

**CLAUSAL SUBJECTS AND EXTRAPOSITION IN THE  
HISTORY OF ENGLISH**

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## Abstract

Using Kibort's revised Lexical Mapping Theory (Kibort, 2007, 2008, 2013, 2014), this paper gives an analysis of the argument structure of verbal predicates that alternately take (i) a clausal subject and (ii) a subject *it* in conjunction with propositional subclause. Based on data from syntactically annotated corpora of historical English, two separate argument structures are posited for the relevant predicates. A distinction is made between, on the one hand, a thematic subject *it* occurring together with an adjunct subclause and, on the other hand, a non-thematic subject *it* occurring together with a complement subclause. This distinction provides an explanation for a number of facts in present-day and historical English concerning extraction and co-occurrence patterns with respect to the predicates showing the alternation under discussion.

## 1 Introduction

In all periods of the history of English, there have been predicates that alternately occur with, on the one hand, a clausal subject<sup>1</sup> and, on the other hand, a subject *it* in conjunction with a propositional subclause. This alternation, which often goes under the label *it*-extraposition, is exemplified in (1). Both sentences are taken from the Penn-Helsinki Parsed Corpus of Early Modern English (Kroch et al., 2005). The subclause is marked out by square brackets, something that is done throughout the article. Note that the clausal subject is preposed in (1-a). As will be seen in section 4 of the article, in early English, there are also clausal subjects that are not preposed.

- (1) a. Preposed clausal subject:  
but [that it should go amongst the Rebels] is a strange thing.  
(DRUMMOND-E3-P1,2,4,189.10)
- b. Subject *it* in conjunction with a subclause:  
It is a strange thing [you will impute that to me], . . .  
(RALEIGH-E2-H,I,209.C1.155)

In (1-a), the *that*-clause *that it should go amongst the Rebels* occurs in a clause-initial position followed by the copula *be* and the nominal phrase *a strange thing*. The construction exemplified by the sentence in (1-a) will here be called the preposed clausal subject construction; *preposed*, because the subclause is clause-initial while subclauses typically occur in a clause-final position; *clausal subject*,

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<sup>1</sup>The existence of clausal subjects in Old English is a contentious issue. For a study that argues for the nonexistence of clausal subjects in Old English, see Anderson (1997).

because there is evidence to suggest that the subclause in this kind of construction is to be analyzed as a functional subject (Huddleston and Pullum, 2002, 957).

In (1-b), we see the same predicate *be a strange thing* in combination with a subject *it* and the subclause *that you will impute that to me* in clause-final position. The construction exemplified by the sentence in (1-b) will descriptively be referred to as the *it+subclause* construction.

In this paper, it is argued that not all cases of a subject *it* in conjunction with a propositional subclause can be given the same analysis. The aim of the paper is to argue that the *it+subclause* construction can be divided into two different constructions: (i) the *it+ADJ* construction and (ii) the *it+COMP* construction. Consider the difference between the sentences in (1) and the sentences in (2). The sentences in (2) derive from Seppänen and Herriman (2002).

- (2) a. \*[That there was no alternative] seems.
- b. It seems [that there was no alternative].
- c. [That we were to take care of the remaining work] seemed like a good idea at the time.

In (1), with the nominal predicate *be a strange thing*, there is an alternation between the preposed clausal subject in (1-a) and the *it+subclause* construction in (1-b). In (2), with the raising verb *seem*, the alternative with a preposed clausal subject is only possible in conjunction with a secondary predicate, as in (2-c), and not on its own, as in (2-a) (Seppänen and Herriman, 2002). Considering this difference between the sentences in (1) and (2), it does not seem possible to give the same analysis to both predicates.

The analysis proposed in this paper is that the sentence in (1-b) represents the *it+ADJ* construction, while the sentence in (2-b) represents the *it+COMP* construction. The *it+ADJ* construction consists of a thematic subject *it* in conjunction with an adjunct subclause, while the *it+COMP* construction consists of a non-thematic subject *it* in conjunction with a complement subclause. Based on the revised Lexical Mapping Theory of Kibort (2007, 2008, 2013, 2014), an analysis is given of the differences between the predicates that occur in these two constructions in present-day and historical English.

In the next section, a short background is given on previous analyses of a subject *it* in conjunction with a subclause in LFG. This is followed by a presentation of my own analysis in section 3. In section 4, the question is discussed whether the argument structures, presented for data on Present-Day English, also fit the data from early English.

## 2 Previous LFG analyses

Subject *it* in conjunction with a subclause in LFG has been discussed mainly in connection with the phenomenon of raising. In the Lexical Mapping Theory presented in Bresnan et al. (2016), the argument structure and argument-to-function

mapping of the raising verb *seem* is represented, see (3) from (Bresnan et al., 2016, 340).

- (3) Argument structure for *seem*:
- |             |      |                        |                      |
|-------------|------|------------------------|----------------------|
| <i>seem</i> | _    | ⟨ <i>experiencer</i> , | <i>proposition</i> ⟩ |
|             | [-r] | [-o]                   | [-o]                 |
|             |      |                        |                      |
|             | SUBJ | OBL <sub>exp</sub>     | XCOMP/COMP           |

In (3), the verb *seem* takes three arguments, where the first argument constitutes an empty argument role that does not have any semantic content. Following the mapping principles, the empty argument role is mapped to SUBJ, the *experiencer* to OBL<sub>exp</sub> and the *proposition* to XCOMP or COMP. This argument structure accounts, among other things, for the fact that the subject of the verb *seem* can be non-thematic *there* or *it*. An example of the verb *seem* taking non-thematic subject *there* or *it* is given in (4).

