

## 1. Introduction

The focus of this paper is the attested English examples in (1), in which a long relativized *subject* unexpectedly triggers agreement in both the embedded and the matrix clause. In (1a), the singular relative operator *which*, referring to the antecedent NP *the standard of hygiene*, agrees with both the matrix (*is felt*) and the embedded (*is attributable*) predicate; in (1b), plural *which*, (with *any quotes* as its antecedent) triggers agreement on both *were (felt)* and *were (relevant)*.

---

<sup>1</sup> An earlier version of this work, with a partially different analysis, was presented at IGG 40, Trento (February 2014), at the University of the Basque Country (UPV-EHU, March 2014), at CGG 24, Madrid (May 2014), and at a SynCart research seminar at the University of Geneva (February 2015). The authors thank the FWO for its financial support (postdoctoral grant FWO13/PDO/024 (Danckaert) and FWO project 3G0A4912 (Haegeman)). We thank Elizabeth Bogal-Allbritten, Timothy Gupton and Eric Lander for comments and judgements, and Adriana Belletti, Jeff Lidz, Terje Lohndal, Jairo Nunes, Andrew Radford, Milan Řezáč, Luigi Rizzi, Ur Shlonsky, Vidal Valmala, and two anonymous reviewers for their suggestions and comments. Needless to say, we remain entirely responsible for the way we have used their comments.

- (1) a. McDonald's has also seen an increase in the standard of hygiene across restaurants which<sub>i</sub> is felt t<sub>i</sub> is attributable to the fact that the programme is now specifically about McDonald's restaurants. ([http://www.cedma-europe.org/newsletter%20articles/Kineo/McDonald's%20UK%20-%20Rapid%20E-Learning%20in%20Action%20\(Oct%202011\).pdf](http://www.cedma-europe.org/newsletter%20articles/Kineo/McDonald's%20UK%20-%20Rapid%20E-Learning%20in%20Action%20(Oct%202011).pdf))
- b. A recording was also made of each School and was then used to transcribe the minutes and any quotes which<sub>i</sub> were felt t<sub>i</sub> were relevant to the process. (<http://orgprints.org/22387/1/JasonHornerMastersthesis.pdf>)

At first sight, such examples seem to be instances of subject **raising** from within a finite clause, which is standardly illicit, regardless of the presence of the complementizer *that*: (2) can be said to violate a constraint according to which **A-movement** cannot cross a CP boundary. Quoting Sigurðsson (2012: 207): “CPs are A-islands; that is, A-relations, including T-licensing, are blocked from being established across C-boundaries” (see also Rizzi & Shlonsky 2007: 146). Although this descriptive generalization remains to be fully accounted for, we will assume here that it is essentially correct.

- (2) \*John<sub>i</sub> seems (that) t<sub>i</sub> reads a book.

Native-speaker informants unanimously reject (2), but data such as (1) are attested, and accepted by some speakers. Speakers rejecting (1) replace the examples by the alternatives in (3), with an expletive subject in the matrix clause. Speakers who accept (1) also accept (3).

- (3) a. ... the standard of hygiene across restaurants which<sub>i</sub> **it** is felt t<sub>i</sub> is attributable to ...
- b. ... any quotes which<sub>i</sub> **it** was felt t<sub>i</sub> were relevant to the process.

Because the pattern in (1) is tied to *wh*-movement and is unavailable with a DP subject (2) (see section 2.1.3), we refer to it as *wh*-raising. Using a cartographic framework, we will develop an analysis for (1) framed against the background of Rizzi & Shlonsky's (2007) approach to subject extraction.

The paper is organized as follows: the remainder of section 1 provides further illustrations of the relevant data. Section 2 inventorizes the core properties of *wh*-raising. Section 3 lays out our theoretical assumptions and section 4 presents our analysis. Section 5 is a brief summary.

(1) illustrates *wh*-raising with relativization, (4) and (5) are interrogative and comparative variants of the *wh*-raising pattern. For reasons of space we discuss only the relativization pattern.

- (4) [the church leaders] disagreed as to which books<sub>i</sub> were thought t<sub>i</sub> were "Godly inspired". (GloWbE; ABC News, Was Jesus Married? Ancient Papyrus Mentions His 'Wife';

<http://abcnews.go.com/blogs/headlines/2012/09/was-jesus-married-ancient-papyrus-mentions-his-wife/>)

- (5) Keep more balloons available than<sub>i</sub> is thought t<sub>i</sub> will be necessary.  
([http://www.ehow.com/how\\_10049417\\_make-balloon-princess-wand.html](http://www.ehow.com/how_10049417_make-balloon-princess-wand.html))

The examples in (1), (4) and (5) seem to be ‘hybrids’ between subject raising and long *wh*-movement. (1b) could be seen as a combination of the raising pattern in (1b’) and the *wh*-movement pattern in (1b’’):

- (1) b’. any quotes which were felt to be relevant to the process  
b’’. any quotes which it was felt were relevant to the  
process

One might consider such hybrid patterns as belonging to a class of ‘**blends**’ or ‘**amalgams**’ which are extragrammatical rather than part of a speaker’s linguistic competence (cf. Bolinger 1961, Coppock 2010, among others). In this paper, we will adopt a different perspective, and analyse the relevant examples as the product of the grammar of some speakers. Although we will do justice to the fact that some properties of the *wh*-raising pattern are characteristic of A-movement, and others of **A’-movement**, our syntactic analysis crucially involves at least one ingredient that is present neither in (1b’) nor in (1b’’).

Specifically, we examine how the grammar generating *wh*-raising would differ from the grammar which does not. Extending Rizzi and Shlonsky's (2007) analysis, we propose that grammars generating (1) have a special device for licensing the subject position of the raising domain.

The empirical basis of our account consists of (i) the intuitions of five native speaking informants who accept the pattern, (ii) anecdotally encountered attested data like those above and (iii) material from searches in online corpora.

## **2. The empirical data**

### *2.1. The core properties*

#### *2.1.1 Double agreement*

The hallmark of *wh*-raising in (1), (4) and (5) is the fact that, in addition to triggering **agreement** in the clause from which it is extracted, a *wh*-subject also agrees with the verb in the immediately superordinate clause. In (1b), repeated here in a simplified form in (6), plural *which* agrees with the lower copula and with the higher auxiliary.

(6)      any quotes which<sub>i</sub> were felt t<sub>i</sub> were relevant to the process

The double agreement makes an analysis postulating a null variant of the subject expletive *it* in the higher clause implausible, since (null) *it* should trigger singular

agreement. Similarly, the double agreement is incompatible with analysing the matrix domain as a parenthetical.

### 2.1.2 *The selecting predicate*

The higher clause in which the *wh*-subject triggers agreement contains a raising predicate including verbs such as *seem*, *appear*, passive predicates such as *said*, *felt*, *hoped*, and adjectives such as *likely*.

### 2.1.3 *Only wh-movement*

Although admittedly there are occasional attestations of the pattern with non-*wh*-subjects, such as (7), all our informants, including those who accept the basic pattern in (1), reject double agreement configurations with non-*wh*-subjects. Therefore, we consider such cases ungrammatical (as signalled by the parenthesized asterisk), and in what follows we will analyse a grammar that can generate cases like (1), (4) and (5), but not (7).

- (7) (\*) However, IT spending rates are expected will bottom out in 2013 and will be resilient over the long run [...]. (Google search 18.01.2014; <http://www.gartner.com/newsroom/id/2238915>)

The asymmetry between *wh*-subjects and DP subjects makes an analysis in terms of copy-raising (Asudeh 2002) or hyperraising (Carstens & Dierckx 2013, among many others) unlikely because these patterns are not restricted to *wh*-subjects.

