

**Infinitival complements in Norwegian and the form -  
function relation**

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## 0. Abstract

This paper attempts to give a description and an explanation of the fact that infinitival complements in Norwegian raising sentences are often introduced by an empty preposition. The preposition is shown to head a PP with the infinitive phrase as a complement, and it is argued that it is a functional head. The use of the preposition is explained on the basis of the form - function relation. The canonical function of infinitive phrases is a parameter of variation in the world's languages. In Norwegian, their canonical function is object. In raising sentences, the prepositional head makes the complement a PP, thus avoiding an infinitive phrase in a marked function.

## 1. Introduction<sup>1</sup>

Raising has been a favorite topic in generative grammar for decades. Even so, there is almost nothing written about raising in Norwegian. (The exception is the "complex passive"; see Christensen (1991), Engh (1994).) The standard literature (for example Faarlund et al. 1997) gives the impression that raising from infinitival complements is a marginal phenomenon in Norwegian, with a very small number of raising verbs. This is far from being true, however; Norwegian allows raising with a rather large number of verbs. The infinitival complement in Norwegian raising sentences is often introduced by a preposition. This preposition is in most cases *til* 'to', as in (1)-(2).

- (1) Han ser ut til å sove  
he seems (particle) to (PREP) to (INF.MARKER) sleep  
'He seems to sleep'
- (2) Vi fikk ham til å sove  
we got him to (PREP) to (INF.MARKER) sleep  
'We made him sleep'

This property distinguishes Norwegian raising sentences from their counterparts in related languages like English, German and Icelandic<sup>2</sup>. It has never been discussed in the literature, however.

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<sup>1</sup> I am grateful to the audience at The 7th International LFG Conference for comments and discussion, especially Ida Toivonen. Parts of this work have been presented at The Oslo Syntax Seminar, The Ninth Meeting on the Norwegian Language (MONS 9, Oslo 2001) and The 19th Scandinavian Conference of Linguistics (Tromsø 2002). I am grateful to the audiences for comments and discussion, especially Kersti Börjars.

<sup>2</sup> It is possible to find prepositions in English raising sentences, cf. (i)-(ii).

(i) He prevented there from being a riot (Postal 1974:159)

(ii) I regard Max as being incompetent (Postal 1974:240)

These cases are different from the ones to be discussed here, however. The preposition is required by the verb independently of the category of the following phrase.

Section 2 gives a description of the use and non-use of the preposition. My data is mostly authentic, found in corpora and on web pages. (Some authentic example sentences have been slightly edited.)

## 2. Raising with(out) the preposition

### 2.1 Active raising to subject verbs

With active raising to subject verbs, the use or non-use of the preposition *til* is determined by the governing verb. Two groups of verbs usually take the preposition: some aspectual verbs (*ta til* 'begin', *komme til* 'be going to', *skulle til* 'be about to') and some verbs that mean 'seem' or are hyponyms to 'seem' (*late til* 'seem', *se ut til* 'seem', *tegne til* 'seem', *høres ut til* 'sound', *kjennes ut til* 'feel'). Cf. (3) - (4).

- (3) Det kommer **til** å skje en ulykke  
there comes to (PREP) to (INF.M) happen an accident  
An accident is going to happen'
- (4) Han ser ut **til** å sove  
he seems (particle) to (PREP) to (INF.M) sleep  
'He seems to sleep'

There are also verbs that take the preposition optionally; the ones in my dialect are *råke* 'happen', *slumpe* 'happen', *tendere* 'tend'.

A number of raising to subject verbs do not usually take the preposition. These are the modal verbs (Lødrup 1994, 1996), aspectual verbs like *begynne* 'begin' and *slutte* 'stop', and some verbs which mean 'seem' or something similar (for example *forekomme* 'seem', *vise seg* 'turn out', *virke* 'seem', *synes* 'seem'<sup>3</sup>).

