

Doubling in the CP in West-Germanic and the Doubly Filled COMP Filter

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1 Introduction

Standard English, German and Dutch: no overt C with an overt interrogative or relative operator

- embedded interrogatives:

(1) I don't know **who** (***that**) has arrived.

- relative clauses:

(2) This is the city **in which** (***that**) I live.

traditional idea: Doubly Filled COMP Filter: prohibiting lexical material in both the specifier and the head of the same XP projection (Chomsky & Lasnik 1977: 446, see also Koopman 2000)

but: Doubly Filled COMP Filter is not obeyed in main clauses (T-to-C movement in interrogatives, V2 in German, cf. Koopman 2000) and there are languages/varieties with Doubly Filled COMP in embedded clauses

Doubly Filled COMP in non-standard English:

- (3) a. They discussed a certain model, but they didn't know **which model that** they discussed.
(Baltin 2010: 331, ex. 1)
b. It's down to the community **in which that** the people live.
(Van Gelderen 2013: 59, ex. 8)

main clause interrogatives in Standard English:

- (4) a. **Who saw** Peter?
b. **Who did** Peter see?

T-to-C movement visible by way of *do*-insertion in (4b), though not in (4a)

doubling in the CP in (4) involves a *wh*-operator in [Spec,CP] and a verb in C

similar: German (and Dutch) V2 – V in C, another constituent moving to [Spec,CP] due to [EDGE] feature (see Fanselow 2002; 2004a;b, Frey 2005, Den Besten 1989)

- (5) a. **Mein Schwiegervater hat** morgen Geburtstag.
my.M father-in-law has tomorrow birthday
'My father-in-law has birthday tomorrow.'
- b. **Morgen hat** mein Schwiegervater Geburtstag.
tomorrow has my.M father-in-law birthday
'My father-in-law has birthday tomorrow.'

→ Doubly Filled COMP Filter should be more restricted in its application domain (e.g. operator and complementiser with largely overlapping functions, DFCF as some kind of an economy principle)

but: the notion of Doubly Filled COMP Filter implies that the C head and [Spec,CP] would be filled without the Filter, and the Filter is responsible for “deleting” the content of C

→ questions:

- what requirement is responsible for filling C even in the presence of an overt operator in [Spec,CP], as in (3)
- what kinds of elements may appear in C – if elements other than complementisers can satisfy the requirement of filling C, the deletion approach is probably mistaken

proposal:

- Doubly Filled COMP constructions truly involve doubling within a single CP
- doubling not restricted to operator + complementiser combinations
- there is no Doubly Filled COMP Filter
- doubling in standard varieties ruled out by general economy of the derivation (minimal number of clause-typing elements inserted)
- doubling arises in order to fill the C independently of whether [Spec,CP] is filled – similar to T-to-C and V2 in main clauses

2 Approaches to Doubly Filled COMP

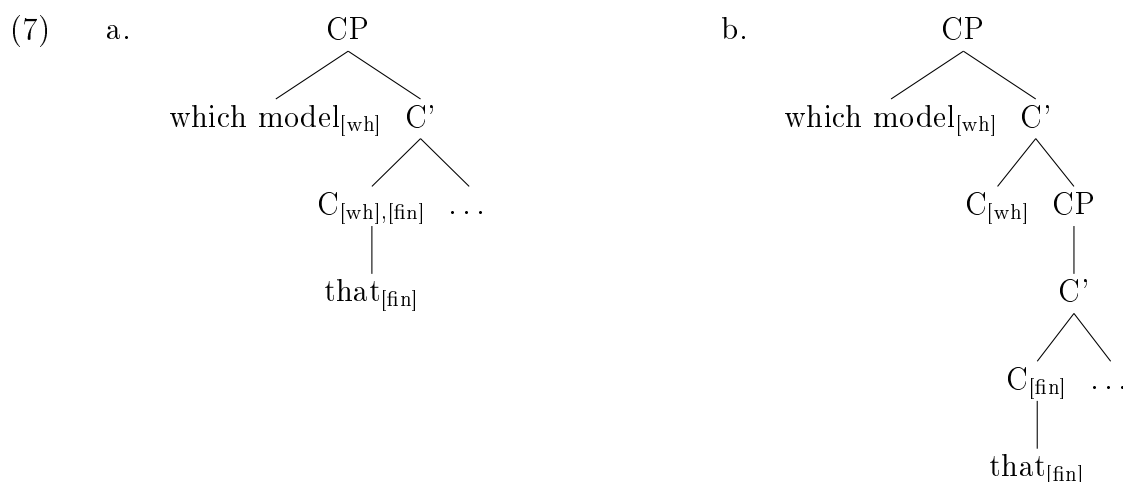
three possible scenarios regarding the Doubly Filled COMP Filter:

- DFCF subject to parametric variation – some dialects (e.g. Standard West-Germanic languages) have it, others so not – problematic, as the operation domain of DFCF should be more refined (see section 1), DFCF should not be a parameter in itself
- DFCF universal – apparent violations actually involve multiple CP projections (e.g. Baltin 2010)
- no DFCF at all – economy of derivation versus requirement to fill the head, similarly to T-to-C or V2

doubling in embedded interrogatives (constituent questions):

- (6) They discussed a certain model, but they didn't know **which model that** they discussed.
(Baltin 2010: 331, ex. 1)

essentially two possible structures:



tree in (7a): Doubly Filled COMP

tree in (7b): proposed by Baltin (2010), split CP to avoid the violation of the DFCF

problems with (7b):

- rigid split of functions (here expressed by features) similar to a cartographic approach (cf. Rizzi 1997), yet the analysis given by Baltin (2010) is fundamentally a minimalist one
- in particular, a rigid separation is indeed needed to avoid the violation of the Minimal Link Condition (see Fanselow 1990; 1991, Chomsky 1995) – the operator in (7b) does not move to the closest possible [Spec,CP]
- but: a rigid separation is not tenable for relative clauses, see below
- if (7b) is possible for non-standard varieties, it remains to be explained why it cannot appear in standard varieties

doubling in relative clauses:

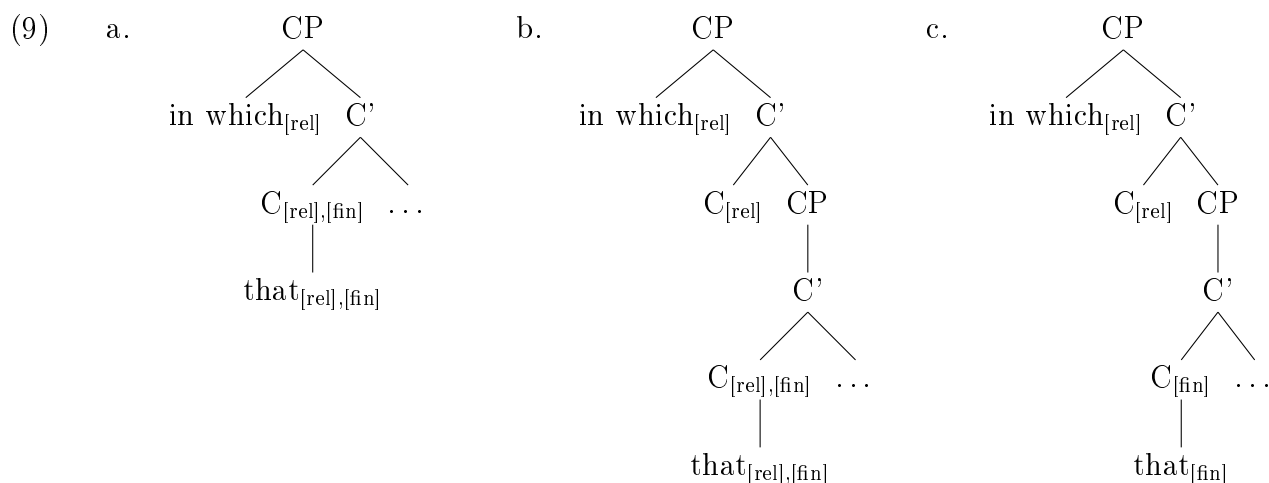
- (8) It's down to the community **in which that** the people live.
 (Van Gelderen 2013: 59, ex. 8)

question: whether a functional split of two CPs like in (7b) is possible ([rel] and [fin])

in interrogatives, *that* is a mere subordinator, but in relative clauses, *that* is available as a relative complementiser in Standard English as well

