Early English clausal arguments of intransitive verbs: Subjects or associates of empty expletives?

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1 Introduction

- Old and Middle English have various verbs that can occur with a *that*-clause as their only argument

- goal: analyse the status of the *that*-clause

1.1 Corpus Size and Examples

- searches for intransitive verbs with a *that*-clauses in the YCOE (Taylor et al. 2003) and PPCME2 (Kroch and Taylor 2000) yielded a total of **182 examples**

- two semantic verb classes make up for majority of cases:

  1. verbs meaning roughly "happen", *limpan, byrian, wearðan, becuman, befall* etc. (137 / 182 examples)

     (1) For ðiosum ðonne oft **gebyreð** [ðæt se reccere on his mode wirð   upahæfen]
           for this   then often happens that the ruler   in his mind becomes uplifted

           'Therefore, it happens often [that the ruler gets arrogant in his mind]'
           (cocura,CP:17.109.24.732)

  2. verbs meaning roughly "befit", *dafenian, byrian, risan, behove* etc. (17 / 182 examples)

     (2) Ond þeah   wel **gedafonað** [ðætte ða godan recceras wilnigen ðæt hie monnum licigen]
           and though well befits   that the good rulers   want   that they men   please
           ' It is nevertheless appropriate [that the good rulers want to be pleasing to men]'
           (cocura,CP:19.147.5.994)

- a large number of other verbs; e.g. *betoken, follow, help, need, seem, signify, suffice* etc. (28/182 examples)

  (3) a. **Helpeð** [þæt se mete hreðe &   wel mylteð].
           helps   that the food quickly and well digests
           'It is helpful [that the food digests quickly and well]'
           (coverhom,HomU_11_[ScraggVerc_7]:97.1131)
       b. &   **ðuhte** [þæt hit eal forbyrnan sceolde.]
           and seemed that it   all down-burn should
           ' And it seemed [that it would burn down entirely]'
           (coblick,LS_17.1_[MartinMor[BlHom_17]]:221.172.2822)
       c. ... Wherof **folowyth** [that they were not the same]
           (CMFITZJA,A2V.16)

1.2 The Rise of Expletive *it*

- intransitive verbs with *that*-clauses begin to develop *it*-expletives

- long period of variation between bare *that*-clause arguments and *it*-associate structures (from before attested Old English to at least 1450)

  (4) a. Æfter þisum **gelamp** [þæt ða leasan hæðenan wrægdon Philippum to ðam casere]
        after this   happened that the false   heathens denounced P.   to the emperor
        ''After this, it happened that the false heathens denounced Philip to the emperor'
        (coaelive,ÆLS_[Eugenia]:284.361)

      b. Æfter þisum hit   **gelamp** binnon feawum monðum [þæt Stranguilio and Dionisiade his
        after this   EXPL happened within few   months   that S.   and D.   his
        wif gelærdon Apollonium ðæat   ]
        wife advised   A.   that ...
        'After this, it happened, within a few months, that Stranguilio and Dionysias his wife advised
        Apollonius that'
        (coapollo,ApT:11.1.182)

- searches for examples with *it* in YCOE and PPCME2 yielded **544 examples**

- the variant with *it* gradually takes over

- to date, research has failed to produce significant factors (other than time) that influence the absence or presence of *it*, but it is possible that the nature of the clause-initial constituent, verbal semantics, and gaps in subordinate clauses play a role.

  "On the whole, there seem to be no fixed rules for the addition of this secondary formal subject in OE. As far as I can see, the state of things in this respect is next to chaotic" (Wahln, cited in Mitchell 1985, §1035)

Coefficients:				
	Estimate	Std. Error	z-value	Pr($>$|z|)
(Intercept)	-3.7890160	0.5344918	-7.089	$<$.001 ***
Time	0.0043854	0.0004944	8.870	$<$.001 ***

Null deviance: 412.11 on 140 degrees of freedom
Residual deviance: 314.67 on 139 degrees of freedom
AIC: 419.01, Nagelkerke Pseudo- R^2 0.527