### 2.2 Active raising to object verbs

The Norwegian raising to object verbs that are usually mentioned in the literature are the perception verbs (*se* 'see', *høre* 'hear', *føle* 'feel', *kjenne* 'feel') and the verb *la* 'let'. These verbs have properties that make them rather atypical raising to object verbs (Barron 1999), and they will be put aside here. There are many other verbs that allow raising to object, however. The verbs in (5) have been found in raising sentences with the preposition *til* 'to'<sup>4</sup>; examples are (6)-(7).

- (5) *anslå* 'estimate', *anta* 'assume', *beregne* 'estimate', *bestemme* 'decide', *dedusere* 'deduce', *erklære* 'state', *estimere* 'estimate', *fastslå* 'ascertain', *finne* 'find', *foreslå* 'propose', *forstå* 'understand', *forvente* 'expect', *få* 'make', *mene* 'mean', *oppfatte*

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<sup>3</sup> In authentic texts, there is some variation concerning the use and non-use of the preposition. For example, the last three verbs (*vise seg* 'turn out', *virke* 'seem', *synes* 'seem') can be found with the preposition, and most of the verbs that are mentioned above (3) can be found without the preposition.

<sup>4</sup> Some raising verbs can also be used as equi verbs (for example *anslå* 'estimate'). This is not important for my purposes (see section 6), and will not be discussed further here.

'understand', *oppgi* 'state', *oppleve* 'experience', *regne* 'consider', *rapportere* 'report', *spå* 'foretell', *stipulere* 'stipulate', *tippe* 'guess', *vedta* 'decide', *vurdere* 'evaluate'

- (6) Vi antar temperaturen **til** å være 10 ° C (authentic)  
we assume the-temperature to (PREP) to (INF.M.) be 10 ° C  
'We assume the temperature to be 10 ° C'  
(7) Vi forventer dekket **til** å være klart (authentic)  
we expect the-deck to (PREP) to (INF.M.) be ready  
'We expect the deck to be ready'

A handful of verbs can take another preposition than *til*, as in (8).

- (8) Jeg holder det **for** å være selvsynsende at ... (authentic)  
I take it for to (INF.M.) be obvious that ...  
'I take it to be obvious that ...'

Many verbs that take raising to object with the preposition *til* also allow raising without the preposition, as in (9)-(10).

- (9) som dere på forhånd antok det å være (authentic)  
like you in advance assumed it to be  
'like you in advance assumed it to be'  
(10) Ingen forventer lærere å være perfekte... (authentic)  
nobody expects teachers to be perfect  
'Nobody expects teachers to be perfect'

Some verbs have only been found with the preposition in raising sentences (for example *få* 'make', *mene* 'mean', *rapportere* 'report'). Only a couple of verbs have only been found without the preposition (*hevde* 'claim', *påstå* 'claim', in addition to the perception verbs and the verb *la* 'let').

There is nothing peculiar about the set of raising verbs in Norwegian. Considering the meaning of the verbs, they are rather similar to the set of raising verbs in for example Swedish (Teleman et al. 1999:573, 576-79) or English (Postal 1974).

### 2.3 Passive raising verbs

In passive raising sentences, the preposition *til* seems to be optional. I know only one verb that takes it obligatorily (*fås* 'make-PASS'). Verbs that are always found with the preposition in active raising sentences can be found with or without the preposition in passive raising sentences. An example is *rapportere* 'report', as in (11)-(12).

- (11) Arbeidsmengden rapporteres **til** å være tre til fire timer (authentic)  
the-workload report-PASSIVE to (PREP) to (INF.M.) be three to four hours  
'The workload is reported to be three to four hours'  
(12) Latexallergi rapporteres å være økende (authentic)  
latex-allergy report-PASSIVE to (INF.M.) be increasing  
'Latex allergy is reported to be increasing'

Norwegian has a number of verbs that allow raising to subject in the passive, even if they do not allow raising to object in the active (Eng 1994:77-87). Many of these verbs can be found with or without the preposition, as in (13)-(14).

