

## 6

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# On the Necessity of Phi-features: The Case of Bavarian Subject Extraction\*

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### 6.1 Introduction

The present chapter is concerned with two phenomena: (i) complementizer agreement (comp-agr) and (ii) long-distance extraction. The data come mostly from Bavarian, which is known for the absence of comp-trace phenomena (Bayer 1984). English and Bavarian differ with respect to the grammaticality of extraction of subjects (S). English allows for extraction of S from embedded clauses only if no overt complementizer is present, (1a) and (1b), whereas direct objects (DO) do not show any restriction on their extractability (2). In Bavarian, on the other hand, both S and O are able to be extracted across a complementizer (3), (4).

- (1) a. \*Who<sub>1</sub> does Mary believe [<sub>t<sub>1</sub></sub> that <sub>t<sub>1</sub></sub> left Anna]  
b. Who<sub>1</sub> does Mary believe [<sub>t<sub>1</sub></sub> Ø <sub>t<sub>1</sub></sub> left Anna]
- (2) Who<sub>1</sub> does Mary believe [<sub>t<sub>1</sub></sub> that John left <sub>t<sub>1</sub></sub>]
- (3) Wea<sub>1</sub> hot da Michl gsogt [<sub>t<sub>1</sub></sub> dass <sub>t<sub>1</sub></sub> a Biachl kafft hot]  
who has the Michael said that a book bought has  
'Who did Michael say bought a book?'
- (4) Wos<sub>1</sub> hot da Michl gsogt [<sub>t<sub>1</sub></sub> dass d'Maria <sub>t<sub>1</sub></sub> kafft hot]  
what has the Michael said that the.Mary bought has  
'What did Michael say that Mary bought?'

\* I wish to thank the following people for valuable help and criticism: Cedric Boeckx, Noam Chomsky, Naoki Fukui, Bettina Gruber, Jim Huang, Sabine Iatridou, Hironobu Kasai, Takaomi Kato, Victor Manfredi, Diane Massam, André Meinunger, Shigeru Miyagawa, Andrea Moro, Andrew Nevins, David Pesetsky, Martin Prinzhorn, Martin Reitbauer, Norvin Richards, Luigi Rizzi, Viola Schmitt, Adam Szczegielniak, Edwin Williams, and the audiences at the 'Edges in Syntax' conference and the Harvard Theory Group meetings. Special thanks go to Phoevos Panagiotidis and three anonymous reviewers. All errors are my own.

Descriptively the question is as follows:

- (5) What is the difference between extraction from [Spec,TP] and the complement position of V?

Traditionally (e.g. Chomsky 1981; Cinque 1990; Rizzi 1990) this question has been answered, at least for the English data in (1) and (2), by appealing to the Empty Category Principle (ECP). The ECP exhibits the dichotomy of English S- and O-extraction in its two independent clauses, i.e. lexical and antecedent government.<sup>1</sup> With the abandonment of the ECP the constructions in (1) and (2) are no longer explainable. In addition, data such as (3) complicate the picture considerably, because they contrast with English. This chapter attempts to show that the non-existence of subject–object asymmetries (SOA) in Bavarian provides a window into the nature of long-distance extraction. This is achieved by relating the construction in (3) to the comp-agr phenomenon in Bavarian exemplified by (6). In (6) one can observe that the complementizer bears inflectional morphology agreeing with the subject of the embedded clause.

- (6a) Da Franz fragt [ob-*st* du morgen in d'Schui geh-*st*]  
the Frank asks if-2sg you.2sg tomorrow in the.school go-2sg  
'Frank asks if you(sg) will go to school tomorrow.'
- (6b) Da Franz fragt [ob-*s* es morgen in d'Schui geh-*ts*]  
the Frank asks if-2pl you.2pl tomorrow in the.school go-2pl  
'Frank asks if you(pl) will go to school tomorrow.'

In particular, we argue that comp-agr is a prerequisite for extraction of S in Bavarian (see Rizzi 1990 on French and the discussion in sections 6.2.4 and 6.3.4 below). Extraction of O, on the other hand, is shown to be indifferent with respect to agreement. It will become clear that this in some way reflects the two clauses of the ECP referred to above, and the closely related empirical question of the underlying structural difference.

The main goal of this chapter is thus to explain the difference between English and Bavarian with respect to SOAs without appealing to the ECP—i.e. the (non-)extractability of S should reflect its later point of Merge in the syntactic derivation. I will argue that extractability of S nonetheless arises when an additional mechanism is employed, namely  $\varphi$ -agreement. However,  $\varphi$ -relations are forgotten once a structure has undergone Spell-Out (S-O), modelled on Chomsky's 2000 Phase Impenetrability Condition (PIC). If the  $\varphi$ -relation between S and T is forgotten after S-O of TP, the only way S can

<sup>1</sup> A related approach takes the underlying difference to be a reflex of left and right branches (Cattell 1976 and esp. Kayne 1984), i.e. left branches cannot extract, whereas right branches can. The Bavarian data seem to disprove this generalization immediately. The explanation given below nevertheless attempts to make a related idea feasible.

be extracted is by being in another such relation with C—that is through comp-agr. In this sense the chapter can be seen as an argument against Rizzi (2006*b*) and Rizzi and Shlonsky (2007), where the EPP is reanalysed as a so-called criterial position, similar in nature to the *wh*-criterion and other such positions. Although the present chapter provides some suggestions as to what exactly ‘criterial’ means, no stipulation regarding the existence of criterial positions is intended. That is, there is no such principle as criterial freezing, and there is no dedicated position for which a principle such as the subject criterion could be stated.<sup>2</sup>

The chapter is organized as follows. First the fundamental data concerning extraction and comp-agr in Bavarian are introduced in section 6.2. This is followed by an attempt to relate the two phenomena. In this section, movement from *wh*-islands and doubly filled comp phenomena are also discussed and shown to fit the generalizations. The first part of section 6.3 presents the actual account. In section 6.3.4, differences between the present proposal and another recent approach, by Rizzi (2006*b*) and Rizzi and Shlonsky (2007), are discussed. We will show that the two approaches make different empirical predictions. Section 6.4 concludes the chapter and tries briefly to address the relevance of the present findings for current theoretical work.

## 6.2 The absence of comp-trace phenomena in Bavarian

### 6.2.1 *The basic data*

As already shown above, Bavarian does not exhibit comp-trace phenomena (Bayer 1984) on a par with, for instance, West Flemish (Haegeman 1992). Extraction across a complementizer is possible both with S (7a) on the one hand and DO (7b) and IO (7c) on the other<sup>3,4</sup>

<sup>2</sup> This chapter can also be seen as an argument against approaches such as the one advocated by Fuß (2003), where it is assumed that comp-agr is a post-syntactic process—i.e. applying at PF. This approach seems problematic in light of the facts put forward in the present account. Such a theory would beg the question of how it is possible for post-syntactic processes to have effects on movement. Also see Gruber (2008), where it is shown that the adjacency conditions, which Fuß identifies for comp-agr and which are essential for locating it at PF, do not always hold.

<sup>3</sup> German and also Bavarian do not exhibit superiority effects as (ia) and (ib) show. Superiority should therefore not be taken to interfere in the examples under discussion:

(ia) Wem<sub>2</sub> hast du t<sub>2</sub> empfohlen [was<sub>1</sub> zu t<sub>1</sub> kaufen]  
 who have you recommended what to buy

(ib) Was<sub>1</sub> hast du wem empfohlen [zu t<sub>1</sub> kaufen]  
 what have you who recommended to buy  
 ‘Who did you recommend to buy what?’