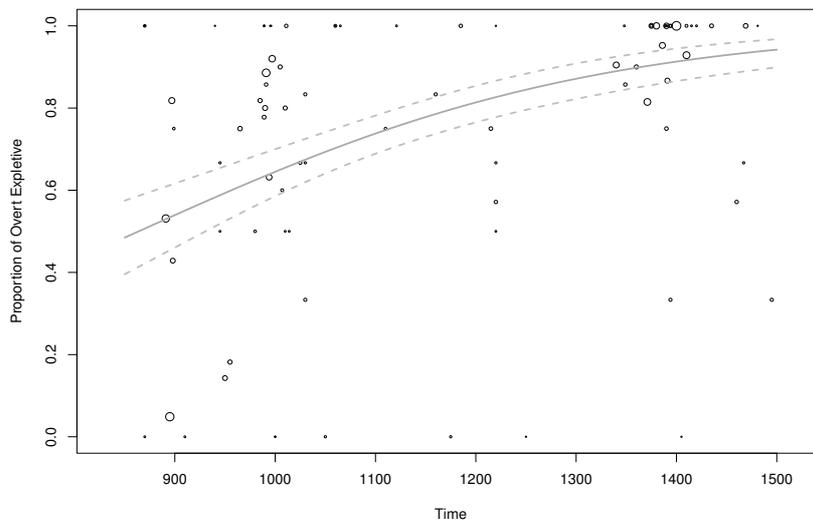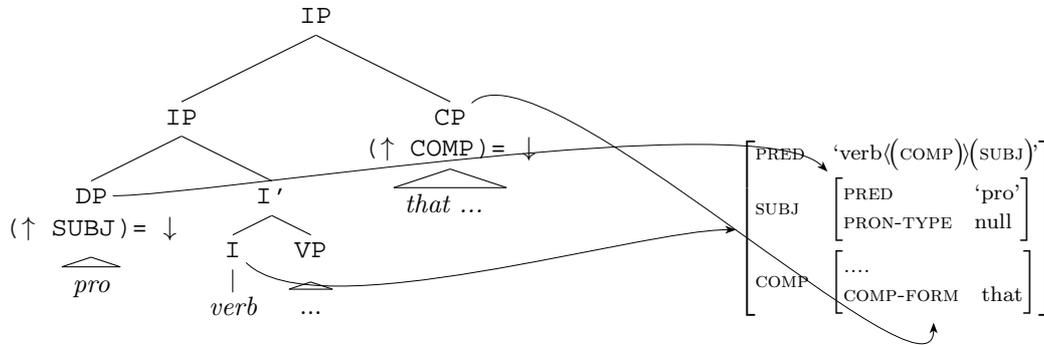Table 1: Logistic regression model for rise of *it*

Figure 1: The rise of expletive *it* with intransitive verbs

- very slow change, log-odds of *it* are predicted to increase by only 0.44 per century (95%-CI: [0.34 - 0.54]); it would take c. 1,300 years for the frequency of *it* to rise from 5% to 95% (?)
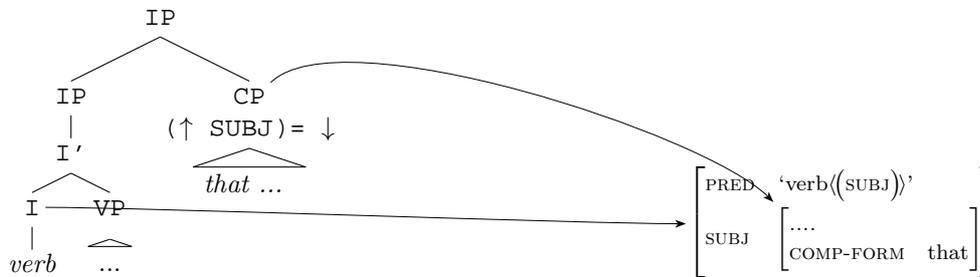
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1.3 Research Question: Which analysis is more appropriate?

- intransitive verbs with a *that*-clause are compatible with two different parses:

  1. The empty expletive analysis:

```
                        IP
                 _____|_____
                IP                 CP
           _____|_____          (↑ COMP)= ↓
          DP         I′            ⌒
      (↑ SUBJ)= ↓   __|__        that ...
          ⌒        I    VP
         pro       |    ⌒
                  verb   ...
```

$$\begin{bmatrix} \text{PRED} & \text{`verb}\langle(\text{COMP})\rangle(\text{SUBJ})\text{'} \\ \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{`pro'} \\ \text{PRON-TYPE} & \text{null} \end{bmatrix} \\ \text{COMP} & \begin{bmatrix} .... \\ \text{COMP-FORM} & \text{that} \end{bmatrix} \end{bmatrix}$$

  2. The unmediated analysis:

```
                   IP
             _____|_____
            IP             CP
            |          (↑ SUBJ)= ↓
            I′             ⌒
          __|__          that ...
         I    VP
         |    ⌒
        verb   ...
```

$$\begin{bmatrix} \text{PRED} & \text{`verb}\langle(\text{SUBJ})\rangle\text{'} \\ \text{SUBJ} & \begin{bmatrix} .... \\ \text{COMP-FORM} & \text{that} \end{bmatrix} \end{bmatrix}$$

- most syntacticians seem to prefer the empty expletive analysis (e.g., Haeberli 1999, Kemenade 1997, Ringe and Taylor 2014, 502)

- YCOE and PPCME2 implement an empty expletive analysis

(5)
```
    (IP-MAT (NP-NOM-x *exp*)
        (ADVP-TMP (ADV^T +Ta))
        (VBDI gelamp)
        (CP-THT-x ( C +t+at)
           (IP-SUB ...))
        (.  .))
    (ID comart2,Mart_2.1_[Herzfeld-Kotzor]:No15,A.17.139))
```

