stating (31), the hearer assumes that the speaker truthfully (Maxim of Quality) gave the only relevant person who laughed (Maxim of Quantity), thus, if more people were laughing, the speaker would have said so. Thus, the only relevant person that laughs is Mary. There are two problems with

this kind of approach.

First of all, conversational implicatures are generally easily cancelable. The exhaustivity in clefts, however, seems not to be, at least intuitively.

- (39) a. Mary ate pizza, indeed she ate pizza and calzone.  
 b. #It was pizza Mary ate; indeed it was pizza and calzone.  
 (Velleman et al., 2013, 445)

Second, this analysis predicts, that the syntactic form – SVO or cleft – should not make a difference with respect to exhaustivity. This is not, however, what Onea and Beaver (2011), Velleman et al. (2013) claim to have found recently: even though clefts are ‘less’ exhaustive than exclusives like *only*, they are ‘more’ exhaustive than SVO sentences.

Third, the restriction on additive particles cannot be derived in a general approach of conversational implicatures. Conversational implicatures can be canceled easily, but this seems to not be the case with ICs. So again, there is a difference between regular SVOs and ICs which remains unaccounted for in these approaches.

### 6.3.6 Conclusion

In this section, I have discussed four different classes of approaches to the analysis of exhaustivity effects in ICs. None of the discussed approaches are without problems. Velleman et al. (2013) are closest with their analysis that the cleft presupposes that no stronger answer than the one provided in the cleft is true.

There are two central empirical questions relevant to the discussion of these approaches: First, to what extent are exhaustivity effects truth-conditionally relevant? This boils down to the question of whether *no* answers are felicitous in examples like (40).

(40) It is Mary who laughed. - No, it is John and Mary who laughed.

And second, at the other end of the spectrum of accounts of exhaustivity effects in terms of implicatures: to what extent are ICs different from SVO sentences? I will address these two empirical issues in the next section.

## **6.4 Experimental Evidence for Exhaustivity Effects**

### **6.4.1 Introduction**

The aim of this section is to contribute further data for two central empirical questions:

1. To what extent are exhaustivity effects truth-conditionally relevant?
2. To what extent are ICs different from SVO sentences?

The first question has been addressed in Beaver (2012). Experiment 5 and 6 therefore aim to reproduce these findings with a different method and with a different set of materials for English and for German. My findings for English are generally in line with Beaver (2012), however, the experimental results might contain some additional intervening factor, namely a potential presupposition failure induced by the particle *too*. Experiment 7 circumvents this potential problem, so that the results of this experiment show a clear difference between English ICs and corresponding SVO sentences, as do the results from German.

### **6.4.2 Experiment 5: Exhaustivity effects in English it-clefts A**

#### *6.4.2.1 Introduction*

The main idea of the experiment is to reproduce the findings in Beaver (2012) with a different method. There are two central changes to the gen-

eral set-up: (i) instead of a *wh*-question as context, I used a yes-no question as context (in line with the finding in chapter 5 that clefts are more felicitous in such contexts. (ii) Second, I have concluded above already that ICs clearly differ from *only*-sentences. Thus, I did not include these in the study here.

#### 6.4.2.2 Factors and materials

In this study, I manipulated two factors. First, the type of structure - SVO vs. cleft; and second, the type of answer particle, *no* vs. *yes*, *and*. Crossing these two factors leads to the four conditions illustrated in (41) - (44). The context consists of a *yes-no* question and contains either the SVO sentence or the IC.

(41) *It-cleft - No*

A: Was it Susan that blamed John for the company's bankruptcy?

B: No, Sabrina too, blamed John for the company's bankruptcy.

(42) *It-cleft - Yes, and*

A: Was it Susan that blamed John for the company's bankruptcy?

B: Yes, and Sabrina too, blamed John for the company's bankruptcy.

(43) *SVO - No*

A: Did Susan blame John for the company's bankruptcy?

B: No, Sabrina too, blamed John for the company's bankruptcy.

(44) *SVO - Yes, and*

A: Did Susan blame John for the company's bankruptcy?

B: Yes, and Sabrina too, blamed John for the company's bankruptcy.

Twelve lexical variants were constructed and distributed across 4 lists in a Latin square design. Additionally, the experiment contained 68 filler sentences, which included a set of experimental items from a different experiment. The lexical material contained transitive verbs. In the cleft-version the subject was clefted. The full set of items can be found in the appendix.

#### 6.4.2.3 Procedure and participants

Participants were asked to rate the naturalness of the answer in the context of the question on a seven point scale with 1 (very unnatural) to 7 (very natural). The experiment was set-up in OnExp, and conducted online. Participants were recruited via Mechanical Turk. After reading the instructions, participants were asked to provide information on their language background as well as age, gender and occupation. There were 32 participants all self-reported native speakers of English taking part in the study, 8 per list. 50% of the participants were female. The age ranged from 23 to 57 years with a mean age of 32.5.

After providing this information, participants went through a short practice phase in which they could familiarize themselves with the task. Afterwards, the experimental material and the fillers were presented with the order randomized per participant.

#### 6.4.2.4 Results

The overall results of the study are given in figure 6.1.

The raw data was analysed with two repeated-measure ANOVAs. There is main effect for the factor construction per participants ( $F(1,31) = 5.6$ ;  $p = .02$ ) though it fails to reach significance by items ( $F(1,11) = 2.0$ ;  $p = .18$ ). It-cleft sentences are rated on average more natural than SVO structures. The factor answer type (*yes, and* vs. *no*) also had a significant effect ( $F(1,31)$



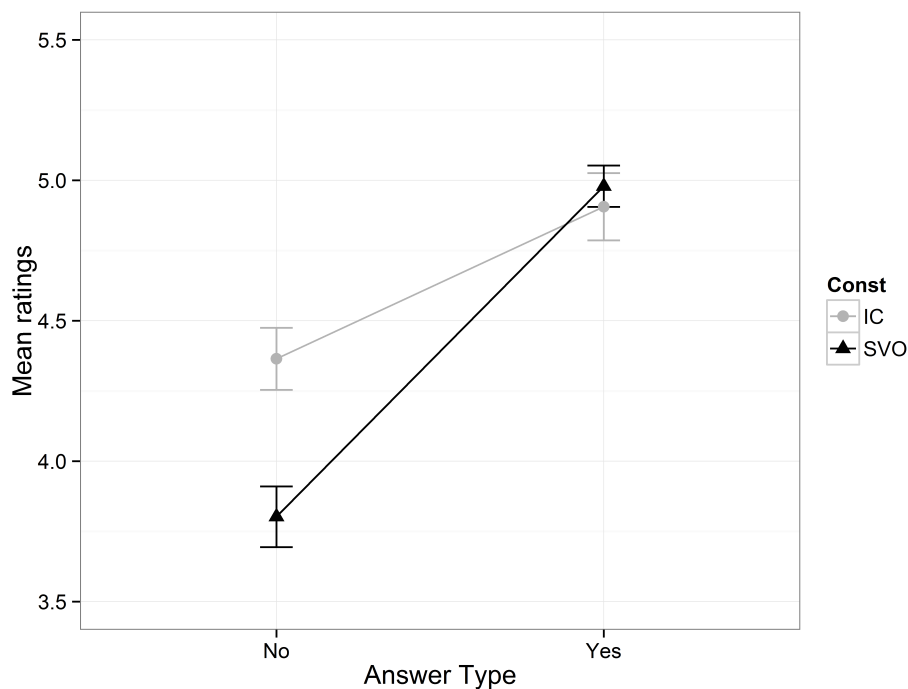


Figure 6.1: Results Rating study A on Exhaustivity in Clefts

= 29.76,  $p = .000$ ;  $F(1,11)=42.57$ ,  $p = .000$ ). Yes answers are rated better than *no* answers on average. Finally, there was an interaction between the two factors ( $F(1,31) = 12.32$   $p = .001$ ;  $F(1,11)=6.1$ ,  $p = .03$ ). The *no* answer in it-clefts was rated significantly better than the *no* answer in SVO sentences ( $t(1,31) = 3.7$   $p = .001$ ;  $t(1,11)=2.18$ ,  $p = .05$ ).

#### 6.4.2.5 Discussion

The experiment overall confirms the findings of Beaver (2012) in two respects. Yes answers are preferred over *no* answers. Yet, there is still a difference between SVO and IC sentences - *no* answers are more acceptable with clefts, than with SVO sentences.

Note, though, that this study contains a problematic point concerning the *no* answers. Independent of whether clefts assert exhaustivity, they also assert the proposition derived by applying the background to the focus, for example the IC *It was John who left*, asserts that *John left*. If *no* rejects this

assertion. There is no such assertion in the common ground (though there is a presupposition that someone left. Now if the particle *too* introduces a presupposition that there is a previous assertion that someone left, this presupposition cannot be satisfied in the given context. That this reasoning is indeed on the right track can be seen from the results of the following two experiments. The same effect is not found with German *auch* (which seems to be less restricted). Additionally, once this particle is not used as in experiment 7, there is a clear difference between clefts and SVO sentences. Before I discuss the overall results in more detail, I will present the results of the next two experiments.

### 6.4.3 Experiment 6: Exhaustivity effects in German *es*-clefts

#### 6.4.3.1 Introduction

This section presents the experiment on German. Thus, it extends the study on exhaustivity to another closely related language. Furthermore, I want to try to reproduce the findings in Beaver (2012) for German using a different method.

#### 6.4.3.2 Factors and materials

This study manipulated the same factors as experiment 5, the type of structure (SVO vs. cleft) and the type of answer (*ja und* 'yes, and' vs. *nein* 'no'). As before, a yes-no question provides the context. The resulting four conditions are illustrated in (45) - (48).

(45) *It-cleft - No*

- a. War es der Kameramann,                      der einen Preis  
     Was it the director of photography, who a       prize  
     gewonnen hat?  
     won                      has

- b. Nein, auch der Regisseur hat einen Preis gewonnen.  
No, also the director has a price won.

(46) *It-cleft - Yes, and*

- a. War es der Kameramann, der einen Preis  
Was it the director of photography, who a prize  
gewonnen hat?  
won has
- b. Ja, und auch der Regisseur hat einen Preis gewonnen.  
Yes, and also the director has a price won

(47) *SVO - No*

- a. Hat der Kameramann einen Preis gewonnen?  
Has the director of photography a prize won
- b. Nein, auch der Regisseur hat einen Preis gewonnen.  
No, also the director has a price won.

(48) *SVO - Yes, and*

- a. Hat der Kameramann einen Preis gewonnen?  
Has the director of photography a prize won
- b. Ja, und auch der Regisseur hat einen Preis gewonnen.  
Yes, and also the director has a price won

Twelve lexical variants were constructed and distributed across 4 lists in a Latin square design. Additionally, the experiment contained 68 filler sentences including a set of experimental items from a different experiment. The lexical material contained transitive verbs only. In the cleft-version, the subject was clefted. The full set of items can be found in the appendix.

#### 6.4.3.3 Procedure and participants

Participants were asked to rate the naturalness of the answer in the context of the question on a seven point scale with 1 (very unnatural) to 7 (very natural). The experiment was set-up in OnExp, and conducted online. 32 students from Tübingen University, all self-reported native speakers of German, took part in the study. After reading the instructions, participants were

asked to provide information on their language background as well as age, gender and occupation. There were 8 participants per list. 31% of the participants were female. The age range was from 19 to 31 years with a mean age of 23.6 years.

After providing this information, participants went through a short practice phase in which they could familiarize themselves with the task. Following that, the experimental material and the fillers were presented with the order randomized per participant.

#### 6.4.3.4 Results

The overall results of the study are given in figure 6.1.