- (4) a. There seems to me [to be a problem with the proposal]. (Bresnan et al., 2016, 340)  
 b. It seems to me [that there is a problem with the proposal]. [constructed]

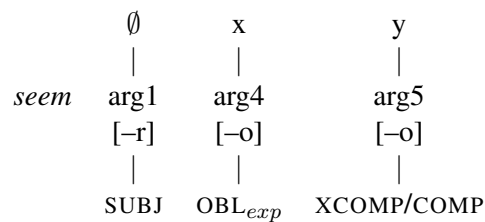
In (4-a), *there* is the subject of *seem* and also the subject within the XCOMP *to be a problem with the proposal*. The prepositional phrase *to me* is linked to OBL<sub>exp</sub>. In (4-b), the nonthematic *it* is linked to SUBJ, *to me* to OBL<sub>exp</sub>, and the subclause *that there is a problem with the proposal* to COMP. The empty subject argument can thus either be filled with a raised argument from an XCOMP, as in (4-a), or with the nonthematic *it*.

The postulation of an empty argument structure slot, which is not associated with a thematic role, implies that there is a distinction to be made between thematic roles and argument structure slots. In the revised Lexical Mapping Theory of Kibort (2007, 2008, 2013, 2014), this distinction between thematic roles and argument structure slots is made explicit in the sense that an independent set of argument structure slots<sup>2</sup> is introduced, separate from the level of thematic roles. Each argument slot is associated with a set of proto-role entailments, governing the possible mappings between thematic roles and argument structure slots (Kibort, 2007, 257). The argument structure of the verb *seem* according to the revised Lexical Mapping Theory is given in (5).

- (5) Argument structure for *seem*:

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<sup>2</sup>List of argument structure slots:  
 arg1    arg2    arg3    arg4    ... arg<sub>n</sub>  
 [-o]/[-r]    [-r]    [+o]    [-o]    [-o]



In (5), the verb *seem* takes the three argument slots, arg1, arg4 and arg5, which each is associated with an intrinsic feature, [-r], [-o], and [-o]. According to the mapping principle of the revised LMT<sup>3</sup> (Kibort, 2007), arg1[-r] is mapped to SUBJ, and arg4[-o] and arg5[-o] to obliques (OBL<sub>exp</sub> and XCOMP<sup>4</sup>). The result of the mapping-to-functions is the same as in (3), but the distinction between thematic roles and argument structure slots gives a more intuitive depiction<sup>5</sup> of the fact that the verb *seem* in sentences such as those in (4) takes three syntactic arguments, but only two thematic roles.

The analyses given above with respect to the raising verb *seem* represent the way in which all instances of the *it+subclause* construction in English have typically been analysed. There is no distinction made between thematic and non-thematic *it* in these constructions. One example of a study that doesn't make this distinction is Haugland (2006, 39), who, when presenting the sentence in (6), holds that the subject *it* is non-thematic and the subclause a complement.

(6) It is true [that John saved her].

Haugland (2006, 39) describes the subject *it* in (6) as a 'semantically empty (or nonreferential) entity used solely for some grammatical, or rather, syntactic purpose'.

One study that does make a distinction between different kinds of subject pronouns in conjunction with propositional subclauses, but in relation to German data, is Berman (2003). Berman (2003) gives two separate analyses for the subject *es* in the sentences in (7).

- (7) a. weil es gesagt wurde, [dass Hans krank ist].  
       because it said was that Hans sick is  
       'because it was said that Hans is sick.'
- b. weil es mich stört, [dass sie den Hans liebt].  
       because it bothers me that she Hans loves

<sup>3</sup>The mapping principle of the revised LMT is that 'the ordered arguments are mapped on to the highest (i.e. least marked) compatible function on the markedness hierarchy' (Kibort, 2007).

<sup>4</sup>The functions COMP and XCOMP are being equated with OBL<sub>prop</sub> (cf. Zaenen and Engdahl, 1994).

<sup>5</sup>Kibort's revised Lexical Mapping Theory has additional advantages. Given the proto-role entailments of the argument slots, a certain thematic role could be mapped to different slots, resulting in different semantic entailments. Kibort (2007) gives the example of the *agent* role of a certain Polish predicate, which, as a result of a morphosemantic operation, is mapped to a secondary object, giving rise to an interpretation in which the *agent* is 'unwilful'.

‘because it bothers me that she loves Hans.’

Berman (2003) argues that the sentence in (7-a) has a thematic subject *es* in conjunction with an adjunct subclause, i.e. *it+ADJ*, while the sentence in (7-b) has a non-thematic subject *es* in conjunction with a complement subclause, i.e. *it+COMP*. The evidence given for this distinction comes among other things from *wh*-extraction. The analysis provides an explanation why it is not possible to extract out of the subclause in (8-a), while, according to Berman (2003, 152), extraction from the subclause in (8-b) is perfectly acceptable.