- the research question may seem trivial at first; however, it is easier to link the rise of *it*-expletives to the development of a canonical subject position if there is no expletive drop

	empty expletive analysis	unmediated analysis
crucial change	phonology: *pro* → *it*	syntax: rise of Spec,IP as canonical subject position
function of CP	necessarily identical:	may be different:
	with *pro*: COMP	without overt expletive: SUBJ
	with *it*: COMP	with *it*: COMP

Table 2: Comparsion between empty expletive and unmediated analyses

- I will try to find as many tests as possible to distinguish between the two hypotheses

- most tests will make an argument from parsimony or exploit the fact that the grammatical function of the *that*-clause is different under the two analyses

- however, since data is sparse and the question is intricate, it is impossible to produce absolutely clear evidence for or against either view

2 The positional argument

- the absence of pre-verbal *that*-clauses has been used as an argument against their status as subjects

2.1 Traugott 1992

"[T]here is one significant difference from PDE: [...] complement[] [clauses] that could, on the basis of their equivalents in PDE, be regarded as subjects actually either function as oblique NPs in impersonal constructions, [or] as complements of NPs or predicates [...]. This is partly because, unlike in PDE, noun clauses cannot occur in sentence-initial position, i.e. there is no equivalent of *That they arrived so late is a problem.*" (Traugott 1992, 234)

→ Traugott proposes two alternative parses for constructions that involve potential finite subject clauses

- *that*-clauses with verb with oblique EXPERIENCER (e.g. *þyncan, lystan, please* etc.):

(6) a. EXPERIENCER verb [*that ...*]
     b. subject: [*that ...*] verb EXPERIENCER
     c. "oblique": EXPERIENCER [verb [*that ...*]]

"[T]he *þæt*-clause may be taken to serve the stimulus function without also being subject" (Traugott 1992, 235)

→ it is quite uncontroversial that a *þæt*-clause with impersonal verbs is not a subject (e.g., Fischer and van der Leek 1983; Visser 1963-73, §32)
→ evidence:

1. the EXPERIENCER is probably the subject as it passes various subject tests, most importantly conjunction reduction (Allen 1995)

   (7) ... gif him   na ne   tweonað [þæt he þæs   tiða   beo],
        ... if him.DAT not at all doubts   that he of-this receiver be,

        ac __   gelyfð on heortan
        but Ø.NOM believes in heart

        '... if he doesn't doubt at all that he will receive this, but believes it in his heart'
        (coaelhom,ÆHom_8:85.1212)

2. the *þæt*-clause can show non-nominative case when used with cataphoric elements

   (8) ac **þæs**   us scamað swyþe [þæt we bote   aginnan swa]
        but this.GEN us shames very   that we atonement begin   so

        'But we are ashsamed of this, [that we begin atonement in that way]'
        (cowulf,WHom_20.3:166.1851) (Traugott 1992, 236, example (110))

3. extraction out of the *þæt*-clause is easily possible

   (9) a. [But one thyng], sir knyght, me thynkes [ye lak __]
           (CMMALORY,194.2921)
        b. [Hwæt] þincð þe [þæt þu   sy __]?
           what   seems you that you.DAT are

           'What does it seem to you that you are?'
           (cowsgosp,Jn_[WSCp]:8.53.6483)

4. co-occurrence of EXPERIENCER and expletive *it* is extremely rare (e.g., Mohlig-Falke 2012, 170)

   (10) þa   gelicode hit ðam   leodebiscope [þæt he his lichaman up ða   gelogode.]
         then liked   EXPL the.DAT bishop.DAT   that he his body   up then put
         'Then it pleased the bishop to place his body up (there)'
         (cocathom2,ÆCHom_II,_10:90.333.1858)

- *that*-clauses with *be* + NP / predicate (e.g. *custom, wonder; foolish* etc.):

(11)   a.   *is* NP / predicate [*that ...*]
   b.   subject: [*that ...*] *is* NP / predicate
   c.   complement of NP / predicate: *is* [NP / predicate [*that ...*]]

"In the absence of evidence that the complement [clause] [...] must be a subject, it is preferable to analyse it as a complement of an NP [or predicate]" (Traugott 1992, 235)

→ Traugott's description of the two parsing options is confused
→ predicates that contain *that*-clause complements are generally **unambiguous**:

1. an external argument is present

(12)   Hwæðer nu   [se anwald] hæbbe [þone þeaw   [ðæt he astificige unðeawas [...] &   plantige
   whether now the power   has   the   custom that it uproots vices   [...] and plants
   ðær   cræftas on]] ?
   there vrities on

   'Does power now have the custom of uprooting vices [...] and planting virtues there?'
   (coboeth,Bo:27.61.7.1133)

2. existential *be* forces complement reading (ambiguity between existential and equative *be*)

