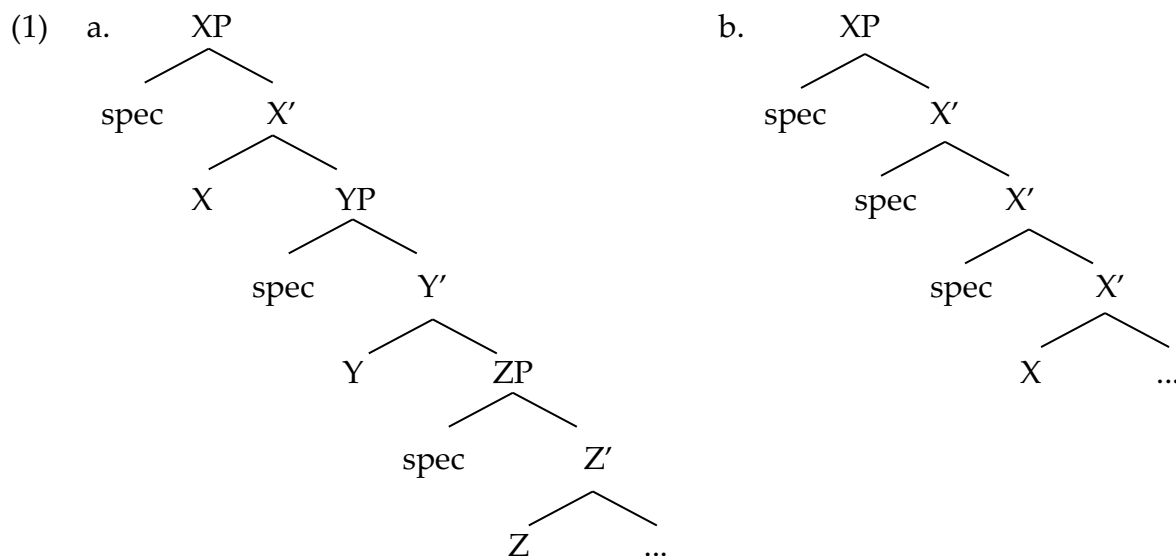


Multiple projections or multiple specifiers? On the analysis of (deviations from) V2 in the history of German

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1 Introduction

- Cartographic approach (cf. e.g. Rizzi 1997, Cinque 1999): (i) one-to-one relation between functional heads and morphosyntactic/semantic/pragmatic features; (ii) each head licenses only a single specifier \Rightarrow massive growth of the number of functional projections.
- Alternative analysis (in many cases): (i) single functional head + multiple specifiers (cf. Chomsky 1995, 2000, Richards 2001, Bobaljik 1999, Lahne 2007); (ii) one-to-many relation between functional heads and features; (iii) features of a single head are hierarchally ordered to account for ordering effects (Richards 2001, Grewendorf & Sabel 1999, Grewendorf 2002, Lahne 2007, Müller 2010).



- How can we decide between (1a) and (1b)?
 - ❖ Clear evidence in favor of (1a): The heads X,Y,Z are overtly realized;
 - ❖ Clear evidence in favor of (1b): ?
- This paper: Analysis of multiple fronting/V3 in (early) OHG.

2 Background: Matrix V1/V2/V3 in OHG

- Well-known fact: Early OHG is more V2ish than other early Germanic languages such as Old English or Gothic (Lippert 1974, Robinson 1997, Dittmer & Dittmer 1998, Axel 2007, Axel-Tober 2018):
 - (i) **Systematic verb fronting**: In early OHG translations, deviations from the word order of the Latin original systematically lead to V2 patterns (Dittmer & Dittmer 1998, Petrova & Solf 2007 on the OHG *Tatian*; Axel 2007, Axel-Tober 2018):¹
 - (2) *unum tibi deest* → *ein ist thir uuan.*
 one thing you lack one thing is you-DAT lacking
 ‘thou lackest one thing’ (*Tatian*, 357,15 [106,3]; Dittmer and Dittmer 1998: 92)
 - (ii) **Semantically/pragmatically neutral XP-fronting**: fronting of non-topics such as indefinites/adjuncts (Axel 2007: EPP-feature in C):²
 - (3) a. [Neoman] **niuirdit** fona gote festi [...]
 nobody NEG-becomes by God strengthened
 Lt. *Nemo erit a deo nisi firmus* [...]
 ‘Nobody will become strengthened by God [...]
 (*Monsee Fragments*, XL,19; *St. Augustini sermo*; Axel 2007: 120)
 - b. [Neo] **nist** zi chilaubanne dhazs fona dhemu salomone
 never NEG-is to believe that of the Salomon
 sii dhiz chiforabodot
 is this prophesied
 Lt. *Numquid de illo salomone creditur prophetatum? minime*
 ‘It can never be believed that this was prophesied by Salomon.’
 (*Isidor*, 638; Axel 2007: 120)
 - c. **endi** [chiiuisso] **ist** *christus* in dheru selbun salbidhu chimeinit
 and certainly is Christ in that same salve meant
 Lt. *et utique christus ipsa unctione monstratur*
 ‘And certainly is Christ meant in that same salve.’ (*Isidor*, 144; Axel 2007: 120)

Deviations from V2: V1 declaratives and V3 orders (mostly confined to early OHG)

- Existence of V1-declaratives suggests that EPP-feature in C was merely optional (cf. Axel 2007, Petrova 2018):

¹ Furthermore, in contrast to Old English, (subject) pronouns regularly undergo inversion in examples with fronted non-operators, which can be taken to indicate that the finite verb moves to C, skipping the position of weak pronouns at the left edge of IP/TP (see (8) for some exceptions).

² In contrast, XP-fronting was confined to referential topics (apart from operator contexts) in earlier stages of Germanic (i.e., Gothic), suggesting that XP-fronting was originally triggered by semantic/pragmatic factors only (topic/focus/operator properties), cf. Axel (2007: 198ff.).