- (8) a. \*Was wurde es gesagt, [dass er gelesen hat].  
What was it said that he read has  
‘What was it said that he has read.’  
b. Wen stört es dich, [dass sie liebt].  
Who bothers it you that she loves  
‘Who does it bother you that she loves.’

In (8-a), passive *gesagt werden* takes a theme subject, which corresponds to the pronoun *es*. The assumption that the predicate here takes only one argument results in an analysis of the subclause as an adjunct. As is standardly assumed, adjuncts constitute syntactic islands out of which extraction is not possible, or at least is significantly more difficult than for complements (Bresnan et al., 2016, 287).

In (8-b), according to Berman (2003, 161), the verb *stören* takes a non-thematic subject *es*, an experiencer object and a theme complement. The *it+COMP* analysis accounts for the grammaticality of extraction out of the subclause, shown in (8-b). Because of the fact that *stören* does not always take a non-thematic subject, the non-thematic subject is treated as optional (Berman, 2003, 163).

In the present paper, the distinction between *it+ADJ* and *it+COMP*, which is discussed in Berman (2003), is applied to Present-Day and Historical English. Some aspects of Berman’s analysis are adopted, while others are rejected. A problem with Berman’s analysis is the fact that the presence of non-thematic *es* in Berman (2003) seems to a large extent to be the result of lexical idiosyncrasies. How is it that a verb such as *stören* requires a non-thematic subject while passive constructions don’t? How is it that passive constructions sometimes take a covert non-referential subject and sometimes a thematic *es*? In the next section, my analysis for constructions containing a subject *it* in conjunction with a subclause in historical English is presented. As will be seen, this analysis also gives a different account of the German data presented by Berman (2003), where the presence or absence of a non-referential subject is not taken to be the result of lexical idiosyncrasies.

### 3 The *it+ADJ* and *it+COMP* constructions

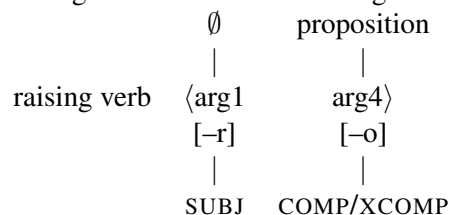
The argument structure analysis of the present paper is performed using the revised Lexical Mapping Theory of Kibort (2007, 2008, 2013, 2014). One important aspect

of this theory is that there is no Subject Condition, i.e. not all verbal predicates need subcategorize for SUBJ. The absence of the Subject Condition has consequences for the analysis of non-thematic subjects. Why do certain predicates take a non-thematic subject, when there is no principle that forces subjects to be present? As there is no thematic role associated with the subject, there is no semantic reason for a non-thematic subject to be present. There is also no structural reason that could be posited for the presence of a non-thematic subject. A constraint that a particular phrase-structural position, such as SpecIP, needs to be filled could be formulated solely with respect to the c-structure and needs not involve the requirement for verbs to subcategorize for a subject. In the current section, the *it*+COMP and the *it*+ADJ constructions are discussed in one subsection each.

### 3.1 The *it*+COMP construction

In the analysis given here, non-thematic subject *it* in English occurs exclusively in connection with raising verbs, including the copula *be* in passive constructions. My analysis of the argument structure of raising verbs is given in (9). This analysis applies both to lexical raising verbs, such as *seem* and *appear*, and to the copula *be* in passive constructions.

(9) The argument structure of raising verbs:



In (9), an abstract representation of the argument structure of raising verbs is given. Individual raising verbs might diverge slightly from this representation. As could be seen in (5), the verb *seem* takes an optional oblique experiencer. The characteristic feature of raising verb is that the arg1[-r] slot is not associated with a thematic role. This is true both for lexical raising verbs such as *seem* and for the copula *be* used in passive constructions.

Two pieces of support for the analysis of passive *be* as a raising verb are given here<sup>6</sup>. The first piece of evidence concerns the thematic relation between the main clause subject and an infinitival phrase in a sentence such as (10).

- (10) She is said [to have bined the death of her husband]. (MONTAGUE-E3-P2,1,219.78)  
 ‘She is said to have been the death of her husband.’

<sup>6</sup>For additional support for the raising analysis of passivization, based on Polish data, see Patejuk and Przepiórkowski (2014).

In the sentence in (10), the constituent *she* appears to be a thematic argument of the predicate *be the death of her husband*, and not a thematic argument of the predicate *be said*. It is not *she* that is said, but rather the proposition that *she is the death of her husband*. My analysis of the argument structure of the passive participle *said* is given in (11).

(11) The argument structure of the passive participle *said*:

	agent	proposition
<i>said</i> <sub>pass.part</sub>	⟨arg1	arg4⟩
	[-o]	[-o]
	[+r]	[+r]
	(OBL <sub>agent</sub> )	XCOMP/COMP

In the analysis of passive participles, the arg1[-o] is assigned a [+r] feature<sup>7</sup>, demoting arg1[-o] to the function of OBL. For the passive participles that take a propositional subclause as an argument, I also assume that the second argument, arg4[-o], is assigned a [+r] feature. This operation demotes the arg4[-o], which would have become SUBJ, to the function XCOMP. The passive participle in (11) is thus subject to two morphosyntactic operations, where a [-o] argument is assigned a [+r] feature. For these passive participles, they thus take two types of oblique arguments, an OBL<sub>agent</sub> and a XCOMP or COMP, and take no SUBJ<sup>8</sup>. For the purpose of illustration, a simplified f-structure associated with the sentence in (10) is given in Figure 1.