<sup>4</sup> *That*-trace constructions and *wh*-islands with *wh*-adverbials and *if*-elements in C are treated similarly in the present account (but see Sobin 1987, who shows that there are certain differences following Pesetsky 1982). Pesetsky already notes that German *ob* and English *if* are more likely to be complementizers than *whether*. See also fn. 8 below.

We assume that the *wh*-adjuncts are base-generated in C (cf. Rizzi 1990; 1999; Ko 2005).

- (7a) Wea<sub>1</sub> hot da Michl gsogt [*t*<sub>1</sub> dass *t*<sub>1</sub>a Biachl kafft hot]  
who has the Michael said that a book bought has  
'Who did Michael say bought a book?'
- (7b) Wos<sub>1</sub> hot da Michl gsogt [*t*<sub>1</sub> dass d'Maria *t*<sub>1</sub> kafft hot]  
what has the Michael said that the.Mary bought has  
'What did Michael say that Mary bought?'
- (7c) Wem<sub>1</sub> hot da Michl gsogt [*t*<sub>1</sub> dass d'Maria *t*<sub>1</sub> a Biachl  
who.DAT has the Michael said that the.Mary a book.ACC  
kafft hot]  
bought has  
'Who did Michael say that Mary bought a book for?'

The same applies to cases of long-distance topicalization. Consider first the structure without movement (8). In (9), on the other hand, the embedded subject is moved to the matrix [Spec,CP] (cf. (von Stechow and Sternefeld 1988; Bayer 2001).<sup>5</sup>

- (8) Da Franz sogt [dass da Michl morgen in d'Schui geht]  
the Frank says that the Michael tomorrow in the.school goes  
'Frank says that Michael will go to school tomorrow.'
- (9) Da Michl<sub>1</sub> sogt da Franz [*t*<sub>1</sub> dass *t*<sub>1</sub> morgen in d'Schui geht]  
the Michael says the Frank that tomorrow in the.school goes  
'Frank says that Michael will go to school tomorrow.'

It seems therefore that movement of S is freer in Bavarian than it is in English, where cases such as (7a) and (9) above would be ungrammatical.

In addition to extraction of S from embedded clauses Bavarian exhibits comp-agr, as already introduced in section 6.1. Comp-agr in Bavarian, in contrast to languages such as West Flemish, does not manifest itself overtly on all persons. Usually the 2nd person singular and plural and, for many dialects, also the 1st person plural show overt agreement morphology on C. In the examples to follow, *ob* 'if' is used, because it shows agreement best.<sup>6</sup> The examples (10) repeat (6) from above.

- (10a) Da Franz fragt [ob-*st* du morgen in d'Schui geh-*st*]  
the Frank asks if-2sg you.2sg tomorrow in the.school go-2sg  
'Frank asks, if you(sg) will go to school tomorrow.'

<sup>5</sup> For detailed discussion of such and other facts, see Mayr (2008).

<sup>6</sup> *Dass* 'that' is problematic, because presumably for phonological reasons the 2nd person plural suffix fuses with *dass*. We will use *dass* with 2nd person singular in examples below, because here comp-agr is overt as well.

- (10b) Da Franz fragt [ob-s es morgen in d'Schui geh-ts]  
the Frank asks if-2pl you.2pl tomorrow in the.school go-2pl  
'Frank asks, if you(pl) will go to school tomorrow.'

Interestingly, comp-agr seems to correlate with extraction of S, as is suggested by the following paradigm. In particular, long-distance movement of S is only grammatical if S agrees with C. Thus (11a) with comp-agr is grammatical, whereas (11b) without it is ungrammatical.

- (11a) [Es Kinda]<sub>1</sub> hot da Hauns gfrogt [<sub>t<sub>1</sub></sub> ob-s <sub>t<sub>1</sub></sub> hamkummts]  
you children has the John asked if-2pl home come  
'John asked if you children will come home.'
- (11b) \*[Es Kinda]<sub>1</sub> hot da Hauns gfrogt [<sub>t<sub>1</sub></sub> ob-∅ <sub>t<sub>1</sub></sub> hamkummts]  
you children has the John asked if-∅ home come

On the other hand, it must be noted that comp-agr is not obligatory for all speakers in environments, where no extraction of S takes place. This state of affairs suggests that the obligatory use of comp-agr in (11) is somehow connected to the long-distance extraction of S in this case.

- (12) %Da Hauns hot gfrogt [ob-∅ es Kinda ham kummts]  
the John has asked if you children home come  
'John asked, if you children will come home.'

(11b) and (12) cannot be easily analysed on a par with Carstens' 2005 observations about Bantu, where comp-agr only appears, if A'-movement to [Spec, CP] has applied. Otherwise the following example exhibiting agreement of S in situ with C would be expected to be ungrammatical, contrary to fact:

- (13) Da Hauns hot gfrogt [ob-s es Kinda ham kummts]  
the John has asked if-2pl you children home come  
'John asked, if you children will come home.'

(12) suggests that there is a correlation between comp-agr and extraction of S. The following argument strengthens this suspicion further.<sup>7</sup> In cases where a 2nd person singular subject and a 3rd person singular subject are coordinated in this respective order in situ, two patterns of subject-verb agreement are possible: either 3rd person plural (14a) or 2nd person plural (15). Only

<sup>7</sup> I thank Viola Schmitt (p.c.) for drawing my attention to such constructions.

the latter shows overt comp-agr, too. In fact, 2nd person plural comp-agr in the case of 3rd person subject–verb agreement is impossible, as (14b) shows—i.e. the particular realization of comp-agr depends on which type of subject–verb agreement is chosen.

- (14a) Da Hauns hot gfrogt [ob du und da Franz weggengan]  
the John has asked if you.2sg and the Frank leave-3pl  
'John asked if you and Frank will leave.'
- (14b) \*Da Hauns hot gfrogt [ob-s du und da Franz weggeh-ts]  
the John has asked if-2pl you.2sg and the Frank leave-3pl
- (15) Da Hans hot gfrogt [ob-s du und da Franz weggeh-ts]  
the John has asked if-2pl you.2sg and the Frank leave-2pl  
'John asked if you and Frank will leave.'

If long-distance topicalization applies, only the 2nd person plural pattern with comp-agr becomes available (16a). 3rd person plural is ungrammatical (16b). This strongly suggests that overt comp-agr must always manifest itself, if possible, when extraction of S takes place in Bavarian.

- (16a) [Du und da Franz]<sub>1</sub> hot da Hauns gfrogt [<sub>t<sub>1</sub></sub> ob-s <sub>t<sub>1</sub></sub> weggeh-ts]  
you.2sg and the Frank has the John asked if-2pl leave-2pl  
'John asked, if you and Frank will leave.'
- (16b) \*[Du und da Franz]<sub>1</sub> hot da Hauns gfrogt [<sub>t<sub>1</sub></sub> ob <sub>t<sub>1</sub></sub> weggengan]  
you.2g and the Frank has the John asked if leave-3pl

The coordination data taken together with (12) suggest that extraction of S in Bavarian is contingent on comp-agr, which is preferably overtly realized. But consider the case of O, which does not require comp-agr, when extracted:

- (17a) [Die Bauan]<sub>1</sub> hot da Hans gfrogt [<sub>t<sub>1</sub></sub> ob-s es Kölna  
the farmers has the John asked if-2pl you waiters  
endlich <sub>t<sub>1</sub></sub> bedients]  
finally serve
- (17b) [Die Bauan]<sub>1</sub> hot da Hans gfrogt [<sub>t<sub>1</sub></sub> ob-Ø es Kölna endlich <sub>t<sub>1</sub></sub>  
the farmers has the John asked if-Ø you waiters finally  
bedients]  
serve  
'John asked if you waiters will finally serve the farmers.'