→ question: whether *that* in doubling patterns is the mere subordinator, or whether there are two relative CPs – in the latter case, a representation like (7b) violates the Minimal Link Condition because the operator should move to the lower [Spec,CP]

possible structures:



evidence from South German: doubling in embedded interrogatives involves *dass* ‘that’ (cf. Bayer & Brandner 2008) and in relative clauses it involves *wo* ‘where’ (cf. Brandner & Bräuning 2013):

- (10) a. I frog-me, **fia wos dass**-ma an zwoatn Fernseher braucht.
 I ask-REFL for what that-one a second TV needs
 ‘I wonder what one needs a second TV for.’
 (Bavarian; Bayer & Brandner 2008: 88, ex. 3)
- b. ...dea Mo (**dea**) **wo** seine Schu verlor hot
 the man PRON.DEM PRT his shoes lost has
 ‘the man who has lost his shoes’ (Brandner & Bräuning 2013: 132, ex. 2)

→ doubling in relative clauses real doubling of two [rel] elements, no functional split between two CPs possible (cf. Bacskai-Atkari 2015)

doubling in relative clauses: regular pattern with *wo* (Brandner & Bräuning 2013), relative pronoun lexicalising the operator under certain conditions

- *wo* relativizes all types of head nouns (see also Brandner 2008, Fleischer 2004)
- doubling with a demonstrative-based relative operator (cf. Weise 1917): Doubly Filled Comp effect
- no relative operators genuinely in these dialects; visible operators (borrowing from Standard German) can lexicalise the operator function (covert operator present anyway)
- similar in Middle English: *wh*-based relative operators constitute an innovation alongside the regular relativiser *that* (see Van Gelderen 2009)

→ Doubly Filled COMP analysis (with a single CP) favourable on the whole

3 Embedded constituent questions

recall: three possible scenarios regarding the Doubly Filled COMP Filter:

- DFCE subject to parametric variation – some dialects (e.g. Standard West-Germanic languages) have it, others so not – problematic, as the operation domain of DFCE should be more refined (see section 1), DFCE should not be a parameter in itself
- DFCE universal – apparent violations actually involve multiple CP projections (e.g. Baltin 2010) – problematic (see section 2)
- no DFCE at all – economy of derivation versus requirement to fill the head, similarly to T-to-C or V2

the availability of a separate [wh] CP and a separate [fin] CP, see (7b), would imply that doubling is available with all *wh*-elements

but: Bayer & Brandner (2008) show that this is not universally the case; several Alemannic and Bavarian speakers show the following pattern (examples from Bavarian):

- (11) a. I frog-me **fia vos dass**-ma an zwoatn Fernseher braucht.
 I ask.REFL for what that.one a second TV needs
 ‘I wonder what one needs a second TV for.’
 (Bayer & Brandner 2008: 88, ex. 3a)
- b. I hob koa Ahnung, **mid vos fia-ra Farb dass**-a zfrien waar.
 I have no idea with what for-a colour that-he content would.be
 ‘I have no idea with what colour he would be happy.’
 (Bayer & Brandner 2008: 88, ex. 4a)
- c. *I woass aa ned, **wer dass** allas am Sunndoch in da Kiach gwen is.
 I know too not who that all at Sunday in the church been is
 ‘I don’t know either who all has been to church on Sunday.’
 (Bayer & Brandner 2008: 88, ex. 5a)
- d. I woass aa ned, **wer** allas am Sunndoch in da Kiach gwen is.
 I know too not who all at Sunday in the church been is
 ‘I don’t know either who all has been to church on Sunday.’
 (based on Bayer & Brandner 2008: 88, ex. 5a)

difference between *wh*-elements: phrase-sized *wh*-phrases, see (11a) and (11b), occur with *dass*, while word-sized *wh*-elements (also: *was* ‘what’, *wo* ‘where’), see (11c) and (11d), do not

Bayer & Brandner (2008): *wer* and *dass* are in complementary distribution in (11c) → a head-sized *wh*-element may target the C head position

note: this does not involve actual grammaticalisation – for instance, contrastive *wh*-elements with focal stress occur with *dass*:

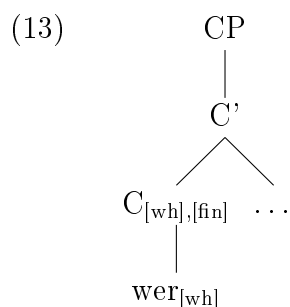
- (12) Ich woass **WO dass** er abfahrt aber noit WENN.
 I know where that he leaves but not-yet when
 ‘I know WHERE it (the train) will leave but not WHEN.’
 (Bayer & Brandner 2008: 93, ex. 18, quoting Noth 1993: 424)

note also: split between (11a)/(11b) and (11c) not for all speakers in the dialect areas, there are speakers who accept both (11c) and (11d) (see Weiß 2013)

variation related to *wh*-elements not explained by (7b) – uniform doubling of [wh] and [fin] predicted

DFCF as a parameter again does not explain variation – *wh*-elements should behave in a uniform way

proposed structure, based on Bayer & Brandner (2008):



two potential problems from a minimalist perspective:

- problem for Bare Phrase Structure: *wer* is not a C
- problem for Chain Uniformity: *wer* originates as a phrase and moves to a head position

regarding Chain Uniformity: *wer* is both minimal and maximal in both of its positions (if it adjoins to C, it does not project), see Bayer & Brandner (2008), following the notion of Chain Uniformity given by Chomsky (1995)

regarding Bare Phrase Structure: *wer* adjoins to C (head adjunction) and does not project, rather than substitution – the same problem arises in the same way for V2 in main clauses by V moving to C, see Fanselow (2004b: 10–32)

proposal: the phenomenon in (13) is related to the general ability of C hosting elements other than complementisers in the language (note: English not V2 but T-to-C attested in main clause interrogatives)

non-standard dialects with Doubly Filled COMP effects: extending the property of a phonologically empty C requiring head adjunction

4 Embedded polar interrogatives

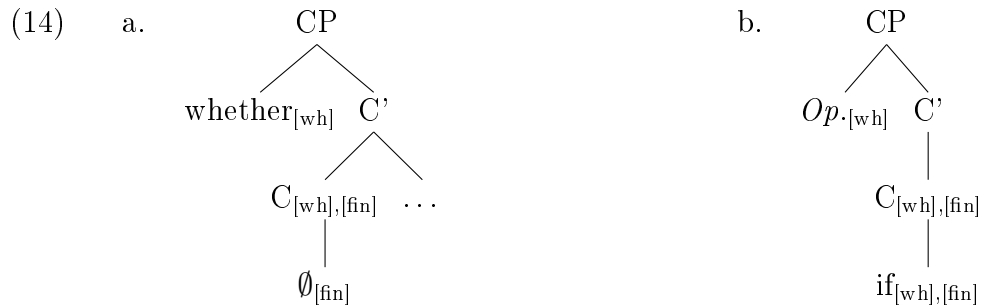
so far: doubling in constructions with overt operators – *wh*-operator necessarily overt in constituent questions (not recoverable, focus), relative operators may otherwise be covert (recoverable gap corresponding to the lexical head)

polar interrogatives also contain an operator:

- overt or covert yes/no operator corresponding to *whether*, marking the scope of covert *or* (Larson 1985)
- inserted directly into the [Spec,CP] position (Bianchi & Cruschina 2016), hence no movement required

embedded interrogatives in (Standard) German: [wh] feature of a C head marked either by the *wh*-element moving to [Spec,CP] in constituent questions, or by the insertion of *ob* ‘if’ into C in polar questions (Zimmermann 2013: 86)

structures:



no doubling of *ob dass* in dialects like Alemannic either (Ellen Brandner, p.c.)