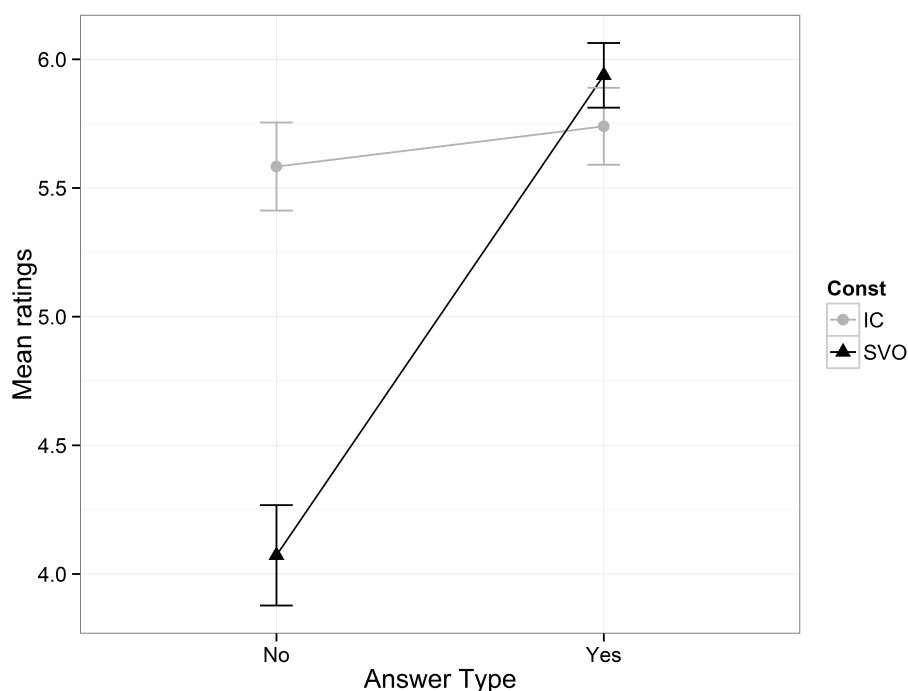


Figure 6.2: Results Rating study on Exhaustivity in German Clefts

The raw data was analysed with two repeated-measure ANOVAs, per participants and items. There is a main effect for the factor construction ( $F(1,31) = 20.5$ ;  $p < .0001$ ,  $F(1,11) = 15.3$ ;  $p < .005$ ). On average, IC sentences are rated more natural than SVO structures. The factor answer type

(*yes, and* vs. *no*) also had a significant effect ( $F(1,31) = 17.05$ ,  $p < .0001$ ;  $F(1,11) = 15.2$ ,  $p < .005$ ). *No* answers are rated more natural than *yes* answers on average. Finally, the two factors interact ( $F(1,31) = 29.8$ ,  $p < .0001$ ;  $F(1,11) = 17.9$ ,  $p < .005$ ). The *no* answer in ICs was rated significantly better than the *no* answer in SVO sentences ( $t(1,31) = 5.5$ ,  $p < .0001$ ;  $t(1,11) = 4.5$ ,  $p < .005$ ), while there is no difference between the *yes* answer and the *no* answer in clefts ( $t(1,31) = -.55$ ,  $p = .590$ ;  $t(1,11) = -.65$ ,  $p = .532$ ).

#### 6.4.3.5 Discussion

The data from German ICs shows a clear difference between IC and SVO sentences. While SVO sentences show a clear and strong dispreference for *no* answers, this is not the case for ICs. Both, *yes* and *no* answers are felicitous. At first sight, this is quite surprising. On the one hand, the exhaustivity effect seems to be truth-conditionally relevant and can be rejected with the answer *no*. On the other hand, the *yes* answer is equally felicitous, suggesting that there is no such exhaustivity effect in clefts.<sup>10</sup>

Note, though, that the *yes* answer here (as in experiment 5), was *ja und* 'yes and'. *And* can provide some additional material, some kind of afterthought, which could possibly be the reason for this observation. I will discuss this fact in more detail after the presentation of the results of the fourth experiment.

<sup>10</sup>This means that *auch* does not give rise to a potential presupposition failure. I suspect that this shows a general difference between *auch* and *too*. The former can occur both preceding the focus while the latter can only follow it, see Reis and Rosengren (1997) on *auch*. However, the details of the differences are left open here.

### 6.4.4 Experiment 7: Exhaustivity effects in English *it*-clefts B

#### 6.4.4.1 Introduction

The second rating study on English was designed to exclude the possible problem with the presupposition failure with *too*. Thus, the answers did not contain the particle but a coordinated phrase. Leaving out this particle allows for testing the combination of cleft-question with an IC in the answer, another major difference between the materials used in Beaver (2012) and the test in the theoretical literature. Additionally, there was a distinction made between a simple confirmation answer and the answer *Yes, and*, which not only confirms the previous statement, but also signals the amendment of the previous statement. I was interested in to what degree this makes a difference, especially in the combination with the additive particle *also*. This is relevant because the original test for exhaustivity made a comparison between a simple *no* and a simple yes answer.

As we have seen in the discussion above, alternatives do play a significant role for the exhaustivity of clefts. In order to control for this factor at least partially, the context was amended with a preceding statement that introduces the two relevant alternatives in clefts, even though this does not completely exclude the accommodation of further alternatives.

Finally, while the previous rating studies instructed the participants to rate the naturalness of the target as such, the participants were instructed to rate whether the target sentence is a natural continuation for the preceding context on a scale from 1 (very unnatural) to 7 (very natural).

#### 6.4.4.2 Factors and materials

The experiment again manipulated two factors: the type of construction (SVO vs. cleft) and the type of answer (No; simple yes; yes, and). Crossing

these factors leads to the six conditions illustrated in (49) - (54).

(49) Cleft - No

A: I know that Susan and Sabrina were annoyed with John.

Was it Susan that blamed John for the company's bankruptcy?

B: No, it was Susan and Sabrina that blamed John for the company's bankruptcy.

(50) Cleft - Yes

A: I know that Susan and Sabrina were annoyed with John.

Was it Susan that blamed John for the company's bankruptcy?

B: Yes, it was Susan and Sabrina that blamed John for the company's bankruptcy.

(51) Cleft - Yes, and

A: I know that Susan and Sabrina were annoyed with John.

Was it Susan that blamed John for the company's bankruptcy?

B: Yes, and it was also Sabrina that blamed John for the company's bankruptcy.

(52) SVO - No

A: I know that Susan and Sabrina were annoyed with John.

Did Susan blame John for the company's bankruptcy?

B: No, Susan and Sabrina blamed John for the company's bankruptcy.

(53) SVO - Yes

A: I know that Susan and Sabrina were annoyed with John.

Did Susan blame John for the company's bankruptcy?

B: Yes, Susan and Sabrina blamed John for the company's bankruptcy.

(54) SVO - Yes, and

A: I know that Susan and Sabrina were annoyed with John.

Did Susan blame John for the company's bankruptcy?

B: Yes, and Sabrina also blamed John for the company's bankruptcy.

18 lexical variants were constructed based on the lexicalisation of the first experiment plus six new items. These were distributed across 6 lists in a Latin square design. Additional, 30 filler sentences were added, partly containing test sentences from a different experiment.

#### *6.4.4.3 Procedure and participants*

Participants were asked to rate the naturalness of the answer in the preceding context on a seven point scale with 1 (very unnatural) to 7 (very natural). The experiment was set-up in OnExp and conducted online. Participants were recruited via Mechanical Turk. After reading the instructions, participants were asked to provide information on their language background as well as age, gender and occupation. There were 30 participants all self-reported native speakers of English taking part in the study; five per list. 16 of the participants were female, 14 male. The age ranged from 22 to 55 years with a mean age of 32.6.

After providing this information, participants went through a short practice phase in which they could familiarize themselves with the task. After that the experimental material and the fillers were presented with the order randomized per participant.

#### *6.4.4.4 Results*

The overall results of the second experiment are given in figure 6.3

The raw ratings were subjected to two repeated-measure ANOVAs, per participants and per items. There is no significant main effect for the



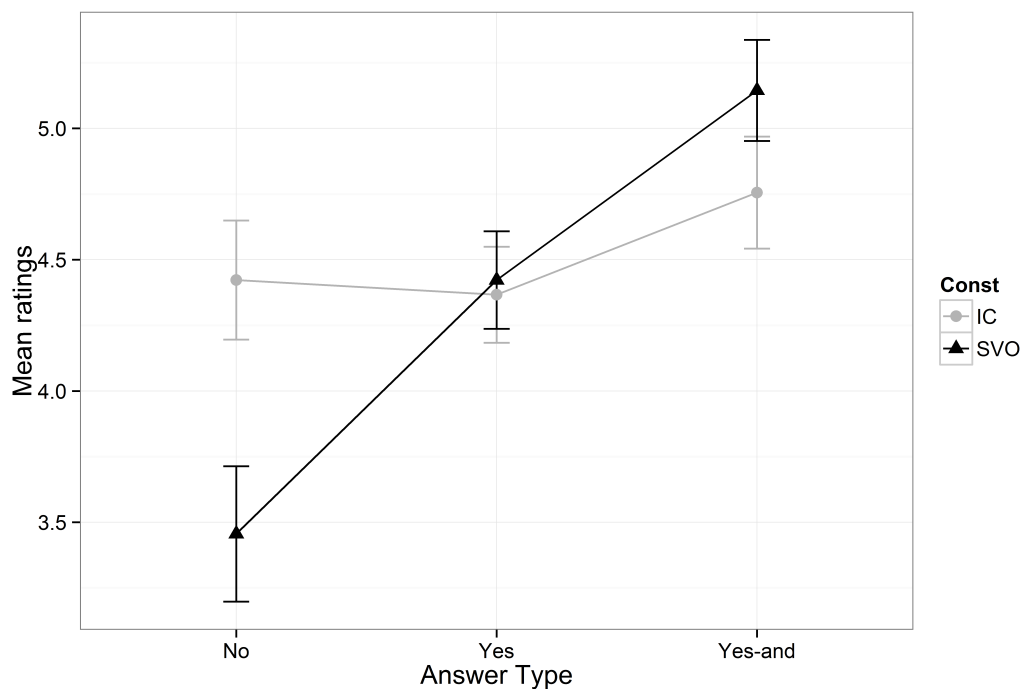


Figure 6.3: Rating study on Exhaustivity in Clefts

factor construction (It-cleft vs. SVO) ( $F(1,29)=1.9$ ,  $p=.18$ ;  $F(1,17)=1.3$ ,  $p=.27$ ). There is a main effect for the answer type ( $F(1,2,58)=5.1$ ,  $p<.02$ ;  $F(2,34)=13.7$ ,  $p<.001$ ). On average, *yes and* answers are rated more natural than simple *yes* answers, which in turn are more acceptable than *no* answers. Additionally, there is a significant interaction between the two factors ( $F(1,2,58)=11.4$ ,  $p<.001$ ;  $F(2,34)=5.9$ ,  $p<.01$ ).

For the cleft sentences, there is no significant difference between the individual answers. The comparisons between condition 1 vs. 2, 2 vs. 3 and 1 vs. 3 yielded no significant results ( $t(1,30)$  and  $t(1,17)$  are all not significant). There is a significant difference between individual answers in SVO sentences, the *no* answer is significantly worse than the simple *yes* answer ( $t(29)=-2.5$ ,  $p<.02$ ;  $t(17)=-3.1$ ,  $p<.01$ ), and the simple *yes* answer is significantly worse than the *yes, and* answer ( $t(29)=-2.5$ ,  $p<.02$ ;  $t(17)=-2.4$ ,  $p<.03$ ).

#### 6.4.4.5 Discussion

Firstly, the clear pattern with the SVO question-answer pairs show that the participants were able to make the necessary distinctions and provide intuitions about the relevant factor. Secondly, regarding ICs, all answers are rated equally well. In relation to experiment 5, this shows that the problem with the *no* answer in clefts, indeed is the combination with the particle *too* and not the lack of an exhaustivity effect. Thus, with the adjusted material, it is clear that the *no* answer is out for a different reason in SVO than in clefts. Once the presupposition is controlled for by providing both alternatives, the difference between SVO sentences and clefts is visible. There is an additional interesting result in this experiment: the *yes-and* answer in this experiment included a cleft with *also*. This condition was rated almost as natural as the same condition with the SVO sentences (the difference is marginally significant by participants only) and in absolute values this condition is rated best with ICs. This shows that *also* is not problematic in it-clefts per se, as long as the context allows that the additive meaning is integrated.

Concerning the two empirical questions from the outset, this experiment shows two things. First, the exhaustivity effect can be truth-conditional, thus, allowing for a *no* answer. Yet, the stress is on *can* - the simple *yes* and the *yes-and* answers are available as well. Additionally, this experiment shows that there is a difference between ICs and SVO sentences, thus a mere pragmatic inference from the context will not do.

The crucial question that emerges from these results is - why are all three answers possible with clefts? And what does that tell us about exhaustivity in clefts? I address these questions in the next section.

## 6.5 A Focus Account of Exhaustivity Effects

### 6.5.1 Introduction

In this section, I consider in some detail the possible source of the exhaustivity effects that have been observed for clefts in opposition to SVO sentences. The major observations that need to be considered are summarized here in (55).

- (55) Exhaustivity effects in clefts
- (i) Exhaustivity effects in clefts depend on the relevant focus alternatives, see Velleman et al. (2013)
  - (ii) Clefts differ from exclusives like *only*, see Horn (1981) among others;
  - (iii) The use of additive particles is restricted though not excluded in clefts, see É. Kiss (1998) and section 6.2.6;
  - (iv) Clefts are felicitous with both positive and negative answers when the singularity of the pivot is under discussion, see section 6.4.4;

In the light of the experimental findings by Beaver (2012), Washburn (2013), the question that I will raise and try to answer here is: what is the source of the observed exhaustivity effects in ICs, given that exhaustivity effects seem not to appear uniformly? My aim here is modest. I want to investigate how far the focus analysis presented in the previous chapter can account for the observed data.

My starting point is that exhaustivity effects depend on the relevant focus alternatives. I will try to show that the effects that we observe are a result of the contrastive interpretation, which in turn gives rise to a set of relevant alternatives. There is a truth-conditional effect, when the contrast-

ing proposition  $q$  is relevant. As the truth-conditionally relevant contrasting proposition is based on the choice of one alternative from the focus alternatives and as the set of focus alternatives and the choice of  $q$  often depends on the context, the interpretation of exhaustivity effects in ICs are variant. And this effect turns up in the experimental results.