#### 2.1.4 Subject restriction

*Wh*-objects cannot trigger agreement in a superordinate clause: examples such as (8) are not attested, and rejected by our informants.

- (8) \*they will transcribe any quotes which<sub>i</sub> were felt [they can use t<sub>i</sub> in the court case].

#### 2.1.5 That-trace effect

The extraction of the subject in the *wh*-raising configuration gives rise to the familiar **that-trace effect**. Our informants reject (9) with an overt complementizer in the extraction domain:

- (9) These organisations will now have the opportunity to bid for the new city funds, which<sub>i</sub> are hoped (\*that) t<sub>i</sub> will help up to 150 families facing eviction

#### 2.1.6 The biclausal restriction

For ease of discussion, we use numerals to identify the clausal domains in a given derivation: the clause from which the *wh*-subject is extracted is assigned the index 1, and labelled CP1, the immediately dominating clause is CP2 etc. Similarly, the lowest TP is labelled TP1, the immediately dominating one TP2.

*Wh*-raising involves two and only two adjacent finite clauses. Having triggered agreement in CP2, the moved *wh*-subject halts in the left periphery of the same

clause. There are no attestations such as (10), with further *wh*-movement of the *wh*-subject to CP3, and such examples are rejected by our informants:<sup>2</sup>

- (10) ? the new city funds, [<sub>CP3</sub> which<sub>i</sub> they say/it is said [<sub>CP2</sub> t<sub>i</sub> are hoped [<sub>CP1</sub> t<sub>i</sub> will help up to 150 families facing eviction]]].

Informants who accept double agreement (11a) reject triple agreement (11b).<sup>3</sup>

<sup>2</sup> We ascribe the fact that (10) was in fact judged as better than (11b) and (12a,b) to the availability of an alternative reading where the string *it is said* functions as a parenthetical inside CP2.

<sup>3</sup> Our data are reminiscent of the *que/qui* alternation in French illustrated in (i). However there are salient differences: on the one hand, the *que/qui* alternation is manifested only in the clause from which the subject is extracted (ia), and on the other, long movement is possible, with the *que/qui* alternation being manifested in the lowest domain only:

- (i) a. la personne que/\*qui je pense \*que/qui  
the person that/\*qui I think \*that/qui  
pourra résoudre le problème  
will.be.able solve.INF the problem  
‘the person that I think will be able to solve the problem’
- b. la personne que/\*qui tu as dit que/\*qui tu  
the person that/\*qui you have said that/\*qui you  
penses \*que/qui pourra résoudre le problème  
think \*that/qui will.be.able solve.INF the problem  
‘the person that you have said that you think will be able to solve the problem’



- (11) a. This is a mutation of the virus [CP2 which<sub>i</sub> was suspected [CP1 t<sub>i</sub> had initially caused the infection]]].
- b. \*/?/?This is a mutation of the virus [CP3 which<sub>i</sub> was reported [CP2 t<sub>i</sub> was suspected [CP1 t<sub>i</sub> had initially caused the infection]]].

In this respect, *wh*-raising is different from regular raising, as the raising analogue of (11b) is acceptable:

- (11) c. This is a mutation of the virus [CP3 which<sub>i</sub> was reported [t<sub>i</sub> to be suspected [ t<sub>i</sub> to have initially caused the infection]]].

Finally, the alternatives in (12), in which a *wh*-subject moves out of CP1, skips CP2 and triggers agreement in CP3, are also unattested and rejected by our informants, regardless of whether the intermediate clause has a lexical (12a) or an expletive subject (12b).

- (12) a. \* the new city funds, [CP3 which<sub>i</sub> are hoped [CP2 the government will confirm [CP1 t<sub>i</sub> will help 150 families facing eviction]]].
- b. \* the new city funds, [CP3 which<sub>i</sub> are said [CP2 it is hoped [CP1 t<sub>i</sub> will help up to 150 families facing eviction]]].

---

We thank an anonymous reviewer for bringing up these data. See also the discussion of text example (21).

## 2.2 Some similar patterns in English

In *wh*-raising, with respect to the clause that dominates its extraction site, an A'-moved subject surprisingly gives rise to T-agreement, a behaviour typical for A-movement. There are similar patterns elsewhere in the grammar of English, some of them also restricted to a subset of speakers.

### 2.2.1 Accusative long *wh*-moved subjects

*Wh*-raising is reminiscent of examples such as (13), in which the *wh*-subject of a finite clause is realized by *whom*, whose accusative source is taken to be the selecting verb *expect* (Quirk et al. 1985: 368, 1299). Such configurations are sometimes considered ungrammatical (cf. Quirk et al. 1985: 1299), and they could also be analysed as blends, with (13) a blend of (14a) and (14b).

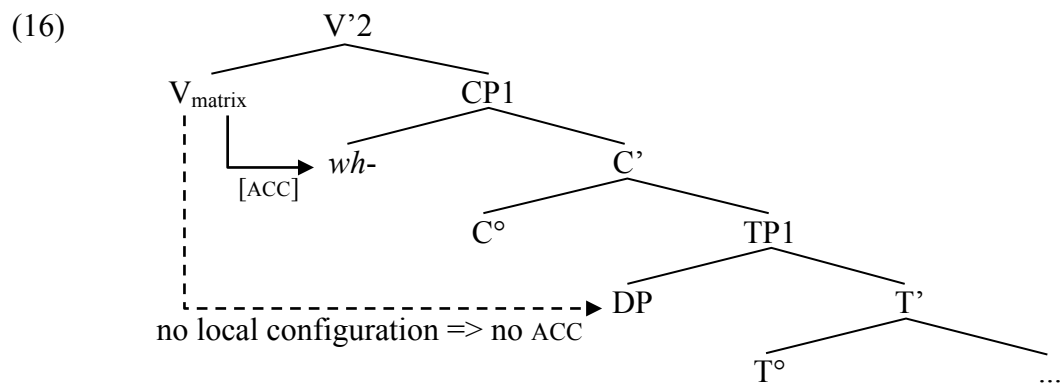
(13) This is the candidate [*whom*<sub>i</sub> [*we expect* [ *t*<sub>i</sub> will win the competition ]]].

- (14) a. This is the candidate whom we expect to win the competition.  
b. This is the candidate who we expect will win the competition.

As is the case for *wh*-raising, (13) displays an asymmetry between *wh*- and DP subjects, in that only the former can be assigned accusative **case** from a higher verb.

(15) \*We expect him/her/them will win the competition.

Formal accounts for the accusative form of the *wh*-subject propose that by virtue of transiting through the embedded left periphery, the *wh*-subject enters into a local relation with the higher verb - here *expect* - and is assigned accusative case (cf. Kayne (1995) and Haegeman (2008), but see Lasnik & Sobin (2000) for a different view). The ungrammaticality of (15) is expected: a DP in the embedded SpecTP cannot enter into a local configuration with the selecting verb.



Observe that for (16) to converge, the matrix V must be able to probe and case-mark a *wh*-subject which is independently assigned nominative case by the embedded T. This means that a constituent which is assigned case need not become syntactically inactive. We might then conclude that at least in some cases English has ‘hyperactive’ DPs (cf. Carstens 2011), i.e. DPs which remain active for probing in spite of having already been assigned structural case (or more broadly, DPs that take part in A-operations in more than one clausal domain).