- an analysis with a separate [wh] and [fin] CP, such as (7b), as in Baltin (2010), would predict that this is possible
- there is no ban on multiple complementisers in Alemannic either, the doubling *als wie* ‘than as’ is possible (Jäger 2010, Bacskai-Atkari 2014)

→ *ob* a grammaticalised complementiser

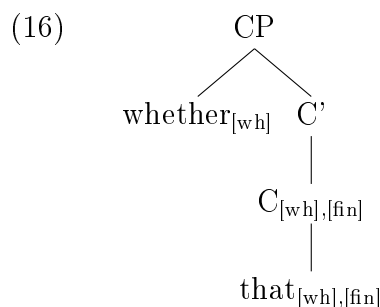
→ questions:

- whether Doubly Filled COMP effects possible in embedded polar questions at all
- whether the behaviour of *ob* is truly due to reanalysis

doubling with *whether* attested in Old and Middle English and in modern substandard varieties (see Van Gelderen 2009):

- (15) I wot not **whether that** I may come with him or not.
 ‘I do not know whether I may come with him or not.’ (Paston Letters XXXI)

structure is possible:



question: if ordinary *wh*-elements may move to C (to lexicalise C), *whether* should be able to do so (it is not even moved but inserted directly into CP)

Van Gelderen (2009): Doubly Filled COMP with *whether* quite rare in modern dialects in comparison to ordinary *wh*-elements (complex *wh*-elements more likely to occur in Doubly Filled COMP constructions) – similar effects as in Alemannic constituent questions

whether may be in competition with *that* for the C position, but the question is whether this is purely about the position itself or rather a competition between two clause-typing elements

whether also used in main clauses (Old English, Middle English, Early Modern English)

- may occur with verb in C, see (17a) – T-to-C, lexical verb moving to T in Early English), hence *whether* in [Spec,CP], see Van Gelderen (2009)
- may occur on its own, see (17b) – inserted directly into C instead of [Spec,CP], without actual grammaticalisation (\leftrightarrow Van Gelderen 2009; see also the arguments of Walkden 2014 against grammaticalisation here)
- may occur with *do*-insertion, see (17c) – reanalysis of *do*-insertion as polarity marking in Early Modern English (Wallage 2015), ultimately swiping out the overt polar operator

- (17) a. **Hwæðer wæs** iohannes fulluht þe of heofonum þe of mannum
whether was John's baptism that of heavens or of man
'Was the baptism of John done by heaven or by man?' (*West Saxon Gospel*)
(Van Gelderen 2009: 141, ex. 15)
- b. **Hwæðer** ic mote lybban oðdæt ic hine geseo
whether I might live until I him see
'Might I live until I see him?' (Aelfric *Homilies*)
(Van Gelderen 2009: 141, ex. 16, quoting Allen 1980)
- c. **Whether did** he open the Basket?
(*The Tryal of Thomas Earl of Macclesfield*)
(source: Salmon, Thomas and Sollom Emlyn (1730) A complete collection of state-trials, and proceedings for high-treason, and other crimes and misdemeanours: 1715–1725)

disappearance of *whether* from main clauses shows that double filling is not necessary per se, the filling of C is – in *wh*-questions both [Spec,CP] and C are filled (the *wh*-element cannot be silent)

several patterns attested with *whether* \leftrightarrow *if*: always in C, not doubling (note: *if that* attested in Middle English but in conditional clauses, see Van Gelderen 2009) – grammaticalised complementiser

→ elements filling C head in English polar questions:

- [wh] element itself (*if*, also *whether*)
- finite subordinator (*that*)
- finite verb (lexical verb or *do*)

elements in Old German (Old Saxon and Old High German): cognates of *whether* and *if* attested (cf. Axel 2007, who categorises all of these elements as complementisers, contrary to the assumption here)

Old Saxon: both the operator *(h)wedār* ‘whether’ and the complementiser *ef* ‘if’ attested

corpus analysis: DDD Referenzkorpus Altdeutsch (Old German Reference Corpus)

results (both texts from the 9th century):

	<i>ef</i>	<i>(h)wedār</i>	<i>(h)wedār</i> + V
Genesis	1	1	
Heliand	5	2	1

example for *ef*:

- (18) *endi frâgodun, ef he uuâri that barn godes*
and asked.3PL if he was.3SG the son God’s
‘and they asked whether he was the son of God’ (*Heliand* 11)

examples for *(h)wedār*:

- (19) a. *ne rôkead, huueðar gi is ênigan thanc antfâhan*
not worry.IMP.2PL whether you it some thank receive.2PL
‘do not worry whether you get some reward’ (*Heliand* 18)
- b. *endi he frâgoda sân, huilic sie ârundi ûta gibrâhti,*
and he asked.3SG instantly, which they.ACC business out brought.3SG
ueros an thana uuracsîð huueðer lêdiad gi uundan gold te
man in this.ACC foreign.land whether bring.2PL you wrought gold to
gebu huilicun gumuno?
gift.DAT some men.GEN
‘and he instantly asked, what business had brought them out from their land into this foreign land and whether you are bringing wrought gold as a gift to someone?’ (*Heliand* 7)

→ Old Saxon pattern similar to the English one – separation of *whether* and *if* in their distribution

Old High German: cognates of *if* attested (*ibu* and *ob*)

corpus analysis: DDD Referenzkorpus Altdeutsch (Old German Reference Corpus)

results:

	<i>ibu</i> + V	<i>ob</i>	<i>ob</i> + V
Benediktiner Regel (9th c.)	1		
Otfrid (9th c.)		11	
Tatian (9th c.)		8	1
Ludwigslied (9th c.)		2	
Psalm 138 (9–10th c.)		1	
St. Galler Schularbeit (11th c.)		1	
Benediktbeurer Glaube und Beichte III (12–13th c.)		1	

examples:

- (20) a. fona himile simblum sihit ubar parn manno, daz sehe,
 from heaven always sees onto children.PL men's, that see.SBJV.3SG
ibu ist farstantanti edo suahhanti cotan
 if is understood or sought.ACC God.ACC
 'from Heaven, he always sees onto men's children, to see if God is understood
 or sought' (*Benediktiner Regel* 7)
- b. láz nu, gisehemes **oba come** Helias losenti inan
 let.IMP.2SG now see.1PL if comes Elias save.INF he.ACC
 'let us see if Elias will come to save him' (*Tatian* 208)
- c. Pilatus uuntrota, **oba** her iu entoti
 Pilate wondered.3SG of he already died.3SG
 'Pilate wondered if he was already dead.' (*Tatian* 12)

verb movement to C with *ibu/ob*: in the earliest texts, rare; yet: *ibu/ob* is an operator in these instances, but *ob* grammaticalised as a complementiser quite early

both *Benediktiner Regel* and *Tatian* from the Upper German dialect area, as most texts in table above (only *Ludwigslied* Central German); *Benediktiner Regel* is Alemanic, *Tatian* is East Franconian, *Otfrid* is South Rhine Franconian

→ the unavailability of *ob* in Modern German as an operator truly stems from grammaticalisation

Old Saxon more similar to English than to Old High German (*if* already fully grammaticalised in polar questions, availability of *whether*) – Ingvaenic dialects of West Germanic (Old English, Old Frisian, Old Saxon), while (Old) High German is Erminonic and (Old) Dutch is Istvaeonic

question: status of *of* ‘if’ in Dutch

Standard Dutch: no doubling, similar to the case of English *if* (see Bayer 2004, following Hoekstra 1993)

combination of *dat* in substandard dialects possible:

- (21) Ik vraag me af **of dat** Ajax de volgende ronde haalt.
I ask me PRT if that Ajax the next round reaches
‘I wonder whether Ajax will make it to the next round.’
(Bayer 2004: 65, ex. 14, quoting Hoekstra 1993)

note: substandard dialects also allow for Doubly Filled COMP with ordinary *wh*-elements in Dutch (see Bayer 2004, following Hoekstra 1993)

note also: here only interrogatives discussed, not conditional clauses – in conditionals, operator use may develop independently (see Van Gelderen 2009 on *if that* in Middle English conditionals, Jäger 2010 on *ob* in German conditionals)

availability of verb movement to C with a yes/no operator in [Spec,CP] shows that Doubly Filled COMP is not directly related to the clause-typing status of the finite complementiser corresponding to *that* but the property is rather related to the requirement to adjoin phonologically overt material to a null C head (or to insert a non-null C head)

requirement to lexicalise the C head attested in polar interrogatives as well, not just in constituent questions – but: filling the C head in polar questions does not imply the necessity of doing so in constituent questions

example for a complex *wh*-phrase in Old High German with no Doubly Filled COMP:

- (22) quid **uuelih namo** thir sí
say.IMP.2SG what name you.DAT is
‘say what name is yours’ (*Tatian* 53)