(4) **uuarun** thô *hirta* In thero lantskeffi uuahante [...]
 were then/there shepherds in that country abiding

Lt. *Et pastores erant In regione eadem. uigilantes [...]*
 ‘And there were shepherds in that country abiding [...]’
 (*Tatian*, 85,29; Axel 2007: 113)

- Early OHG: Surface V3 orders may result from adding the interrogative particles *inu/eno* to a V2 clause (mostly yes/no questions; some examples with *wh*-questions, cf. Axel 2007: 41ff.; similar orders occur with the affirmative particle *ja*):

(5) a. Inu ni [angil] **nist** anaebanchiliih gote?
 INU NEG angel-NOM NEG-is identical God-DAT
 Lt. *Num angelus equalem cum deo habet imaginem?*
 ‘Is an angel not identical to God?’ (*Isidor* 184; Axel 2007: 206)

b. Inu [huu{e}nan] **meinit** ir daz ih sii
 INU who-ACC think you.PL that I am
 Lt. *Uos autem quem me esse dicitis*
 ‘who do you think I am?’
 (Monsee fragments XXXVIII,1: St. Augustini sermo; Axel 2007: 43)

- Topics may occur to the left of fronted *wh*-phrases (but not vice versa):

(6) [Uuexsal dhes nemin] huuazs **bauhnida**?
 changing-NOM of-the name what meant
 Lt. *Mutatio nominis quid significabat?*
 ‘The changing of the name, what did it mean?’
 (*Isidor*, 532; Axel 2007: 209)

- Multiple XP-fronting (most frequent in the *Isidor*, cf. Robinson 1997, Axel 2007):

- (7) a. [Dhea uuehhun] [auur] [in heilegim quhidim] **arfullant** sibun iaar.
 the weeks however in sacred language fulfil seven years
 Lt. *Ebdomada namque in sacris eloquiis septem annis terminatur.*
 ‘The weeks, however, take seven years in sacred language.’
 (Isidor, 457; Robinson 1997: 26)
- b. [So] [auh in andreru stedi] [dhurah dhen selbun heilegun forasagun]
 so also in other places through the same holy prophet
uuard dhera dhrinissa bauhunc sus araughtit: [...]
 became the-GEN Trinity-GEN meaning in this way demonstrated
 Lt. *Item alibi per eundem prophetam trinitatis sic demonstratur significantia: [...]*
 ‘In this way, also elsewhere the meaning of the Trinity was demonstrated by
 the same holy prophet: [...]’ (Isidor, 328; Robinson 1997: 27)

- Small number of examples exhibiting V3 with pronouns (Isidor, in particular; see Fourquet 1938, Lippert 1974, Eythórsson 1995, Tomaselli 1995, Robinson 1997, and Axel 2007):

- (8) a. [Erino portun] *ih* **firchnissu**, iisnine grindila firbrihu
 bronze portals I destroy-1SG iron locks break-1SG
 endi [dhiu chiborgonun hort] *dhir* **ghibu**
 and the hidden treasures you give-1SG
 Lt. *Portas aereas conteram et uectes ferreos confringam et dabo tibi thesauros absconditos*
 ‘I destroy bronze portals, break iron locks and give you the hidden
 treasures.’ (Isidor, 157; Robinson 1997: 17)
- b. [Dhes martyrunga endi dodh] *uuir* **findemes** mit urchundin
 of-his martyrdom and death we prove with testimony
 dhes heilegin chiscribes
 of-the holy scripture
 Lt. *Cuius passionem et mortem in suo loco scripturarum testimoniis*
adprobabimus (Isidor, 516; Robinson 1997: 17)

- V3 with pronouns soon disappeared: (i) much less frequent in the *Tatian* (around 850, cf. Dittmer & Dittmer 1998); very rare in late OHG records (cf. Axel 2007).^{3,4}

³ Note that in the majority of relevant V3 orders, the finite verb appears in absolute clause-final position (17 examples, according to Eythórsson 1995: 327), as in (8a). Possible conclusions: (i) The order XP-pron.-V_{fin} represents matrix SOV order, a residue of an earlier (Pan-Germanic) grammatical system (Lenerz 1984); (ii) the pattern XP-pron.-V_{fin} was triggered for (archaic) metrical reasons (Behaghel 1932, Eythórsson 1995) “to avoid an unstressed element in absolute clause-final position.” (Eythórsson 1995: 327f.); (iii) orders such as (8b) can be attributed to extraposition.

⁴ In contrast to Old English (van Kemenade 1987 and many others), pronouns occasionally intervene between a fronted operator and the finite verb:

(i) [zihiu] mih **suoh&** zi arslahanne ...
 why me seek to kill

- Additional V3-pattern (cf. Catasso et al. 2019): the finite verb is preceded by the temporal adverb *tho* and (in most cases) a fronted (subject) pronoun (36 examples in the Tatian; 33 with pronouns):⁵

(9) pronoun – *tho* – V_{fin} – ...

(10) siu **tho** giuuanta sih (quad imo) ...
 she *tho* turned REFL saidhim
 ‘She turned herself (and said to him)...’ (Lat. *conuersa illa dicit ei ...*)
 (Tatian, 221, 6)

- In the vast majority of cases (34/36), the clause-initial element is a shifting topic, (often signalling turn-taking in connection with verb dicendi):

(11) **context:**
 [tho quad In ther heilant, uuâr uuâr quidu ih Iû er thanne abraham uuari er bim ih. Tho namun sie steina thaz sie vvurphin In Inan]
 ‘Jesus said to them: ‘Verily, verily, I say to you, before Abraham was, I am’. Then they took up stones to cast at him’

pronoun-*tho*- V_{fin} -clause:

her **tho** barg sih...
 he (= Jesus) *tho* hid REFL
 ‘Jesus hid himself’ (Lat. *Ihesus autem abscondit se*)
 (T. 131, 26)

- Catasso et al. (2019): In examples like (10)/(11) *tho* is a topic marker that is either part of the DP or a Top-head in the clausal left periphery.
- Possible orderings/left periphery of (early) OHG (not exhaustive; see also Axel 2007: 210):⁶

‘why do you seek to kill me?’

Lat. *quid me queritis Interficere...*

(Tatian 167, 20-21; Axel-Tober 2018: 33)

Observations: the word order of (i) is very similar to the Latin source. Moreover, the finite verb usually occupies the clause-final position in relevant examples (which again suggests that we possibly deal with residues of non-embedded basic SOV; see also fn. 3)

⁵ Similar V3 patterns show up in Old English and Old Saxon (cf. Catasso et al. 2019 for details).