(13)   &   þær is mid Estum   **ðeaw**   [...] [þæt he lið inne   unforbærned]
   and there is with Estonians custom [...] that he lies inside unburned

   'There exists among the Estonians [the custom [...] [that he lies inside unburned]]'
   (probably not: [That ...] is [a custom])
   (coorosiu,Or_1:1.17.6.325) (Traugott 1992, 235, example (133a))

→ in most examples of "*is* NP / predicate [*that ...*]", *be* is much more likely to be equative, not existential

(14)   ... swa swa gio   [Romana **þeaw**] wæs, &   giet is on manegum þiodum,
   ... so   as   once Romans' custom was, and yet is in many   countries,
   [þæt mon hehð   ænne heafodbeag gyldenne æt sumes ærneweges ende].
   that one hangs a   crown   golden   at some run-way's end

   '... just as it once was the custom of the Romans, and still is in many countries, that people hang a golden crown at the end of a racecourse' (not: the custom [that ...] existed)
   (coboeth,Bo:37.112.20.2222)

→ examples with two *that*-clauses also show that *that*-clauses can occur as an argument with equative *be* (Méndez 1997, 219, "double embedding"); complement reading unlikely (coordination?) if not impossible
→ the real ambiguity in these cases is between whether the NP or the *that*-clause is the predicate (NP is [*that...*] vs. [*that...*] is NP)
→ this ambiguity is also reflected in different annotations in the parsed corpora:

(15)

```
( ( IP-MAT (CONJ &)
    (ADVP-TMP (ADV^T sy+d+dan))
    (BEPI is)
    (NP-NOM (ADJ^N o+der) (N^N bebod))
    (, ,)
    (CP-THT (C +t+at)
        (IP-SUB (...))))
    (. ;))
(ID cowulf,WHom_18:141.1506))
```

```
( (IP-MAT (NP-NOM-x *exp*)
    (ADVP-TMP (ADV^T +Ta))
    (BEDI w+as)
    (NP-NOM-PRD (NP-GEN (D^G +t+are)
        (N^G casere)) (N^N bebod))
    (CP-THT-x (C +t+at)
        (IP-SUB (...))))
    (. ,))
(ID coaelive,+ALS_[Martin]:31.5990))
```

→ ambiguity probably the main reason why measurements of the rise of expletive *it* with predicates is quite incoherent

- but what about examples without an oblique EXPERIENCER and without an "NP or predicate"?

  (16)   verb [*that ...*]

$\rightarrow$ Traugott conveniently ignores intransitive verbs with a *that*-clause argument!

$\rightarrow$ Traugott would probably have to concede that they are subjects since her system does not include empty elements like null expletives

$\rightarrow$ it turns out that the denial of finite subject clauses in Old English is not "partly" based on the fact that "noun clauses cannot occur in sentence-initial position" but that this is in fact the only argument

2.2   The position of initial *that*-clauses

- initial *that*-clauses are often assumed to occur in Spec,CP, not the canonical subject position, Spec,IP

- also common view in textbooks (e.g. Adger 2003)

- most important arguments in (Koster 1978) and lots of literature afterwards; no sentential subject in embedded or inversion contexts, no topicalization over sentential subjects

(17)   * [That [that the world is round] is obvious] upset Hermes (Adger 2003, 299, example (57))

(18)   * Did [that Medea killed her children] upset John? (Adger 2003, 299, example (54))

(19)   a. * John, that the Giants lost the World Series shouldn't have bothered.
       b. John, the story shouldn't have bothered. (Lohndal 2013, 316, example (9))

- however, some syntacticians disagree, most importantly (Delahunty 1983) and subsequent literature; some speakers allow embedded sentential subjects; some more fine-grained arguments

- I assume that clause-initial *that*-clauses are in Spec,CP for most speakers and that that has been true throughout the history of English

- the rule for canonical subjects in Spec,IP requires a DP

(20)   IP $\rightarrow$ DP   I'
                           ($\uparrow$ SUBJ) = $\downarrow$ $\uparrow$ = $\downarrow$

2.3 Expected number of fronted *that*-clauses with intransitive verbs

- comparison of initial *that*-clauses that are complements of transitive verbs vs. initial *that*-clauses of intransitive verbs; Old English texts only

- fronted complement clauses do in fact exist (2 examples); hence Traugott's general claim that "noun clauses cannot occur in sentence-initial position" is in fact wrong

(21) [þæt God on urum geþohtum andwearde is], se witega gesweotelað þus cweþende
      that God in our thoughts present is, the prophet makes-known, thus saying

   'That God is present in our thoughts, the prophet makes known, thus saying'
   (cobenrul,BenR:7.24.11.356)

(22) ðæt he þa Eastran on hiora rihttid ne heold, [...] ic no ne herige.
      that he the Easter on their right-time not held [...] I I at-all not approve

   'That he did not keep Easter at its right time [...], I do not approve at all'
   (cobede,Bede_3:14.206.20.2101)