The f-structure in Figure 1 shows a functional equation relationship between the subject of the main clause *be* and the subject of the XCOMP *to have bine the death of her husband*. The functional equation required for this to work differs from the typical functional equation for subject raising (Bresnan et al., 2016, 304) in the sense that the subject that is ‘raised’ occurs as the subject within an XCOMP which occurs within another XCOMP. Raising *be* in passive constructions thus needs to have the specification in (12).

(12) (↑ SUBJ) = (↑ XCOMP XCOMP SUBJ)

<sup>7</sup>Kibort (2007) assumes three morphosyntactic operations, shown in (i)

- (i) Morphosyntactic operations:
- a. adding the [+r] specification to a [-o] argument;
  - b. adding the [+o] specification to a [-r] argument; and
  - c. adding the [+r] specification to a [+o] argument.

<sup>8</sup>Kibort’s revised LMT does not include the Subject Condition, i.e. it does not include the rule that all verbal predicates take a SUBJ. This means that subjectless predicates, such as the passive participle in (11), are allowed. To get the obligatoriness of subjects in English, a c-structure rule must be posited, which says that the SpecIP position must be filled by a SUBJ. Such a rule is required for Present-day English, regardless if the Subject Condition is assumed.



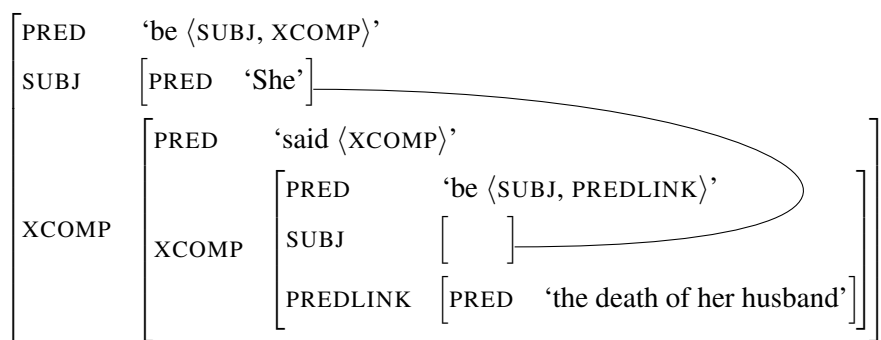


Figure 1: F-structure for the sentence *She is said to have bined the death of her husband*

The equation shown in (12) needs to be present as an alternative to the ordinary raising equation,  $(\uparrow \text{SUBJ}) = (\uparrow \text{XCOMP SUBJ})$ , in the lexical entry of raising *be*. The outside-in equation in (12) says that the SUBJ of a clause also constitutes the SUBJ embedded within two XCOMPS.

With the standard analysis of a passive construction, such as *be said*, in which the copula *be* does not have its own PRED value (e.g. Bresnan et al., 2016, 35), an additional [-r] argument needs to be made available when the predicate is in the passive voice, an argument which is not available in the active voice<sup>9</sup>.

A second piece of support for the analysis of *be* in passive constructions as a raising verb is that the subject of *be*, just like the raising verb *seem* in (4), allows the two non-thematic subjects *it* and *there*, exemplified in (13).

- (13) a. It is said [that Dunkirk is sold to the French for four hundred thousand pound]. (HOXINDEN-1660-E3-H,280.184)  
 b. there is said [to be in it of Churches & Chappels, 150]. (JOTAYLOR-E2-P2,3,96.C2.299)  
 ‘There is said to be 150 churches and chapels in it (Prague)’

In (13-a), the subject of the main clause is non-thematic *it* and, in (13-b), it is non-thematic *there*.

Let us now go back to the German data discussed in Berman (2003). In German, it does not seem as if the passive raising construction, exemplified for English in (10), is grammatical. Consider the sentence in (14).

<sup>9</sup>Evidence that such an extra argument is not available in the active voice is for instance that we don’t find sentences such as the one in (i).

- (i) \*He said her [to be the death of her husband].

- (14) \*Sie wird gesagt, [der Tod ihres Mannes gewesen zu sein].  
 She is said the death her man been to be  
 ‘She is said to have been the death of her husband’ [constructed]

I take the ungrammaticality of (14) as an indication that the passive constructions in German and English are different. I will argue that *werden* is not a raising verb in German, and that only the *it+ADJ* construction is available for passive constructions in German. Consider the sentences in (7), here repeated as (15). Additional information has been added about the grammaticality of the sentences where there is no subject *es*.

- (15) a. weil (es) gesagt wurde, [dass Hans krank ist].  
 because it said was that Hans sick is  
 ‘because it was said that Hans is sick.’  
 b. Was wurde (\*es) gesagt, [dass er gelesen hat].  
 What was it said that he read has  
 ‘What was it said that he has read.’