### 2.2.2 *Wh-agreement with long moved subjects in American English*

The *wh*-raising data in (1) are also reminiscent of an American English pattern discussed in Kimball & Aissen (1971) and Kayne (1995) illustrated in (17), in which the *wh*-subject *who* unexpectedly triggers plural agreement with the matrix predicate *think*, in spite of the presence of the singular subject *Clark*. Only a subset of speakers accept this pattern.

- (17) % Mark knows the people  $who_{PL}$  Clark $_{SG}$  think $_{PL}$  are in the garden. (from Kimball & Aissen (1971: 241, their (1b); cf. Kayne 1995)).

Once again, in (17) the T probe associated with the matrix verb *think* must be able to probe and agree with a case marked DP in the embedded domain. This might thus be seen as another instantiation of a ‘hyperactive’ DP.

### 2.2.3 *DP/wh-asymmetries and ECM*

The asymmetry between *wh*- and DP subjects in (1)/(7) is also found with some ECM complements, as shown in (18). Assuming that the infinitival complements in (18) have a left-peripheral space, i.e. that they are CPs rather than bare TPs, a DP in the infinitival SpecTP is not close enough to the selecting verb for case marking. By transiting through the left periphery of the complement clause, a *wh*-moved subject becomes accessible to the higher case marker (cf. (16)). For Romance analogues see Kayne (1981) and Rizzi (1982).

- (18) a. \*I assure you John to be the best student.

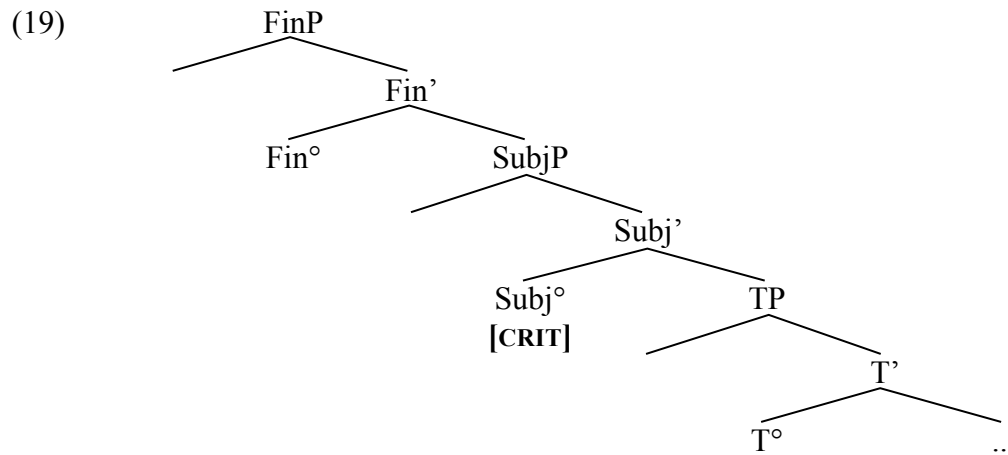
- b. John, who<sub>i</sub> I assure you t<sub>i</sub> to be the best student... (Kayne 1980: 79-80, his (34) and (33))

### 3. Cartography and the Subject Criterion

We here adopt the approach to subject extraction developed by Rizzi (2006), Rizzi & Shlonsky (2006, 2007) (henceforth R&S) and Shlonsky (2014), which recasts the EPP in terms of the Subject Criterion and accounts for restrictions on subject extraction in terms of **Criterial Freezing**.

#### 3.1 *SubjP*, the Subject Criterion and subject extraction

Following Cardinaletti (1997, 2004), Rizzi (2006) postulates that T is the locus where subject-verb agreement is established and that TP is dominated by SubjP, which hosts the subject of predication. SubjP is dominated by FinP, the lowest left-peripheral projection, which encodes the finiteness properties of the clause (Rizzi 1997).



SubjP is a criterial projection. A criterial requirement is defined as in (20a) (R&S 2006: 138, their (53)):

- (20) a. For [+F] a criterial feature,  $X+F$  is in a Spec-head configuration with  $A+F$ .

Criterial features comprise [*wh*], [Top], [Foc], [Rel] and [Subj]. Criterial configurations induce Criterial Freezing of the constituent in the specifier of the criterial head.<sup>4</sup> A constituent which has satisfied the Subject Criterion (henceforth SCrit) by moving to SpecSubjP is thus frozen in place, as illustrated by the subject-object asymmetry in the French interrogatives in (21a,b):

- (21) a. \*Qui<sub>i</sub> crois-tu que [<sub>SubjP</sub> t<sub>i</sub> va partir]?  
 who think-you that will leave

<sup>4</sup> We are abstracting away from possible cases of subextraction.

- b. Que<sub>i</sub> crois-tu que [<sub>SubjP</sub> Jean a fait t<sub>i</sub> ]?  
 what think-you that Jean has done  
 ‘What do you think (that) John did?’

Rizzi & Shlonsky (2006, 2007) assume that grammatical instances of subject extraction bypass SpecSubjP, and that the SCrit is satisfied by a specialized mechanism manifested by the replacement of the regular complementizer *que* by *qui* (21c):

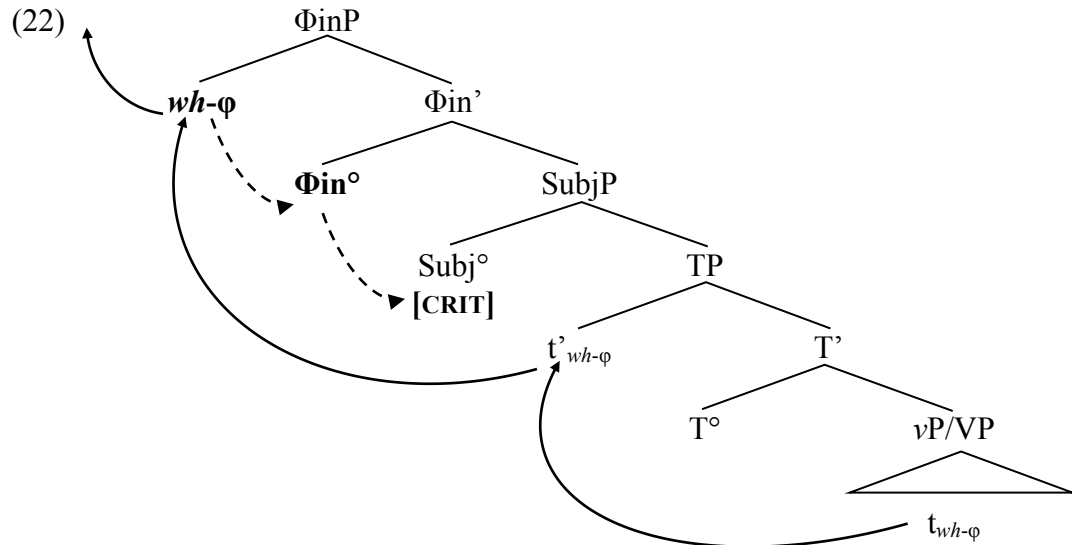
- (21) c. Qui crois-tu qui va partir?  
 who think-you *qui* will leave  
 ‘Who do you think will leave?’

According to Rizzi & Shlonsky (2007), *qui* in (21c) is a manifestation of Fin enriched with  $\phi$ -features (see also Rizzi 1990), which we represent here as ‘ $\Phi_{in}$ ’. The authors assume that through the local c-command relation with the Subj head, the  $\phi$ -features on  $\Phi_{in}$  satisfy the SCrit. Rizzi & Shlonsky (2007: 138-139) therefore restate the criterial condition as follows:

- (20) b. For [+F] a criterial feature, X+F is locally c-commanded by A+F.