- how many fronted *that*-clauses would be expected?

	that clause with transitive verb	*that* clause with intransitive verb
clause-initial	2 (0.084%)	0 (0%)
after the subject	2,391	143

Table 3: *That*-clause fronting with transitive and intransitive verbs

- less than 0.1% of complement *that*-clauses are fronted,

- assuming that the rate of clausal topicalization is identical for *that*-clauses of any grammatical function, we would thus expect 0.12 examples of fronted *that*-clauses with intransitive verbs

- in fact, 0 examples are attested

2.4 Summary

- the positional argument is inconclusive

- lack of fronted *that*-clauses with intransitive verbs may be due to extremely lowe frequency of clausal topicalization in general and not due to their subject status

- accidental gap in corpus data; more data would be needed (about 8 times as much data for one example)

3 Arguments from Parsimony

3.1 Modal Passives

- subject *that*-clauses will result in an elegant parallelism between nominal and clausal arguments in modal passives

3.1.1 Definition of 'Modal Passive'

- modal passives use a form of *be* plus a predicative *to*-infinitive to express (mainly deontic) modal meaning, "duty, obligation" (Visser 1963-73, §368)

- they involve object-to-subject raising (e.g. Fischer et al. 2000, 269-70)

- in Modern English, such structures have largely disappeared; *blame* is a fossil

(23) a. ... þat [Godis word] is [more to loue __ þan ony eurþly mete]
          ... that God's word is more to love   than any earthly sustenance
          '... that God's word should be loved more than any earthly sustenance'
          (CMWYCSER,397.3091)

     b. ... [the thinges] that ben [to doone __]
          ... the things   that are to do
          '... the things that should be done '
          (CMBOETH,451.C2.473)

     c. in the same wise is [he] [to blame __] that spendeth over-largely
          in the same way is he   to blame   who spends   over-largely
          'In the same way, he who spends too much should be blamed / is to blame'
          (CMCTMELI,233.C2.647)

3.1.2 Argument

- modal passives involve object-to-subject raising because the raised argument shows nominative case

(24) [se   God] wære [to wurþigenne __]
      the.NOM   God   was to honor
      'This God should be honored'
      (coaelive,ÆLS_[Martin]:459.6257)

- furthermore the raised argument agrees with *be*

(25) [Godes cwydas]   sind   [to smeagenne __ mid swa micelre carfulnysse]
      God's words.plural are.plural to consider   with so   great   carefulness
      'God's words are to be considered with great care' (cocathom2,ÆCHom_II,_15:159.294.3525)

- the subject can extrapose

(26) micle swyþor is [to halsienne __] [ealra gesceafta Drihten]
      much greater is to implore   all   creatures' Lord
      'But the Lord of all creatures must be implored much more greatly'
      (cobenrul,BenR:20.45.15.581)

- when the subject is extraposed, the subject tests still work - the raised argument is still the subject

(27) þonne beoð   [him to sellanne __] swiþost [þa migolan drincan]
      Then be.plural him to give   rather   the diuretic drinks.plural.NOM
      'Rather, [the diuretic drinks] should be given to him'
      (colaece,Lch_II_[2]:22.1.15.2458)

- therefore, raised *that*-clauses can be treated analogously - they can also be subjects

(28) Ac [to gelyfanne __] is, [þæt swylc deað þæs æfestan monnes swylce synne adilgode]
but to believe is, that such death of-the pious man such sins abolished

'But [that such a death of the pious man did away with such sin] is to be believed'
(cobede,Bede_3:16.228.23.2349)

- instead of using one object-to-subject raising analysis for DPs and another empty expletive raising analysis for CPs, the inclusion of subject clauses allows one unified analysis for both categories

3.1.3 What if both extraposed DPs and CPs involve empty expletives?

- the modal passive structures with DPs and CPs could be unified by introducing empty expletives everywhere

- however, the empty expletive would not really be motivated by another empirical fact

- another argument against empty expletives with extraposed DPs:

1. clausal and nominal associates in Modern English cannot usually co-occur with one expletive in Modern English

(29) a. There /*It emerged an answer.
b. It / *There emerged that the solution was simple.
c. *There /*It emerged an answer and that the solution was simple

2. however, there is one sentence attested in Old English in which a modal passive subject DP is co-ordinated with a CP

(30) On þan geðylde is [to secene __]
in this patience is to seek
[forgyfenysse sped], & [na hwu se man muge his teona eðest gewrecan]
forgiveness opportunity and not how the man may his injuries easiest avenge

'An opportunity for forgiveness, and not how one might most easily avenge one's injuries, should be sought in this patience.'
(coalcuin,Alc_[Warn_35]:213.153)

3. therefore, the structure probably does not involve an empty expletive
(problems: not a *that*-clause, presence of *not* may indicate gapping rather than ordinary coordination, this seems to be the only example)