### 6.5.2 Contrastive Focus and Exhaustivity

I argued above that the main contribution of focus in ICs is that they give rise to an alternative proposition  $q$  which is added to the common ground with the opposite truth-value of the asserted proposition  $p$  repeated here for convenience.

#### (56) **Contrasting Focus Hypothesis (=CFH)**

ICs express Contrasting Focus, i.e. there is an asserted proposition  $p$  and an alternative proposition  $q$  such that

- (i)  $p = \alpha(\beta)$ ; where  $\alpha$  corresponds to the background/cleft clause and  $\beta$  to the focus phrase/pivot
- (ii)  $q = \alpha(x)$  where  $x \in \{ \text{ALT}(\beta) \}$ ;
- (iii)  $q \neq p$ ;
- (vi)  $p$  and  $q$  are mutually exclusive, i.e. they have opposite truth-values;

Exhaustivity effects are a result of two processes: first, the relevant larger set, has to be part of the focus alternatives, and second, there needs to be an implicature of sorts that the assertion of the cleft is complete. So let us assume a context of three relevant individuals Peter, John and Mary. The IC in (57) asserts that John left. Additionally, the contribution by (56) is that at least one of the others did not leave, let's say Mary. Now if there is a further requirement that the element that the cleft clause holds of is unique

in the set of focus alternatives (which might also contain a plural individuals along the lines of Delin 1992, Delin and Oberlander 1995, Percus 1997), this means that all other alternatives are excluded. Independent of which option one chooses for  $q$  - (left(Mary) or left(Bill)) - the outcome is the same.

- (57) It was John who left.
- a.  $p = \text{left}(\text{John})$
  - b.  $q = \text{left}(\text{Mary})$ ;  $q$  is false;
  - c. Uniqueness: Bill did not leave.

In the same context with three individuals, the negative statement makes a different prediction. The main point of the sentences is to assert that John did not leave, but someone else did. Let's again first assume it holds of Mary. The additional uniqueness requirement is already satisfied by Mary, so the proposition that Bill did not leave is implied.

- (58) It wasn't John who left.
- a.  $p = \text{left}(\text{John})$ ;  $p$  is false;
  - b.  $q = \text{left}(\text{Mary})$ ;  $q$  is true;
  - c. Uniqueness: Bill did not leave.

Thus, the difference between the examples in (58) and (57) is that in the former, both Bill and Mary come out as not leaving. In the latter, who leaves and who stays, depends on the choice of  $q$ . Therefore, there is no exhaustivity effect in negative ICs.

The main point that this approach adds to previous contributions is that the focus alternatives are the basis for the uniqueness interpretation. This opens a way to handle at least some of the potential counterexamples to the exhaustivity effect in ICs. This can be further illustrated with the

example in (59) from Hedberg (1990).

- (59) Greenfield told her we were going to need her assistance, and she came to life like a parched petunia that's finally been watered. 'I'm ready,' she said, 'but if it involves climbing a tree, I'll need help.' God knows what she thought we were planning. 'It's your voice we need. And your intelligence.' he said. (Hedberg, 1990, 116)

The IC is immediately followed by a further addition of another property needed. Thus, this seems to be a plain counterexample to the exhaustivity claim. However, I think that it is not, or at least not necessarily. Given that the set of alternatives matters, it is plausible that the relevant set for the interpretation of the cleft is {your voice, your physical abilities}.

- (60) It's your voice we need.
- a.  $p$  = We need your voice.
  - b. ALT = {your voice, your physical abilities}
  - c.  $q$  = We need your physical abilities.  $q$  is false;

Thus, the cleft is indeed exhaustive on this set. Based on this alternative set {your voice, your physical abilities}, it is not surprising that it is possible to add another property, which is not part of the initial set of alternatives.

Having established here now, the main idea how exhaustivity effects arise in ICs, I now address the main observations in the following.

### 6.5.3 It-clefts do not assert exhaustivity

As already noted above, the data by Horn (1981) and also the results by Onea and Beaver (2011), Beaver (2012) show that in contrast to exclusive particles like *only*, clefts do not assert exhaustivity. Therefore they are differ-

ent from sentences with *only*. Nothing in the analysis of the focus structure of clefts in the previous chapters claims this. Exhaustivity effects here are the result of a uniqueness interpretation on the set of focus alternatives. So the fact that clefts do not assert exhaustivity is not surprising and follows straightforwardly.

#### 6.5.4 It-clefts are compatible with additive particles

As observed by É. Kiss (1998) clefts are compatible with additives like *also* in a very restricted context.

- (61) A: Bill danced with Mary.  
       B: No, it was Sam that danced with Mary.  
       C: It was also John that danced with her.  
       (É. Kiss, 1998, 252)

The basic idea is that a cleft including *also* adds an alternative that has not been considered so far. Thus, the first cleft can be analysed as in (62).

- (62)  $p = \text{danced-with-Mary}(\text{Sam})$   
        $q = \text{danced-with-Mary}(x) \text{ where } x \in \{\text{Sam}, \text{Bill}\}$   
        $q \text{ is false: } \neg \text{danced-with-Mary}(\text{Bill})$

$q$  has been mentioned in the preceding discourse, thus the set of alternatives is obviously  $\{\text{Sam}, \text{Bill}\}$ . The second cleft now adds an additional alternative to the preceding one, but possible with a different set of alternatives. The presupposition of *also* is satisfied, because the first cleft provides the relevant proposition that is true.

- (63)  $p = \text{danced-with-Mary}(\text{John})$   
        $q = \text{danced-with-Mary}(x) \text{ where } x \in \{\text{John}, \dots\}$

q is false:  $\exists x.\text{danced-with-Mary}(x)$

Thus, *also* is possible in clefts. But why is it so rare, or rather restricted to such contexts? I think the problem lies in the focus structure of clefts. As they explicitly or implicitly reject a possible alternative proposition as false, ICs exactly require such a specific context to allow additives like *also*.

The case seems to be to be similar with *even*. Consider the example in (64) found in the BNC. The example is taken from a sermon and the context sets-up that humans are like sheep.

(64) Context: But in our helplessness, in our sheep-like condition <pause> the shepherd comes and he rescues us. And he saves us, because we can't do it ourself!

IC1 You know, if it was a dog that was lost,

IC2 if it was a cat that was lost,

IC3 if it was even a pigeon that had got lost <pause>

PoT: they've got some homing device, but the sheep hasn't even got that, it can't even find it's own way home. And that's just like human beings.

Then, there are three clefts each embedded in an if-clause. All of them contrast the pivot with sheep, i.e. with the statement that *if it wasn't a sheep that is lost*. As the relevant alternative set in this context contains the asserted alternative and the contrasts with *sheep*, *even* does not interfere with these alternatives. Rather, *even* ranges over the alternatives ordered in a scale { a dog was lost, a cat was lost, a pidgeon was lost }. As these alternatives are somewhat independent from the cleft alternatives, the two are compatible.



Again here, the combination of *even* with a *it*-cleft structure is rare and restricted. The precise reason is that we need such a specific context where the alternatives relevant for *even* are not the same as those for the cleft. Thus, it still holds that the cleft alternatives are not compatible with the scalar interpretation of *even*.

### 6.5.5 Exhaustivity effects with positive and negative answers

One of the crucial data for exhaustivity effects comes from positive versus negative answers. The test was originally taken to show that clefts assert exhaustivity, here repeated for convenience from É. Kiss (1998).

- (65) a. It was a hat that Mary picked for herself. / Was it a hat that Mary picked for herself?  
 b. #Yes/No, she also picked a coat for herself  
 c. #Yes/No, it was a hat and a coat that Mary picked for herself.

The results from Beaver (2012), however, suggest that *no* is not an appropriate reaction to correct a cleft statement. Thus, he found that the *yes-but* answer is preferred over the *no* answer. A sample of his test sentences is repeated here again. The *no* answer was chosen relatively rarely (roughly about 50 choices from a total of about 350).

- (16) It-clefts  
 A: What did Philip buy his sister?  
 B: It was a necklace that Philip bought his sister.  
 A1: Yes, and Philip also bought his sister a bracelet.  
 A2: Yes, but Philip also bought his sister a bracelet.  
 A3: No, Philip also bought his sister a bracelet.

The basic finding of a preference of the yes-and answer was also found in my first rating experiment. A relevant test sentence is provided in (41) - (42).

(41) *It-cleft - No*

A: Was it Susan that blamed John for the company's bankruptcy?

B: No, Sabrina too, blamed John for the company's bankruptcy.

(42) *It-cleft - Yes, and*

A: Was it Susan that blamed John for the company's bankruptcy?

B: Yes, and Sabrina too, blamed John for the company's bankruptcy.

As noted above though, the low rating of the *no* answer could have an independent source in these discourses. When participants take *no* to reject the proposition  $p = \textit{Susan blamed John for the company's bankruptcy}$ , the presupposition of *too* cannot be satisfied in B's answer, leading to a lower rating of the *no* answer in both ICs and SVO sentences.

This problem was circumvented in experiment 7 - the second rating experiment on English ICs. The crucial conditions are repeated here in (49) and (50). What I found here then, was that for ICs both the yes answers, as well as the *no* answer were rated equally natural with clefts.

(49) *Cleft - No*

A: I know that Susan and Sabrina were annoyed with John.

Was it Susan that blamed John for the company's bankruptcy?

B: No, it was Susan and Sabrina that blamed John for the company's bankruptcy.

(50) *Cleft - Yes*

A: I know that Susan and Sabrina were annoyed with John.

Was it Susan that blamed John for the company's bankruptcy?

B: Yes, it was Susan and Sabrina that blamed John for the company's bankruptcy.

(51) Cleft - Yes, and

A: I know that Susan and Sabrina were annoyed with John.

Was it Susan that blamed John for the company's bankruptcy?

B: Yes, and it was also Sabrina that blamed John for the company's bankruptcy.

I think that this somewhat contradictory observation can be explained if participants established different sets of relevant alternatives for the different questions and answers. For the *no* answer, the relevant set of alternatives for both the question and the answer consist of the following set: { Susan, Sabrina, Susan and Sabrina}. If the cleft question ranges over these three alternatives, the *no* answer is felicitous, because it says that of the relevant alternatives the question was not picking out the right one, and the cleft answer provides a different one. Thus, we get a truth-conditional effect. For the plain *yes* answer, the relevant set of alternatives to be construed is the set {Susan, ...} for the question and {Sabrina and Susan, ...} for the answer. As both establish a contrast to another alternative, which is not mentioned in the context, the *yes* answer is felicitous. For the *yes and* answer the alternative set for the question is the same, {Susan, ...}, the alternative set for the answer is {Sabrina, ...}. In all three versions, contrasting focus is observed. The choice of relevant alternatives varies though. And depending on the selection of alternatives, different answers are felicitous.

If it is indeed possible to adjust the assumed set of relevant alternatives to the current needs, as assumed here, the data in Washburn (2013), Washburn et al. (2013) can be explained in the same way. The relevant set

of alternatives under discussion involves lamps and a chair, and contrasting focus gives rise to reject the proposition that *Tom painted a lamp*.

### 6.5.6 Conclusion

In this section, I have tried to show how to derive exhaustivity effects from the contrasting focus of ICs as proposed in the previous chapter. If the data and reasoning presented here holds up to closer scrutiny in future research, the conclusion is that ICs express contrasting focus and contrasting focus can give rise to exhaustivity effects, depending on the selection of alternatives.

If the reasoning applied here is on the right track, future research will have to address the question: How is the set of focus alternatives established? The argumentation presented here suggests that three factors are involved: the alternatives derived from the internal structure of the pivot (see the example in (31) above), the alternatives present in the discourse, and if both fail to give rise to a consistent discourse, alternatives might be adjusted if need be.

## 6.6 Conclusion

In this chapter, I have addressed the question of the empirical status and theoretical evaluation of exhaustivity effects in ICs. Based on previous theoretical and empirical studies, the first three points in (66) could be established. Additionally, I conducted two experiments, one on English and one on German, to provide more data for the results in Beaver (2012), which showed a preference for the yes answer in clefts. While the study on English more or less confirmed that observation in Beaver (2012), the German experiment did not. Thus, the English experimental material was further

adjusted and the design and method improved. This provides the fourth observation in (66), and a clear difference from SVO sentences.

(55) Exhaustivity effects in clefts

- (i) Exhaustivity effects in clefts depend on the relevant focus alternatives, see Velleman et al. (2013)
- (ii) Clefts differ from exclusives like *only*, see Horn (1981) among others;
- (iii) The use of additive particles is restricted though not excluded in clefts, see É. Kiss (1998) and section 6.2.6;
- (iv) Clefts are felicitous with both positive and negative answers, see section 6.4.4;

On first sight, (iv) seems rather contradictory, apparently providing evidence for both the truth-conditional relevance of exhaustivity effects (*no* reacts to truth-conditional content), but at the same time contradicting such a truth-conditional effect as the *yes* answer is also felicitous. I have proposed to analyse this effect as one that is related to the contrasting focus present in ICs. The *no* answer is felicitous if the set of alternatives is such that the sum of the individuals provided as a correction is assumed to be part of the relevant focus alternatives. The *yes* answer is felicitous if the new additional alternative has not been assumed to be part of the set of alternatives in clefts.