In fact O cannot agree with C, not even in cases of long-distance extraction:

- (18) \*[Eich Bauan]<sub>1</sub> hot da Hans gfrogt [*t*<sub>1</sub> ob-s die Kölna endlich *t*<sub>1</sub>  
 you farmers has the John asked if-2pl the waiters finally  
 bedienen]  
 serve

In this section I presented data that suggest that comp-agr in Bavarian renders extraction of S grammatical. As will become clearer below, we are led to assume that for persons other than 2nd person, covert agreement with C must take place in the case of extraction of S. Furthermore, in the case of extraction of S, comp-agr must be overtly specified, when such a choice exists. The coordination data in (16), where two agreement patterns should in principle be possible, argue that overt agreement is always preferred, in order to phonologically mark extraction on C. This is supposed to mean that when there is covert comp-agr, S can only be extracted if there is no competing version of overt comp-agr. That is, I assume an economy condition that says: realize comp-agr overtly, whenever possible and whenever S-extraction has taken place. This, however, does not lead to a post-syntactic view with respect to the licensing of S-extraction, as overt comp-agr is just the S-O of abstract licensing. This could be formalized by assuming a competition-based approach in terms of reference sets, for instance. The overt and the covert pattern compete for realization of the abstract syntactic licensing. The economy condition will prefer the overt one.

### 6.2.2 *Extraction from wh-islands*

Long-distance extraction of S from *wh*-islands is also possible, as (19) shows. Again, only the construction with  $\varphi$ -agreement (19a) is possible, not the one without (19b).<sup>8</sup>

<sup>8</sup> Two anonymous reviewers ask interesting questions. First, how is it possible for S to move out of the *wh*-island in (19a) given that the embedded [Spec,CP] is filled? In light of this problem it can be questioned whether we are dealing with actual movement. That long-distance topicalization is movement can be shown by the fact that, for instance, both the CNPC (i) and the CSC (ii) are obeyed, i.e. when the *wh*-island is embedded under a ‘real’ island, ungrammaticality is triggered. Second, could comp-agr be a resumptive pronoun? Note that in (i) comp-agr holds within the island. If what I refer to as comp-agr were actually a resumptive pronoun, we would expect (i) to be grammatical. This shows that we are dealing with movement and not with resumptive pronouns. Nevertheless I agree with the reviewers that there is some correlation between resumptive pronouns and comp-agr (see also the discussion in section 6.3.4). I do not know how to spell out this intuition, though.

(i) \*[<sub>DP</sub> Eich]<sub>1</sub> frogt d’ Maria noch [<sub>DP</sub> dem Gerücht] [<sub>CP</sub> *t*<sub>1</sub> wonn-*st*<sub>1</sub> zruckkummts]]]  
 you asks the Mary after the rumour when-2pl come back

(19a) [Es Kinda]<sub>1</sub> frogt da Hauns [<sub>t<sub>1</sub></sub> wonn-*s* <sub>t<sub>1</sub></sub> ham kumm<sub>ts</sub>]  
 you children asks the John when-2pl home come  
 ‘John asked when you children will come home.’

(19b) \*[Es Kinda]<sub>1</sub> frogt da Hauns [<sub>t<sub>1</sub></sub> wonn- $\emptyset$  <sub>t<sub>1</sub></sub> ham kumm<sub>ts</sub>]  
 you children asks the John when- $\emptyset$  home come

It seems that (19) does not follow Huang’s (1982) observation that subjects together with adjuncts are more difficult to extract than objects. In order to bring the paradigm in (19) in line with the observations from the preceding section, let us assume that there exists an underlying  $\varphi$ -relation with the *wh*-adverbial in (19a), but not in (19b). This assumption is corroborated by the fact that long-distance movement becomes much worse, or even ungrammatical, in the case of S, if no overt C is present (20). This is not the case with O (21):

(20) \*Wer<sub>1</sub> hot da Hauns gfrogt [<sub>t<sub>1</sub></sub> C <sub>t<sub>1</sub></sub> was kafft hot]  
 who has the John asked what bought has

(21) ?Wos<sub>1</sub> hot da Hauns gfrogt [<sub>t<sub>1</sub></sub> C wer <sub>t<sub>1</sub></sub> kafft hot]  
 what has the John asked who bought has  
 ‘What did John ask who bought it?’

The problem that it is possible to move out of *wh*-islands, given that a specifier of the embedded CP is already filled, is quite complicated (cf. the discussion in fn. 8 above). Even extraction across *wh*-DPs in [Spec,CP] is possible as seen in (22), but only if comp-agr ensues.

(22a) [Es Kinda]<sub>1</sub> frogt da Hauns [<sub>t<sub>1</sub></sub> wem-*s* <sub>t<sub>1</sub></sub> a Geschenk  
 you children asks the John who.DAT-2pl a present  
 kafft hob<sub>ts</sub>]  
 bought have-2pl  
 ‘John asks who you children have bought a present.’

(22b) \*[Es Kinda]<sub>1</sub> frogt da Hauns [<sub>t<sub>1</sub></sub> wem- $\emptyset$  <sub>t<sub>1</sub></sub> a Geschenk  
 you children asks the John who.DAT- $\emptyset$  a present  
 kafft hob<sub>ts</sub>]  
 bought have-2pl

(ii) \*[<sub>DP</sub> Da Hauns]<sub>1</sub> frogt d’Maria [<sub>CP</sub> [<sub>CP</sub> <sub>st<sub>1</sub></sub> ob <sub>st<sub>1</sub></sub> auf Wallfort (war)] [<sub>CP</sub> und (ob)  
 the John asks the Mary if on pilgrimage was and if  
 d’Lisa in da Stod war]  
 the Lisa in the city was

I do not see any other way around this problem than to assume that a second specifier appears in such cases. In particular, I assume for clarity's sake that *wh*-elements in [Spec,CP] with  $\varphi$ -features are interpreted as part of complex C-heads. Indeed, multiple specifiers are (if somewhat marginally) possible (23c) in addition to the single specifier constructions (23a,b). I do not have any explanation of why this optionality exists. But crucially, it allows us to assume a second specifier for long-distance extraction too.<sup>9</sup>

- (23a) Da Hauns hot gfrogt [wem-s es wonn a Buach  
 the John has asked who.DAT-2pl you.2pl when a book  
 gebm hob-ts]  
 given have-2pl
- (23b) Da Hauns hot gfrogt [wonn-s es wem a Buach  
 the John has asked when-2pl you.2pl who.DAT a book  
 gebm hob-ts]  
 given have-2pl
- (23c) ?Da Hauns hot gfrogt [wem wonn-s es a Buach  
 the John has asked who.DAT when-2pl you.2pl a book  
 gebm hob-ts]  
 given have-2pl  
 'John asked, when you(pl) gave a book to who.'

One might conjecture that factivity plays a role in the extractability of S from *wh*-islands.<sup>10</sup> But note that the possibility of extraction cannot be directly related to factivity. All the examples used in this section have non-factive verbs. It is true, however, that heavily non-factive verbs do not allow extraction from *wh*-islands (24), even if there is comp-agr in the embedded clause. I must leave this for future research.

- (24) \*[Es Kinda]<sub>1</sub> flüstert da Hauns [<sub>t<sub>1</sub></sub> wonn-s <sub>t<sub>1</sub></sub> ham kummts]  
 you children whispers the John when-2pl home come  
 'John whispers when you children come home.'

<sup>9</sup> Importantly, such phenomena are not restricted to Bavarian. The following is an example from Italian, where movement out of a *wh*-island takes place. As (Rizzi 2006b: 115) notes, some escape hatch, i.e. a second specifier, must be assumed:

- (i) ??Quanti libri di quale autore ti domandi se siano stati censurati?  
 how many books by which author do you wonder whether have been censored

<sup>10</sup> Thanks to an anonymous reviewer for bringing up this question.