- (13) De antydes **til** å være 25 000 - 30 000 år gamle (authentic)  
they suggest-PASS to (PREP) to (INF.M.) be 25 000 - 30 000 years old  
'They are suggested to be 25 000 - 30 000 years old'
- (14) Investeringsrammen antydes å være hele 10,5 milliarder (authentic)  
the-investment-frame suggest-PASS to (INF.M.) be all 10.5 billions  
'The investment frame is suggested to be as much as 10.5 billions'

### 3. Constituency

What is the constituent structure of raising sentences with the preposition *til*? Standard criteria like topicalization and proforms are unavailable, for reasons to be given below. Even so, it is possible to give some arguments that the preposition and the infinitive phrase are one constituent.

First argument: The preposition and the infinitive phrase can never be separated. This is especially striking in a sentence like (15), in which there is a PP between the infinite main verb and the preposition.

- (15) Den er erklært av komitéen **til** å være en integrert del (authentic)  
it is declared by the-committee to (PREP) to (INF.M) be an integrated part  
'It is declared by the committee to be an integrated part'

Second argument: Some raising verbs can take an AP as an alternative to the preposition and the infinitive phrase. With an AP, there can be no preposition, cf. (16)-(17). This indicates that the preposition and the infinitive phrase are one constituent

- (16) Han ser (**\*til**) snill ut  
he seems (**\*to**) kind (particle)  
'He looks nice'
- (17) Vi fikk ham (**\*til**) glad  
we got him (**\*to**) happy  
'We made him happy'

Third argument: Raising sentences are often more acceptable when the raised object is topicalized, cf. (18)-(19).

- (18) ?Han erklærer verdien å være fem millioner  
he declares the-value to (INF.M) be five millions  
'He declares the value to be five millions'
- (19) Verdien erklærer han å være fem millioner  
the-value declares he to (INF.M) be five millions  
'The value, he declares to be five millions'

This property of raising to object sentences is well known from several languages, but not really understood (see Postal 1974, Kayne 1981, Rooryck 1997, Boskovic 1997). However, it only concerns sentences in which the raised object is a sister of an infinitive phrase. (20)-(21) are fully acceptable.

(20) Vi erklærte ham skyldig  
we pronounced him guilty  
'We pronounced him guilty'

(21) Han erklærer sin markedsverdi til å være minst 5 millioner (authentic)  
he declares his market-value to (PREP) to (INF.M) be at-least five millions  
He declares his market value to be at-least five millions'

The reason a raised object is fully acceptable in the ordinary object position in a sentence like (21) must be that it is not a sister of an infinitive phrase, but of a PP. This also gives an argument that the preposition and the infinitive phrase are one constituent

It might be suggested that the reluctance of a raised object to be a sister of an infinitive phrase could give a functional explanation for the use of the preposition. But it does not, since the preposition can also be used when the object is topicalized, and with raising to subject.

The question is still why Norwegian uses a preposition in raising sentences. My best suggestion is to look at the relation between form and function.

#### 4. Form - function

A syntactic theory must have rules saying what formal categories can be assigned what grammatical functions. These rules are not much discussed. The reason is probably that they are looked upon as trivial, but they do raise some interesting questions. This kind of rules should account for the unmarked cases of the form - function relation. There will always be cases that must be considered marked, for example PP subjects (Bresnan 1994). The rules will to a large extent be universal, but there is some variation. Examples of such rules are (22)-(25).

(22) The unmarked function of DP is SUBJ, OBJ, OBJ<sub>theta</sub> (the core functions)

(23) The unmarked function of AP is XCOMP, XADJ (the open functions)

(24) The unmarked function of non-finite VP is XCOMP

(25) The unmarked function of PP is (roughly) anything except the core functions

PPs are different from the other categories in that it is difficult to pick out one or two unmarked functions. They can have most functions, and the best generalization would probably be to say what their unmarked functions are not.