Just like Berman (2003, 156), I take it that the ungrammaticality of extraction in (15-b), when a subject *es* is present, is a result of the fact that the *dass*-clause is an adjunct, out of which extraction is typically unacceptable. When no subject *es* is present, I assume that the subclause is demoted to complement, and that there is no subject in the clause. The argument-to-function mapping of passive *gesagt-werden* in German, applicable to the sentence without a subject *es*, is shown in (16).

- (16) The argument structure of passive *gesagt-werden* with demotion of the propositional argument:

	agent	proposition
<i>gesagt-werden</i>	⟨arg1	arg4⟩
	[-o]	[-o]
	[+r]	[+r]
	(OBL <sub>agent</sub> )	COMP

Just like in the argument-to-function mapping of English passive *said*, which was shown in (11), in (16), the first argument is demoted to OBL<sub>agent</sub> and the second argument is demoted to COMP.

For the sentence when a subject *es* is present, or for the preposed clausal subject, given in (17) from Berman (2003, 153), I assume that there is no demotion of the arg4[-o] argument, which results in the argument-to-function mapping in (18).

- (17) [Dass Hans krank ist], wurde (\*es) gesagt.  
 that Hans sick is was it said.  
 ‘That Hans is sick, was said.’  
 (18) The argument structure of passive *gesagt-werden* without demotion of the

propositional argument:

	agent	proposition
<i>gesagt-werden</i>	⟨arg1	arg4⟩
	[-o]	[-o]
	[+r]	
	(OBL <sub>agent</sub> )	SUBJ

In contrast to the mapping in (16), in (18), there is no demotion (adding a [+r] feature) of the propositional argument. The ungrammaticality of a subject *es* in the preposed clausal subject construction in (17) follows from the assumption that the preposed clausal subject is not demoted to COMP. Given the fact that there thus already is a subject in the clause, the addition of *es* is ungrammatical, violating the principle of coherence (Bresnan et. al., 2016).

Berman (2003, 165) gives a different analysis of (17), where the subclause does not constitute a subject and where there is a ‘(dropped) resumptive pronoun’ blocking the presence of a subject *es*. The assumption that there is an empty pronoun blocking the presence of *es* seems unnecessarily complicated. Furthermore, it is not made clear why the resumptive pronoun sometimes is present covertly, while the subject pronoun *es* is never given the same analysis.

### 3.2 The *it*+ADJ construction

As mentioned above, the *it*+COMP in English is only used in connection with raising verbs, including raising *be*. With respect to non-raising predicates, a subject *it* is always analyzed as thematic. Consider for instance the analysis of the verb *appear*, which has two different lexical entries corresponding to two distinct interpretations, one of which is connected to its use as a raising verb and one of which is connected to its use as a non-raising verb. These two options are exemplified in (19).

- (19) a. And a vision appeared to Paul in the night:  
‘And a vision showed itself to Paul in the night.’  
(AUTHNEW-E2-P2,16,1A.1072)
- b. The children appeared to be struck with amazement,  
‘It seemed that the children were struck with amazement.’  
(COOK-1776,29.535)

In (19-a), the verb *appear* has the approximate interpretation ‘to show itself’ and functions syntactically as an intransitive verb. In (19-b), the same verb has the approximate interpretation ‘to seem, to give the impression of being’. With this second interpretation the verb functions as a raising verb. The two argument structures for the two lexical entries for the verb *appear* are represented in (20).

- (20) The two argument structures of *appear*:
- |                                  |                |                |
|----------------------------------|----------------|----------------|
|                                  | ∅              | proposition    |
|                                  | ↓              | ↓              |
| <i>appear</i> ('to seem')        | ⟨arg1<br>[-r]⟩ | arg4<br>[-o]⟩  |
|                                  | ↓              | ↓              |
|                                  | SUBJ           | XCOMP/COMP     |
|                                  |                | theme          |
|                                  |                | ↓              |
| <i>appear</i> ('to show itself') |                | ⟨arg1<br>[-r]⟩ |
|                                  |                | ↓              |
|                                  |                | SUBJ           |

The two different argument structures of the verb *appear*, given in (20), explain the differences in grammaticality between the two sentences in (21) and (22) below. The sentences in (21-a) and (22) are attested in the Late and Early Modern English corpora (Kroch et al., 2005, 2010), respectively, while the sentence in (21-b) is constructed. The ungrammaticality of sentences such as the one in (21-b) is frequently reported with respect to Present-Day English (e.g. Seppänen and Herriman, 2002), a judgement further supported by the fact that such sentences are not found in the corpora.

- (21) a. - So it appears [to be].  
(BOETHRI-1785,119.197)
- b. \*[To be so] appears. [constructed]
- (22) a. [that in this matter I was not led by hym], very well and plainly apereth, (MROPER-E1-P1,521.98)
- b. - it plainly appeared by this time [that he had got a stiff neck, as he never once more turned]. (COLLIER-1835,13.370)

In (21), the interpretation of *appear* is 'to seem, to give the impression of'. With this interpretation, a subclause occurring in a preposed position on its own without a secondary predicate is ungrammatical, as illustrated in (21-b).