6.2.3 *Doubly filled comp*

In addition to what has been discussed in the preceding subsections, there is another phenomenon in Bavarian connected to the status of C. Bavarian does not respect the doubly filled comp filter (see Bayer 1984 on this topic, and more generally Chomsky and Lasnik 1977; van Riemsdijk and Williams 1986). Consider the following contrast between English and Bavarian:

- (25) \*Michael asked who that bought the books.  
 (26) Da Michael hot gfrøgt [wer dass die Biacha kafft hot]  
 the Michael has asked who that the books bought has  
 ‘Michael asked who bought the books.’

As (26) shows, Bavarian can form embedded questions by having both an overt complementizer and an overt specifier of C. The important fact in the present context is that doubly filled comp has consequences for long-distance movement of S. Consider the following paradigm. The examples in (27a) and (27b) repeat the findings from the preceding section, namely that S can only be extracted from embedded CPs if comp-agr holds. (28b) shows that extraction of S is also possible, in cases of doubly filled comp. Comp-agr is expressed on *dass*, but never on the specifier. Note that the agreement on *dass* becomes easily detectable if 2nd person singular is used.

- (27a) \*DU<sub>1</sub> frogn d’Leit [CP t<sub>1</sub> warum-Ø t<sub>1</sub> nigs orbeits]  
 you ask the.people why-Ø nothing work  
 (27b) DU<sub>1</sub> frogn d’Leit [CP t<sub>1</sub> warum-st t<sub>1</sub> nigs orbeits]  
 you ask the.people why-2sg nothing work  
 ‘The people ask why you don’t work (and not someone else).’  
 (28a) \*DU<sub>1</sub> frogn d’Leit [CP t<sub>1</sub> warum-st dass-Ø t<sub>1</sub> nigs orbeits]  
 you ask the.people why-2sg that-Ø nothing work  
 (28b) DU<sub>1</sub> frogn d’Leit [CP t<sub>1</sub> warum-Ø dass-st t<sub>1</sub> nigs orbeits]  
 you ask the.people why-Ø that-2sg nothing work  
 ‘The people ask why you don’t work (and not someone else).’

This means that comp-agr must always be with the rightmost complementizer.<sup>11</sup> Furthermore, as already conjectured above, we assume that whenever extraction of S takes place, comp-agr must hold. This means that even in cases of doubly filled comp, the rightmost complementizer exhibits covert

<sup>11</sup> Thanks to Bettina Gruber (pc.) for discussion of this topic. For similar locality effects see Fuß (2003).

agreement if, say, a 3rd person plural S is moved, i.e. there is covert agreement with *dass* in (29):

- (29) [D'Lehrer]<sub>1</sub> frogn d'Leit [<sub>CP</sub> *t*<sub>1</sub> warum-Ø *dass*-3pl *t*<sub>1</sub> nigs  
 the.teachers ask the.people why-Ø that-3pl nothing  
 orbeitn]  
 work  
 'The people ask why the teachers don't work.'

On the other hand, we submit that there is no covert agreement with *dass* in (30), because in this case a DO is extracted. We have already claimed that extraction of O does not need to be licensed by comp-agr.

- (30) [D'Lehrer]<sub>1</sub> frogn d'Leit [<sub>CP</sub> *t*<sub>1</sub> warum-Ø *dass*-Ø da Fritz ned *t*<sub>1</sub>  
 the.teachers ask the.people why-Ø that-Ø the Frank not  
 mog]  
 likes  
 'The people ask why Frank doesn't like teachers.'

#### 6.2.4 *Another instance of comp-agr*

That comp-agr plays a crucial role in the extraction of S has been acknowledged at least since Rizzi (1990), where the familiar *que/qui*-alternation from French is analysed as involving such agreement.<sup>12,13</sup> Consider the following examples from Rizzi (1990: 56):

- (31a) L'homme<sub>1</sub> que je crois [*t*<sub>1</sub> qui [*t*<sub>1</sub> viendra]]  
 'The man who I think that will come.'  
 (31b) L'homme<sub>1</sub> que je crois [*t*<sub>1</sub> que/\*qui [Jean conna<sub>i</sub>t *t*<sub>1</sub>]]  
 'The man that I believe that Jean knows.'

<sup>12</sup> See also Kayne (1984) and Szczegielniak (1999b).

<sup>13</sup> But see Taraldsen (2001) for a competing analysis, where the *-i* of *qui* is argued to be a reflex of expletive *il* in [Spec,TP], which gets contracted with *que* in C. Taraldsen's arguments come mainly from languages other than French, in particular Norwegian and Danish. Also, it is argued that French in contrast to, say, Bavarian only shows comp-agr in cases of actual extraction, provided that Rizzi's assumption is correct. We already saw in section 6.2.1 that Bavarian comp-agr is not contingent on extraction. But it should be pointed out that pronouns and agreement do of course share crucial properties, which might make it still possible to relate Rizzi's and Taraldsen's proposals to each other. Below it will be shown that it is not crucial whether actual comp-agr takes place, but rather that a  $\varphi$ -relation of some sort must be there for S in order to extract from embedded CPs. See also section 6.3.4, where the account of Rizzi and Shlonsky (2007) is reviewed.

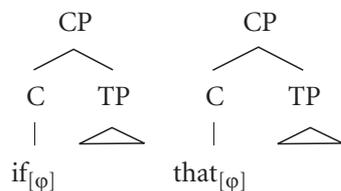
- (31c) L'homme<sub>1</sub> que je pense [<sub>t<sub>1</sub></sub> que/\*qui [Jean croit [<sub>t<sub>1</sub></sub> qui [<sub>t<sub>1</sub></sub> viendra]]]]  
 'The man that I think that John believes that will come.'

As (31a) shows, extraction of S can only apply if the agreeing complementizer *qui* is chosen. For extraction of O, the non-agreeing complementizer *que* must be used (31b). (31c) shows that *qui* cannot license successive-cyclic extraction of S—i.e. only the clause in which S is immediately contained needs to become penetrable through comp-agr. Higher complementizers must be of the non-agreeing variant.<sup>14</sup> French thus shows that the licensing of extraction of S by  $\phi$ -agreement with C is not such a rare phenomenon.

### 6.2.5 Intermediate summary

What we have seen so far is that S in Bavarian can undergo long-distance movement from embedded CPs only if they agree with the local C. This agreement, we suggested, can be both overt and covert. The former option is chosen if comp-agr is lexically realized for a given person and number. For O, no such licensing process is required. Let us therefore propose the following unified complementizer structures for agreement with C (the relevant lexical items are given in English):

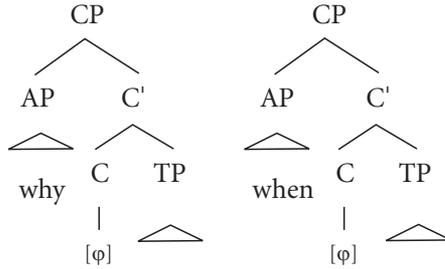
- (32a) Comp-agr 1



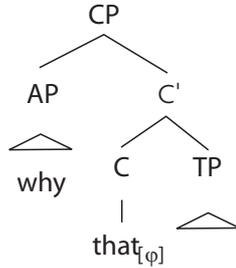
<sup>14</sup> Further, since Perlmutter (1971) it has been known that extraction of S is permissible in pro-drop languages. Consider Spanish in (i). In light of this the possibility of direct extraction from [Spec, vP] must be added to the options of extraction for S. See also Rizzi and Shlonsky (2007).