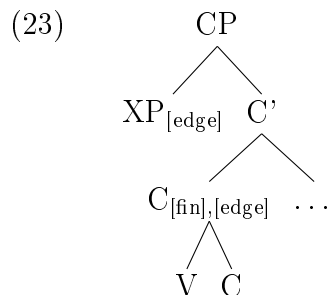
two observations:

- gradience in language change and variation (Traugott & Trousdale 2010); variation also in V2 according to sentence types (Westergaard 2007; 2008; 2009)
- slightly different feature specification of [wh] head in polar and constituent questions (see Bayer 2004 for the separation of [Q] and [wh])
- the availability of an overt polar interrogative complementiser constitutes a basis for analogy for other polar interrogatives to lexicalise the C head

5 Towards an analysis

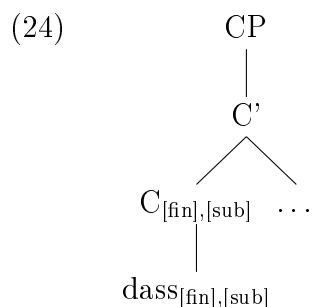
main idea: Doubly Filled COMP effects stem from the necessity of filling the C head with an overt element – lexicalisation of the operator follows from independent reasons; filling of [Spec,CP] is independent of filling C in V2 (see Fanselow 2009)

V2 movement (German):



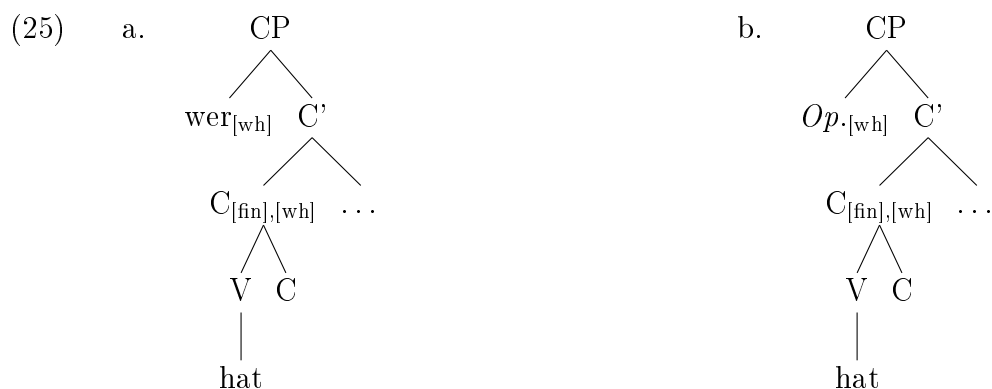
C with [fin] specification has to be lexicalised – carried out by finite verb

finite subordination (German, also English):



denotation [sub]: indicates that the CP is selected by a matrix predicate, which imposes selectional restrictions on elements in C (*dass* ‘that’ in German essentially obligatory, or V2 occurs; overtiness of a finite subordinator in declarative clauses subject to cross-linguistic variation, also to position of the subclause with respect to the matrix clause)

matrix interrogatives (German and English):



C with [fin] specification lexicalised by verb movement just as in V2 in German declarative (main) clauses

[wh] feature: overt encoding not tied to an overt *wh*-element, intonation carries the information overtly

German: no XP moved to [Spec,CP] since the covert yes/no operator is inserted there

English: a C with [fin] and [wh] has to be lexicalised, unlike a C with only [fin] → lexicalisation dependent on the exact features

embedded interrogatives (Standard German and Standard English):



case in (26b): C head lexicalised by inserting a complementiser that is both [fin] and [wh]