In addition, they postulate that the  $\phi$ -features on  $\Phi_{in}$  have to be independently licensed: on its way to its ultimate left-peripheral landing site, the *wh*-subject moves

through Spec $\Phi$ in and licenses the  $\varphi$ -features of  $\Phi$ in. Spec $\Phi$ in is not a criterial position, meaning that it is not a halting place. (22) summarizes the derivation. As the constituent in Spec $\Phi$ inP  $\varphi$ -agrees with the head, Spec $\Phi$ in qualifies as an A-position (Rizzi 1991).



### 3.2 Subject extraction from English finite clauses

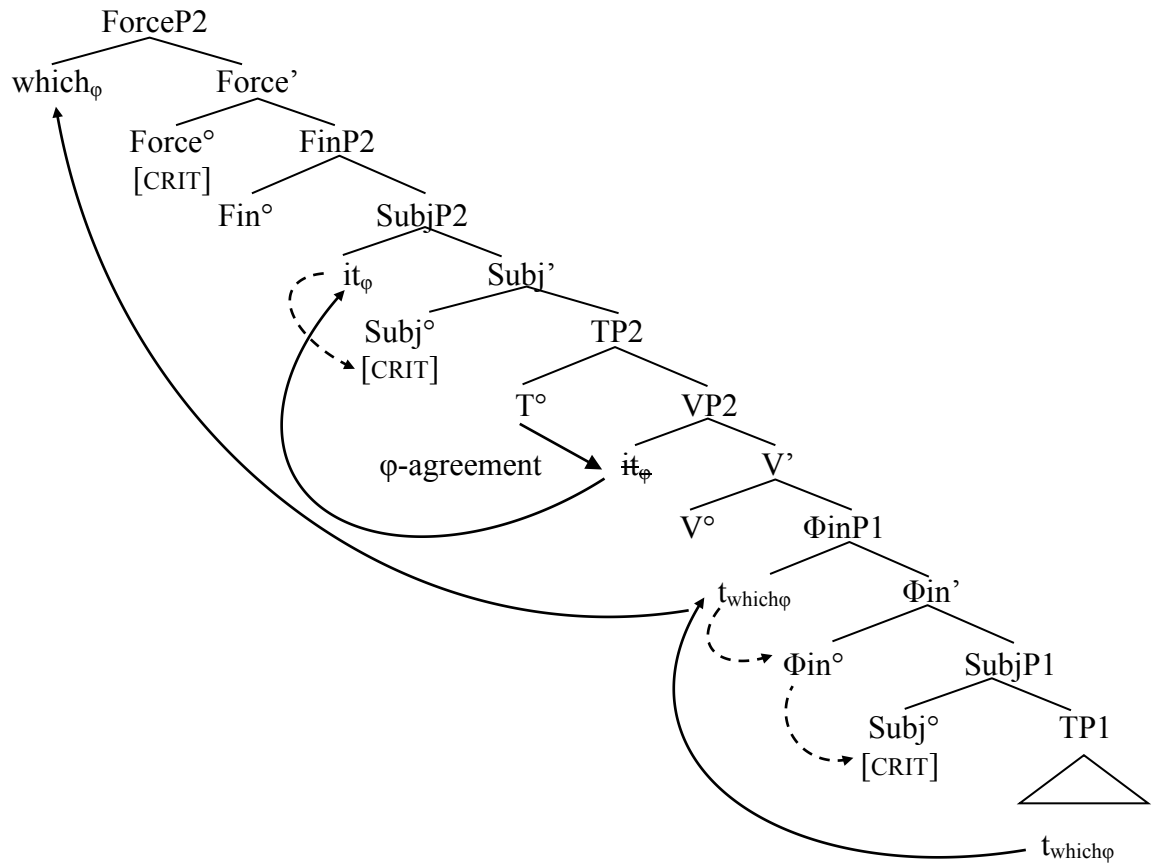
#### 3.2.1. Licit extraction

In regular subject extraction in English (23a), we follow Rizzi & Shlonsky (2006: section 9) and assume that the left periphery of the complement clause in (23a) is reduced ('truncated') to  $\Phi$ inP1. The SCrit on Subj1 is satisfied by the  $\varphi$ -features on  $\Phi$ in1, themselves licensed by the *wh*-moved subject in Spec $\Phi$ in1. (23b) shows the main ingredients of the analysis. In the complement clause agreement on T1 is triggered by the plural subject *which* <quotes> (not shown); matrix agreement on T2 is triggered by the expletive subject *it*.



(23) a. quotes which it was felt were relevant to the process

b.



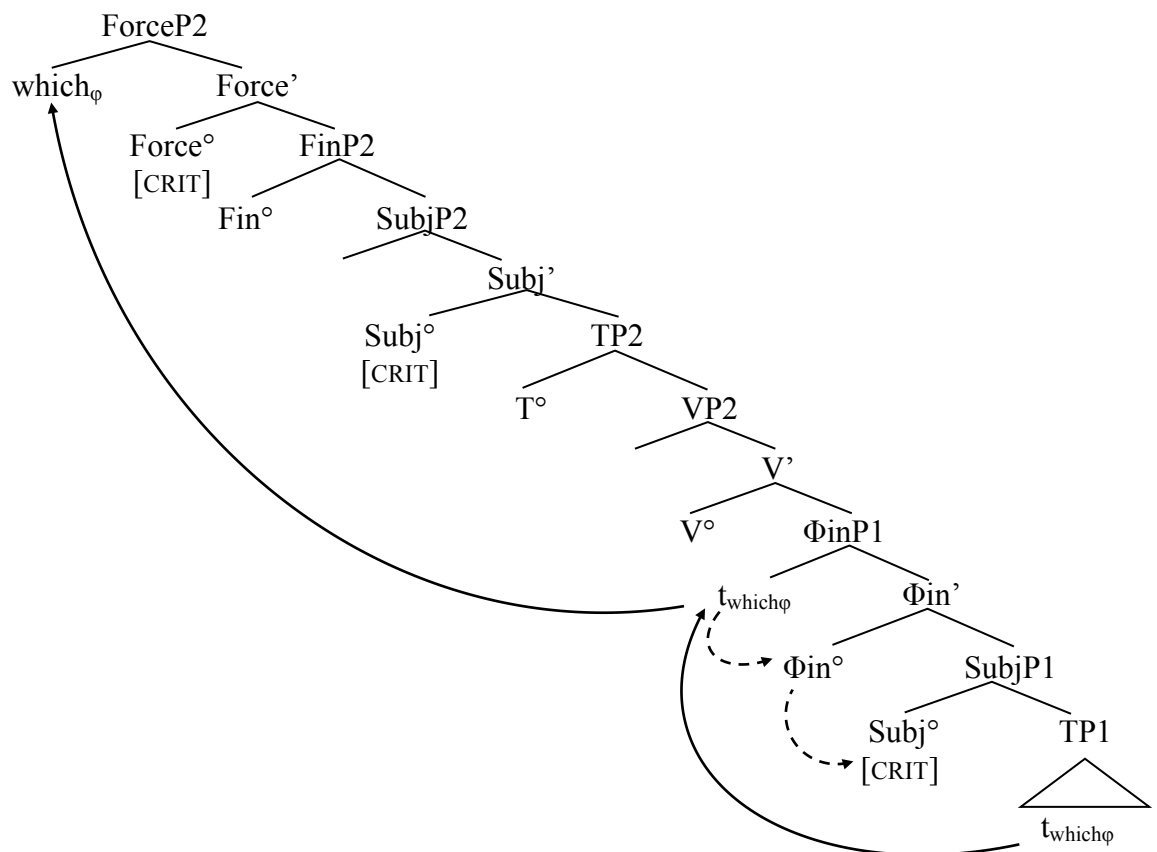
### 3.2.2. The unavailability of *wh*-raising

For most English speakers *wh*-raising, illustrated in (1) and repeated as (24a), is unacceptable. Let us examine how the pattern can be ruled out in R&S's account.