- (ia) ¿Quién dijiste que salió temprano?  
 'Who did you say that left early?'  
 (ib) ¿Qué dijiste que pasó?  
 'What did you say that happened?'

(32b) Comp-agr 2



(32c) Doubly filled comp



As can be observed, the difference between the three options boils down to the question of whether or not C is realized by a lexical item bearing phonological features. If this is the case, the relevant element will bear the  $\varphi$ -features. If not, the  $\varphi$ -features will be hosted by the linearly closest element to the left of the complementizer. This way the *wh*-adverbials become part of the complex C-head, and extraction from *wh*-islands becomes possible. This in itself does not explain why we do not observe subjacency effects in German, when there is agreement on the *wh*-element in [Spec,CP]. Remember that we proposed multiple specifiers for this type of construction. Further, (32) explains why in the case of (28a) no agreement morpheme can be realized on *warum*. *Dass* bears the  $\varphi$ -features and therefore intervenes, so that the  $\varphi$ -features cannot appear on *warum*.

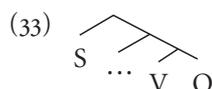
In the following section I will try to account for the constructions discussed so far.

### 6.3 Subject–object asymmetries and merge

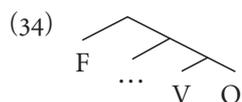
This section will first discuss extraction of O and after that the more problematic case of extraction of S. In what follows, the copy theory of movement is assumed (Chomsky 1993).

#### 6.3.1 *Extraction of objects*

It has been well known for some time that SOAs are due to the underlying structural difference between O and S. This is exactly what the ECP was designed to capture.<sup>15</sup> Without the ECP or the help of a similar principle, we are forced to assume that SOAs are due to the way in which Merge proceeds. That is, SOAs should follow from S being merged later in the derivation than O. Assume that S merges with an already complex structure:



In what follows, I will try to argue that the asymmetry is really one of hierarchical structure. If we consider a tree diagram as in (34), where F is a functional head that probes its c-command domain, we observe that FP is on a projection line with O (see (36) below for the definition). That is, all the heads from F down to O stand in selectional relations with their complements, the final complement being O. In particular, F selects its complement, the head of which selects its own complement, etc., and O is selected by the verb.



<sup>15</sup> One reason for abandoning the ECP was that its statement was disjunctive, i.e. that it consisted of two not directly related clauses (although see Rizzi 1990, where an attempt is made to overcome this state of affairs). Consider the following independent clauses of the ECP:

- (ia)  $\theta$ -government  
 $\alpha$   $\theta$ -governs  $\beta$  iff  $\alpha$  is a zero-level category that  $\theta$ -marks  $\beta$ , and  $\alpha, \beta$  are sisters. (Chomsky 1986a:15)
- (ib) Antecedent government  
 $\alpha$  antecedent-governs  $\beta$  iff  $\alpha$  and  $\beta$  are coindexed and there is no intervening  $\gamma$ , which could be coindexed with  $\beta$ .

Therefore, if Internal Merge (IM) is contingent on probing and probing is defined over projection line, then O is clearly within the probe domain of F. On the basis of this observation, let us define IM in the following way:

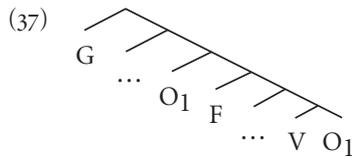
- (35) Internal Merge  
 IM at derivational stage  $\Sigma_i$  applies to nodes on the same projection line as the head H probing under c-command, thus to a node formed at stage  $\Sigma_{i-1}, \dots, \Sigma_1$ , where  $i > 1$ .

Projection line is defined in terms of selection:<sup>16</sup>

- (36) Projection line  
 X and Y are on the same projection line, iff the head X selects for YP. If the head Y selects for ZP, then by transitivity X and Z are on the same projection line.

I assume that (35) is an interface condition that checks whether a given instance of probing and IM is licit. In particular, probing and IM take place in syntax, but during the mapping procedure to the interfaces the definition in (35)—an interface condition—with the help of (36) is checked (see section 6.3.2 for a fuller exposition of this condition).

By this reasoning, F will have no difficulty probing O, because they are on the same projection line. Therefore O can always undergo movement. There arises a question with respect to extraction of O from [Spec, FP]—i.e. when O has already been moved to a successive-cyclic position—because in this case O is no longer on the projection line of any higher head G, and would therefore be unable to move further without any additional assumption. This would have the consequence that O would not be able to move from intermediate [Spec, CP]s. In (37), G could not probe the copy of O, which is in [Spec, FP].



<sup>16</sup> Clearly Kayne's (1984) definition of g-projection is relevant in this respect. Note that in the present formulation no connectedness effects can be derived, though.

The conclusion must be that O is always found because it lies on the projection line in its External Merge (EM) position. That is, O is on the clausal projection line from the first derivational stage on. A complete syntactic representation contains the complete chain of copies created by Merge, and therefore this representation contains a copy of O in the EM position. As such, this copy is visible for interface conditions. (35), which is an interface condition checking representations for convergence, must thus look at complete chains and will therefore see whether the EM position licenses extraction or not. In other words, the EM position of O licenses extraction for all copies of O. Also note that, although the EM copy of O licenses successive-cyclic movement, it is still the copy in the intermediate position that gets extracted.<sup>17</sup> This just follows from the identity of copies in a given movement chain.<sup>18</sup>

In that sense, long-distance extraction and the observed islandhood for S is turned into an interface notion in the present theory. It must be left for future research to investigate the legibility conditions which dictate that lying on a projection line allows for long-distance extraction. One obvious candidate for a fundamental underlying principle is selection. Note that projection line is defined over selection

We will now turn to subjects, and consider their special status with respect to the stipulation of (35) and its supporting definition of projection line (36).

### 6.3.2 *Extraction of subjects*

Given what has been said so far, the following move is expected. S can extract, if it agrees with a head. But the question is why this is the case. Let us recall (35) and (36) from above. From these two definitions, it follows that S will never lie on the same projection line as F, because it is not directly selected for by any of the heads within the clausal projection (Chomsky 1986*a*).<sup>19</sup> That is, it cannot be probed and is by virtue of this unable to act as a goal. The following proposal is therefore made:

- (38) The role of  $\varphi$ -features  
Agreement between DP in [Spec,HP] and H in  $\varphi$ -features connects an element to the projection line, of which H is a part.

<sup>17</sup> More precisely, it is the same element that is targeted by each instance of probing, as copies of some syntactic material are really just the same element.

<sup>18</sup> i.e. it is not the case that the EM copy is extracted and the copy in the successive-cyclic position stays put. This way of thinking would be an artefact of theories that take movement literally.

<sup>19</sup> If anything, S is derivatively selected by the label created at the directly preceding merge, as argued by Chomsky (1986*a*).

If that is the case, Bavarian S in [Spec,TP] can be probed, because it agrees in  $\varphi$ -features with T. This derives local dislocation of S and is also applicable to English. We saw, however, that it is agreement with C that matters for long-distance extraction. In light of the discussion in the preceding section with respect to extraction of O—where it is suggested that O is on the correct projection line once and for all due to its EM position—we must conclude that the EM position of S does not license extraction. In particular, agreement with T does not license long-distance extraction in itself. It appears that  $\varphi$ -agreement with T is ‘forgotten’ at the stage when S has been moved to [Spec,CP]—i.e. licensing must ensue again with C. Assume the following condition:

(39) Deletion of  $\varphi$ -relations at S-O

After S-O induced by a phase head *P* (e.g. C)  $\varphi$ -relations between a head and a DP in the complement of *P* are invisible for computation at the next phase.<sup>20</sup>

The condition in (39) has the consequence that, upon checking whether an S in an intermediate [Spec,CP] is allowed to undergo long-distance extraction, only local  $\varphi$ -agreement with that C-head matters. All previous  $\varphi$ -relations are invisible. This amounts to saying that agreement relations that are contained in the complement of a phase head *P* are no longer accessible after S-O of that complement, where containment is defined as follows:

(40) Containment

A  $\varphi$ -relation is contained in the complement of a phase head *P* if it holds between a head and a DP, both in the complement of *P*.