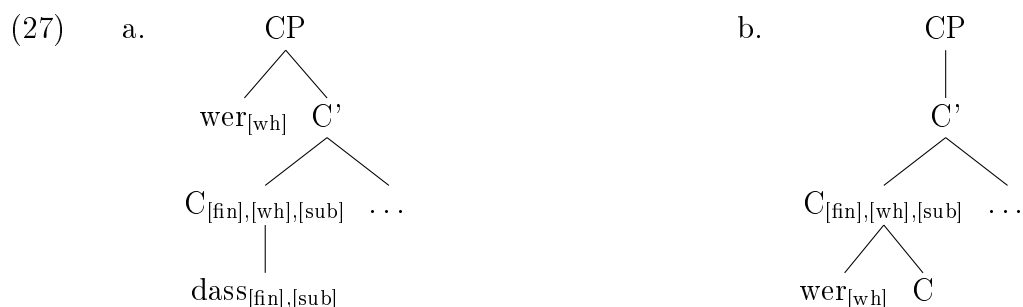
- German: matches the full syntactic paradigm (main clauses, embedded clauses)
- English: matches the embedded paradigm

case in (26a): C head itself not lexicalised

- German: does not match the rest of the paradigm; the matrix predicate licenses a zero C head (note: in polar questions, there cannot be a zero [wh] C head because there is no overt yes/no operator and some element has to carry [wh], no intonation to mark the property)
- English: matches the main clause declarative paradigm only; again, the matrix predicate licenses a zero C head with the relevant feature specification

embedded interrogatives (dialectal German and English):

constituent questions:



polar questions:



cases in (27a) and (28a): matrix predicate does not license zero C head, hence the complementiser that otherwise licenses [fin] in a subordinate context is licensed

cases in (27b) and (28b): instead of inserting the regular [fin] complementiser, the [wh] element is moved/inserted directly to C

questions:

- why polar interrogatives may differ from constituent questions (as in Old German)
- why verb movement is not satisfactory in embedded contexts, unlike in main clauses

difference between polar and *wh*-interrogatives: availability of [wh] C head in polar questions anyway; selection by matrix predicate

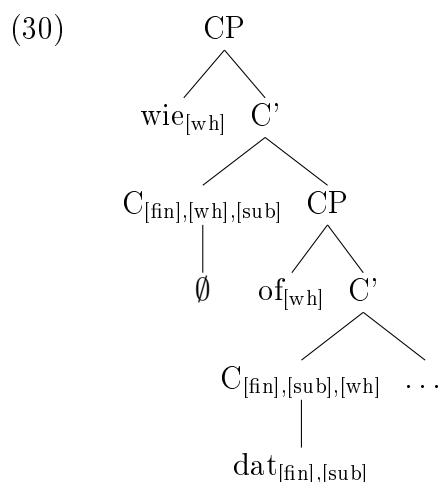
separation of [Q] and [wh] by Bayer (2004): languages with distinct elements carrying yes/no property and the *wh*-element itself

Dutch: combination of *of* 'if' and *wh*-element possible:

- (29) Ze weet **wie of dat** hij had willen opbellen
 she knows who if that he had want call
 'She knows who he wanted to call.'
 (Bayer 2004: 66, ex. 17, citing Hoekstra 1993)

note: Q element (*if*, earlier German *ob*) also in conditionals, where no [wh] proper is present

structure for (29):



regarding verb movement: selection by matrix predicate – note that Old High German allowed for verb movement in embedded polar questions, see (20b)

in other dependent clause types without a matrix lexical predicate, verb movement may be sufficient:

- (31)
- a. Peter schreit, **als wäre** er beim Zahnarzt.
Peter shouts as be.COND.3SG he at.the dentist
'Peter is shouting as if he were at the dentist's.
 - b. Peter schreit, **als ob** er beim Zahnarzt wäre.
Peter shouts as if he at.the dentist be.COND.3SG
'Peter is shouting as if he were at the dentist's.
 - c. Plan an escape route, **if** fire should break out.
 - d. Plan an escape route, **should** fire break out.

lexicalising [fin] C by head adjunction involving a *wh*-element: parallel with verb movement in main clauses

6 Conclusion

Doubly Filled COMP in West-Germanic interrogatives

- DFCF not a parameter
- DFCF not universal, and DFC structures do not involve two CPs with distinct functions
- no DFCF as such

doubling:

- not doubling per se, lexicalisation of the C head is crucial, and the lexicalisation of [Spec,CP] is not directly related
- doubling not restricted to constituent questions, also possible in polar questions
- lexicalisation of the C head not necessarily by an element like *that* – *wh*-element, verb movement
- lexicalisation of the C head attested in the entire syntactic paradigm, non-lexicalisation licensed by a matrix predicate

→ languages/varieties differ in the licensing of a zero [fin] C head

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