⁶ Furthermore, adverbial clauses always occur at the outermost left edge of the clause (in both main and embedded contexts), giving rise to another deviation from V2:

(i) / [thanne ih iuuuuh santa/ uzzan seckil] / [...]/ eno uuas iu iouuiht thes uuan
 when I you sent without bag PRT was you anything of-that need

Lt. */quando misi uos / sine sacco / [...]/ numquid aliquid defuit uobis*

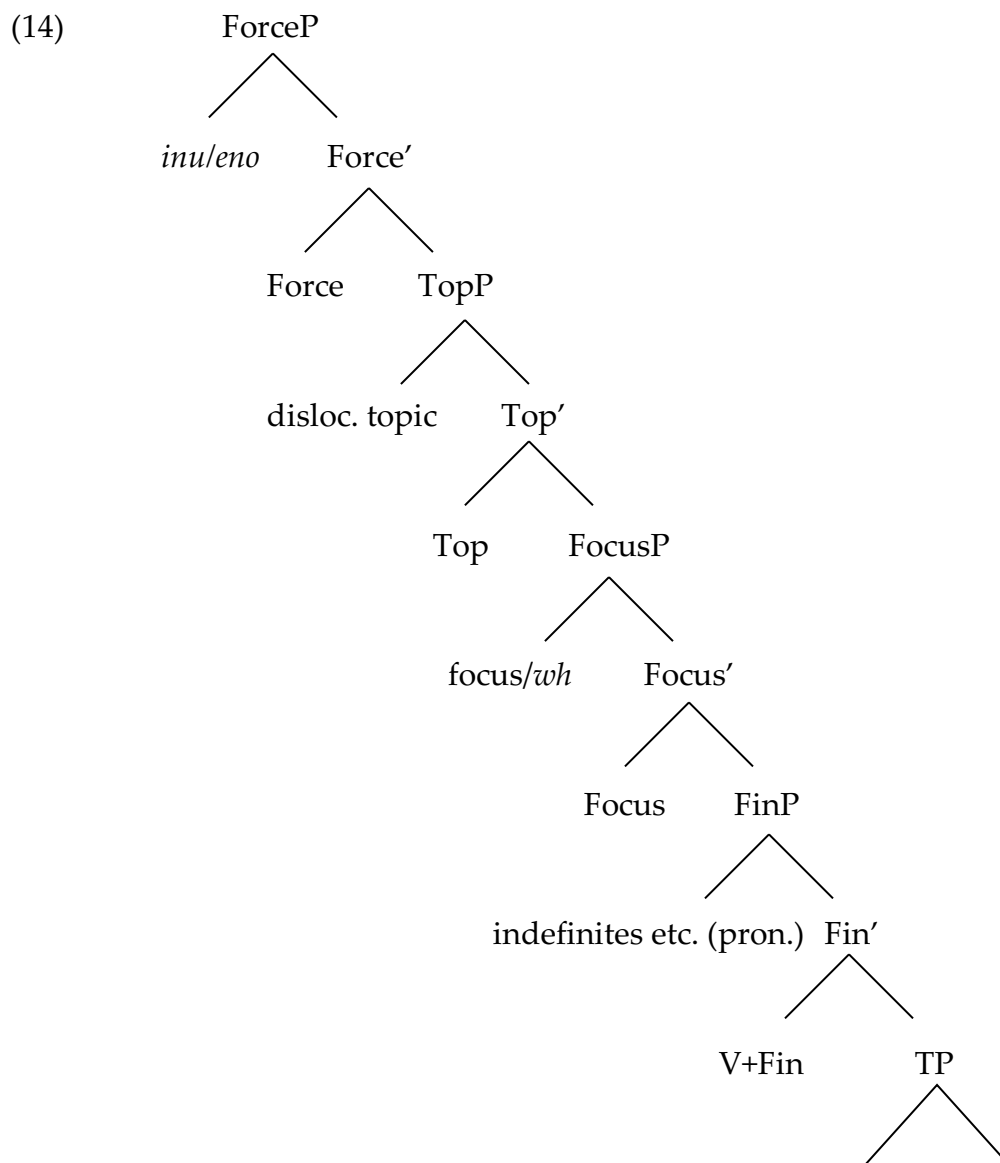
‘When I sent you without a bag [...], did you lack anything?’ (Tatian, 575,1; Axel 2007: 210)

- (12) a. $\emptyset > V_{fin} > (tho)...$ (V1, declaratives)
 b. $XP > V_{fin} > ...$ (V2, declaratives)
 c. $inu/eno > XP > V_{fin} ...$ (V3, interrogatives)
 d. $disloc. topic > XP/wh > V_{fin} ...$ (V3, declaratives & interrogatives)
 e. $XP > pron. > V_{fin} ...$ (V3 with pronouns (rare))
 f. $pron. > tho > V_{fin} ...$ (V3 with *tho*, declaratives)
- (13) $clausal\ particle > disloc.\ topic > fronted\ XP/wh\ phrase > (pron) > finite\ verb > ...$
 (Axel-Tober 2018: 36)

3 Multiple projections

- Axel (2007)/Axel-Tober (2018) on early OHG: fronted XP and finite verb do not (necessarily) enter into a spec-head relation in early OHG; verb movement targets a low head in the C-domain (Fin), while XPs can occupy a number of specifiers in a split CP):

Possible analyses include (i) adjunction to ForceP (Axel 2007); (ii) countercyclic late Merge, which applies (optionally) to a given syntactic object at the point of Spell-Out/Transfer (Fuß 2008, following Nissenbaum 2000, Chomsky 2004).



- Movement to spec positions triggered by:
 - (i) semantic/pragmatic factors such as topic, focus, *wh*
 - (ii) a semantically vacuous EPP-feature (fronting of indefinites)
- Indefinites/adjuncts occupy SpecFinP (which in early OHG may also host pronouns (archaic trait; only few cases)).
- Walkden (2014), Axel-Tober (2018): reduced structure with two (Walkden) or three (Axel-Tober) projections in the left periphery (CP as a multi-purpose position):⁷

(15) (ForceP) – TopP – CP – TP ...

- Loss of V3: At some point, the formerly split CP was conflated into a structure with only two positions in the CP (plus a position for dislocated topics):

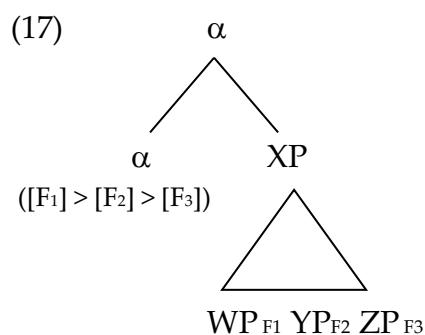
⁷ Cf. also Axel (2007: 234), who notes that “In the OHG sources there is no evidence that topics and *wh*-phrases occupied different positions.”