In other words, a condition like Chomsky’s PIC<sup>21</sup> will make, among other things, all agreement relations in the complement of a phase head *P* invisible at the next phase level. S when in [Spec,TP] is probed by C—i.e. a  $\varphi$ -relation with C is established. By virtue of being probed by C, S is eligible for movement to [Spec,CP]. Thus S is in the edge of the C-phase and therefore in the domain of the next higher phase. Upon S-O of the complement of C, the  $\varphi$ -relation between S and T becomes inaccessible for operations outside of C because of (39). But the  $\varphi$ -relation between S and C is by definition

<sup>20</sup> I ignore  $\nu$  as a phase-head for reasons of simplicity. If  $\nu$  is a phase head as well, the processes described here need to be generalized to  $\nu$ .

<sup>21</sup> Consider the following formulation of the PIC to enhance clarity (Chomsky 2000: 108):

(i) Phase Impenetrability Condition

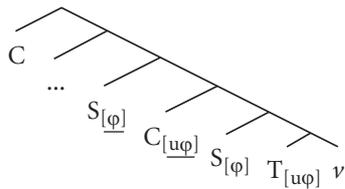
In phase  $\alpha$  with head H, the domain of H is not accessible to operations outside  $\alpha$ ; only H and its edge are accessible to such operations.

visible, as it is in the local domain for computation after S-O of the complement of C.

O, on the other hand, never experiences any such problems, as selectional requirements must be legible at all stages in the derivation, as argued in the preceding section. I leave for future research the question why agreement has the effect it has. But I think that the intuitive difference between selectional licensing and licensing through agreement is sufficiently clear.

From this it follows that in Bavarian, S can undergo movement both from [Spec,TP] and [Spec,CP], because it agrees with T and C respectively. Movement to [Spec,CP] is licensed because, at the relevant stage in the derivation, agreement between S and T is visible and S is thereby on the projection line of C. Once it is moved to [Spec,CP], the complement of C undergoes S-O and agreement relations with T have become illegible. Since C has probed S for IM into its [Spec,CP]  $\varphi$ -agreement between S and C holds as well. This relation is not ‘forgotten’ because it is not contained in the complement of C. That is, S is on the projection line for probing by a higher head by virtue of this (underlined  $\varphi$ -features indicate active relations):<sup>22</sup>

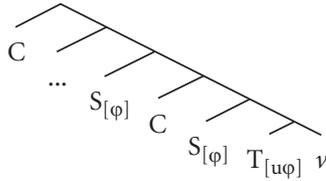
(41) Bavarian



For English, the following situation obtains. In cases where S is non-extractable, it must be assumed that the relevant C does not bear any  $\varphi$ -features, which is supported by the fact that English lacks comp-agr across the board. In other words, S would be stuck in the embedded [Spec,CP] not accessible to any higher head, because it cannot be connected to a higher C’s projection line by virtue of a  $\varphi$ -relation with its local C-head. The only  $\varphi$ -relation with a head on the relevant projection line for extraction—the one with T—is no longer active due to S-O of the complement of C. This situation is shown in (42).

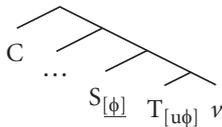
<sup>22</sup> A previous version caused an anonymous reviewer to think that comp-agr relations are established between C and its specifier after S-O of the complement of C has occurred. I hope that the text makes it clear now that this is not intended. Rather, comp-agr, like any other  $\varphi$ -relation, is established via probing, i.e. before S-O. Otherwise comp-agr with an unmoved S would be impossible.

(42) English with C



For the English case, where no comp-trace effect appears, we are forced to conclude not only that C does not surface but that in fact there is no underlying C. This has been for instance argued for by Bošković (1997a) (see also the references there). Rizzi and Shlonsky (2007) argue for a very similar solution. Since they assume a more articulated C-domain, it is only the higher part of the C-domain that is missing in their account. Crucially, the lowest C-head, i.e. the Fin-head, is present in their structure, but not the highest Force-head.<sup>23</sup> In the present account we assume that S undergoes extraction directly from [Spec,TP], when there is no overt C in English. Crucially, φ-agreement between S and T holds and there is no intervening S-O domain—i.e. the agreement relation is still active, and S is thereby on the same projection line as the higher probing head:

(43) English without C



Interestingly, the option pictured in (43) is not available in Bavarian, as extraction across non-overt complementizers is always prohibited (see Haider and Prinzhorn 1985 and Rizzi 1990). Recall the construction in (20), repeated here:

- (44) \*Wer<sub>1</sub> hot da Hauns gfrogt [<sub>t<sub>1</sub></sub> C <sub>t<sub>1</sub></sub> was kafft hot]  
 who has the John asked what bought has

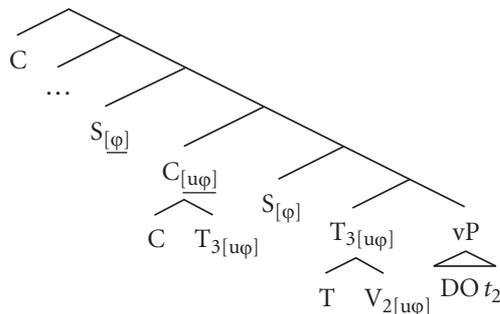
In such environments, we witness one of the rare instances where V2 is found in embedded clauses. Consider the following examples:

<sup>23</sup> They actually also consider an even more similar solution, where the complete C-domain is absent.

- (45a) Wer<sub>1</sub> hot da Hauns gfrogt [<sub>t<sub>1</sub></sub> hot<sub>2</sub> <sub>t<sub>1</sub></sub> wos kafft <sub>t<sub>2</sub></sub>]  
 who has the John asked has what bought  
 ‘Who did John ask bought what?’
- (45b) Wer<sub>1</sub> hot da Hauns gsogt [<sub>t<sub>1</sub></sub> hot<sub>2</sub> <sub>t<sub>1</sub></sub> wos kafft <sub>t<sub>2</sub></sub>]  
 who has the John said has what bought  
 ‘Who did John say bought what?’

In light of this fact we are led to conclude that verb movement acts as a last-resort mechanism. Thereby agreement with S can take place. The requirement of verb movement can be modelled on an overttness requirement, i.e.  $\varphi$ -features must be hosted by an overt C. If covert C has probed S, head-raising of the T-V complex will follow, so that overt  $\varphi$ -features are present on C. This way the configuration in (46) can be added to the complementizer structures in (32) licensing S-extraction. Note that it is still the  $\varphi$ -features on C that probe S. The T-V complex simply acts as phonological support for these features. The absence of V2 in English will not allow a configuration like (46) to license subject extraction, though:

- (46) Embedded V2



One further question has to be addressed. Recall the French data in (31). They raise the question why an extracted S can move across higher complementizers without agreeing with them. The same applies to Bavarian and English. Consider Bavarian in (47).

- (47a) [Es Kinda]<sub>1</sub> hot da Hauns gsogt [<sub>t</sub> dass da Michl gfrogt hot  
 you children has the John said that the Michael asked has  
 [<sub>t<sub>1</sub></sub> ob-s <sub>t<sub>1</sub></sub> hamkummts]]  
 if-2pl home come  
 ‘John said that Michael asked if you children will come home.’