## **7 Pseudoclefts in Hungarian (Hartmann et al. 2013)**

Pages 347-382 are not included in this online version. Readers are referred to the published article instead:

Hartmann, Jutta M., Veronika Hegedűs & Balázs Surányi. 2013. Pseudoclefts in Hungarian. In Johan Brandtler, Valeria Molnár & Christer Platzack (eds.), *Approaches to Hungarian. Volume 13: Papers from the 2011 Lund conference*, 67–96. Amsterdam: Benjamins.

DOI: <https://doi.org/10.1075/atoh.13.05har>

## **8 Pseudoclefts in Serbian (Hartmann & Milićević 2015)**

Pages 383-398 are not included in this online version. Readers are referred to the published article instead:

Hartmann, Jutta M. & Nataša Milićević. 2015. Pseudoclefts in Serbian. In Gerhild Zybatow, Petr Biskup, M. Guhl, C. Hurtig, Olaf Mueller-Reichau & Maria Yastrebova (eds.), *Slavic Grammar from a Formal Perspective. The 10th Anniversary FDSL Conference, Leipzig 2013*, 217–230. Frankfurt am Main: Peter Lang. DOI: <https://doi.org/10.3726/978-3-653-05335-7>

## 9 Conclusion and Outlook

This work provides a major contribution to the study of the relationship of focus and predication. The starting point of the detailed analysis of clefts is the cross-linguistic observation that languages of unrelated types relate focus to copula sentences in four different respects. First, copula clauses are used to express focus properties with a specific construction - cleft sentences of different types, most prominently different versions of *it*-clefts and pseudoclefts. Second, there is a frequent overlap of focus markers and copula verbs. This second aspect is also evident in a diachronic perspective, there are several cases in which copula verbs develop into focus markers. Finally, there is a fifth point, namely that specific focus restrictions also turn up in the so-called specificational copula clauses.

This suggests a fundamental relationship between focus and predication. Thus, this work set out to investigate this fundamental relationship by exploring the Focus Mapping Hypothesis provided in (1), which is a subhypothesis to general mapping hypothesis provided in (2).

(1) Focus Mapping Hypothesis

In specificational sentences (including clefts) the predication phrase (PrP) is mapped onto a focus-background division.

(2) General Mapping Hypothesis

The syntactic configuration for predication (PrP) can be mapped onto an information-structural division.



(1) implies that there is an interaction between the syntactic form (a specific type of syntactic projection - PrP) and the information-structural interpretation. This is a hall-mark of focus and information-structure more generally - it is an interface phenomenon. Focus plays a role in the major modules of grammar - syntax, PF and LF at the same time. In order to spell-out the interactions of these modules for the (1), chapter 2 develops such a model that is able to account for these interactions - the Phase-Based Interface Model of Grammar. This model shows two major changes to standard models of grammar. First, syntax, PF and LF can interact via the information-structural module during the derivation of a sentence at the phase-level. Second, the information-structural module guides the interaction of syntax, PF and LF, by assigning feature bundles to specific constituents at the edge of the phase, to the complement of the phase-head, or to the phase itself. These feature bundles can affect further syntactic derivation, PF-realization and interpretation at LF.

This model has several advantages that are relevant for the major observations for the nature of information-structure and focus. First, it allows to model information-structurally related movement when the constituent that moves has a specific function. This is the case in focus movement, such as is found in Hungarian. Second, it allows a constituent with a certain information-structural property to remain in-situ, while the corresponding constituent that does not bear this interpretation can move away. This is argued to be the case for specificational copula clauses in general, and clefts in particular. The mapping as described in (1) can thus be part of the information-structural module and drive the derivation of sentences. The workings of the model are illustrated briefly for three phenomena - focus movement, specificational copula clauses and *it*-clefts. As the main focus of the work here is on the interaction of focus and predication, the remain-

ing chapters concentrated on the detailed analysis of specificational copular clauses, *it*-clefts and pseudoclefts.

Chapter 3 provides a syntactic analysis of specificational copular clauses which is crucially based on the specific focus properties, namely that the post-copular noun-phrase has to be focused. This observation, which goes back to at least Heggie (1988), has been shown to be entirely adequate on the basis of two rating experiments with auditorily presented materials. Taking this observation seriously, the analysis provided in chapter 3 follows inversion analyses of these sentences types (Heggie 1988, Heycock 1994, Moro 1997, den Dikken 2006a among others) with the major extension that focus plays a crucial role for the derivation of these sentences - the in-situ subject is focused while the background moves away. This is a major step forward in the analysis of specificational copular clauses, as the analysis takes seriously the defining feature of the structure, namely the focus on the post-copular noun phrase, the in-situ subject.

Chapter 4 turns to the syntax of *it*-cleft sentences in English. Following previous insights, *it*-clefts are analysed as specificational copular clauses. I add to this observation that, as specificational copular clauses, *it*-clefts share the main property with this class - the pivot is the underlying subject that stays in-situ because it is focused. The cleft clause is argued to be a light-headed relative clause. The relative clause is extraposed to the right while the DP including the head *it* moves to Spec,TP to satisfy the subject requirement in English. Apart from the fact that the syntactic analysis links to the information-structural relevance, it accounts nicely for the properties of the cleft clause - while it is formally a relative clause, it is special because it acts as the syntactic predicate.

Chapter 5 analyses the focus structure of *it*-clefts in detail. Cleft sentences are focus structures, i.e. their syntactic form is used to express a

marked focus. More specifically, *it*-clefts express contrasting focus - a sub-type of focus which is defined in (3). *It*-clefts assert the proposition that results from applying the background (cleft clause) to the focus (pivot), and additionally, they add a further alternative proposition to the common ground that contrast with the asserted proposition. Contrast means that they have opposite truth-values.

(3) **Contrasting Focus Hypothesis (=CFH)**

ICs express Contrasting Focus, i.e. there is an asserted proposition  $p$  and an alternative proposition  $q$  such that

- (i)  $p = \alpha(\beta)$ ; where  $\alpha$  corresponds to the background/cleft clause and  $\beta$  to the focus phrase/pivot
- (ii)  $q = \alpha(x)$  where  $x \in \{ \text{ALT}(\beta) \}$ ;
- (iii)  $q \neq p$ ;
- (vi)  $p$  and  $q$  are mutually exclusive, i.e. they have opposite truth-values;

The hypothesis in (3) is shown to be adequate for the full range of different types of clefts (positive statements, negative statements, *it*-clefts involving second occurrence focus, or multiple foci) and in different contexts that affect the discourse-status of both pivot and cleft clause. Additionally, two experimental studies show (i) that clefts are best suited in contexts in which (at least) two alternative propositions are under discussion, and (ii) that the alternative proposition is present and accommodated in clefts and its presence is not just a result of interpretative contrasts in the context. Thus, this chapter provides a full-fledged analysis of the focus structure of shared by different subtypes of *it*-clefts in English, something that has not been provided in such detail so far. This analysis further more accounts for the existential presupposition of *it*-clefts as well as for the analysis of the

so-called predication clefts. The latter are shown to be a subcase with a specific type of pivot that restricts the focus alternatives in a specific way.

Chapter 6 provides both a theoretical as well as an empirical contribution to the hotly debated issue of the empirical validity and the theoretical analysis of exhaustivity effects in it-clefts. On the empirical side, three experiments are provided that show that the exhaustivity effects in clefts differ from the implicatures that one can derive from the non-cleft counterparts. It-clefts show truth-conditionally relevant effects of exhaustivity, i.e. the particle *no* can target the exhaustivity effect. At the same time this is not the only way, it-clefts are also compatible with a yes-answer that seemingly contradicts the exhaustivity effect. The theoretical contribution of the study lies exactly in pointing out that these effects can be explained on the basis of the contrastiving focus hypothesis and the set of available alternatives in clefts. The truth-conditionally relevant effect is a result of choosing the set of alternatives to contain the stronger answers. Thus, in situation with two relevant individuals, John and Mary, the sentence *It was John who came* can be rejected and replaced by *No, it was John and Mary who came*. If the relevant set of alternatives is construed as { John, Mary, John and Mary }. If the sum of the two individuals is not part of the set of alternatives, it is not truth-conditionally relevant.

The final two chapters, which are Hartmann et al. (2013) and Hartmann and Milićević (2015). They show how the core idea of the work here - namely that underlying subject is focused and stays in situ - can be extended to the third type of specificational copular clauses - specificational pseudo-clefts. The two studies concentrate on the syntax of these sentences, but they illustrate nicely how the syntax of these sentences depends both on the syntax of relative clauses in the respective languages as well as on the properties of the syntactic predication phrase. These two studies are also

interesting in contributing to the empirical range of observations concerning the so-called connectivity effects.

In sum, this work has shown how focus and predication interact intriguingly in the range of the class of specificational sentences: specificational copular clauses, it-clefts and pseudoclefts. It argued that focus and predication are related such that the focus-background structure can be mapped on the underlying subject-predicate relationship in the syntactic configuration PrP. This relationship has been modeled to be a truly interface issue - it has repercussions on syntax, PF and LF. Finally, the analysis has brought out a simple syntactic structure that can be interpreted with the general mechanisms, and it allows to account for the major observation: specificational sentences are focus structures, and this is what drives their syntactic derivation, influences their interpretation and shapes their phonetic form.

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# Appendix: Experimental Materials

## .1 Materials Experiment 1 and 2 on SCCs

| No   | Type | Focus                       | Abbreviation  |
|------|------|-----------------------------|---------------|
| i.   | PCC  | Narrow focus on precopular  | PCC - NFpre   |
| ii.  | PCC  | Narrow focus on postcopular | PCC - NFpost  |
| iii. | PCC  | Neutral topic - focus       | PCC - neutral |
| iv.  | SCC  | Narrow focus on precopular  | SCC - NFpre   |
| v.   | SCC  | Narrow focus on postcopular | SCC - NFpost  |
| vi.  | SCC  | Neutral topic - focus       | SCC - neutral |

Table .1: Conditions experiment 1 and 2

- (4)
- i. Do you think that Lynette Scavo or Bree de Kamp is the laziest housewife?  
Lynette Scavo is the laziest housewife.
  - ii. Do you think that Lynette Scavo or Bree de Kamp is the laziest housewife?  
The laziest housewife is Lynette Scavo.
  - iii. Do you think that Lynette Scavo is the laziest housewife or the laziest mother?  
Lynette Scavo is the laziest housewife.
  - iv. Do you think that Lynette Scavo is the laziest housewife or the laziest mother?  
The laziest housewife is Lynette Scavo.
  - v. What's new in Desperate Housewives?  
Lynette Scavo is the laziest housewife.
  - vi. What's new in Desperate Housewives?  
The laziest housewife is Lynette Scavo.

- (5)
- i. Do you think that Jamie Oliver or Gordon Ramsey is the craftiest chef?  
Jamie Oliver is the craftiest chef.
  - ii. Do you think that Jamie Oliver or Gordon Ramsey is the craftiest chef?  
The craftiest chef is Jamie Oliver.
  - iii. Do you think that Jamie Oliver is the craftiest chef or the craftiest marketing manager?  
Jamie Oliver is the craftiest chef.
  - iv. Do you think that Jamie Oliver is the craftiest chef or the craftiest marketing manager?  
The craftiest chef is Jamie Oliver.
  - v. What's new on the BBC?  
Jamie Oliver is the craftiest chef.
  - vi. What's new on the BBC?  
The craftiest chef is Jamie Oliver.
- (6)
- i. Do you think that Marcel Taylor or Noah Adams is the nicest colleague?  
Marcel Taylor is the nicest colleague.
  - ii. Do you think that Marcel Taylor or Noah Adams is the nicest colleague?  
The nicest colleague is Marcel Taylor.
  - iii. Do you think that Marcel Taylor is the nicest colleague or the nicest flatmate?  
Marcel Taylor is the nicest colleague.
  - iv. Do you think that Marcel Taylor is the nicest colleague or the nicest flatmate?  
The nicest colleague is Marcel Taylor.
  - v. What's new at your office?  
Marcel Taylor is the nicest colleague.
  - vi. What's new at your office?  
The nicest colleague is Marcel Taylor.
- (7)
- i. Do you think that Bill Gates or Warren Buffet is the richest investor?  
Bill Gates is the richest investor.
  - ii. Do you think that Bill Gates or Warren Buffet is the richest investor?  
The richest investor is Bill Gates.
  - iii. Do you think that Bill Gates is the richest investor or the richest company owner?  
Bill Gates is the richest investor.