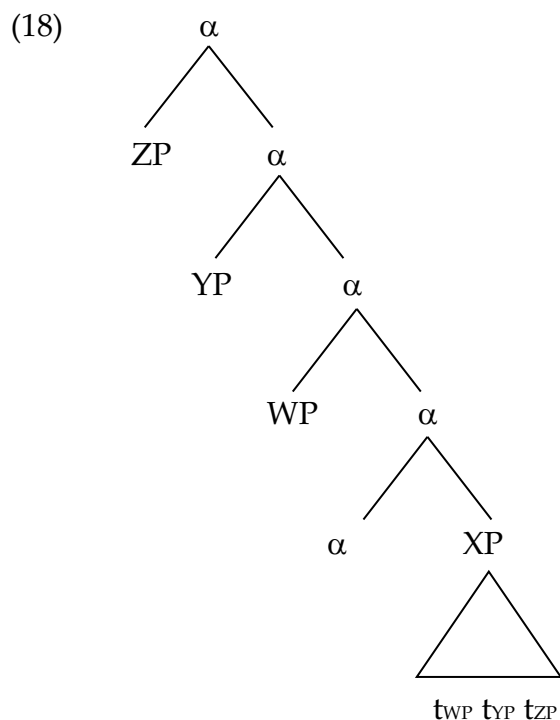
(16) $[_{CP} XP_1 [_{C'} V_j + C [\dots t_i \dots t_j]]]$

- Open questions:
 - (i) No clear evidence for more than a single head position in the C-domain:
 - (a) complementizers uniformly occupy a head position directly above IP/TP;
 - (b) left-peripheral particles are rather specs than heads (see Axel 2007);
 - (c) BUT: *tho* as a potential topic head (see above)?
 - (ii) Historical development of a rigid V2 syntax in a split-CP model: triggers for conflation of the formerly split CP remain unclear.

4 Multiple specifiers?

- Proposal: The C-domain of OHG is made up by only a single functional head (C), which may project multiple specifiers hosting fronted XPs, or particles directly merged in the left clausal periphery.
- Features in C are hierarchically ordered (cf. e.g. Grewendorf & Sabel 1999, Lahne 2007, Müller 2009), ensuring that they must be checked off in a certain order.
- Higher specifiers correspond to features lower in the hierarchy: If a functional head α comes with the feature hierarchy $[F_1] > [F_2] > \dots > [F_n]$, $[F_1]$ first triggers an operation creating the closest specifier of α . Subsequently, $[F_2]$ triggers an operation creating an outer specifier etc.:





- At any point during the syntactic derivation, syntactic operations may only be triggered by an active feature of an active head. In more formal terms, this can be expressed by the following condition (Lahne 2007: 10):

(19) *Condition on hierarchy-driven derivation*

- A feature [F] of a head α is to be satisfied at a point P of the derivation iff (i) and (ii):
 - α is the active head.
 - [F] is the active feature.
 - Active head**
A head is active at a point P of the derivation iff it is a probe at P.
 - Active feature**
A feature is active at a point P of the derivation iff it is the highest unsatisfied (unchecked/unvalued) feature in the feature hierarchy of an active head at P.
- Notational convention: Structure-building features that require Merge/overt movement/PF realization are assigned a diacritic *₋* (cf. Roberts and Roussou 2003, Sternefeld 2007; cf. Müller 2010 for the same idea, but a different notational convention (•₋•)).

4.1 Deriving ordering restrictions in the left periphery of (early) OHG

(20) [Uuexsal dhes nemin] huuazs **bauhnida**?

changing-NOM of-the name what meant

Lt. *Mutatio nominis quid significabat?*

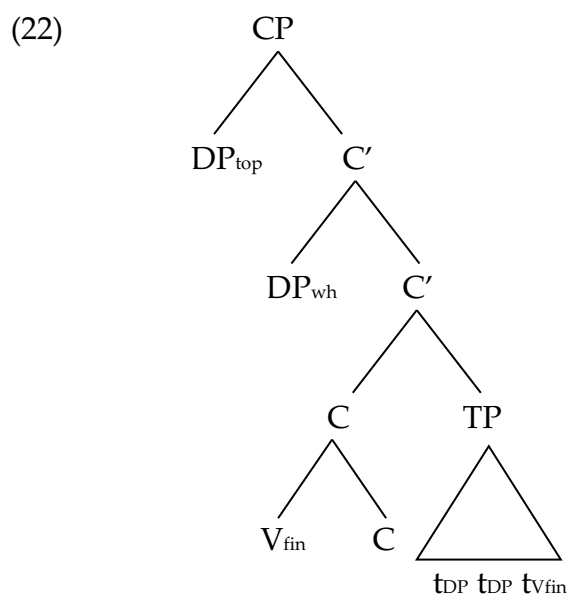
'The changing of the name, what did it mean?'

(*Isidor*, 532; Axel 2007: 209)

- Derivation of (20): C hosts the features [**fin/_V**] (which requires attraction of a finite element of the category V), [**wh**], and [**top**], ranked according to the following hierarchy:⁸

(21) [**fin/_V**] > [**wh**] > [**top**]

- Conceptual consideration: Checking/valuation of purely formal morphosyntactic features is imperative, since if unvalued, these constitute genuine uninterpretable features that cause a derivation to crash at both interfaces (see also fn. 8).
- Accordingly, C must first attract the finite verb. Subsequently, a *wh*-specifier and a topic specifier are added by recursive applications of Merge:



⁸ The relevant feature hierarchy for a given functional head is presumably determined by (semantic) conditions holding at the interfaces, in the sense that a 'wrong' hierarchy of specifiers hosting the relevant elements could not be interpreted at the interface to C-I. Furthermore, note that the ranking of semantic/pragmatic features in functional heads represents the reverse of what presumably holds at the interface to C-I, with 'lower' functional features giving rise to higher specifiers (see also Müller 2007). In addition, morphosyntactic features seem to have primacy over 'peripheral' semantic/pragmatic features (i.e., must be satisfied first). This might have to do with the fact that unvalued/unchecked morphosyntactic features lead to a crashing derivation, while unvalued/unchecked semantic/pragmatic features merely give rise to deviant interpretations.

- XP-fronting in early OHG: triggered by
 - (i) 'strong' (i.e., starred) semantic/pragmatic features, or
 - (ii) a semantically vacuous EPP-feature optionally added to C (leading to generalized V2 effects, Axel 2007).
- Question: How do EPP-features and starred features interact in cases of multiple XP-fronting, i.e., what's the position of the EPP in the feature hierarchy?
- Purely formal features (such as the EPP) must be checked first (see above):

(23) [*fin/_V*] > [EPP] > [*wh*] > [*top*]

4.1.1 Declaratives: the impact of an (optional) EPP feature

- Observation: Fronted elements for which it is likely that they are attracted by C's EPP-feature (indefinites/adjuncts, discourse-continuative marker *thô* 'then') occur directly to the left of the finite verb (i.e., in the lowest spec of CP):

(24) ... > (disloc.) topic > indef./adjunct/ <i>thô</i> > V _{fin} ...
--

- Indefinites/adjuncts:

(25) a. [fon themo tage inti ziti] *nioman* **ni=uueiz**...
 from that day and time nobody NEG=know

Lt. *De die autem illo et hore nemo scit...*

(*Tatian*, Gospel Harmony, 146,6; TITUS)

b. [Merun therra minna] *nioman* **habet** thanne thaz
 greater this love nobody has than that
 uer sin ferah seze furi sina friunta.

who his live lay-down for his friends

'No one has greater love than this, than that he lay down his life for his friends.'