- (47b) [Die Kinda]<sub>1</sub> hot da Hauns gsogt [*t* dass-*st* du gfroght host  
the children has the John said that-2sg you asked have  
[*t*<sub>1</sub> ob *t*<sub>1</sub> hamkumman]]  
if home come  
'John said that you(2sg) asked if the children will come home.'
- (47c) \*DU<sub>1</sub> hot da Hauns gsogt [*t* dass-*st* da Michl gfroght hot  
you has the John said that-2sg the Michael asked has  
[*t*<sub>1</sub> ob-*st* *t*<sub>1</sub> hamkummst]]  
if-2sg home come

Example (47a) shows that agreement with C only appears on the most embedded C. (47b,c) show that agreement on an intermediate C must be with the local subject. In particular, (47c) shows that the successive-cyclically moved S cannot agree with the intermediate complementizer.

Recall our condition (39) that says that  $\varphi$ -relations that are contained in the complement of a phase head *P* are invisible after S-O of the complement of *P*. When S is moved to the intermediate [Spec,CP] in (47a) and (47b) the  $\varphi$ -relation with the deepest C-head is illegible, because it is contained in the S-O domain of the intermediate C. This has the consequence that S is no longer on the projection line relevant for probing, once it is moved to an intermediate specifier. Therefore (47a) and (47b) should violate the interface condition that we identified. I see no other way than to circumvent this with a stipulation like (48).

(48) Secondary selection

If V selects for a CP with a DP in [Spec,CP] which agrees with the head of this CP in  $\varphi$ -features, then the DP behaves as if it were directly selected by V.

The intuition behind (48) is that selection of a CP, which really is selection of C, is in fact also selection of the specifier of C, if C bears the same value for  $\varphi$ -features as the DP in the specifier. Note that upon selection of C by V, the  $\varphi$ -relation between C and S in [Spec,CP] is still visible, because no phase head intervenes that introduces S-O of its complement. Whenever secondary selection holds, (39) cannot apply, because the S in [Spec,CP] is derivatively selected for by the embedding verb. No further licensing for extraction need apply at later stages of the derivation, as S is on the clausal projection line once and for all, i.e. it should now behave like an extracted O. The same applies to the English cases at hand, with the difference that it is T which acts as selectee of the higher V and transfers this relation onto its specifier, i.e. subjects attempt to get as close to a verbal selector as possible. See Rackowski

and Richards's (2005) theory, to which the present formulation bears some similarity.

In this section we have shown how the PIC, taken together with an interface condition on extraction defined through the notion of projection line, can derive the basic facts distinguishing English and Bavarian/German long-distance movement of S.

### 6.3.3 *Intermediate summary*

The basic difference between English and Bavarian S-extraction exemplified by (1) and (3) is derived. In particular, the findings from section 6.2 on comp-agr were incorporated into the theory of extraction. It was argued that S must undergo  $\varphi$ -agreement with the head of the projection they are located in, in order to obtain a permissible probing relation with a higher head. Any such head that lies on the same projection line as the one with which S already shares a value for  $\varphi$ -features can then probe S. Further, it was shown that English extraction of S is only possible if no C is merged, because C in English does not bear  $\varphi$ -features which could act as connectors to the projection line. In Bavarian, agreement with C is no problem, as was shown in section 6.2, which has the consequence that extraction is always possible. Furthermore, cases of embedded V<sub>2</sub> were discussed, which were argued to exhibit the same type of  $\varphi$ -agreement with S, thereby licensing its extraction. Moreover we found that agreement relations are 'forgotten' after a structure has undergone S-O, whereas selectional requirements are legible after S-O, too. Furthermore, entering a  $\varphi$ -relation with C was suggested to equal being selected by the higher V, which selects for C. Thereby an S standing in a  $\varphi$ -relation with a C (or T in English) is on the relevant projection line once and for all and need not undergo any further  $\varphi$ -relations with higher phase heads.

The proposal must remain sketchy, unfortunately, and many areas must be left for future research. For instance, we have not addressed the issue of extraction of adjuncts at all. The present proposal is very limited in its scope, as it is only concerned with extraction of arguments. But we also have not addressed the question why it is equally possible to extract DO and IO, as seen in (7b) and (7c) above. We do not have an answer to this question. One might conjecture that no strict ordering of Merge between DO and IO is required, so that either of them could be directly selected for by V. But this is admittedly not a solution.

#### 6.3.4 Comparison to other proposals

There exist other accounts in the literature that try to account for SOAs without the use of the ECP. In particular, the work by Rizzi (2006*b*) and Rizzi and Shlonsky (2007) has to be mentioned. There it is argued that syntax makes use of certain criterial positions. Criterial positions are heads with (substantive) features which attract arguments to their specifiers. Once the argument has reached such a position, it is frozen. With respect to S, Rizzi (2006*b*) assumes that a head Subj exists, which attracts a DP to its specifier. The feature of Subj is interpreted as *aboutness*, i.e. the event described by the complement of Subj is interpreted as involving the DP in its specifier. The feature [about] should be seen as a nominal requirement of Subj. Consider the structure in (49):

- (49) [SubjP XP<sub>[about]1</sub> [Subj<sup>1</sup> Subj<sub>[about]</sub> ... [t<sub>1</sub>]]]

By making the stipulation that once a criterial position is reached, the DP is frozen in place, no further movement can apply, i.e. the English example in (1a) follows trivially. The subject is moved to [Spec,SubjP] and is frozen there.

Rizzi and Shlonsky rethink Rizzi's 1990 theory of the *que/qui* alternation reviewed briefly in section 6.2.4. In particular, they argue that *i* in *qui* is a second expletive-like element in addition to *il*. It is merged as the finiteness head in the clausal structure, which takes SubjP as its complement. They further argue that it stands in a head–head relation with Subj and by virtue of its nominal nature satisfies the nominal requirement of Subj, so that no DP must be merged in [Spec,SubjP]. Because of this, the actual S can directly move to its designated A'-position, i.e. the criterial [Spec,SubjP] is skipped. S moves to [Spec,FinP] to value the  $\varphi$ -features of *i*, since *i* is so far only specified as being of nominal nature. Consider the example in (50) and its structure in (51) (Rizzi and Shlonsky 2007: 135*f*).

- (50) L'homme qui va partir.  
 the man who is going to leave  
 'the man who is going to leave'

- (51) L'homme [CP Rel-Op<sub>1</sub> que [FinP t<sub>1</sub> Fin<sub>[i]</sub> [SubjP Subj [AgrP t<sub>1</sub> Agr [va partir t<sub>1</sub>]]]]]

For cases of long-distance extraction the same analysis is assumed. In particular, further extraction takes place from [Spec,FinP], which under the present logic must not be criterial, at least not in the present context.

In contrast to (1a), which is immediately ruled out by the account sketched, examples like (1b) with a covert complementizer must be ruled in somehow.