3.2 A Gapping Example

- gapping often requires a great deal of parallelism in the order and type of grammatical functions of the initial conjunct, and the gapped non-initial conjunct

(31) [[$_{subject}$ Mary] drank [$_{object}$ beer]]
      and [[$_{subject}$ Sally] ~~drank~~ [$_{object}$ wine]]

(32) [[$_{subject}$ Peter] gave [$_{object}$ a book] [$_{oblique}$ to Sue],
      and [[$_{subject}$ Paul] ~~gave~~ [$_{object}$ a magazine] [$_{oblique}$ to Sally]]

(33) * [[$_{subject}$ Peter] gave [$_{object}$ a book] [$_{oblique}$ to Sue],
      and [[$_{subject}$ Paul] ~~gave~~ [$_{indirectobject}$ Sally] [$_{object}$ a magazine]]

- grammaticality survey with five test questions to find a possible difference between subject clauses and *that*-clause associates

- 10 native speakers; considerable speaker variation; but overall statistically significant difference:

  1. subject clause in first conjunct can license gapping with full subject DP in second conjunct

  2. *that*-clause associates cannot license gapping with full subject DP in second conjunct

  3. normal VP-ellipsis shows the same contrast but in a relative, graded way

(34) a. Two things were reported recently:
         [$_{subject}$ That the Chinese were building a moon rocket] was reported on Monday,
         and [$_{subject}$ the result of the election] ~~was reported~~ the day after.
      b. * Two things were reported recently:
         It was reported [$_{associate}$ that the Chinese were building a moon rocket] on Monday,
         and [$_{subject}$ the result of the election] the day after.

(35) a. *better:* Two things appeared unimaginable one hundred years ago:
         [$_{subject}$ That so many people would fly around in planes] appeared unimaginable,
         and [$_{subject}$ the small number of accidents] did too.
      b. *worse:* Two things appeared unimaginable one hundred years ago:
         It appeared unimaginable [$_{associate}$ that so many people would fly around in planes],
         and [$_{subject}$ the small number of accidents] did too.

- there is in fact one example in the Old English text corpus that contains a *that*-clause without *it* in the first conjunct and a gapped second conjunct with a DP subject

(36) ... þeah ðe   to þam fæder synderlice   belimpe [þæt he bearn gestrynde] [...]
      ... although to the   father exclusively belongs   that he child   begets   [...]
      &   to þam halgan gaste   [seo forðstæppung]
      and to the   Holy   Ghost the   procession.

      '... although [that he should beget a son] belongs exclusively to the father [...], and [the procession] to the Holy Ghost'
      (cocathom1,ÆCHom_I,_33:463.141.6666)

- the *that*-clause is therefore likely to be a subject

4 Arguments from Differential CP Status

- under the empty expletive analysis, the status of the CP is identical with and without overt expletives; under the unmediated analysis, the CP is a subject in one case, but a complement in the other

- often root-clause phenomena are found in complement clauses, but not in other kinds of clauses like certain adjunct clauses and also subject clauses
  → analyses: CP-recursion after bridge verbs, CP-truncation (work by Haegeman), Rizzi's split CP etc.

- therefore, if root clause phenomena are significantly more common in *that*-clauses with than without an overt expletive, this would support the unmediated analysis

4.1 Fronting in *that*-clauses

- fronting / embedded topicalization is a root clause phenomenon

- in Modern English, fronting can distinguish between *it*-associates and subject *that*-clauses (Authier 1992)

(37) a. It is nice [that Rachel visited Geneva.]
      b. ? It is nice [that [Geneva]$_i$, Rachel visited __$_i$.]

(38) a. [That Rachel visited Geneva] is nice.
      b. * [That [Geneva]$_i$, Rachel visited __$_i$] is nice.

- problem: Old English may allow Spec,IP as a topic position in restricted, especially in broadly speaking unaccusative, contexts; thus fronting does not necessarily indicate a full-fledged CP-structure

(39) ... hwæðer [**on ðam cwarterne**] wæron ænige cristene   menn for Godes geleafan belocene
      ... whether in   the   prison   were   any   Christian men for God's faith   locked
      '...whether any Christian men were incarcerated in that prison for their faith to God'
      (coaelhom,ÆHom_24:122.3840)

- nevertheless quantitative investigation may reveal a clause type difference

4.1.1 DP-Arguments

- DP-fronting vs. subject-initial clauses; clauses with and without *it*; *that*-clauses with overt complementizer