(24) a. \*quotes which were felt were relevant to the process

Informally speaking, (24a) is the result of embedding a finite clause from which the subject is successfully extracted (viz. by virtue of an instantiation of  $\Phi_{in}$ ), under a finite raising predicate. Thus a partial representation of (24a) would be as in (24b), with V2 a raising predicate.

(24) b.



One way of ruling out the double agreement is by saying that T2 cannot probe the lower subject *which* because having been assigned nominative case, the valued case-features of the latter become syntactically inactive and thus invisible to higher case

probes. However, in sections 2.2.1 and 2.2.2 we did come across what seem to be instances of ‘hyperactive’ (subject) DPs in English, in structures that are acceptable to some speakers. Below, we will suggest that for a subset of speakers T2 can actually probe a hyperactive nominative subject in  $\Phi$ inP1, giving rise to the double agreement effect.

Before addressing this point, observe that even if the double agreement as such can be derived, a problem arises in relation to the satisfaction of the matrix SCrit. Since T2 agrees with the embedded subject, insertion of an expletive is blocked, as this element will not be able to agree with and be case marked by T2. Because the relative operator *which* (*quotes*) ultimately has to end up in a left-peripheral position, it cannot itself move to SpecSubj2 to satisfy the SCrit because, SpecSubjP2 being criterial, this would induce freezing. Furthermore, such movement would illicitly extend an A-chain across a CP-boundary. For the satisfaction of the SCrit in the context of subject extraction in CP1,  $\Phi$ in1 insertion was invoked, but R&S (2007: 145-146) restrict the availability of  $\Phi$ in to the clause from which the subject is extracted.  $\Phi$ in-insertion being unavailable at the level of CP/Fin2, there is no alternative strategy to satisfy the SCrit, and *wh*-raising is correctly (in the case of speakers rejecting (1)) excluded. We will solve this apparent problem in the next section.<sup>5</sup>

---

<sup>5</sup> Note in passing that if the relevant embedded structure could be truncated to SubjP1 the system would not preclude T2 from agreeing with a DP subject in the canonical subject position of the lower clause. Again, though, the SCrit in the higher clause cannot be satisfied since SubjP1 is a criterial position and hence the relevant DP subject would not be able to move any higher.

#### 4. The grammar of *wh*-raising

In *wh*-raising (25a), the extracted subject triggers T-agreement in both the embedded clause - as expected - and in the immediately dominating raising domain.

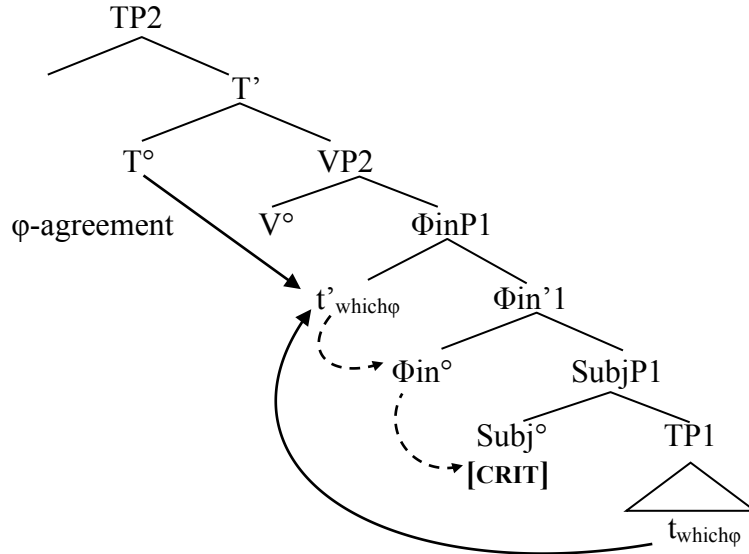
- (25) a. % to transcribe any quotes which were felt were relevant to the  
process

As a first marked property, the grammar with *wh*-raising must allow the features of the embedded *wh*-subject to be ‘hyperactive’ so as to become accessible to the T-head of the raising clause: this will prevent insertion of an expletive subject in the higher clause. Given that other cases of such hyperactivity are arguably found in (varieties of) English (cf. section 2.2), let us propose that the strategy is available to the relevant speakers. But in addition, the grammar generating *wh*-raising must also have an ‘exceptional’ way of satisfying the SCrit in the higher domain.

##### 4.1 *Hyperactivity* and T2-agreement

The configuration for the agreement between matrix T2 and the long moved *wh*-subject evidenced by the agreement between <any quotes> *which* and *were (felt)* in (25a) is schematized in (26), to be modified below.

(26)



At this stage, we need to stipulate that the hyperactive DP must occupy an A-position, since otherwise any DP on the edge of an embedded CP could trigger superordinate T-agreement, contrary to fact (cf. the subject restriction in section 2.1.4). Assuming that taking part in operations related to case and agreement is what defines A-positions (cf. Rizzi 1990, 1991), we will assume that this stipulation is at least intuitively plausible.

#### 4.2 The matrix SCrit

As mentioned above, T2-agreement with the *wh*-subject blocks insertion of an *it*-expletive in SpecTP2 (25b), making the regular mode of satisfying the SCrit, insertion of an XP in SpecSubjP2, unavailable:

- (25) b. \* to transcribe any quotes which [<sub>SubjP2</sub> it were felt were relevant to the process].

In the absence of a regular subject in TP2, the SCrit associated with Subj2 has to be satisfied differently. Moving the *wh*-subject to SpecSubjP is not an option because it would illicitly extend the A-chain beyond the finite CP1, and it will lead to freezing.

Our hypothesis is that while for most speakers  $\Phi_{in}$ -insertion is restricted to the embedded clause (i.e.  $\Phi_{in1}$ ), speakers accepting *wh*-raising can also insert it at the matrix level, thus satisfying the matrix SCrit. Although for Rizzi & Shlonsky (2007: 137; 145-146)  $\Phi_{in}$  can only be inserted in contexts of ‘local’ subject extraction (i.e. in the clause in which an extracted subject is base generated), we can hypothesize that insertion of  $\Phi_{in2}$  actually is licensed by virtue of T2-agreement with the (hyperactive) *wh*-subject. The idea would be that by virtue of its agreement with T2, the *wh*-subject can also ‘requalify’ as the ‘local’ subject of CP2. If this is on the right track, the more liberal use of  $\Phi_{in}$  follows from the exceptional hyperactivity of *wh*-subjects.