Rizzi and Shlonsky argue that again the finiteness head satisfies the subject criterion. It is merged with a set of  $\varphi$ -features that provide the necessary nominal quality and are subsequently valued by S moved to its specifier. Again the criterial [Spec,SubjP] is skipped and [Spec,FinP] must again not be criterial.<sup>24</sup>

The reason why this approach is reviewed here is that on the surface it appears to be a possible solution for the Bavarian data, too. However, the two approaches make different predictions. Remember that in the theory presented in section 6.3.2 above  $\varphi$ -relations are central. We showed in section 6.2.1 that, in cases where in principle two patterns of agreement are possible, i.e. in cases of conjoined subjects, only one pattern is allowed when extraction of S occurs. In particular, the pattern is chosen that shows overt comp-agr. We took this to show that, whenever possible, overt agreement must be exhibited in order to show that an extracted subject is connected to the relevant projection line. The relevant data from (16) are repeated below. They follow immediately under a theory whereby comp-agr is analysed as involving literal  $\varphi$ -agreement:<sup>25</sup>

- (52a) \* [Du und da Franz]<sub>1</sub> hot da Hauns gfrogt [*t*<sub>1</sub> ob *t*<sub>1</sub> weggengan]  
 you and the Frank has the John asked if leave-3pl
- (52b) [Du und da Franz]<sub>1</sub> hot da Hauns gfrogt [*t*<sub>1</sub> ob-s *t*<sub>1</sub> weggeh-ts]  
 you and the Frank has the John asked if-2pl leave-2pl  
 ‘John asked if you and Frank will leave.’

<sup>24</sup> It is worth noting some similarities between Rizzi (1990) and Rizzi and Shlonsky (2007). In the old theory the process of agreement between DP and C by spec-head agreement would allow C to properly govern the trace of S in [Spec,TP]. In Rizzi and Shlonsky (2007) the subject requirement of Subj/T is licensed by *i* in Fin (C in the old theory), which in turn is licensed by movement of S into its specifier. This has the effect that no specifier of Subj must be projected. That is, what was the requirement of proper government of the subject trace in the old theory is now a non-projected specifier by licensing the nominal requirement of Subj in another way. Consider the following two structures, where the first is the structure before extraction in the old account and the second is the new one. It is hard to see where the formal difference lies between these two accounts:

- (ia) [<sub>CP</sub> DP<sub>1</sub>[ $\varphi$ ] C<sub>[ $\varphi$ ,governor</sub>] [<sub>TP</sub> *t*<sub>1</sub> T [ . . . ]]]  
 (ib) [<sub>FinP</sub> DP<sub>1</sub>[ $\varphi$ ] Fin<sub>[ $\varphi$ ,about</sub>] [<sub>SubjP</sub> Subj<sub>[about</sub>] [ . . . *t*<sub>1</sub> . . . ]]]

<sup>25</sup> Note that when the order of the DPs inside the coordination is switched, slight degradedness obtains. This is presumably due to the fact that pronouns tend to come first in such coordinations. But to the extent that this order is possible, we find the same difference in acceptability as between (52a) and (52b):

- (i) a. \* [Da Franz und du]<sub>1</sub> hot da Hauns gfrogt [*t*<sub>1</sub> ob *t*<sub>1</sub> weggengan]  
 the Frank and you has the John asked if leave-3pl  
 b. ? [Da Franz und du]<sub>1</sub> hot da Hauns gfrogt [*t*<sub>1</sub> ob-s *t*<sub>1</sub> weggeh-ts]  
 the Frank and you has the John asked if-2pl leave-2pl  
 ‘John asked if you and Frank will leave.’

For Rizzi and Shlonsky (2007) the pattern in (52a) should be possible too. We know independently that it shows up in cases where no extraction takes place (14a). Since Rizzi and Shlonsky would attribute the following structure to (52), where S is in [Spec,FinP] to value the  $\varphi$ -features of Fin, before actual long-distance extraction takes place, (52a) cannot be ruled out:

- (53)  $[_{FinP} [_{DP} \text{du und da Franz}]_{[\varphi]1} \text{ob}_{[\varphi,fin]} [_{SubjP} \text{Subj} [_{AgrP} t_1 \text{Agr} [t_1 \text{weggengan}]]]]]$

In particular, the nominal requirement of Subj would be satisfied in (53). The  $\varphi$ -features of *ob* in Fin license the subject criterion. It should not matter at all how the  $\varphi$ -features are later valued (and in fact it must not, because agreement is taken care of by Agr and the nominal requirement by Subj), i.e. there is no difference for satisfaction of the subject criterion with respect to  $\varphi$  being valued by 2nd or 3rd person plural. The theory proposed in section 6.3.2 has no problem with these constructions.

Further, Rizzi (2006b) and Rizzi and Shlonsky (2007) crucially rely on the presence of Agr below Subj, so that the EPP requirement and the agreement process can be dealt with separately. In particular, they assume that in cases of expletive constructions S moves to [Spec,AgrP], whereas the expletive is in [Spec,SubjP]. The following construction, however, suggests that no movement of S at all takes place. Otherwise S should precede the adverb *often*, which following standard practice marks the edge of vP (Cinque 1999):

- (54) There is often a room available.

We conclude that agreement between S and Agr can occur over distance in expletive constructions. This makes a prediction with respect to comp-agr constructions. Recall that in these cases it is the  $\varphi$ -features in Fin satisfying the nominal requirement of Subj (expletives and comp-agr are treated exactly the same in Rizzi and Shlonsky's 2007 theory). That is, S should not move to [Spec,Agr] in expletive constructions, but rather stay in situ and long-distance agree with Fin. German shows vP/VP-fronting. We expect that the vP/VP containing the subject in cases of comp-agr should be able to front with the vP/VP contrary to fact. Consider first the example of fronting in Bavarian, where the subject is not contained in the vP/VP (55).

- (55)  $[_{vP} \text{A Buach kafft}]_1 \text{hot da Hauns gfrogt} [_{CP} t_1 \text{ob-s es } t_1 \text{hobts}]$   
 a book bought has the John asked if-2pl you.2pl have  
 'John asked whether you(pl) bought a book.'

Movement with the subject contained in vP/VP is ungrammatical (56). We therefore conclude that the  $\varphi$ -features on the complementizer do not satisfy

the subject criterion, i.e. the subject does not skip the canonical subject position in the relevant cases. S must leave the vP/VP:

- (56) \*<sub>[vP]</sub> Es a Buach kafft]<sub>1</sub> hot da Hauns gfrogt [<sub>CP</sub> t<sub>1</sub> ob-s t<sub>1</sub> hobts]  
you a book bought has the John asked if-2pl have

An account, where the  $\varphi$ -features of C/Fin satisfy the EPP is unfeasible on these grounds. We therefore conclude that Rizzi (2006*b*) and Rizzi and Shlonsky (2007) make the wrong predictions. The theory articulated in this chapter is more accurate in its empirical predictions, because the EPP positions and the position for agreement between S and T are not split.<sup>26</sup>

## 6.4 Conclusion

This chapter discussed the comp-agr phenomenon and how it relates to extraction of subjects. We argued that agreement connects S to the projection line on which the probing head is located. Further, it was shown that agreement relations are deleted after S-O and cannot be accessed for further computation. This is the very reason why comp-agr must ensue: because C has induced S-O of its complement domain and thereby all the previous established  $\varphi$ -relations are deleted. In addition, we showed that  $\varphi$ -agreement with an embedded phase-head C amounts to being selected by the embedding verb. We called this process ‘secondary selection’.

Further, we argued that theories making use of criterial freezing (see Richards 2001; Boeckx 2003; Rizzi 2006*b*) make some wrong predictions, which the present account does not face. In the present theory, on the other hand, the notion ‘criterial’ can be tied to the absence of  $\varphi$ -features on a given head. This applies both to comp-trace phenomena and, with certain limitations, to *wh*-islands. No dedicated positions for freezing need to be introduced in the present system.

In other words, the theory proposed hinges on three crucial ingredients, which are all independently motivated:

- (57a) opaqueness of certain domains (i.e. the PIC in the current system);
- (57b)  $\varphi$ -agreement;
- (57c) selection.

The present account is thereby of considerable simplicity.

<sup>26</sup> See also Mayr (2008), where it is argued that the subject island can be accounted for under the present formulation in terms of projection line. This part of the ECP cannot be part of Rizzi and Shlonsky’s (2007) theory at all.