- iv. Do you think that Bill Gates is the richest investor or the richest company owner?  
The richest investor is Bill Gates.
  - v. What's new in the Sunday Times list?  
Bill Gates is the richest investor.
  - vi. What's new in the Sunday Times list?  
The richest investor is Bill Gates.
- (8)
- i. Do you think that Sam Miller or Alistair Smith is the brightest student?  
Sam Miller is the brightest student.
  - ii. Do you think that Sam Miller or Alistair Smith is the brightest student?  
The brightest student is Sam Miller.
  - iii. Do you think that Sam Miller is the brightest student or the brightest teacher?  
Sam Miller is the brightest student.
  - iv. Do you think that Sam Miller is the brightest student or the brightest teacher?  
The brightest student is Sam Miller.
  - v. What's new in the school magazine?  
Sam Miller is the brightest pupil.
  - vi. What's new in the school magazine?  
The brightest pupil is Sam Miller.
- (9)
- i. Do you think that Michael McIntyre or Noel Fielding is the funniest comedian?  
Michael McIntyre is the funniest comedian.
  - ii. Do you think that Michael McIntyre or Noel Fielding is the funniest comedian?  
The funniest comedian is Michael McIntyre.
  - iii. Do you think that Michael McIntire is the funniest comedian or the funniest radio performer?  
Michael McIntyre is the funniest comedian.
  - iv. Do you think that Michael McIntire is the funniest comedian or the funniest radio performer?  
The funniest comedian is Michael McIntyre.
  - v. What's new in Britain's got talent?  
Michael McIntyre is the funniest comedian.
  - vi. What's new in Britain's got talent?  
The funniest comedian is Michael McIntyre.



- (10) i. Do you think that Shawn Bradley or Chuck Nevitt is the tallest basket ball player?  
Shawn Bradley is the tallest basket ball player.
- ii. Do you think that Shawn Bradley or Chuck Nevitt is the tallest basket ball player?  
The tallest basket ball player is Shawn Bradley.
- iii. Do you think that Shawn Bradley is the tallest basket ball player or the tallest rugby player?  
Shawn Bradley is the tallest basket ball player.
- iv. Do you think that Shawn Bradley is the tallest basket ball player or the tallest rugby player?  
The tallest basket ball player is Shawn Bradley.
- v. What's new on the sports channel?  
Shawn Bradley is the tallest basket ball player.
- vi. What's new on the sports channel?  
The tallest basket ball player is Shawn Bradley.
- (11) i. Do you think that Matthew Spencer or Bill Fielding is the youngest professor?  
Matthew Spencer is the youngest professor.
- ii. Do you think that Matthew Spencer or Bill Fielding is the youngest professor?  
The youngest professor is Matthew Spencer.
- iii. Do you think that Matthew Spencer is the youngest professor or the youngest lecturer?  
Matthew Spencer is the youngest professor.
- iv. Do you think that Matthew Spencer is the youngest professor or the youngest lecturer?  
The youngest professor is Matthew Spencer.
- v. What's new on the campus bulletin?  
Matthew Spencer is the youngest professor.
- vi. What's new on the campus bulletin?  
The youngest professor is Matthew Spencer.
- (12) i. Do you think that Eric Esch or Frank Finnegan is the heaviest boxer?  
Eric Esch is the heaviest boxer.
- ii. Do you think that Eric Esch or Frank Finnegan is the heaviest boxer?

- The heaviest boxer is Eric Esch.
- iii. Do you think that Eric Esch is the heaviest boxer or the heaviest sumo wrestler?  
Eric Esch is the heaviest boxer.
- iv. Do you think that Eric Esch is the heaviest boxer or the heaviest sumo wrestler?  
The heaviest boxer is Eric Esch.
- v. What's new in Black Belt magazine?  
Eric Esch is the heaviest boxer.
- vi. What's new in Black Belt magazine?  
The heaviest boxer is Eric Esch.
- (13) i. Do you think that Sir Lancelot or King Arthur is the bravest knight?  
Sir Lancelot is the bravest knight.
- ii. Do you think that Sir Lancelot or King Arthur is the bravest knight?  
The bravest knight is Sir Lancelot.
- iii. Do you think that Sir Lancelot is the bravest knight or the bravest king?  
Sir Lancelot is the bravest knight.
- iv. Do you think that Sir Lancelot is the bravest knight or the bravest king?  
The bravest knight is Sir Lancelot.
- v. What's new in the Holy Grail saga?  
Sir Lancelot is the bravest knight.
- vi. What's new in the Holy Grail saga?  
The bravest knight is Sir Lancelot.
- (14) i. Do you think that Paul Williams or Jean Brown is the fittest biker?  
Paul Williams is the fittest biker.
- ii. Do you think that Paul Williams or Jean Brown is the fittest biker?  
The fittest biker is Paul Williams.
- iii. Do you think that Paul Williams is the fittest biker or the fittest runner?  
Paul Williams is the fittest biker.
- iv. Do you think that Paul Williams is the fittest biker or the fittest runner?  
The fittest biker is Paul Williams.
- v. What's new about the triathlon team?  
Paul Williams is the fittest biker.
- vi. What's new about the triathlon team?  
The fittest biker is Paul Williams.

- (15)
- i. Do you think that 50cent or Little Wayne is the coolest rapper?  
50cent is the coolest rapper.
  - ii. Do you think that 50cent or Little Wayne is the coolest rapper?  
The coolest rapper is 50cent.
  - iii. Do you think that 50cent is the coolest rapper or the coolest DJ?  
50cent is the coolest rapper.
  - iv. Do you think that 50cent is the coolest rapper or the coolest DJ?  
The coolest rapper is 50cent.
  - v. What's new in the Rolling Stone?  
50cent is the coolest rapper.
  - vi. What's new in the Rolling Stone?  
The coolest rapper is 50cent.
- (16)
- i. Do you think that Steve Eisman or Danny Rimer is the toughest investor?  
Steve Eisman is the toughest investor.
  - ii. Do you think that Steve Eisman or Danny Rimer is the toughest investor?  
The toughest investor is Steve Eisman.
  - iii. Do you think that Steve Eisman is the toughest investor or the toughest salesman?  
Steve Eisman is the toughest investor.
  - iv. Do you think that Steve Eisman is the toughest investor or the toughest salesman?  
The toughest investor is Steve Eisman.
  - v. What's new in the Wall Street Journal?  
Steve Eisman is the toughest investor.
  - vi. What's new in the Wall Street Journal?  
The toughest investor is Steve Eisman.
- (17)
- i. Do you think that Fred Baker or Walter Green is the busiest colleague?  
Fred Baker is the busiest colleague.
  - ii. Do you think that Fred Baker or Walter Green is the busiest colleague?  
The busiest colleague is Fred Baker.
  - iii. Do you think that Fred Baker is the busiest colleague or the busiest manager?  
Fred Baker is the busiest colleague.
  - iv. Do you think that Fred Baker is the busiest colleague or the busiest manager?

- The busiest colleague is Fred Baker.
- v. What's new at your work place?  
Fred Baker is the busiest colleague.
- vi. What's new at your work place?  
The busiest colleague is Fred Baker.
- (18) i. Do you think that Malcolm Scott or Ephraim Young is the finest acrobat?  
Malcolm Scott is the finest acrobat.
- ii. Do you think that Malcolm Scott or Ephraim Young is the finest acrobat?  
The finest acrobat is Malcolm Scott.
- iii. Do you think that Malcolm Scott is the finest acrobat or the finest tamer?  
Malcolm Scott is the finest acrobat.
- iv. Do you think that Malcolm Scott is the finest acrobat or the finest tamer?  
The finest acrobat is Malcolm Scott.
- v. What's new in the Circus business?  
Malcolm Scott is the finest acrobat.
- vi. What's new in the Circus business?  
The finest acrobat is Malcolm Scott.
- (19) i. Do you think that Mike Riley or Gordon Hill is the fairest referee?  
Mike Riley is the fairest referee.
- ii. Do you think that Mike Riley or Gordon Hill is the fairest referee?  
The fairest referee is Mike Riley.
- iii. Do you think that Bill Mc Creary is the fairest referee or the fairest football player?  
Mike Riley is the fairest referee.
- iv. Do you think that Bill Mc Creary is the fairest referee or the fairest football player?  
The fairest referee is Mike Riley.
- v. What's new in Sports News Online?  
Mike Riley is the fairest referee.
- vi. What's new in Sports News Online?  
The fairest referee is Mike Riley.
- (20) i. Do you think that Brad Pitt or Tom Cruise is the happiest husband?

- Brad Pitt is the happiest husband.
- ii. Do you think that Brad Pitt or Tom Cruise is the happiest husband?  
The happiest husband is Brad Pitt.
  - iii. Do you think that Brad Pitt is the happiest husband or the happiest father?  
Brad Pitt is the happiest husband.
  - iv. Do you think that Brad Pitt is the happiest husband or the happiest father?  
The happiest husband is Brad Pitt.
  - v. What's new in celebrity gossip?  
Brad Pitt is the happiest husband.
  - vi. What's new in celebrity gossip?  
The happiest husband is Brad Pitt.
- (21)
- i. Do you think that Richard Walker or Tony Murray is the craziest policeman?  
Richard Walker is the craziest policeman.
  - ii. Do you think that Richard Walker or Tony Murray is the craziest policeman?  
The craziest policeman is Richard Walker.
  - iii. Do you think that Richard Walker is the craziest policeman or the craziest mafia boss?  
Richard Walker is the craziest policeman.
  - iv. Do you think that Richard Walker is the craziest policeman or the craziest mafia boss?  
The craziest policeman is Richard Walker.
  - v. What's new on the BBC?  
Richard Walker is the craziest policeman.
  - vi. What's new on the BBC?  
The craziest policeman is Richard Walker.
- (22)
- i. Do you think that David Beckham or Ryan Giggs is the quickest striker?  
David Beckham is the quickest striker.
  - ii. Do you think that David Beckham or Ryan Giggs is the quickest striker?  
The quickest striker is David Beckham.
  - iii. Do you think that David Beckham is the quickest striker or the quickest mid-fielder?  
David Beckham is the quickest striker.
  - iv. Do you think that David Beckham is the quickest striker or the quickest mid-

fielder?

The quickest striker is David Beckham.

- v. What's new in the Champions League?

David Beckham is the quickest striker.

- vi. What's new in the Champions League?

The quickest striker is David Beckham.

- (23) i. Do you think that Trevor Bailey or Henry Blofeld is the wittiest host?

Trevor Bailey is the wittiest host.

- ii. Do you think that Trevor Bailey or Henry Blofeld is the wittiest host?

The wittiest host is Trevor Bailey.

- iii. Do you think Trevor Bailey is the wittiest host or the wittiest actor?

Trevor Bailey is the wittiest host.

- iv. Do you think Trevor Bailey is the wittiest host or the wittiest actor?

The wittiest host is Trevor Bailey.

- v. What's new on ITV?

Trevor Bailey is the wittiest host.

- vi. What's new on ITV?

The wittiest host is Trevor Bailey.

- (24) i. Do you think that Kate Moss or Cindy Crawford is the hottest model?

Kate Moss is the hottest model.

- ii. Do you think that Kate Moss or Cindy Crawford is the hottest model?

The hottest model is Kate Moss.

- iii. Do you think that Kate Moss is the hottest model or the hottest actress?

Kate Moss is the hottest model.

- iv. Do you think that Kate Moss is the hottest model or the hottest actress?

The hottest model is Kate Moss.

- v. What's new in Cosmopolitan?

Kate Moss is the hottest model.

- vi. What's new in Cosmopolitan?

The hottest model is Kate Moss.

- (25) i. Do you think that Adam Fitzgerald or Allen Hall is the fiercest critic?

Adam Fitzgerald is the fiercest critic.

- ii. Do you think that Adam Fitzgerald or Allen Hall is the fiercest critic?  
The fiercest critic is Adam Fitzgerald.
  - iii. Do you think that Adam Fitzgerald is the fiercest critic or the fiercest supporter?  
Adam Fitzgerald is the fiercest critic.
  - iv. Do you think that Adam Fitzgerald is the fiercest critic or the fiercest supporter?  
The fiercest critic is Adam Fitzgerald.
  - v. What's new in the literature scene?  
Adam Fitzgerald is the fiercest critic.
  - vi. What's new in the literature scene?  
The fiercest critic is Adam Fitzgerald.
- (26)
- i. Do you think that Jack the Ripper or Lord Blackwood is the cruellest killer?  
Jack the Ripper is the cruellest killer.
  - ii. Do you think that Jack the Ripper or Lord Blackwood is the cruellest assassin?  
The cruellest killer is Jack the Ripper.
  - iii. Do you think that Jack the Ripper is the cruellest assassin or the cruellest torturer?  
Jack the Ripper is the cruellest killer.
  - iv. Do you think that Jack the Ripper is the cruellest assassin or the cruellest torturer?  
The cruellest killer is Jack the Ripper.
  - v. What's new in your crime novel?  
Jack the Ripper is the cruellest killer.
  - vi. What's new in your crime novel?  
The cruellest killer is Jack the Ripper.
- (27)
- i. Do you think that Tom Bell or George Cook is the harshest judge?  
Tom Bell is the harshest judge.
  - ii. Do you think that Tom Bell or George Cook is the harshest judge?  
The harshest judge is Tom Bell.
  - iii. Do you think that Tom Bell is the harshest judge or the harshest prosecutor?  
Tom Bell is the harshest judge.
  - iv. Do you think that Tom Bell is the harshest judge or the harshest prosecutor?