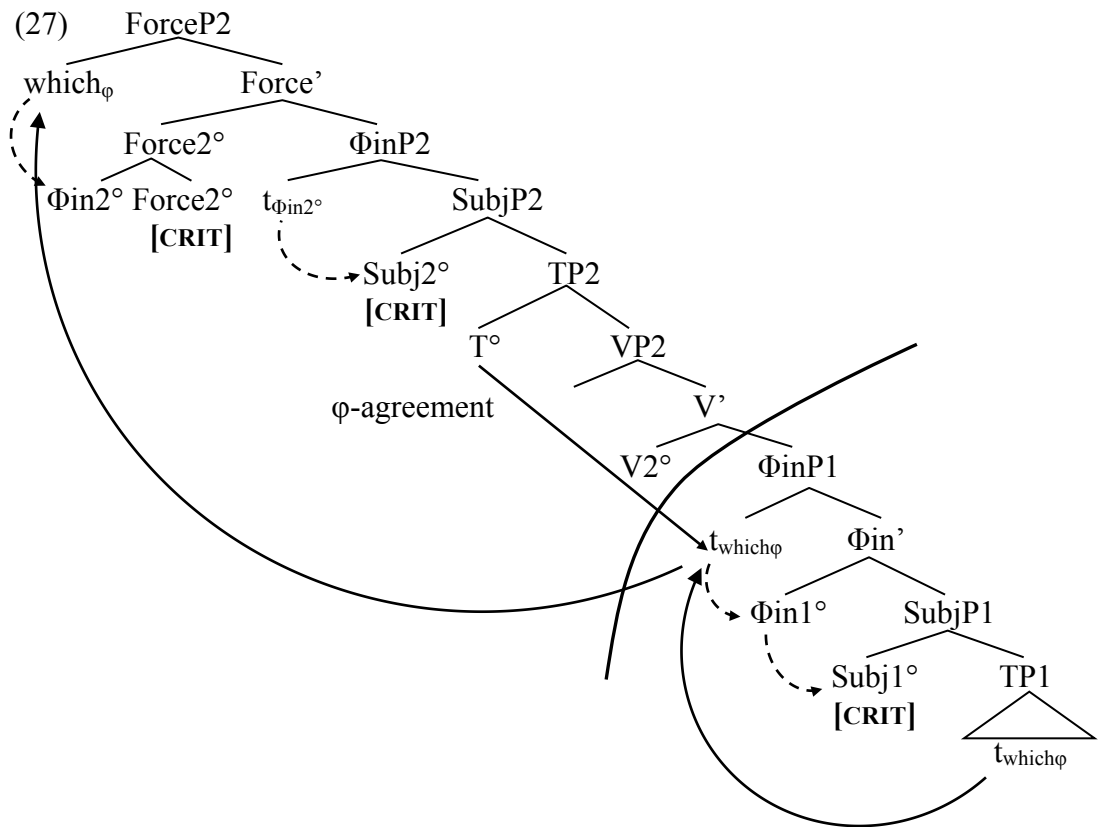
Assuming  $\Phi_{in}$ -insertion indeed to be available also in CP2, once again the  $\phi$ -features of  $\Phi_{in2}$  have to be licensed independently: we take it that this is achieved by the *wh*-subject which targets a left-peripheral criterial position, say SpecForceP2 (Rizzi 1997).<sup>6</sup> However, the *wh*-subject cannot move from Spec $\Phi_{in1}$  to Spec $\Phi_{in2}$ : Spec $\Phi_{in}$  is an A-position and movement from Spec $\Phi_{in1}$  to Spec $\Phi_{in2}$  would again illicitly extend an A-chain beyond a finite clause boundary. We therefore need to propose an alternative scenario to license the  $\phi$ -features of  $\Phi_{in2}$ .

Recall that the *wh*-subject targets a criterial position, Force2 and thus attains a local relation with Force2. Assume that  $\Phi_{in2}$  incorporates into the criterial Force2

---

<sup>6</sup> The relevant position might also be labelled SpecRelP as in Shlonsky (2014).

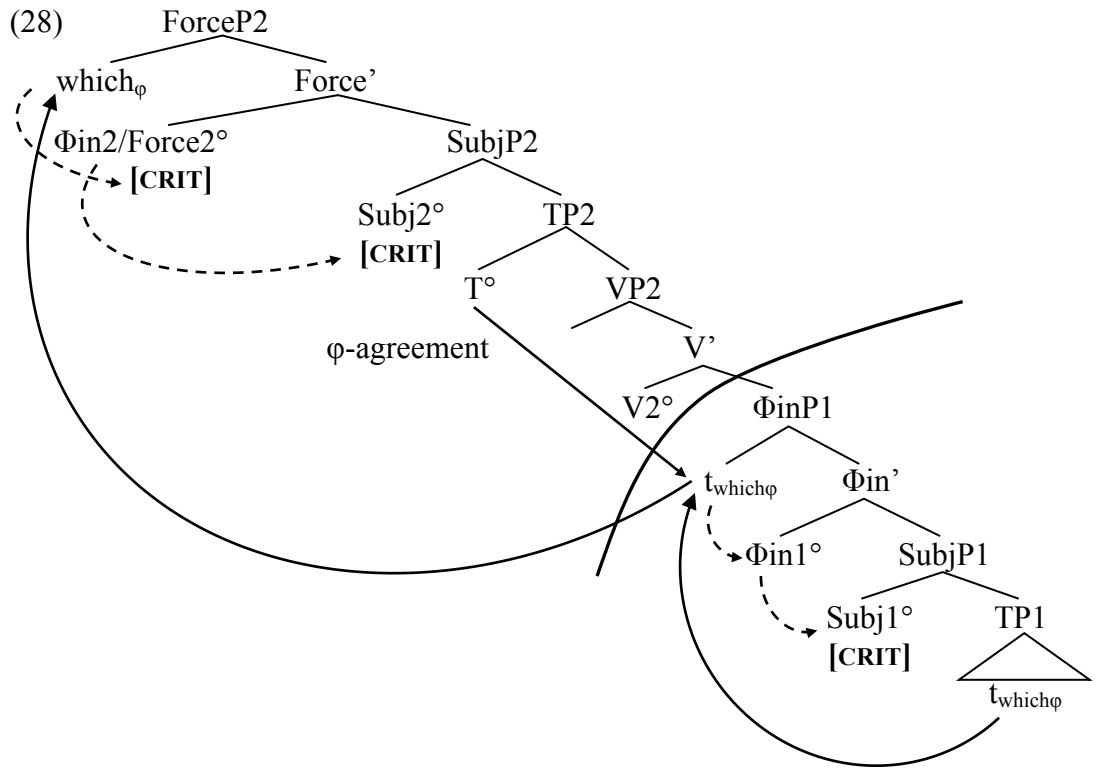
head. Through the creation of the complex head  $\Phi_{in2}$ -Force2, the  $\phi$ -features of  $\Phi_{in2}$  attain the required local relation with the *wh*-subject in SpecForce2. Thus in the specifier position of Force2- $\Phi_{in2}$ , the *wh*-subject simultaneously satisfies both the criterial condition of Force2 and licenses the  $\phi$ -features on  $\Phi_{in2}$ . (27) summarizes the derivation:



In work on Hebrew **relativization** Shlonsky (2014) proposes that  $\Phi_{in}$  and the criterial head in whose specifier relative operators are hosted (Rel) can constitute one syncretic head. This proposal goes back to Rizzi (1997), where it was proposed that Fin and Force do not occur as separate heads in the absence of any topical or focal material. Our **incorporation** analysis can be reformulated along such lines. Recall that Rel is a criterial head. In Shlonsky's original proposal,  $\Phi_{in}$  (or nominal Fin, in his

terms) and Rel can only be syncretic in the case of short extraction, since for him  $\Phi_{in}$  is restricted to the lowest level of extraction (i.e.  $\Phi_{in1}$  and not  $\Phi_{in2}$ ). In our proposal, for the grammars which generate *wh*-raising, i.e. allow T2-agreement with the hyperactive *wh*-phrase in Spec  $\Phi_{in1}$ ,  $\Phi_{in}$  may be inserted at higher levels, and thus in terms of Shlonsky's analysis we would hypothesize that  $\Phi_{in}$  can be syncretic with the criterial head targeted by the long moved *wh*-phrase. To the extent that *wh*-interrogatives are also available in the case of *wh*-raising (see (4)) we would have to assume that  $\Phi_{in}$  can also be syncretic with an interrogative criterial head. However, assuming a scenario in which Force2 and  $\Phi_{in}$  are syncretic, the question will arise whether the specifier of the syncretic head is an A position or an A' position. If the former, then the movement of the *wh*-subject from Spec $\Phi_{in1}$  violates the ban on the continuation of the A-chain. Possibly, the internal articulation of the features in the syncretic head might provide a solution to this problem. For reasons of space we do not pursue this point here.