Lt. *Maiorem hanc dilectionem nemo habet quam ut animam suam quis ponat pro amicis suis.*

(*Tatian*, Gospel Harmony, 168,2; TITUS)

(26) So dhar after auh *chiuuisso* **quhidit** dher selbo forasago: ...
 so thereafter also certainly said the same prophet

Lt. *Sic enim subiecit idem propheta: ...*

(*Isidor*, 5,9; TITUS)

- Discourse-continuative marker *thô* 'then': Highly frequent clause-linker introducing V2-clauses (cf. e.g. Donhauser & Petrova 2009), often marking a sequence of events or change of speaker in dialogues:

(27) **Thô gihortun** inan thie iungiron sprechantan inti folgetun themo heilante. **Thô hiiuanta** sih ther heilant inti gisah sie imo folgente, quad in: uuaz suochet ir? Sie quadun imo: rabbi (thaz ist arrekit meistar) uuâr artos? **Thô quad** her in: quemet inti gisehet. (*Tatian* [16.2])

Lt. John 1.37. *Et audierunt eum discipuli loquentem et secuti sunt Ihesum.* 38. *Conversus autem Ihesus et videns eos sequentes se, dicit eis: quid queritis? Qui dixerunt ei: rabbi (quod dicitur interpretatum magister) ubi habitas?* 39. *Dicit eis: venite et videte.*

‘The two disciples heard him speak, and they followed Jesus. Then Jesus turned, and seeing them following, said to them, “What do you seek?” They said to Him, “Rabbi” (which is to say, when translated, Teacher), “where are You staying?” He said to them, “Come and see.”

- V1-declaratives: *thô* appears directly to the right of the finite verb:

(28) inti **uuas tho** giheilil ira tothter fon dero ziti
and was then/there healed her daughter from that hour

Lt. [...] & *sanata est filia illius ex illa hora.*

‘And her daughter was healed from that hour.’

(*Tatian*, 273,31)

- Pragmatic functions linked to these placement options (Donhauser & Petrova 2009):⁹
 - ❖ **V_{fin}+tho**: new foregrounded actions/events/situations along the main story line of a narrative;
 - ❖ **tho+V_{fin}**: *tho* functions as a temporal anaphor that relates the temporal setting of its clause to another temporal interval given in the discourse context:¹⁰
- *tho+V2* is particularly frequent with *verba dicendi* in dialogic sequences where it marks a change of speaker as in (27) (*Tatian*: 97 of 115 instances according to Donhauser & Petrova 2009: 19).
- Analysis: *tho* as an element linked to temporal deixis:
 - 1) When *tho* occurs in postfinite position (a position linked to new information, cf. Donhauser & Petrova 2009, Hinterhölzl & Petrova 2009), it introduces a novel time interval.
 - 2) When *tho* occurs preverbally (a position linked to topicality/anaphoricity), it refers anaphorically to a temporal interval that has been established before:

⁹ See also Betten (1987), Hinterhölzl & Petrova (2005, 2009), Petrova (2006), and Petrova & Solf (2008).

¹⁰ The cognate words Gothic *þanuh*, Old English *þa* and Old Saxon *tho* fulfill similar discourse functions (cf. Petrova & Solf 2008, Hinterhölzl & Petrova 2009, Fuß 2008, Trips & Fuß 2009).

- (29) a. [CP \emptyset [C' V_{fin}] [TP *tho* ...]] *tho* is part of the focus domain
 b. [CP *tho* [C' V_{fin}] [TP ___ ...]] *tho* has left the focus domain (EPP)
-

- *thô* is base-generated as an outer SpecTP and moves to prefinite position if C is endowed with an EPP feature (for reasons of locality, C_[+EPP] attracts the closest (i.e., highest) element of the IP/TP domain, cf. e.g. Fanselow 2004, Frey 2006):
- What about V3 orders of the type pronoun-*thô*-V_{fin}?

- (30) /[...] [siu] tho **giuanta** sih/
 she then turned herself
 Lt. /[...] *conuersa illa*/
 'She then turned around.'
 (Tatian, 665,19; Axel 2007: 224)

- Traditional observation Ruhfus (1897: 12, 73): The sequence *her tho* forms a cluster that acts as one accent-bearing unit in the prefield.
- Proposal: Cluster formation in the syntax:
 - ❖ *tho* is a temporal anaphor base-generated in an outer specifier of TP (cf. Fuß 2008, Trips & Fuß 2009);¹¹
 - ❖ Cluster Hypothesis (Sabel 2001, Grewendorf 2001): Prior to movement to a checking/licensing position, lower checkees may adjoin to a higher checkee with the same (unchecked) feature.
 - ❖ In the case at hand, pronouns attach to *tho* (in SpecTP), an element that similar to pronouns, (i) carries a categorial D-feature (*tho* goes back to the demonstrative paradigm) and (ii) is linked to anaphoricity, that is, must escape the focus domain. The cluster then undergoes movement to the left periphery:

- (31) a. [TP *tho* T [vP ... pron. ...]] ⇒ pron. moves to SpecTP (cluster formation)
 b. [TP pron.+*tho* T [vP ... t_{pron.} ...]] ⇒ pron.+*tho* moves to SpecCP
 c. [CP pron.+*tho* V_{fin}+C [TP t_{pron.+tho} T [vP ... t_{pron.} ...]]

- ❖ Restriction to pronouns: for morpho-phonological reasons, only light/non-complex elements may participate in cluster formation.

4.1.2 Wh-questions

- Observation: fronted *wh*-phrases are directly left-adjacent to the finite verb in main clauses (Petrova & Solf 2007):

¹¹ That is, *tho* is a temporal anaphor that specifies temporal properties of its clause in relation to the immediate discourse context. It is directly merged in SpecTP (the locus of Reference time) to receive a temporal index that is linked with a Reference time given in the discourse context.

(32) *... *wh* > XP > V_{fin}

- Question: Why does EPP-checking by an element such as *thô* not preempt *wh*-movement to the closest specifier of C (if [EPP] is ranked higher than [*wh])?
- Possible answer: The distribution of *wh*-phrases can be attributed to the following principle (Chomsky 2001: 15):

(33) Maximize matching effects.