- The harshest judge is Tom Bell.
- v. What's new at the supreme court?  
Tom Bell is the harshest judge.
- vi. What's new at the supreme court?  
The harshest judge is Tom Bell.

## .2 Materials Experiment 3 on Context and ICs

| No   | Question Intonation | Answer          | Abbreviation      |
|------|---------------------|-----------------|-------------------|
| i.   | All-new             | Yes-answer (T1) | AllNew - Yes      |
| ii.  | All-new             | No-answer (T2)  | AllNew - No       |
| iii. | Narrow Focus        | Yes-answer (T1) | NarrowFocus - Yes |
| iv.  | Narrow Focus        | No-answer (T2)  | NarrowFocus - No  |

Table .2: Conditions experiment 3 on context and ICs

- (1) Q: Did Jason buy a history book?  
T1: Yes, it was Jason that bought a history book.  
T2: No, it was Daniel that bought a history book.
- (2) Q: Did Robert sell a leather jacket?  
T1: Yes, it was Robert that sold a leather jacket.  
T2: No, it was Ryan that sold a leather jacket.
- (3) Q: Did Susan bake a birthday cake?  
T1: Yes, it was Susan that baked a birthday cake.  
T2: No, it was Sarah that baked a birthday cake.
- (4) Q: Did Karen wre a lerature essay?  
T1: Yes, it was Karen that wrote a lerature essay.  
T2: No, it was Lily that wrote a lerature essay.
- (5) Q: Did Alan read a music magazine?  
T1: Yes, it was Alan that read a music magazine.  
T2: No, it was Justin that read a music magazine.
- (6) Q: Did Marcel arrest a drug dealer?



- T1: Yes, it was Marcel that arrested a drug dealer.  
T2: No, it was Michael that arrested a drug dealer.
- (7) Q: Did Sabine get an acceptance letter?  
T1: Yes, it was Sabine that got an acceptance letter.  
T2: No, it was Maira that got an acceptance letter.
- (8) Q: Did Misha meet a childhood friend?  
T1: Yes, it was Misha that met a childhood friend.  
T2: No, it was Samuel that met a childhood friend.
- (9) Q: Did Sheila produce a Hollywood movie?  
T1: Yes, it was Sheila that produced a Hollywood movie.  
T2: No, it was Moira that produced a Hollywood movie.
- (10) Q: Did Gabrielle publish a crime novel?  
T1: Yes, it was Gabrielle that published a crime novel.  
T2: No, it was Maya that published a crime novel.
- (11) Q: Did Ella suggest a meeting place?  
T1: Yes, it was Ella that suggested a meeting place.  
T2: No, it was Lilian that suggested a meeting place.
- (12) Q: Did Luran wear a cocktail dress?  
T1: Yes, it was Luran that wore a cocktail dress.  
T2: No, it was Julia that wore a cocktail dress.
- (13) Q: Did Liam open a tobacco shop?  
T1: Yes, it was Liam that opened a tobacco shop.  
T2: No, it was Brandon that opened a tobacco shop.
- (14) Q: Did William introduce a theatre seminar?  
T1: Yes, it was William that introduced a theatre seminar.  
T2: No, it was Nathan that introduced a theatre seminar.
- (15) Q: Did Julian attend a UN conference?

T1: Yes, it was Julian that attended a UN conference.

T2: No, it was Bryan that attended a UN conference

(16) Q: Did Oliver call a financial advisor?

T1: Yes, it was Oliver that called a financial advisor.

T2: No, it was Joseph that called a financial advisor.

### **.3 Materials Experiment 4 on the Role of Alternatives in ICs**

| No   | Context | TargetType    | Abbreviation |
|------|---------|---------------|--------------|
| i.   | Cleft   | Match (T1)    | IC-Match     |
| ii.  | Cleft   | Mismatch (T2) | IC-Mismatch  |
| iii. | SVO     | Match (T1)    | SVO-Match    |
| iv.  | SVO     | Mismatch (T2) | SVO-Mismatch |

Table .3: Conditions experiment 4 on alternatives in ICs

(1) Context:

This year, the professor of politics is supervising two PhD students. Sarah works on democratization in South America. Paul concentrates on the role of non-governmental organization in Argentina. Both students need close supervision.

CleftIt is Sarah that talks to the professor every week.

T1: Paul discusses his questions with the professor once a month.

T2: Paul discusses his questions with the professor every Monday.

(2) Context:

All of the housemates have chores that they follow on the weekly cleaning chart. Matthias makes the chart for the household. Sandra prints it and posts it on the door. They always choose their duties themselves so that everyone is happy.

CleftIt is Sandra who is responsible for cleaning the communal spaces.

T1: Matthias is responsible for doing the weekly grocery shopping.

T2: Matthias is responsible for sweeping the kitchen floors.

(3) Context:

There has been recent chatter at a major American company over whether or not Americans should take more time off. The salespeople work an average of 45 hours per week. The CEOs work up to 60 hours per week. So the board decided to provide regulations for compensatory free time.

CleftIt is the salespeople who currently take holidays off.

T1: The CEOs take a longer summer break.

T2: The CEOs take a Christmas break.

(4) Context:

The Schaeffer family are known in their hometown for being over-achievers. Their two children excel in their academics, as well as their extra-curricular activities. Their daughter, Kim, is the best swimmer in the state. Their son, Jim, has won several awards for mathematics.

CleftIt is Kim who has the musical talent in the family.

T1: Her brother Jim was accepted into Berkeley on a science scholarship.

T2: Her brother Jim was accepted into Berkeley on a violin scholarship.

(5) Context:

Some of the couples on the commune have non-traditional marriages, which has been a source of inspiration to all. Scott, a husband in one of the couples, is a stay-at-home dad. Mary, his wife, works full-time as an editor at the community newspaper. Both Scott and Mary love their roles and contribute equally to the household.

CleftIt is Scott who does the baking for special occasions.

T1: Mary puts up her famous decorations on their anniversary.

T2: Mary makes her famous strawberry cake on their anniversary.

(6) Context:

The Brown family fell on hard times due to the economic downturn. Since both parents lost their corporate jobs, their two sons had to find a way to help make ends meet. The oldest son, Jamie, now works to help pay for the mortgage. The younger son, Harry, is too young to get a job and help.

CleftIt was Jamie who was forced to pawn jewelry.

T1: Harry had to sell his video games.

T2: Harry had to sell his Rolex.

## (7) Context:

Nobody was killed in the seventeen-car pile-up on the interstate over Thanksgiving weekend. Cynthia and her friend Kelly were on their way to a concert when the accident occurred. Cynthia's car was one of the first to be hit. Her friend Kelly was her passenger on that fateful afternoon.

CleftIt was Cynthia who was injured in the accident.

T1: Kelly had a small headache.

T2: Kelly had a serious concussion.

## (8) Context:

The little Baptist church relies on its members to manage all of the weekly responsibilities and upkeep. Daniel and his wife Dawn have been members for more than thirty years. They spend an average of three days a week at the church. Both are more than happy to run any errands asked of them.

CleftIt is Daniel who does the grocery shopping every month.

T1: Dawn makes sure to pay the utilities.

T2: Dawn makes sure to stock up on food.

## (9) Context:

This year, the junior high school administrators allowed students to choose both the season and the type of activity on the annual excursion. The sixth graders wrote their choices down after class. The seventh graders gave their ideas during a convention. The results were similar across grades.

CleftIt was the sixth graders who wanted winter activities.

T1: The seventh graders chose canoeing.

T2: The seventh graders chose skiing.

## (10) Context:

The company always plays music for the staff because they believe that it makes workers more productive. The administrators prefer playing classical music all the time. The workers would rather listen to rock and roll during the lunch break. Lately, the staff have found themselves getting sleepy on the job.

CleftIt was the classical music that was making them drowsy.

T1: The Rolling Stones were fine.

T2: The Mozart was fine.

(11) Context:

The Atlanta restaurant convention allowed local chefs to exhibit their best dishes to the public. The French food stalls have always been popular with the attendees. There was significantly much more competition from the Italian chefs this year, however. The top prize was a toss-up.

CleftIt was the Italian food that stole the show.

T1: The quiche was virtually untouched.

T2: The manicotti was virtually untouched.

(12) Context:

Abbadaba's has begun expanding its products due to their success. Their original small store started out with locally made shoes. After such success with shoes, management started a sock line. After one year they are now reconsidering this strategy.

CleftIt is their shoes that they are famous for.

T1: Their socks are virtually unknown.

T2: Their boots are virtually unknown.

(13) Context:

The new fusion restaurant in town has attracted celebrities and locals alike. Jane has been coming regularly with her boyfriend for the last year. Peter has just discovered the restaurant recently. Both of them have favorite dishes that they tell everyone about.

CleftIt is Jane who loves their vegetarian dishes.

T1: Peter loves their barbecue chicken stir-fry.

T2: Peter loves their mango zucchini stir-fry.

(14) Context:

The entire summer camp helped prepare a going away breakfast on the last day of camp. The younger children helped set the table with condiments, syrups and toppings. The older children put the food on the table after the staff prepared it. When they sat down to eat, the staff checked the table to make sure that

everything was accounted for.

CleftIt was the toast toppings that were missing from the table.

T1: There was plenty of salt and pepper.

T2: There was plenty of jam.

(15) Context:

The university began offering free exercise classes in order to help students alleviate stress and improve grades across the board. Sarah signed up for one dance class to improve her cardiovascular health. She then signed up for a yoga class to improve her sleep, stress and concentration. Eventually, Sarah noticed that her back was sore, which led to trouble concentrating.

CleftIt is the dance class that has been hurting Sarah's back the most.

T1: Her yoga class is actually great!

T2: Her ballet class is actually great!

(16) Context:

Last week's double homicide has left Detroit police baffled and citizens concerned. There was a knife used in the crime, according to police. In addition, the murderer must have had a gun. All of the news outlets have been reporting the facts in order to find the missing evidence.

CleftIt is the gun that is still missing.

T1: The knife was found at the crime scene.

T2: The rifle was found at the crime scene.

(17) Context:

The local night school has seen a surge of adults looking to study a second language. Romance languages take up most of the department. Chinese has been becoming more and more important in the last few years. Demand has become so high that extra teachers are being interviewed so that new classes can be created.

CleftIt is the Romance classes that are not always full.

T1: The Chinese class is hard to get into.

T2: The French class is hard to get into.

(18) Context:

At the Wellness Institute in Phoenix, Arizona, the most popular treatment is the herbal body massage. Their loyal clients consistently give positive feedback about how renewed they feel with the rose oil. To the massage therapists, the lavender oil is more powerful. Their overwhelming success lies in their dedication and expertise in oil therapy.

CleftIt is the lavender oil that makes the clients so relaxed.

T1: The rose oil creates ambiance.

T2: The rose oil calms the clients.

(19) Context:

Everyone was asked to bring their pets to the fourth of July barbecue last summer. Brian, the local flower shop owner, came to enjoy the food. His neighbor, Bella, came to enjoy the music and company. After a while, a pitbull and a cat wound up fighting.

CleftIt was Bella who was attacked by the dog.

T1: Brian was scratched by the cat.

T2: Brian was bitten by the pit bull.

(20) Context:

The Dutch gardening club grows tulips and lilacs to sell. The tulips are chosen by color in order to make beautiful wreaths. The lilacs are regarded for their scent and sentimental value. Both flowers are equally difficult to grow.

CleftIt is the tulips that bloom in spring.

T1: The lilacs blossom in July.

T2: The lilacs blossom in May.

(21) Context:

The online dating website was responsible for several great matches. Anne found herself on a date with a man who had almost everything in common with her. Her date, Max, mentioned hiking, snorkeling, reading and Indian food, much to Anne's delight. They only found a few differences in interests.

CleftIt is Anne who is an animal lover.

T1: Max loves cars.

T2: Max loves horses.

## (22) Context:

The elderly woman was recently admitted into an elderly care facility due to her deteriorating mental state. Her daughter Shawna, lives more than fifty miles away. Her youngest grandchild, Tina, commutes from only fifteen minutes away. Both grandchildren communicate regularly about her health from day to day.

CleftIt is her youngest grandchild that comes to see her during the week.

T1: Her daughter comes to see her on Saturdays.

T2: Her daughter comes to see her on Wednesdays.

## (23) Context:

A large proportion of the English teachers are having trouble getting to their classes, which are off campus. Jason has been trying to find the fastest method of transportation. Larry tries to travel at different times of the day. Both colleagues are hoping to find the best way to get to their classes on time.

CleftIt is Jason who takes public transport.

T1: Larry usually takes a taxi.

T2: Larry usually takes the bus.

## (24) Context:

The doctors at the respiratory clinic are growing increasingly concerned with patients' disregard for their own health. Sally has been asthmatic since a very young age. Valerie has been struggling with asthma since her teens. Both patients are aware of the doctor's instructions regarding their inhalers.

CleftIt is Sally who uses her inhaler regularly.

T1: Valerie uses it twice a year.

T2: Valerie uses it every day.