(40) a. þa   gelamp   hit   [þæt [**ðam gyftum**] win ateorode]
         then happened EXPL that the   gifts   wine lacked
         'It then happened that, as for the gifts, wine was lacking.'
         (cocathom1,ÆCHom_I,_4:206.8.646)
      b. þa   gelamp   hit   [þæt hi   genealæhton [**anre byrig**]]
         then happened EXPL that they approached a   city
         'It then happened that they approached a city'
         (cocathom1,ÆCHom_I,_10:258.10.1810)
      c. ðonon gelomp   [þætte [**þa seolfan moldan**] monige men neomende wæron]
         thence happened that   the same   clay   many   men taking   were
         'Hence it happened that the very clay was taken by many men'
         (cobede,Bede_3:7.178.5.1739)
      d. þa   gelamp   æfter þon [þæt þes eadiga wer Sanctus Martinus [**sum mynster**] getimbrede]
         then happened after that that the blessed man Saint   M.   some minster   built
         'Then it happened afterwards that the blessed man, Saint Martin, built a minster'
         (coblick,LS_17.1_[MartinMor[BlHom_17]]:217.102.2759)

	it verb that...	verb that...
Fronted DP-Argument	6 (4%)	1 (2%)
Subject-initial clauses with a frontable DP-Argument	165	56

Table 4: Argument DP-fronting in *that*-clauses of intransitive verbs

- the odds of finding an embedded fronted DP in structures without an expletive are about twice as high as in structures with an overt expletive (odds ratio: 2.03, 95%-CI: 0.24–95.28)

- this would support an unmediated analysis

- however, the effect fails to reach statistical significance (Fisher's Exact Test for Count Data: p=0.68)

4.1.2 PPs

- same procedure as before but with PP-fronting; *that*-clauses with overt complementizer

(41) a. Sothly, ofte-timis   it   happins [þat [**be þe ordinance of þe prioresse**] greuus   sklaunders
          Truly, often-times EXPL happens that by the ordinance   of the prioress   grievous slander
          rysis in monesterys]
          arises in monasteries

          'Truly, it often happens that grievous slander arises from the ordinance of the prioress in monasteries.'
          (CMBENRUL,43.1345)

      b. But þus hit   bifelle   [...] [þat Kyng Alurede hade þe vittorie [**with michel honoure**]]
          but thus EXPL happened [...] that King A.   had the victory with   much   honour

          'Thus it happened [...] that King Alfred had an honorable victory'
          (CMBRUT3,110.3328)

      c. On þæam dagum gewearð   [þætte [**on anre dune neah Romebyrig**] tohlad   seo eorþe]
          on those days   happened that   on a   hill   near Rome   trembled the earth

          'In these days it happened that there was an earthquake on a hill near Rome'
          (coorosiu,Or_4:2.86.28.1752)

      d. ... þæt gewurðan mihte, [þæt God him sende þa wæter **of þæs assan   teð**]]
          ... that happen   might that God him send the water of a   donkey's tooth

          '... that it might happen that God should send him the water of a donkey's tooth'
          (cootest,Judg:15.21.5762)

	it verb that...	verb that...
Fronted PP	17 (8%)	3 (3%)
Subject-initial clauses with a frontable PP	226	88

Table 5: PP-fronting in *that*-clauses of intransitive verbs

- results are as before:

- the odds of finding an embedded fronted PP in structures without an expletive are about twice as high as in structures with an overt expletive (odds ratio: 2.20, 95%-CI: 0.61–12.01), which would support an unmediated analysis

- but again, the difference is not statistically significant (Fisher's Exact Test for Count Data: p=0.30)

4.1.3 Adverbial Clauses

- Fronted Adverbial Clauses are only attested with *it*-expletives (5 examples)

(42) ... wherfore it happeth many tyme and ofte [that [**when twey men han everich wounded oother**],
      oon same surgien heeleth hem bothe]
      (CMCTMELI,218.C2.60)

- I failed to code the data for presence of adverbial clauses; counts out of all subject-initial *that*-clauses

	it verb that...	verb that...
Fronted Adverbial Clause	5 (1%)	0 (0%)
All subject-initial clauses	463	166

Table 6: Fronting of subordinate clauses in *that*-clauses of intransitive verbs

- once again the same results:

- the effect would support an unmediated analysis (odds ratio: Inf, 95%-CI: 0.33–Inf), but is not statistically significant (Fisher's Exact Test for Count Data: p=0.33)

4.1.4 Other

- Subject Left-Dislocations are only attested with overt *it*-expletives (2 examples)

(43) but certes þus it bi-felle, [þat [**al the werk þat þe masounes made aday**]$_i$, adoune it$_i$ felle anyght]

- Verb-initial *that*-clauses of intransitvie verbs are only attested with overt *it*-expletives (3 examples)

(44) Hit   gelomp   [...] [þet **com** to hys gemynde onwrignesse þet word þes   arwurðestan fæder]
EXPL happened [...] that came to his mind   divine-power the word of-the honorable   father
'It happened that the word of the honorable father came to his mind by divine power'
(cochad,LS_3_[Chad]:184.114)

- this, too, would support the hypothesis that there is a clause type difference, but the evidence is merely anecdotal

4.1.5 Summary

- the trends in the data are coherent for every fronted category, which would be expected if there is a clause type difference

- none of these differences are significant
→ small sample size, accidental corpus transmission, alternative parses

4.2 Complementizer Drop

- Complementizer drop is much more common in complement clauses than in other clause types, including subject clauses

(45) It is no wonder [(that) you haven't got any friends].