- If there are two elements that may in principle check/value features of C, C will attract only the element that checks/values the greatest subset of features contained in C:
 - (i) Fronting of *wh*-phrases serves to check/value both (i) C's EPP feature and (ii) C's [*wh*] feature.
 - (ii) Purely EPP-driven fronting merely checks a single feature (EPP).
- Accordingly, C will attract the *wh*-phrase, leaving *thô* in a lower, postfinite position.¹²
- *thô* cannot occupy a second/outer specifier: (i) *thô* does not constitute a possible topic/focus and therefore cannot be attracted by features other than the EPP; (ii) the relevant EPP feature has already been eliminated by *wh*-movement.
- This prediction is borne out by the facts: There are apparently no cases where a fronted *wh*-phrase is preceded by a non-topic such as *thô* (cf. Petrova & Solf 2007):

(34) *... *thô* > *wh* > V_{fin}

4.1.3 Further issues: multiple topics & clausal particles

- OHG *Isidor*: Multiple fronting of the type XP-XP-V_{fin} is more productive than in other OHG texts (cf. e.g. Robinson 1997):

(35) a. [Dhea uuehhun] [aur] [in heilegim quhidim] **arfullant** sibun iar.
 the weeks however in sacred language fulfil seven years
 Lt. *Ebdomada namque in sacris eloquiis septem annis terminatur.*
 ‘The weeks, however, take seven years in sacred language.’
 (*Isidor*, 457; Robinson 1997: 26)

¹² This analysis raises some questions concerning the locality of operations. More precisely, it must be ensured that C can attract the *wh*-phrase across the seemingly closer element *tho* (in SpecTP). Note that similar problems arise in cases where a fronted object crosses the subject. Possible solution: Prior to attraction by C, the raised element moves to a position at the left of the middle field (as e.g. in approaches such as Müller 2010, where it is assumed that “every phrase is a phrase”).

- b. [So] [auh in andreru stedi] [dhurah dhen selbun heilegun forasagun]
 so also in other places through the same holy prophet
uuard dhera dhrinissa bauhunc sus araughit: [...]
 became the-GEN Trinity-GEN meaning in this way demonstrated
 Lt. *Item alibi per eundem prophetam trinitatis sic demonstratur significantia:* [...]
 ‘In this way, also elsewhere the meaning of the Trinity was demonstrated by
 the same holy prophet: [...]’
 (*Isidor*, 328; Robinson 1997: 27)

- In (35a), the fronted XPs have a different information-structural status: (i) *dhea uuehhun* is an aboutness topic (which refers back to given information); (ii) *in heilegim quhidim* receives a contrastive reading.¹³
- Analysis in a mult-spec setting: slight modification of the feature hierarchy in (23), replacing the feature [**wh**] by the more general feature [**foc**] (see e.g. Sabel 1998 for the idea that *wh*-movement is triggered by a focus feature):

(36) [**fin/_V**] > [EPP] > [**foc**] > [**top**]

- (35b) most likely involves multiple fronting of topics.
- Analysis: feature hierarchy may include more than a single [**top**] feature each instance of which triggers a separate move operation.¹⁴
- Clausal particles (*inu/eno* etc.): correspond to two more features linked to the coding of affirmativity and the typing of all kinds of interrogatives:

(37) [**fin/_V**] > [EPP] > [**foc**] > [**top1**]/[**top2**] > [**affirm**] > [**interrog**]

¹³ Compare the relevant passage from the OHG *Isidor*:

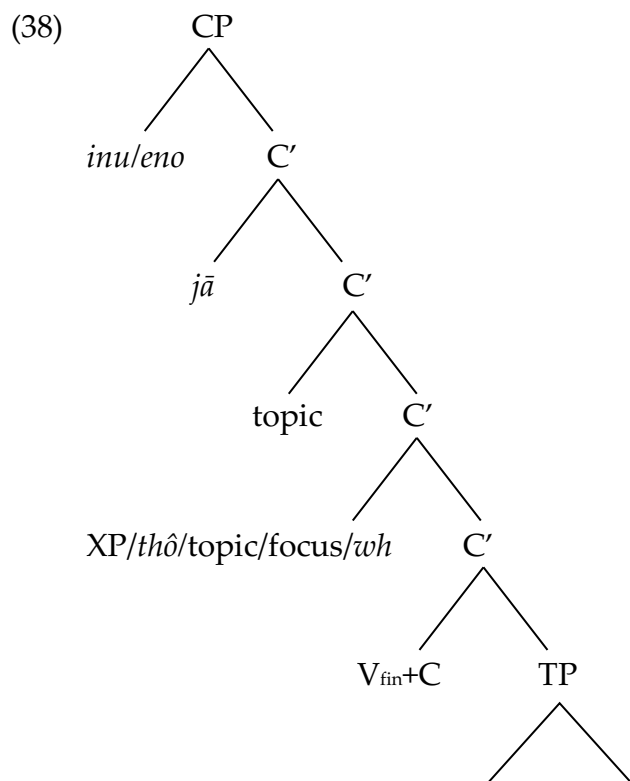
Chiuuisso nu, ibu dhea sibunzo uuehhono fona daniheles zide uuerdhant chizelido, buuzssan einigan zuuiiun ist dhanne archennit, dhazs dher allero heilegono heilego druhtin nerrendeo christ iu ist langhe quhoman. Dhea uuehhun auur in heilegim quhidim arfullant sibun iaar.

Lt. *Quę scilicet LXX ebdomade, si a tempore danielis numerentur, procul dubio sanctus sanctorum dominus iesus christus olim uenisse cognoscitur. Ebdomada namque in sacris eloquiis septem annis terminatur.*

‘Certainly now, if the 70 weeks are counted from Daniel’s time on, it is without doubt that the holiest of the holy, Christ the Lord has already come. The weeks, however, take seven years in sacred language.’

(*Isidor*, 453-457; TITUS)

¹⁴ Thus, it must be ruled out that *Maximize matching effects* leads to multiple checking of both [**top**] features. This can be achieved either by a uniqueness principle ensuring that a single element can maximally satisfy a single substantial semantic/pragmatic feature (similar to criterial freezing, Rizzi 2006), or by a more fine-grained distinction between different kinds of [**top**] features linked to the well-known distinction between aboutness topics, contrastive topics etc.