## **.4 Materials Experiment 5 on Exhaustivity in English It-CLefts A**

- (1) i. Was it Susan that blamed John for the company's bankruptcy?  
No, Sabrina too, blamed John for the company's bankruptcy.
- ii. Was it Susan that blamed John for the company's bankruptcy?



| No   | Type  | Answer Type | Abbreviation |
|------|-------|-------------|--------------|
| i.   | Cleft | No          | IC-No        |
| ii.  | Cleft | Yes, and    | IC-Yes       |
| iii. | SVO   | No          | SVO-No       |
| iv.  | SVO   | Yes, and    | SVO-Yes      |

Table .4: Conditions experiment 5 on exhaustivity in ICs

- Yes, and Sabrina too, blamed John for the company's bankruptcy.
- iii. Did Susan blame John for the company's bankruptcy?  
No, Sabrina too, blamed John for the company's bankruptcy.
- iv. Did Susan blame John for the company's bankruptcy?  
Yes, and Sabrina too, blamed John for the company's bankruptcy.
- (2) i. Was it Rose that hurt Kevin with her honesty?  
No, Melanie too, hurt Kevin with her honesty.
- ii. Was it Rose that hurt Kevin with her honesty?  
Yes, and Melanie too, hurt Kevin with her honesty.
- iii. Did Rose hurt Kevin with her honesty?  
No, Melanie too, hurt Kevin with her honesty.
- iv. Did Rose hurt Kevin with her honesty?  
Yes, and Melanie too, hurt Kevin with her honesty.
- (3) i. Was it Anna that confused Joe during the presentation?  
No, Mandy too, confused Joe during the presentation.
- ii. Was it Anna that confused Joe during the presentation?  
Yes, and Mandy too, confused Joe during the presentation.
- iii. Did Anna confuse Joe during the presentation?  
No, Mandy too, confused Joe during the presentation.
- iv. Did Anna confuse Joe during the presentation?  
Yes, and Mandy too, confused Joe during the presentation.
- (4) i. Was it Maria that surprised the teacher with a smart answer?  
No, Ben too, surprised the teacher with a smart answer.
- ii. Was it Maria that surprised the teacher with a smart answer?  
Yes, and Ben too, surprised the teacher with a smart answer.
- iii. Did Maria surprise the teacher with a smart answer?

- No, Ben too, surprised the teacher with a smart answer.
- iv. Did Maria surprise the teacher with a smart answer?  
Yes, and Ben too, surprised the teacher with a smart answer.
- (5) i. Was it Carol that contradicted the opponent during the debate?  
No, Matthew too, contradicted the opponent during the debate.
- ii. Was it Carol that contradicted the opponent during the debate?  
Yes, and Matthew too, contradicted the opponent during the debate.
- iii. Did Carol contradict the opponent during the debate?  
No, Matthew too, contradicted the opponent during the debate.
- iv. Did Carol contradict the opponent during the debate?  
Yes, and Matthew too, contradicted the opponent during the debate.
- (6) i. Was it Nancy that shocked the audience with pictures of dying children?  
No, Luke too, shocked the audience with pictures of dying children.
- ii. Was it Nancy that shocked the audience with pictures of dying children?  
Yes, and Luke too, shocked the audience with pictures of dying children.
- iii. Did Nancy shock the audience with pictures of dying children?  
No, Luke too, shocked the audience with pictures of dying children.
- iv. Did Nancy shock the audience with pictures of dying children?  
Yes, and Luke too, shocked the audience with pictures of dying children.
- (7) i. Was it Peggy that had to support her children?  
No, Carmen too, had to support her children.
- ii. Was it Peggy that had to support her children?  
Yes, and Carmen too, had to support her children.
- iii. Did Peggy have to support her children?  
No, Carmen too, had to support her children.
- iv. Did Peggy have to support her children?  
Yes, and Carmen too, had to support her children.
- (8) i. Was it Josephine that promised her husband to reduce working hours?  
No, Diana too, promised her husband to reduce working hours.
- ii. Was it Josephine that promised her husband to reduce working hours?  
Yes, and Diana too, promised her husband to reduce working hours.

- iii. Did Josephine promise her husband to reduce working hours?  
No, Diana too, promised her husband to reduce working hours.
  - iv. Did Josephine promise her husband to reduce working hours?  
Yes, and Diana too, promised her husband to reduce working hours.
- (9)
- i. Was it Scott that congratulated the president on his speech?  
No, Lauren too, congratulated the president on his speech.
  - ii. Was it Scott that congratulated the president on his speech?  
Yes, and Lauren too, congratulated the president on his speech.
  - iii. Did Scott congratulate the president on his speech?  
No, Lauren too, congratulated the president on his speech.
  - iii. Did Scott congratulate the president on his speech?  
Yes, and Lauren too, congratulated the president on his speech.
- (10)
- i. Was it Michael that put the children at great risk?  
No, Dan too, put the children at great risk.
  - ii. Was it Michael that put the children at great risk?  
Yes, and Dan too, put the children at great risk.
  - iii. Did Michael put the children at great risk?  
No, Dan too, put the children at great risk.
  - iv. Did Michael put the children at great risk?  
Yes, and Dan too, put the children at great risk.
- (11)
- i. Was it Sally that rewarded the kids with a treat?  
No, Mike too, rewarded the kids with a treat.
  - ii. Was it Sally that rewarded the kids with a treat?  
Yes, and Mike too, rewarded the kids with a treat.
  - iii. Did Sally reward the kids with a treat?  
No, Mike too, rewarded the kids with a treat.
  - iv. Did Sally reward the kids with a treat?  
Yes, and Mike too, rewarded the kids with a treat.
- (12)
- i. Was it Jill that described Steve as a Communist?  
No, Cathy too, described Steve as a Communist.
  - ii. Was it Jill that described Steve as a Communist?

Yes, and Cathy too, described Steve as a Communist.

- iii. Did Jill describe Steve as a Communist?

No, Cathy too, described Steve as a Communist.

- iv. Did Jill describe Steve as a Communist?

Yes, and Cathy too, described Steve as a Communist.

## **.5 Materials Experiment 6 on Exhaustivity in German Es-clefts**

| No   | Type  | Answer Type | Abbreviation |
|------|-------|-------------|--------------|
| i.   | Cleft | No          | IC-No        |
| ii.  | Cleft | Yes, and    | IC-Yes       |
| iii. | SVO   | No          | SVO-No       |
| iv.  | SVO   | Yes, and    | SVO-Yes      |

Table .5: Conditions experiment 6 on exhaustivity in ICs in German

- (1) (i) Waren es die Leichtathleten, die dem neuen Sportpräsidenten zur Wahl gratuliert haben?  
Nein, auch die Schwimmer haben ihm gratuliert.
- (ii) Waren es die Leichtathleten, die dem neuen Sportpräsidenten zur Wahl gratuliert haben?  
Ja, und auch die Schwimmer haben ihm gratuliert.
- (iii) Haben die Leichtathleten dem neuen Sportpräsidenten zur Wahl gratuliert?  
Nein, auch die Schwimmer haben ihm gratuliert.
- (iv) Haben die Leichtathleten dem neuen Sportpräsidenten zur Wahl gratuliert?  
Ja, und auch die Schwimmer haben ihm gratuliert.
- (2) (i) War es der Trainer, der den Fußballspieler zum Bleiben überredet hat?  
Nein, auch die Mannschaftsspieler haben ihn zum Bleiben überredet.
- (ii) War es der Trainer, der den Fußballspieler zum Bleiben überredet hat?  
Ja, und auch die Mannschaftsspieler haben ihn zum Bleiben überredet.
- (iii) Hat der Trainer den Fußballspieler zum Bleiben überredet?  
Nein, auch die Mannschaftsspieler haben ihn zum Bleiben überredet.
- (iv) Hat der Trainer den Fußballspieler zum Bleiben überredet?

Ja, und auch die Mannschaftsspieler haben ihn zum Bleiben überredet.

- (3) (i) War es der Arzt, der dir zur Operation geraten hat?  
Nein, auch die Krankenschwester hat mir zur Operation geraten.
- (ii) War es der Arzt, der dir zur Operation geraten hat?  
Ja, und auch die Krankenschwester hat mir zur Operation geraten.
- (iii) Hat dir der Arzt zur Operation geraten?  
Nein, auch die Krankenschwester hat mir zur Operation geraten.
- (iv) Hat dir der Arzt zur Operation geraten?  
Ja, und auch die Krankenschwester hat mir zur Operation geraten.
- (4) (i) War es die Tänzerin, die dich fasziniert hat?  
Nein, auch der Tänzer hat mich fasziniert.
- (ii) War es die Tänzerin, die dich fasziniert hat?  
Ja, und auch der Tänzer hat mich fasziniert.
- (iii) Hat dich die Tänzerin fasziniert?  
Nein, auch der Tänzer hat mich fasziniert.
- (iv) Hat dich die Tänzerin fasziniert?  
Ja, und auch der Tänzer hat mich fasziniert.
- (5) (i) War es der Kameramann, der einen Preis gewonnen hat?  
Nein, auch der Regisseur hat einen Preis gewonnen.
- (ii) War es der Kameramann, der einen Preis gewonnen hat?  
Ja, und auch der Regisseur hat einen Preis gewonnen.
- (iii) Hat der Kameramann einen Preis gewonnen?  
Nein, auch der Regisseur hat einen Preis gewonnen.
- (iv) Hat der Kameramann einen Preis gewonnen?  
Ja, und auch der Regisseur hat einen Preis gewonnen.
- (6) (i) War es Peter, der den Streit provoziert hat?  
Nein, auch Paul hat den Streit provoziert.
- (ii) War es Peter, der den Streit provoziert hat?  
Ja, und auch Paul hat den Streit provoziert.
- (iii) Hat Peter den Streit provoziert?  
Nein, auch Paul hat den Streit provoziert.

- (iv) Hat Peter den Streit provoziert?  
Ja, und auch Paul hat den Streit provoziert.
- (7) (i) War es die Geschäftsleitung, die Stellenstreichungen ausgeschlossen hat?  
Nein, auch der Betriebsrat hat Stellenstreichungen ausgeschlossen.  
(ii) War es die Geschäftsleitung, die Stellenstreichungen ausgeschloß hat?  
Ja, und auch der Betriebsrat hat Stellenstreichungen ausgeschlossen.  
(iii) Hat die Geschäftsleitung Stellenstreichungen ausgeschlossen?  
Nein, auch der Betriebsrat hat Stellenstreichungen ausgeschlossen.  
(iv) Hat die Geschäftsleitung Stellenstreichungen ausgeschlossen?  
Ja, und auch der Betriebsrat hat Stellenstreichungen ausgeschlossen.
- (8) (i) War es der Frauenchor, der beim Osterfest gesungen hat?  
Nein, auch der Kinderchor hat beim Osterfest gesungen.  
(ii) War es der Frauenchor, der beim Osterfest gesungen hat?  
Ja, und auch der Kinderchor hat beim Osterfest gesungen.  
(iii) Hat der Frauenchor beim Osterfest gesungen?  
Nein, auch der Kinderchor hat beim Osterfest gesungen.  
(iv) Hat der Frauenchor beim Osterfest gesungen?  
Ja, und auch der Kinderchor hat beim Osterfest gesungen.
- (9) (i) War es das Unternehmen Adidas, das mit Kinderarbeit Turnschuhe produziert hat? Nein, auch das Unternehmen Nike hat mit Kinderarbeit Turnschuhe produziert.  
(ii) War es das Unternehmen Adidas, das mit Kinderarbeit Turnschuhe produziert hat? Ja, und auch das Unternehmen Nike hat mit Kinderarbeit Turnschuhe produziert.  
(iii) Hat das Unternehmen Adidas mit Kinderarbeit Turnschuhe produziert?  
Nein, auch das Unternehmen Nike hat mit Kinderarbeit Turnschuhe produziert.  
(iv) Hat das Unternehmen Adidas mit Kinderarbeit Turnschuhe produziert?  
Ja, und auch das Unternehmen Nike hat mit Kinderarbeit Turnschuhe produziert.
- (10) (i) War es der Stadtrat, der diese Fläche zum Windradbau vorgeschlagen hat?  
Nein, auch die Bürgermeisterin hat die Fläche zum Windradbau vorgeschlagen.