(46) [*(That) you haven't got any friends] is no wonder.

- Compare complementizer drop in *that*-clauses with and without an *it*-expletives

(47) a. So happed it on a tyme [∅ he sat at mete with Kyng Edward]
(CMCAPCHR,101.2135)
b. So it happed [**þat** he besegid a castel]
(CMCAPCHR,96.1956)
c. þa   gelomp   [...] [∅   ða   ic hreowsende wæs, ða   ic mid ðy heafde &   mid honda com
then happened [...] [that when I falling   was, then I with the head   and with hands came
on ðone stan   dryfan]
on the   stone drive
'Then it happened [...] that, when I was falling, I smashed my head and hand against the stone'
(cobede,Bede_5:6.400.26.4024)
d. þa sona æfter þysan belamp [**þæt** se arcebiscop Landfranc ferde to Rome]
(cochronA-10,ChronA_[Plummer]:1070.15.1472)

	it verb that...	*verb that...*
Complementizer drop	32 (6%)	3 (2%)
No complementizer drop	512	179

Table 7: Complementizer drop in *that*-clauses of intransitive verbs

- complementizer drop is significantly more common in *that*-clause associates of *it* expletives than in *that*-clauses of intransitive verbs without *it* (χ^2 =4.4, df=1, *p*=0.035)

- this supports the hypothesis that *that*-clauses with and without *it* have a different status; with *it*, they allow more root clause phenomena like complement clauses; without *it*, they have less internal structure

- however, most cases of complementizer drop come from Middle English, i.e. at a time when *it* is already the norm; the comparison may not be completely balanced

4.3   Extraction

- extraction is often used as a test for grammatical function

- in general, extraction out of complements is fine; extraction out of subjects is ungrammatical

(48)   a. It is necessary [that one does one's homework]
       b. ... the homework which it is necessary [that one does ＿]

(49)   a. [That one does one's homework] is necessary
       b. * ... the homework which [that one does ＿] is necessary

- therefore, under the empty expletive analysis, we would expect extraction to be equally frequent in *that*-clauses with and without *it*-expletives; under the unmediated analysis *that* clauses without *it* are subjects and should show considerably less extraction

4.3.1   Problems with the test

- the proposed test is problematic

- Why is extraction out of initial subject clauses ungrammatical?

  1. subject status / extraction path / locality considerations
  2. position; subject clauses are usually in Spec,CP; no higher topic position available in English
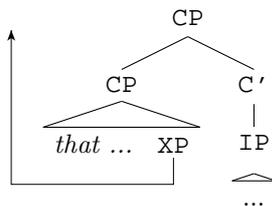
- position probably plays at least in part a role; since *that*-clause arguments of intransitive verbs are not clause-initial in Old English, they may in fact allow extraction

- many factors: graded acceptability, processing, derived vs. underived subject etc.

(50)   * [Which man] was [the friend of ＿] fired?

(51)   [Which president] would [the impeachment of ＿] cause outrage?

- therefore, extraction is at best more probable out of *that*-clauses with than without expletive *it*, but may not be a fool-proof diagnostic of their grammatical function

4.3.2 Extraction examples

- queries for extraction in YCOE and PPCME2
  → extraction is extremely rare!

- evidence is only anecdotal

- I only found one clear example of extraction; it occurs with an expletive

  (52) [þas þing] hyt gebyrede [þæt ge   dydon _]
        these things it   behoves that you do
        'These things, it is fitting that you do'
        (cowsgosp,Mt_[WSCp]:23.23.1613)

- two more potential examples: one probably involves extraction of an adjunct, the other perhaps extraction of an operator

(53) a. þat [tremlyngge and quakyngge] hit semede [þat he stood _ to-forn his dredful domesman at þe
          day of dome.]
          (CMAELR3,32.165)
      b. ... als it semes [þat þou hase done _ þi body]
          (CMROLLEP,93.508)

- I did not find any examples of extraction out of a *that*-clause without an expletive

4.3.3 Summary

- the evidence from extraction is extremely weak

- however, it is not incompatible with the unmediated analysis

5 Conclusion

- It is extremely difficult to find conclusive evidence for or against null expletives with *that*-clauses of intransitive verbs

- however, the admission of subject clauses into the grammar of early English has some conceptual advantages

- the grammar becomes somewhat more parsimonious; no additional rules are needed (modal passives)

- none of the quantitative analyses reach statistical significance (fronting, extraction), but each one of them is compatible with the unmediated analysis; in isolation, the tests are not powerful, but when taken together, they may in fact make subject clauses more likely

- by Ockham's razor we should not assume empty elements unless they are required; would we really assume empty expletives if overt expletives hadn't emerged in the history of English?

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