4.2 Summary: multiple projections vs. multiple specifiers

- Multiple projections vs. multiple specifiers – major differences:
 - (i) absence/presence of multiple head positions in the left periphery;
 - (ii) nature of the specifier closest to the position of the finite verb:
 - (a) SpecFinP in a multiple projections analysis (reserved for pronouns and non-topic/non-focus elements attracted by C's EPP feature, cf. Axel 2007);
 - (b) multi-purpose position in a structure like (38); content is determined by various factors including:
 - (i) the feature hierarchy in (37),
 - (ii) the actual feature content of C in each individual sentence;
 - (iii) the interaction between C's EPP feature and other substantial semantic/pragmatic features in terms of *Maximize matching effects*.
- The multi-purpose character of this position carries over to present-day German (cf. e.g. Fanselow 2004, 2006), the only difference being that in present-day German, C has apparently lost its ability to project more than a single specifier.

5. EPP features, expletives and the rise of (generalized) V2

- Historical development of generalized V2 in German:
 - (i) **Loss of V1:** Development of obligatory XP-fronting to SpecCP.
 - (ii) **Loss of V3:** Development of a restriction against multiple XP-fronting
- Proposal: Both changes are surface reflexes of single underlying change, namely the development of an obligatory EPP feature in C.

5.1 Loss of V1 declaratives

- Step 1: When the original semantic/pragmatic function of XP-fronting began to erode, XP-fronting was grammaticalized as a purely syntactic operation; “fossilization” giving rise to a semantically neutral EPP feature in C⁰ (Axel 2007, Fuß 2008, Hinterhölzl & Petrova 2009)¹⁵
- Result: Fronting of non-topics (Axel 2007):

- (39) a. [Neoman] **niuirdit** fona gote festi [...]
 nobody NEG-becomes by God strengthened
 Lt. *Nemo erit a deo nisi firmus* [...]
 ‘Nobody will become strengthened by God [...]
 (*Monsee Fragments*, XL,19; *St. Augustini sermo*; Axel 2007: 120)
- b. [Neo] **nist** zi chilaubanne dhazs fona dhemu salomone
 never NEG-is to believe that of the Salomon
 sii dhiz chiforabodot
 is this prophesied
 Lt. *Numquid de illo salomone creditur prophetatum? minime*
 ‘It can never be believed that this was prophesied by Salomon.’
 (*Isidor*, 638; Axel 2007: 120)

- Step 2: When the EPP feature became obligatory, SpecCP had to be filled by overt material ⇒ **loss of V1 declaratives**

¹⁵ Fossilization of XP-fronting is possibly linked to the existence of an alternative strategy to mark IS distinctions (given vs. new information), namely clause-internal word order variation in the IP/TP domain (scrambling) As a result, the status of main clauses with fronted topics became ambiguous. More precisely, they could be analyzed as resulting from

- (i) XP-fronting triggered by IS properties (givenness/topicality) linked to C⁰, or
- (ii) XP-fronting triggered by a semantically/pragmatically neutral EPP feature, preserving IS distinctions established at an earlier stage of the derivation (i.e., by IP/TP-internal movement, cf. e.g. Frey 2004, 2006, Grewendorf 2005 on present-day German).

Analysis (ii) is arguably the more parsimonious option, since it does not require double marking of one and the same IS-related category in different clausal domains (all clauses can be parsed by assuming that IS categories are marked within IP/TP only, while (i) requires that IS is sometimes marked within CP, and sometimes within IP).

- Proposal: The development of an obligatory EPP feature in C is linked to the reanalysis of *thô* as a CP-expletive (possibly driven by least effort strategies that favor the least costly derivation in case the input is ambiguous, cf. Roberts & Roussou 2003):

(40) a. [CP ... *thô* [C' V_{fin} + C_[+EPP] [TP t_{thô} T [vP ...]]]] ⇒
 b. [CP *thô* [C' V_{fin} + C_[+EPP] [TP ... T [vP ...]]]]

- Expletives as morphosyntactic repairs: semantically neutral elements that are inserted as a last resort to realize a certain structural position.
- Expletives therefore signal the presence of obligatory EPP-features: Expletives mark obligatory positions which are discourse-semantically neutral and have syntactic functions only:
 - (i) SpecTP: English, Scandinavian, and Dutch (?);
 - (ii) SpecCP in all Germanic V2 languages.¹⁶
- Early instances where clause-initial *tho* does not seem to have an anaphoric interpretation but rather seems to function as Vorfeld-expletive (Donhauser & Petrova 2009: 21):

(41) *thô uuas thiu zehenta zît dhes tages*
 THO was the tenth time of-the day
 Lt. *hora autem erat quasi decima*
 'it was the tenth hour of the day'
 (Tatian, 51,15)

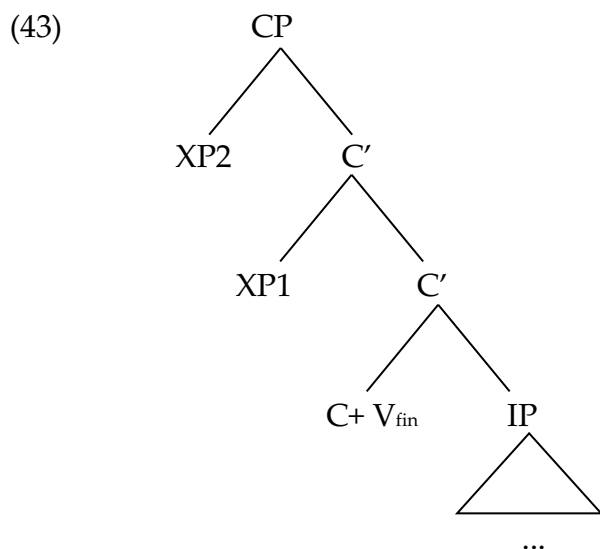
- *tho* was semantically underspecified:
 - (i) *tho* could be used to translate a variety of different elements (conjunctions such as Lat. *et*, discourse particles like Lat. *autem*; cf. Betten 1987);
 - (ii) *tho* could be doubled by other temporal adverbs (Axel 2007: 156):

(42) *inti uuas **tho** giheilît ira tothter [fon dero ziti]*
 Lt. [...] & *sanata est filia illius ex illa hora.*
 'And her daughter was healed from that hour.'
 (Tatian, 273,31)

5.2 Loss of V3 orders = loss of multiple specifiers in the left clausal periphery

- Analysis of V3 in early OHG: C can project more than a single specifier:

¹⁶ Note for instance that SpecCP in German is a multi-purpose position which can host all kinds of XPs (topics, foci, operators etc.).



- Loss of V3 orders/multiple XP fronting: Loss of the possibility of multiple specifiers in the C-domain/Vorfeld \Rightarrow rigid V2
- Connection with the rise of expletives/an obligatory EPP?

- General idea/intuition: Expletives signal that a certain structural position has syntactic functions only. For reasons of derivational economy, the relevant position cannot be realized more than once (i.e., it is unique).