The fact that the propositional subclause in conjunction with raising verbs, including the verbs *appear* ('to seem') and *seem*, do not occur on their own has been referred to as obligatory extraposition (for further discussion see Seppänen and Herriman, 2002). One relatively recent account of obligatory extraposition, Alrenga (2005), connects the ungrammaticality of the structure in (21-b) to the complement selection of the verb. In particular, Alrenga (2005, 196) argues that a verb such as *seem* 'only subcategorizes for a CP complement (seem: [ \_ CP])'. On my account, which differs from Alrenga (2005), the ungrammaticality instead follows from the principle of completeness (Bresnan et al., 2016), given the argument

structure assumed in (20). In (21-b), the verb *appear* ('to seem') does not have all the arguments it selects for. Given this analysis, no idiosyncratic selection for the syntactic category of the complement is required.

In (22), the interpretation of *appear* is 'to show itself'. With this interpretation, *appear* only selects for one argument,  $\text{arg1}[-r]$ , which is mapped to SUBJ. This accounts for the fact that the sentence in (22-a) is grammatical, despite the fact that it superficially looks similar to the sentence in (21-b). In (22-b), where the subclause co-occurs with a subject *it*, we have the *it*+ADJ construction, which is the analysis given for all non-raising predicates, where a subject *it* occurs in conjunction with a propositional subclause.

A consequence of the analysis of a sentence as *it*+ADJ is that extraction out of the subclause should not be possible, or at least be significantly worse than for extraction out of a complement. We would thus predict that the sentence in (23), a variant of (22-a), is significantly worse than the sentence in (24-b). This seems to be the case.

- (23) \*By whom does it appear well and plainly [that I was not led in this matter]? [constructed]
- (24) a. It appears [that Cobham took Raleigh to be either a God, or an Idol].  
(RALEIGH-E2-P1,1,213.46)
- b. What does it appear [that Cobham took Raleigh to be]? [constructed]

When *appear* in (23) is given the interpretation 'to show itself', the sentence in (23) seems to be considerably worse than the sentence in (24-b), where it has the interpretation 'to seem'.

With respect to the German example in (8-b) with the verb *stören*, the possibility of extraction with a subject *es* would not be expected. Since *stören* is not a raising predicate, we would expect the subject *es* to be analyzed as thematic and the subclause as an adjunct, out of which extraction is ungrammatical. However, consider the sentence in (25), taken from Alejchem (1922).

- (25) Was stört es dich, [dass das Kind spielt]?  
what bothers it you that the child plays  
'What does it bother you that the child plays?'

The sentence in (25) has two interpretations. On the first interpretation, *was* functions as the complement of *spielen* in the subclause, while, on the second exclamative interpretation, it does not. The actual interpretation in the text is the second one, where *was* is not the complement of *spielen*. In a search for the string 'Wen stört es' in a subcorpus within the *Deutsches Referenzkorpus* (<http://www1.ids-mannheim.de/kl/projekte/korpora/>), all (27 out of 27) instances represent this second exclamative interpretation. If sentences such as (25) consistently are interpreted as non-extractions, this gives support to the hypothesis that extractions are dispreferred in this type of structure due to the fact that the subclause constitutes

an adjunct.

While the dubious grammaticality of the sentence with a subject *es* follows from the status of the subclause as an adjunct, the ungrammaticality of extraction without a subject *es* follows from the fact that the subclause then constitutes a subject.

In this section, I have argued for the adoption of two different analyses for a subject *it* in conjunction with a propositional subclause in English. In the analysis termed the *it*+ADJ construction, the subject *it* is thematic and the subclause an adjunct, while, in the analysis termed the *it*+COMP construction, the subject *it* is non-thematic and the subclause is a complement. In the next section, the question is asked whether the two constructions always have constituted part of the English language. As will be seen, there is evidence to suggest that the *it*+COMP construction was not part of the grammar of Old English.

#### 4 *It*+ADJ and *it*+COMP in early English

As mentioned in the introduction, the alternation between the clausal subject construction and *it*+subclause construction seems to have been a part of the English language in all historical periods. For Old English, consider the sentences in (26). The examples come from the York-Toronto-Helsinki Parsed Corpus of Old English Prose (Taylor et al., 2003).

- (26) a. Gregorius cwæð, on sumum timan gelamp, [þæt sum man forlet  
Gregory said at some time happened that some man lost  
his eagna gesihðe].  
his eyes' sight  
'Gregorius said that it happened at one time that some man lost his  
eyesight.'
- b. Hit gelampt þa sume dæge [þæt Iosep wæs ana on his  
It happened then some day that Joseph was alone in his  
hlafordes huse].  
master's house  
'It happened one day that Joseph was alone in his master's house.'

The sentence in (26-a) contains the clausal subject *þæt sum man forlet his eagna gesihðe* as the only argument of the verb *gelimpan*. The sentence in (26-b), containing the same verb, *gelimpan*, has a subject *hit* ('it') in conjunction with the propositional subclause *þæt Iosep wæs ana on his hlafordes huse*. In contrast to Present-day English, clausal subjects in Old English most often occur in a clause-final position, rather than in a clause-initial position<sup>10</sup>. For support for the analysis of clausal-final subclauses of intransitive verbs as subjects, see Méndez Naya

<sup>10</sup>In the Old English prose corpus, there are four clausal subjects that do not occur in a clause-final position, one clause-initial *wh*-clause, two clause-initial infinitival phrase and one clause-medial *that*-clause.