#### 4.3 Deriving *wh*-raising: taking stock

In our analysis, the ‘exceptional’ nature of English *wh*-raising is captured by the following three assumptions:

- (i) T2 can probe a (nominative) case-marked *wh*-subject in an embedded SpecΦinP1. The goal DP can be said to be ‘hyperactive’ (in the sense of Carstens 2011).
- (ii) Φin is not restricted to the periphery of the clause from which the subject is locally extracted.
- (iii) Φin can incorporate to (or be syncretic with) a criterial head.

As for (i), the hypothesis that a cased *wh*-DP ‘exceptionally’ remains syntactically active finds some parallels in English discussed already in sections 2.2.1 and 2.2.2. Extending Rizzi & Shlonsky’s approach (ii) plausibly follows from (i), (iii) exploits (ii) in combination with Shlonsky’s (2014) analysis of Hebrew relatives.

The exceptional features (i)-(iii) are integrated in the grammar that derives the canonical pattern, hence a grammar generating *wh*-raising also generates the ‘canonical’ pattern of subject extraction.

In what follows we show to what extent our hypothesis can capture the remaining restrictions on *wh*-raising described in section 2. We will start with the ban on *wh*-raising of non-subjects.

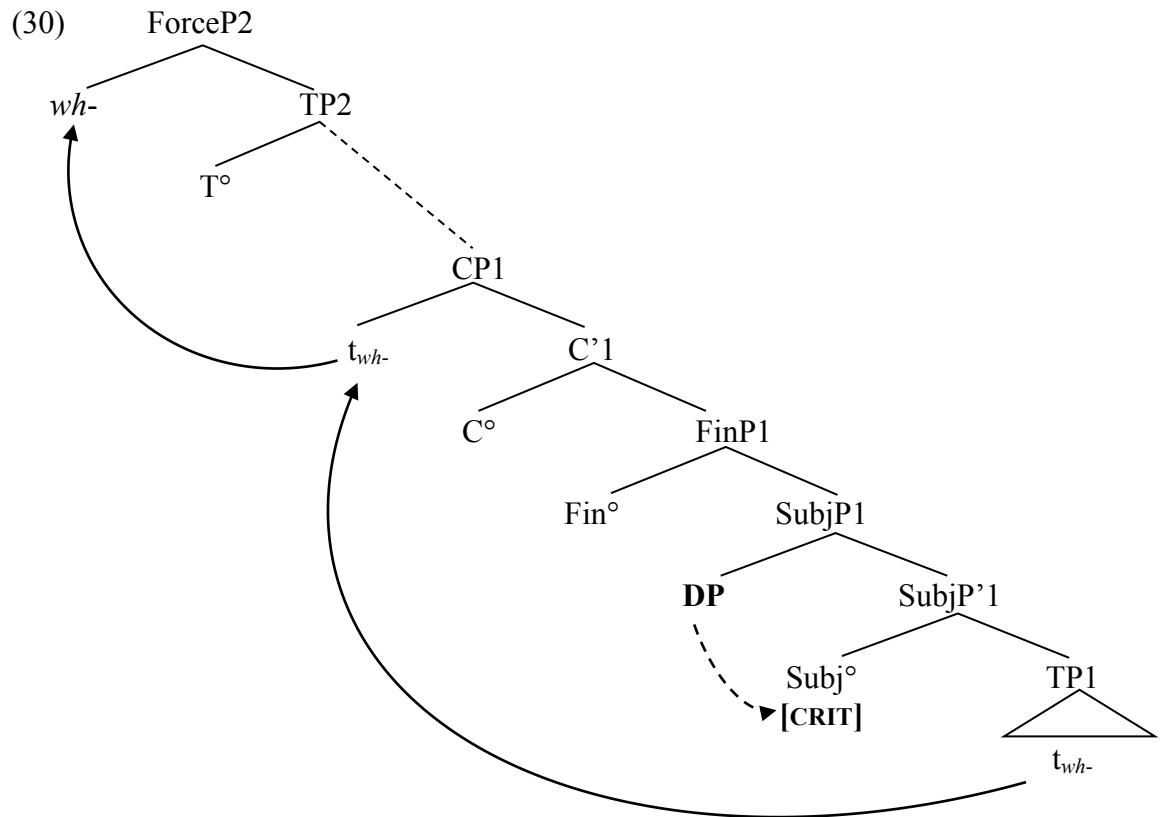
#### 4.4 *The subject restriction*

As discussed in 2.1.4 only (local) subjects give rise to *wh*-raising. (8) repeated here as (29) is generally ungrammatical.

- (29) \*they will transcribe any quotes [<sub>CP2</sub> which<sub>i</sub> were felt [<sub>CP1</sub> they can use  
t<sub>i</sub> in the court case].

In the intended derivation of (29), in CP<sub>1</sub>, the subject DP *they* triggers agreement (*can*). The *wh*-object of *use* moves on to the edge of CP<sub>1</sub>, where it would agree with T<sub>2</sub> *were*. As before, the *wh*-constituent could then continue to its criterial position in CP<sub>2</sub>. In CP<sub>2</sub> the SCrit could not be satisfied in the regular manner, but Φ<sub>in2</sub> could be invoked, being licensed by agreement with the moved *wh*-constituent.

In order to exclude this scenario, we stipulated that T must probe a constituent in an A'-position. The edge position of CP1 which hosts the *wh*-object is an A'-position and a DP in that position can thus not give rise to T2-agreement. Expletive insertion at the level of TP2 will lead to satisfaction of the SCrit in preference to the costlier - and redundant - operation of  $\Phi$ in-insertion.



Note that a crucial ingredient of our account of the ‘subject restriction’ is the (independently motivated) assumption that clauses whose thematic subject is A'-moved are truncated and do not have a full-fledged left periphery, and hence no A'-edge (see again Rizzi & Shlonsky 2007 for additional discussion).

#### 4.5 The biclausal restriction

The scenario outlined above also rules out (31) (= (12a)), i.e. one of the three illicit cases of *wh*-raising which do not obey the ‘biclausal restriction’ introduced in section 2.1.6. In (31) a subject extracted from CP1 gives rise to *wh*-agreement with T3 but not T2:

- (31) \* the new city funds, [<sub>CP3</sub> which<sub>i</sub> are hoped [<sub>CP2</sub> the government will confirm [<sub>CP1</sub> t<sub>i</sub> will help 150 families facing eviction]]]

This example can be excluded in the same way as *wh*-raising of non-subjects. If T only probes DPs in A-positions, we correctly predict T3 not to be able to probe for the *wh*-subject when the latter occupies an A'-position on the CP2 edge.