- Derivational economy: Construction of syntactic structures proceeds with least effort: no superfluous operations (Chomsky 1995).
- Multiple XP-fronting/V3 is ruled out by derivational economy: As soon as the (purely syntactic) requirements of C are fulfilled by either (i) fronting of a single XP or (ii) insertion of an expletive, C is inert and may not trigger any further operations.
- The loss of multiple specifiers is perhaps linked to another property of expletives:

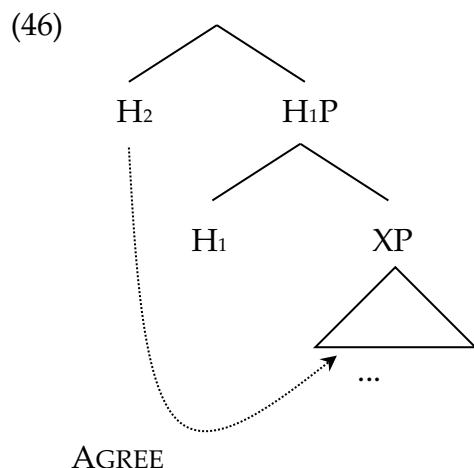
(44) *Expletives and structure-building operations*

The insertion of an expletive terminates the projection of a head and blocks the availability of multiple specifiers.

- The observation that expletives 'close off' the projection of a functional head follows from:
 - strict cyclicity;
 - the assumption that the expletive itself acts as a probe, initiating an Agree relation with a functional head F after the expletive has been merged as specifier of F (Chomsky 2000, 2004).
- Strict cyclicity: A lower head H_1 may no longer trigger syntactic operations after a higher head H_2 has been merged, acting as a probe (Chomsky 2000: 132):

(45) Properties of the probe/selector α must be satisfied before new elements of the lexical subarray are accessed to drive further operations.

- In a structure like (46), H_1 is inert after H_2 (which has been subsequently added to the structure) has initiated an Agree operation:¹⁷



- Expletives as probes: The checking/valuation relation between a functional head F and an expletive merged in F 's specifier is initiated by the expletive itself (cf. Chomsky 2000: 128, 2004: 114).
- Derivation of generalization (44): After an expletive has established an Agree relation with C or T , C/T become inert and may not trigger further operations. As a result, they can neither attract further elements nor project additional specifiers.

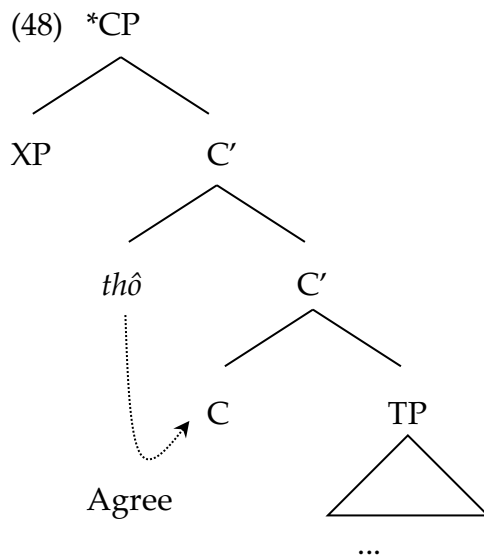
(47) a. $[_{CP} \dots \hat{th}\hat{o} [_{C'} V_{fin} + C_{[+EPP]} [_{TP} t_{\hat{th}\hat{o}} T [_{VP} \dots]]]] \rightarrow$
 b. $[_{CP} \hat{th}\hat{o} [_{C'} V_{fin} + C_{[+EPP]} [_{TP} \dots T [_{VP} \dots]]]]$

- (i) insertion of $\hat{th}\hat{o}$ in SpecCP eliminates C 's EPP-feature.
- (ii) $\hat{th}\hat{o}$ carries an uninterpretable feature $[uF]$ that renders it active and must be eliminated as well.¹⁸

¹⁷ This assumption seems to be implicit in most work on the strict cycle (for related discussion cf. e.g. Chomsky 1995: 234f., Collins 1997: 81ff., and in particular Chomsky 2000: 132f.); it follows more or less directly if phases are equated with phrases as for example in Müller (2010). The status of (46) is somewhat less clear under the assumption that T may initiate syntactic operations only after it has inherited the relevant uninterpretable features from C (Chomsky 2004). One might argue, however, that this particular situation does not conflict with (46), since T in fact has no probe properties prior to Merge of C . After C has been added, the relevant features (e.g., $u\phi$, EPP) are handed over to T , giving rise to cases of 'parallel probing' where operations triggered by C and T apply in parallel.

¹⁸ As to the nature of $[uF]$, we might speculate that it relates either to C 's clause type features (i.e., $[+declarative]$ in the case at hand) or to the fact that C in V2 languages is typically linked to finiteness. The latter might be taken to indicate that both C and the expletive $\hat{th}\hat{o}$ carry an uninterpretable tense specification $[uTns]$. This seems to make the correct typological prediction that cross-linguistically, C -related expletives are confined to V2 languages. I leave this point open for future research.

- (iii) Following Chomsky (2000, 2004), *thô* acts as a probe that accesses C as the closest goal. As a result, *thô*'s [uF] deletes.
- (iv) Crucially, C is inert and cannot trigger any further operations after it has been accessed by the expletive probe. Thus, C may not project further specifiers, ruling out a structure as in (48).



- After the reanalysis, examples with clause-initial *thô* provided positive evidence to the learner that at least in a certain context, C could project only a single specifier.¹⁹
- Together with the fact that the original semantic/pragmatic motivation for XP-fronting was becoming more and more opaque, the reanalysis of *tho* can be taken to have tipped the scales in favor of a strict V2 grammar that lacks the possibility of multiple specifiers in the C-domain.
- (wild) guess: V2 (with an XP in SpecCP) can be analyzed on a par with the derivation in (48): In generalized V2 languages, the fronted XP carries a non-interpretable feature [uF] that renders it active (so it remains visible to C's EPP feature). After being attracted to SpecCP, [uF] probes C, thereby "closing off" the CP projection ⇒ **rigid V2...**

¹⁹ Note that this approach makes a set of additional predictions:

- (i) Expletives cannot occur in subcategorized positions (e.g. within VP, cf. Chomsky 1981): Expletives may occur only in positions with a purely syntactic function (e.g., they are incompatible with the assignment of thematic roles in subcategorized positions). The insertion of expletives in thematic positions would terminate the projection of VP and prevent the assignment of thematic roles to other elements.
- (ii) Systematic structural distinction between expletive-*es* and correlate-*es*: Only the latter can occur in all argument positions, while the use of expletive-*es* is limited to positions with a purely syntactic function.

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