(1997) and Zimmerman (2015).

In the Old English prose corpus, there are 705 instances of a subject *hit* in conjunction with a prepositional subclause. The question to be discussed in the present section is whether sentences such as the one in (26-b) are to be analyzed as *it*+ADJ or *it*+COMP. Is the subject *hit* thematic or non-thematic? Does the subclause constitute an adjunct or a complement?

The discussion in the following will be based on data from the two verbs that most frequently occurs with a prepositional subclause and without an agentive subject in the Old English corpus, namely *þyncan* ('to seem, appear') and *gelimpan* ('to happen'). The verb *gelimpan* alone accounts for about a third of the instances of the *it*+subclause construction in the Old English corpus (228 out of 705 instances). With 112 instances, the verb *þyncan* is also very frequent in the corpus.

The structure of the following discussion is as follows. First, the proposed argument structures for the verbs *þyncan* and *gelimpan* are given. Then, three types of support are given for these argument structures, concerning extraction data, the (non-)existence of raising, and co-occurrence patterns between a subject *hit* and a dative experiencer.

The proposed argument structures for the verbs *þyncan* and *gelimpan* are given in (27) and (28), respectively. Two argument structures are given for each verb. The choice of between argument structures is assumed to follow from the mapping between thematic roles and argument slots, something that will not be further discussed here. An important part of the analysis of these verbs concerns the notion of dative subjects. As is discussed in Allen (1995), there is evidence, for instance from conjunction reduction, supporting the analysis of certain dative phrases in conjunction with intransitive verbs as subjects. More support for this analysis is given below.

(27) Argument structures of *þyncan*:

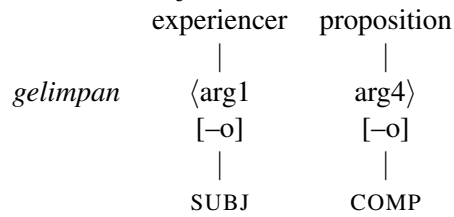
- a. With dative subject (*me*+verb+[*that* ... ]):
- |               |             |             |
|---------------|-------------|-------------|
|               | experiencer | proposition |
|               |             |             |
| <i>þyncan</i> | ⟨arg1       | arg4⟩       |
|               | [-o]        | [-o]        |
|               |             |             |
|               | SUBJ        | COMP        |
- b. With dative object (*it*+verb+*me*+ [*that* ... ]):
- |               |             |             |
|---------------|-------------|-------------|
|               | proposition | experiencer |
|               |             |             |
| <i>þyncan</i> | ⟨arg1       | arg3⟩       |
|               | [-r]        | [+o]        |
|               |             |             |
|               | SUBJ        | OBJ         |

In (27), the argument structures for the verb *thyncan* is given. In (27-a), *byncan* takes two arguments, *arg1*[-o] and *arg4*[-o], which are mapped to SUBJ and COMP, respectively. In (27-b), *byncan* also takes two arguments, but now they are *arg1*[-r] and *arg3*[+o], which are mapped to SUBJ and OBJ, respectively.

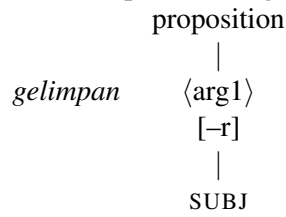
The argument structures for the verb *gelimpan* are given in (28).

(28) Argument structures of *gelimpan*:

a. With dative subject (*me+verb+[that ... ]*):



b. Without experiencer argument (*(it)+verb+[that ... ]*):



In (28-a), the argument structure is the same as the one shown for *byncan* in (27-a). In the second one, the verb *gelimpan* takes just one argument, *arg1*[-r], which is mapped to SUBJ.

Let's proceed to the data that support the adoption of the argument structures in (27) and (28). First, let's consider the co-occurrence between a subject *hit* ('it') and a dative experiencer for *byncan* and *gelimpan*, when they occur with a propositional subclause. The frequencies are shown in Table 1. The frequencies are per 100,000 clauses<sup>11</sup>, with the token frequency within parenthesis.

Table 1: The verbs *byncan* and *gelimpan* in conjunction with a clausal argument and the pronoun (*h*)*it* and/or an oblique experiencer per 100,000 clauses.

	both <i>hit</i> and dative experiencer	( <i>h</i> ) <i>it</i>	dative experiencer	neither <i>hit</i> nor dative experiencer
<i>byncan</i>	<1 (2)	0 (0)	46 (109)	<1 (1)
<i>gelimpan</i>	0 (0)	97 (228)	13 (30)	27 (63)

In Table 1, it is shown that the verb *byncan* more or less consistently occurs together with only an experiencer argument and the subclause. This supports the

<sup>11</sup>In the YCOE, all clauses are represented as IPs. The corpus contains 236,046 IPs



argument structure in (27-a), where *thyncan* takes two arguments, a dative experiencer subject and a propositional complement (the subclause). However, there are also two cases in which *byncan* occurs with both a dative experiencer and a subject *hit*. One of these two sentences is given in (29).