At this point we still have to account for the unavailability of the two other subcases of illicit continuation of *wh*-movement discussed in section 2.1.6. In the first, in (32) (= (10)), the moved *wh*-subject agrees with T2 and moves to the left periphery of CP3, without agreeing with T3, with its own (lexical or expletive) subject. In the second, (33) (= (11b)), *wh*-agreement illicitly applies in both CP2 and CP3.

- (32) ? the new city funds, [<sub>CP3</sub> which<sub>i</sub> they say/it is said [<sub>CP2</sub> t<sub>i</sub> are hoped [<sub>CP1</sub> t<sub>i</sub> will help up to 150 families facing eviction]]].

- (33) \*/??This is a mutation of the virus [<sub>CP3</sub> which<sub>i</sub> was reported [<sub>CP2</sub> t<sub>i</sub> was suspected [<sub>CP1</sub> t<sub>i</sub> had initially caused the infection]]].

In our account, *wh*-raising crucially depends on the fact that  $\Phi_{in}$  is available at levels higher than CP1 and that it incorporates to (or is syncretic with) a criterial head, whose specifier hosts the moved *wh*-subject. Due to criterial freezing the *wh*-subject will halt there.

In (32) and (33) a non-terminal step of cyclic *wh*-movement targets a non-criterial ‘edge’ position in the left periphery of the intermediate CP2. To allow the licensing of the features of  $\Phi_{in2}$ , the *wh*-moved subject has to attain a spec-head relation with  $\Phi_{in2}$ . As the continuation of an A chain beyond the finite CP1 is excluded, this would be achieved via the incorporation strategy described above.  $\Phi_{in2}$  would have to incorporate into the non-criterial head in CP2, with the *wh*-subject in transit locally licensing the features of  $\Phi_{in2}$ . However, this derivation is unavailable because in our account  $\Phi_{in}$ -incorporation is restricted to criterial heads. Note that at this point this restriction on  $\Phi_{in}$ -incorporation is stipulated. The motivation for the ban on  $\Phi_{in}$ -incorporation to a non-criterial head depends on how successive cyclic movement is handled in the cartographic and criterial framework. In Danckaert et al. (to appear) we have outlined some possible ways in which this restriction can be derived. For reasons of space we refer the reader to that discussion.

## 5. Summary

This paper considers *wh*-raising in English, a pattern in which a *wh*-subject triggers T-agreement in a clausal domain immediately dominating its merge site. For most

speakers this pattern is unacceptable. Adopting Rizzi & Shlonsky's (2007) approach to subject extraction, we relate the acceptability of *wh*-raising for some speakers to the distribution of the left-peripheral  $\phi$ -enriched head  $\Phi_{in}$ , which plays a crucial role in subject extraction. We propose that in a grammar with *wh*-raising, extracted subjects can exceptionally be 'hyperactive' (cf. Carstens 2011) and enter into A-relations (receive nominative case and trigger subject-verb agreement) in more than one clause. As a result,  $\Phi_{in}$  is more liberally available than in the grammar lacking hyperactive DPs, and in particular  $\Phi_{in}$  can also contribute to satisfying the Subject Criterion at domains higher than the clause from which the subject is initially extracted.

## References

- Asudeh, Ash. 2002. Richard III. *Chicago Linguistic Society* 38: 31-46.
- Bolinger, Dwight. 1961. Syntactic blends and other matters. *Language* 37: 366-381.
- Cardinaletti, Anna. 1997. Subjects and clause structure. In *The New Comparative Syntax*, Liliane Haegeman (ed.), 33-63. London: Longman.
- Cardinaletti, Anna. 2004. Towards a cartography of subject positions. In *The Structure of CP and IP*, Luigi Rizzi (ed.), 115-165. Oxford: OUP.
- Carstens, Vicki. 2011. Hyperactivity and Hyperagreement in Bantu. *Lingua* 121, 721-741.
- Carstens, Vicki & Diercks, Michael. 2013. Parameterizing Case and Activity: hyper-raising in Bantu. *NELS* 40, 99-118.

- Coppock, Elizabeth. 2010. Parallel grammatical encoding in sentence production: evidence from syntactic blends. *Language and Cognitive Processes* 25, 38-49.
- Danckaert, Lieven, Haegeman, Liliane & D'Hulster, Tijs. To appear. Deriving idiolectal variation: English wh-raising. In *Title TBA*, Ermenegildo Bidese & Federica Cognola (eds). Amsterdam: John Benjamins.
- Haegeman, Liliane. 2008. Extraction du sujet, réallocation de cas et localité. *Cycnos* 17. <<http://revel.unice.fr/cycnos/index.html?id=1694>>
- Kayne, Richard. 1980. Extensions of Binding and Case-marking. *Linguistic Inquiry* 11: 75-96.
- Kayne, Richard. 1981. On certain differences between French and English. *Linguistic Inquiry* 12: 349-371.
- Kayne, Richard. 1995. Agreement and verb morphology in three varieties of English. In *Studies in Comparative Germanic Syntax*, Hubert Haider, Susan Olsen & Sten Vikner (eds), 159-165. Dordrecht: Kluwer.
- Kimball, John & Judith Aissen. 1971. I think, you think, he think. *Linguistic Inquiry* 2: 241-246.
- Lasnik, Howard & Nicholas Sobin. 2000. The *who/whom* puzzle: on the preservation of an archaic feature. *Natural Language and Linguistic Theory* 18: 343-371.
- Quirk, Randolph, Greenbaum, Sidney, Leech, Geoffrey & Svartvik, Jan. 1985. *A Comprehensive Grammar of the English Language*. London: Longman.
- Rizzi, Luigi. 1982. *Issues in Italian Syntax*. Foris: Dordrecht.
- Rizzi, Luigi. 1990. *Relativized Minimality*. Cambridge (Mass.): MIT Press.
- Rizzi, Luigi. 1991. Proper head government and the definition of A positions. Paper presented at GLOW Leiden.

- Rizzi, Luigi. 1997. The fine structure of the left periphery. In *Elements of Grammar: Handbook in Generative Syntax*, Liliane Haegeman (ed.), 281-337. Dordrecht: Kluwer.
- Rizzi, Luigi. 2006. On the form of chains: criterial positions and ECP effects. In *Wh-movement: Moving on*, Lisa Lai-Shen Cheng & Norbert Corver (eds), 97-133. Cambridge (Mass.): MIT Press.
- Rizzi, Luigi & Uri Shlonsky. 2006. Satisfying the Subject Criterion by a non subject: English Locative Inversion and Heavy NP Shift. In *Phases of Interpretation*, Mara Frascarelli (ed.), 341-361. Berlin: Mouton de Gruyter.
- Rizzi, Luigi & Uri Shlonsky. 2007. Strategies of subject extraction. In *Interfaces + Recursion = Language? Chomsky's Minimalism and the View from Syntax-Semantics*, Uli Sauerland & Hans-Martin Gärtner (eds), 115-160. Berlin: Mouton de Gruyter.
- Sigurðsson, Halldór. 2012. Minimalist C/case. *Linguistic Inquiry* 43: 191-227.
- Shlonsky, Uri. 2014. Subject positions, subject extraction, EPP, and the Subject Criterion. In *Locality*, Enoch Oladé Aboh, Maria Teresa Guasti & Ian Roberts (eds), 58-85. Oxford: OUP.