- (ii) War es der Stadtrat, der diese Fläche zum Windradbau vorgeschlagen hat?  
Ja, und auch die Bürgermeisterin hat die Fläche zum Windradbau vorgeschlagen.
  - (iii) Hat der Stadtrat diese Fläche zum Windradbau vorgeschlagen?  
Nein, auch die Bürgermeisterin hat die Fläche zum Windradbau vorgeschlagen.
  - (iv) Hat der Stadtrat diese Fläche zum Windradbau vorgeschlagen?  
Ja, und auch die Bürgermeisterin hat die Fläche zum Windradbau vorgeschlagen.
- (11)
- (i) War es der Fußballverein, der das Fest organisiert hat?  
Nein, auch der Hockeyclub hat das Fest mitorganisiert.
  - (ii) War es der Fußballverein, der das Fest organisiert hat?  
Ja, und auch der Hockeyclub hat das Fest mitorganisiert.
  - (iii) Hat der Fußballverein das Fest organisiert?  
Nein, auch der Hockeyclub hat das Fest mitorganisiert.
  - (iv) Hat der Fußballverein das Fest organisiert?  
Ja, und auch der Hockeyclub hat das Fest mitorganisiert.
- (12)
- (i) War es der Moderator, der dem Journalisten in der Diskussion vehement widersprochen hat?  
Nein, auch der Wissenschaftler hat dem Redner vehement widersprochen.
  - (ii) War es der Moderator, der dem Journalisten in der Diskussion vehement widersprochen hat?  
Ja, und auch der Wissenschaftler hat dem Redner vehement widersprochen.
  - (iii) Hat der Moderator dem Journalisten in der Diskussion vehement widersprochen?  
Nein, auch der Wissenschaftler hat dem Redner vehement widersprochen.
  - (iv) Hat der Moderator dem Journalisten in der Diskussion vehement widersprochen?  
Ja, und auch der Wissenschaftler hat dem Redner vehement widersprochen.

| No   | Type  | Answer Type   | Abbreviation |
|------|-------|---------------|--------------|
| i.   | Cleft | No (T1)       | IC-No        |
| ii.  | Cleft | Yes, and (T2) | IC-Yes       |
| iii. | Cleft | Yes, and (T3) | IC-Yes-and   |
| iv.  | SVO   | No (T1)       | SVO-No       |
| v.   | SVO   | Yes, and (T2) | SVO-Yes      |
| vi.  | SVO   | Yes, and (T3) | SVO-Yes,and  |

Table .6: Conditions experiment 6 on exhaustivity in ICs

## **.6 Materials Experiment 7 on Exhaustivity in English It-CLefts B**

### (1) Context Cleft:

I know that Susan and Sabrina were annoyed with John. Was it Susan that blamed John for the company's bankruptcy?

T1: No, it was Susan and Sabrina that blamed John for the company's bankruptcy.

T2: Yes, it was Susan and Sabrina that blamed John for the company's bankruptcy.

T3: Yes, and it was also Sabrina that blamed John for the company's bankruptcy.

Context SVO:

I know that Susan and Sabrina were annoyed with John. Did Susan blame John for the company's bankruptcy?

T1: No, Susan and Sabrina blamed John for the company's bankruptcy.

T2: Yes, Susan and Sabrina blamed John for the company's bankruptcy.

T3: Yes, and Sabrina also blamed John for the company's bankruptcy.

### (2) Context Cleft:

Rose and Melanie are Christians who follow the 10 commandments very strictly. Was it Rose that hurt Kevin with her honesty?

T1: No, it was Rose and Melanie that hurt Kevin with their honesty.

T2: Yes, it was Rose and Melanie that hurt Kevin with their honesty.

T3: Yes, and it was also Melanie that hurt Kevin with her honesty.

Context SVO:

Rose and Melanie are Christians who follow the 10 commandments very strictly. Did Rose hurt Kevin with her honesty?



T1: No, Rose and Melanie hurt Kevin with their honesty.

T2: Yes, Rose and Melanie hurt Kevin with their honesty.

T3: Yes, and Melanie also hurt Kevin with her honesty.

(3) Context Cleft:

Anna and Mandy actively participated in the seminar on psychology. Was it Anna that confused Joe during the presentation?

T1: No, it was Anna and Mandy that confused Joe during his presentation.

T2: Yes, it was Anna and Mandy that confused Joe during the presentation.

T3: Yes, and it was also Mandy that confused Joe during the presentation.

Context SVO:

Anna and Mandy actively participated in the seminar on psychology. Did Anna confuse Joe during the presentation?

T1: No, Anna and Mandy confused Joe during the presentation.

T2: Yes, Anna and Mandy confused Joe during the presentation.

T3: Yes, and Mandy also confused Joe during the presentation.

(4) Context Cleft:

Maria and Ben prepared for the math class together. Was it Maria that surprised the teacher with a smart answer?

T1: No, it was Maria and Ben that surprised the teacher with a smart answer.

T2: Yes, it was Maria and Ben that surprised the teacher with a smart answer.

T3: Yes, and it was also Ben that surprised the teacher with a smart answer.

Context SVO:

Maria and Ben prepared for the math class together. Did Maria surprise the teacher with a smart answer?

T1: No, Maria and Ben surprised the teacher with a smart answer.

T2: Yes, Maria and Ben surprised the teacher with a smart answer.

T3: Yes, and Ben also surprised the teacher with a smart answer.

(5) Context Cleft:

Carol and Ben attended a debating class at their university. Was it Carol that con-

tradicted the opponent during the debate?

T1: No, it was Carol and Matthew that contradicted the opponent during the debate.

T2: Yes, it was Carol and Matthew that contradicted the opponent during the debate.

T3: Yes, and it was also Matthew that contradicted the opponent during the debate.

Context SVO:

Carol and Ben attended a debating class at their university. Did Carol contradict the opponent during the debate?

T1: No, Carol and Matthew contradicted the opponent during the debate.

T2: Yes, Carol and Matthew contradicted the opponent during the debate.

T3: Yes, and Matthew also contradicted the opponent during the debate.

(6) Context Cleft:

Nancy and Luke gave a presentation about child poverty. Was it Nancy that shocked the audience with pictures of dying children?

T1: No, it was Nancy and Luke that shocked the audience with pictures of dying children.

T2: Yes, it was Nancy and Luke that shocked the audience with pictures of dying children.

T3: Yes, and it was also Luke that shocked the audience with pictures of dying children.

Context SVO:

Nancy and Luke gave a presentation about child poverty. Did Nancy shock the audience with pictures of dying children?

T1: No, Nancy and Luke shocked the audience with pictures of dying children.

T2: Yes, Nancy and Luke shocked the audience with pictures of dying children.

T3: Yes, and Luke also shocked the audience with pictures of dying children.

(7) Context Cleft:

Peggy and Carmen's children studied at a private university for a long time. Was it Peggy that had to support her children?

T1: No, it was Peggy and Carmen that had to support their children.

T2: Yes, it was Peggy and Carmen that had to support their children.

T3: Yes, and it was also Carmen that had to support her children.

Context SVO:

Peggy and Carmen's children studied at a private university for a long time. Did Peggy have to support her children?

T1: No, Peggy and Carmen had to support their children.

T2: Yes, Peggy and Carmen had to support their children.

T3: Yes, and Carmen also had to support her children.

(8) Context Cleft:

Josephine and Diana decided to hire an assistant janitor. Was it Josephine that promised the janitor to reduce his working hours?

T1: No, it was Josephine and Diana that promised the janitor to reduce his working hours.

T2: Yes, it was Josephine and Diana that promised the janitor to reduce his working hours.

T3: Yes, and it was also Diana that promised the janitor to reduce his working hours.

Context SVO:

Josephine and Diana decided to hire an assistant janitor. Did Josephine promise the janitor to reduce his working hours?

T1: No, Josephine and Diana promised the janitor to reduce his working hours.

T2: Yes, Josephine and Diana promised the janitor to reduce his working hours.

T3: Yes, and Diana also promised the janitor to reduce his working hours.

(9) Context Cleft:

Scott and Lauren went to the White House in order to listen to the president's speech. Was it Scott that congratulated the president on his speech?

T1: No, it was Scott and Lauren that congratulated the president on his speech.

T2: Yes, it was Scott and Lauren that congratulated the president on his speech.

T3: Yes, and it was also Lauren that congratulated the president on his speech.

Context SVO:

Scott and Lauren went to the White House in order to listen to the president's speech. Did Scott congratulate the president on his speech?

T1: No, Scott and Lauren congratulated the president on his speech.

T2: Yes, Scott and Lauren congratulated the president on his speech.

T3: Yes, and Lauren also congratulated the president on his speech.

(10) Context Cleft:

Michael and Dan were supposed to look after the children. Was it Michael that put the children at great risk?

T1: No, it was Michael and Dan that put the children at great risk.

T2: Yes, it was Michael and Dan that put the children at great risk.

T3: Yes, and it was also Dan that put the children at great risk.

Context SVO:

Michael and Dan were supposed to look after the children. Did Michael put the children at great risk?

T1: No, Michael and Dan put the children at great risk.

T2: Yes, Michael and Dan put the children at great risk.

T3: Yes, and Dan also put the children at great risk.

(11) Context Cleft:

Sally and Mike had the kids clean the entire house. Was it Sally that rewarded the kids with a treat?

T1: No, it was Sally and Mike that rewarded the kids with a treat.

T2: Yes, it was Sally and Mike that rewarded the kids with a treat.

T3: Yes, and it was also Mike that rewarded the kids with a treat.

Context SVO:

Sally and Mike had the kids clean the entire house. Did Sally reward the kids with a treat?

T1: No, Sally and Mike rewarded the kids with a treat.

T2: Yes, Sally and Mike rewarded the kids with a treat.

T3: Yes, and Mike also rewarded the kids with a treat.

## (12) Context Cleft:

Jill and Cathy's political views differ from their friends'. Was it Jill that described Steve as a communist?

T1: No, it was Jill and Cathy that described Steve as a communist.

T2: Yes, it was Jill and Cathy that described Steve as a communist.

T3: Yes, and it was also Cathy that described Steve as a communist.

## Context SVO:

Jill and Cathy's political views differ from their friends'. Did Jill describe Steve as a communist?

T1: No, Jill and Cathy described Steve as a Communist.

T2: Yes, Jill and Cathy described Steve as a Communist.

T3: Yes, and Cathy also described Steve as a Communist.

## (13) Context Cleft:

Chris and John eat Asian food every day. Was it Chris that recommended that horrible Indian restaurant?

T1: No, it was Chris and John that recommended that horrible Indian restaurant.

T2: Yes, it was Chris and John that recommended that horrible Indian restaurant.

T3: Yes, and it was also John that recommended that horrible Indian restaurant.

## Context SVO:

Chris and John eat Asian food every day. Did Chris recommend that horrible Indian restaurant?

T1: No, Chris and John recommended that horrible Indian restaurant.

T2: Yes, Chris and John recommended that horrible Indian restaurant.

T3: Yes, and John also recommended that horrible Indian restaurant.

## (14) Context Cleft:

Nike and Adidas started to pursue new marketing strategies. Was it Nike that changed their slogan last year?

T1: No, it was Nike and Adidas that changed their slogan last year.

T2: Yes, it was Nike and Adidas that changed their slogan last year.

T3: Yes, and it was also Adidas that changed their slogan last year.

Context SVO:

Nike and Adidas started to pursue new marketing strategies. Did Nike change their slogan last year?

T1: No, Nike and Adidas changed their slogan last year.

T2: Yes, Nike and Adidas changed their slogan last year.

T3: Yes, and Adidas also changed their slogan last year.

(15) Context Cleft:

The babysitter and the neighbor are both very clumsy. Was it the babysitter that broke a wine glass?

T1: No, it was the babysitter and the neighbor that broke a wine glass.

T2: Yes, it was the babysitter and the neighbor that broke a wine glass.

T3: Yes, and it was also the neighbor that broke a wine glass.

Context SVO:

The babysitter and the neighbor are both very clumsy. Did the babysitter break a wine glass?

T1: No, the babysitter and the neighbor broke a wine glass.

T2: Yes, the babysitter and the neighbor broke a wine glass.

T3: Yes, and the neighbor also broke a wine glass.

(16) Context Cleft:

The stylist and the stylist's assistant made an important decision together. Was it the stylist that chose the singer's outfit?

T1: No, it was the stylist and the stylist's assistant that chose the singer's outfit.

T2: Yes, it was the stylist and the stylist's assistant that chose the singer's outfit.

T3: Yes, and it was also the stylist's assistant that chose the singer's outfit.

Context SVO:

The stylist and the stylist's assistant made an important decision together. Did the stylist choose the singer's outfit?

T1: No, the stylist and the stylist's assistant chose the singer's outfit.

T2: Yes, the stylist and the stylist's assistant chose the singer's outfit.

T3: Yes, and the stylist's assistant also chose the singer's outfit.

## (17) Context Cleft:

Liz and Denise tried to obtain more information about a closed criminal case. Was it Liz that wanted the documents?

T1: No, it was Liz and Denise that wanted the documents.

T2: Yes, it was Liz and Denise that wanted the documents.

T3: Yes, and it was also Denise that wanted the documents.

## Context SVO:

Liz and Denise tried to obtain more information about a closed criminal case. Did Liz want the documents?

T1: No, Liz and Denise wanted the documents.

T2: Yes, Liz and Denise wanted the documents.

T3: Yes, and Denise also wanted the documents.

## (18) Context Cleft:

Canada and Mexico found out about corruption among politicians. Was it Canada that had the recently disgraced mayor?

T1: No, it was Canada and Mexico that had a recently disgraced mayor.

T2: Yes, it was Canada and Mexico that had a recently disgraced mayor.

T3: Yes, and it was also Mexico that had a recently disgraced mayor.

## Context SVO:

Canada and Mexico found out about corruption among politicians. Did Canada have a recently disgraced mayor?

T1: No, Canada and Mexico had a recently disgraced mayor.

T2: Yes, Canada and Mexico had a recently disgraced mayor.

T3: Yes, and Mexico also had a recently disgraced mayor.