- (29) Wel geradlic hyt eac þingð us þæt we herto gecnyttton þa  
 well appropriate it also seems us that we hereto tied those  
 epactas,  
 epacts  
 ‘It seems very appropriate to us that we tied the epacts to this’.  
 (cobyrtf,ByrM\_1\_[Baker-Lapidge]:1.2.291.403)

In (29), *byncan* takes both a subject *hit* and a dative experiencer, which is here analysed as an object. This is an *it*+ADJ construction. The argument-to-function mapping for the two sentences where *hit* and a dative experiencer co-occur is the one in (27-b).

For the verb *gelimpan*, the most common occurrence is when *gelimpan* occurs with a subject *hit*, without a dative experiencer, or when there is only a propositional subclause, with neither experiencer nor *hit*. This gives support for the argument structure in (28-b), where there is only one argument, the propositional argument. The most frequent alternative, where *gelimpan* only occurs with *hit* and the subclause represents the *it*+ADJ construction. However, there is also a considerable number of sentences where *gelimpan* occurs with a dative experiencer instead of a subject *it*. This gives support for the argument structure in (28-a), where *gelimpan* has the same argument structure as *thyncan* in (27-a). For the verb *gelimpan*, in the data shown here, there is complementary distribution between a subject *hit* and a dative experiencer. This can be taken as evidence for the argument structure where the dative experiencer constitutes SUBJ.

For the verb *thyncan*, there is no real complementary distribution between dative experiencers and a subject *hit*. The need for the dative subject analysis for *byncan* is thus not clear from Table 1. However, one additional piece of support for subject analysis of the dative experiencer comes from extractions. When a dative experiencer co-occurs with a *that*-clause, it seems to be possible to extract out of the *that*-clause. One example is given in (30).

- (30) Hwæt þincð þe [þæt þu sy]?  
 what seems you that you be  
 ‘What do you think you are?’  
 (cowsgosp,Jn\_[WSCp]:8.53.6483)

In (30), the *wh*-phrase *hwæt* is extracted out of the *that*-clause, giving support to the argument structure in (27-a), where the dative experiencer is SUBJ and the propositional argument COMP. If the subclause constitutes a subject, we would not expect extraction to be possible here.

As can be seen from the argument structures in (27) and (28), *þyncan* and *gelimpan* are given different analyses than the raising verbs *seem* and *appear* in more modern English. As discussed in section 3, the *it*+COMP construction, where a non-thematic subject *it* occurs in conjunction with a complement subclause, is connected to the analysis of the verb as a raising verb. If the *it*+COMP construction were a part of Old English grammar, we would expect typical raising sentences, exemplified in (10), to alternate with the constructions represented in (26) in Old English.

With respect to the verb *þyncan*, whose argument structures is given in (27), there are 15 instances in the Old English prose corpus, where this verb occurs together with an infinitival phrase. In 14 out of 15 sentences, a thematic argument of the main clause is also the subject of the infinitival phrase, i.e. it is control rather than raising that gives the identification of the subject of the infinitival phrase. There is, however, one sentence that seems to represent raising. This sentence is given in (31).

- (31) swa þæt me þynceþ [of gemynde beon] Paulines wundor Nolane burge  
 so that me seems of memory be Paulinus' miracle Nola city  
 biscopes,  
 bishop  
 'so that the miracle of Pauline, bishop of the city of Nola, seems to be  
 forgotten'.  
 (cogregdC,GDPref\_and\_3\_[C]:0.179.4.2177)

In (31), the nominative phrase *Paulines wundor* constitutes the subject of both the verb *þyncan* and the infinitival phrase *of gemynde beon*. The example in (31) should thus be analyzed as raising and constitutes a counterexample in relation to the argument structures given in (27). However, as discussed in Denison (1993), it is somewhat questionable whether the particular example given in (31) constitutes 'natural' Old English. As pointed out by Denison (1993, 221), the structure and word order of the sentence in (31), which is part of a translation from Latin, seems to follow the Latin original in a rigid manner<sup>12</sup>.

The lack of raising structures for the verb *þyncan* constitutes an additional piece of support for the argument structures in (27), and for the fact that the *it*+subclause construction with the verbs *þyncan* and *gelimpan* should be analysed as *it*+ADJ, rather than *it*+COMP.

<sup>12</sup>The Latin original is given in (i).

- (i) ita ut Paulini miraculum, Nolanae urbis episcopi, . . . , memoriae defuisse videatur.

## 5 Conclusion

This paper has given an analysis of the argument structure of predicates that alternately take a clausal subject, and a subject *it* in conjunction with a propositional subclause in present-day and historical English. Using the revised Lexical Mapping theory of Kibort (2007, 2008, 2013, 2014), two separate argument structures are given for constructions with a subject *it* in conjunction with a subclause. On the one hand, we have a thematic subject co-occurring with an adjunct subclause, the *it*+ADJ construction. On the other hand, we have a non-thematic subject *it* co-occurring with a complement subclause, the *it*+COMP construction. The presence of these two argument structures accounts for a number of differences between raising predicates and non-raising predicates when it comes to constructions they realize. For one thing, it straightforwardly provides an explanation why a subclause cannot occur as a preposed clausal subject without a secondary predicate with raising verbs. With respect to the historical English data, the absence of the *it*+COMP construction explains facts about extraction and co-occurrence patterns for verbs that occur together with a propositional subclause.

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