The rule for finite CP is a parameter of variation. Dalrymple and Lødrup (2000) discuss the grammatical functions of finite complement clauses. We propose that UG gives two options for realizing a clausal complement: as an object or a COMP. The object complement clauses alternate with DP objects, and behave syntactically like grammatical objects, in the sense that they

topicalize, correspond to a subject in the passive, etc. The COMP complement clauses lack these object properties. We claim that some languages have object clausal complements, some have COMP clausal complements, and some have both, in the sense that different predicates take complement clauses with different functions. Norwegian is mentioned as a language that has object clausal complements (but the existence of exceptions is noted).

Another parameter of variation is the function of infinitive phrases. In Norwegian, their unmarked function is object<sup>5</sup> (Lødrup 1991, see also Andrews 1982 on Icelandic). The infinitival complement of most equi verbs<sup>6</sup> alternates with a DP object, it can topicalize, and it can be realized as a subject in the passive. Cf. (26)-(29).

- (26) Vi har akseptert å betale skatt  
 we have accepted to pay taxes  
 'We have accepted to pay taxes'  
 (27) Vi har akseptert dette  
 we have accepted this  
 'We have accepted this'  
 (28) Å betale skatt har vi akseptert  
 to pay taxes have we accepted  
 'To pay taxes, we have accepted'  
 (29) Å betale skatt er blitt akseptert  
 to pay taxes has been accepted  
 'To pay taxes has been accepted'

The passive (29) also shows that the infinitive phrase can occur without a realized controller. This means that control is anaphoric, and not functional (Bresnan 1982, Bresnan 2001:267-301).

Differences between lexical categories in taking infinitive phrase complements give an important argument that the unmarked function of Norwegian infinitive phrases is object. The situation is the following:

Adjectives and nouns do not take infinitive phrases as complements<sup>7</sup>, while prepositions take infinitive phrases freely. Cf. (30)-(32).

- (30) \*et forsøk å finne en vei ut  
 an attempt to find a way out  
 (31) \*stolt/ivrig å gjøre dette  
 proud/eager to do this

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<sup>5</sup> I assume that being a subject is a marked function, since an infinitive phrase subject cannot be in the canonical subject position; it must topicalize.

<sup>6</sup> Equi verbs are often called control verbs; I will use the term equi verbs to avoid confusion with the LFG notion of (functional and anaphoric) control.

<sup>7</sup> There is an exception to this claim; an adjective can take an infinitival COMP in the "tough movement" construction. Besides, a couple of clarifications might be in place. First, a handful of adjectives can take an object (cf. *ulikt ham* 'unlike him', see Platzack (1982) on Swedish). This object can be realized as an infinitive phrase; cf. *ulikt å være kunstner* 'unlike to be an artist'. Second, certain nouns can take an infinitive phrase, as in *kunsten å fiske* 'the art to fish' (i.e. 'the art of fishing'). These are not complements, however, but appositions cf. Faarlund et al. (1997:1011-1014).

- (32) ved/fra å svømme  
by/from to swim  
'by/from swimming'

With adjectives and nouns, an infinitival complement must be the object of a preposition, as in (33)-(34).

- (33) et forsøk på å finne en vei ut  
an attempt on to find a way out  
'an attempt to find a way out'  
(34) stolt over / ivrig etter å gjøre dette  
proud over / eager after to do this  
'proud/eager to do this'

The generalization is that the transitive lexical categories can take infinitive phrases, while the intransitive ones cannot. This is an important argument that the unmarked function of Norwegian infinitive phrases is object.

It is not impossible for a Norwegian infinitive phrase to be COMP or XCOMP, but they must be considered marked functions. In English, on the other hand, COMP or XCOMP do not seem to be marked functions for infinitive phrases.

We are now in a position to answer the question why Norwegian uses an empty preposition in raising sentences. In LFG, raising is basically a case of functional control where the controller does not get a thematic role from its governing verb. The complement in a raising sentence is an XCOMP. This is a marked function for an infinitive phrase in Norwegian. Using the preposition gives us a PP instead.

The preposition makes it possible to avoid a marked form - function assignment, and to get a formal category that is suited for the function XCOMP. One could ask, then, why Norwegian doesn't always use a preposition in a raising sentence. The answer is that other constraints, like economy of expression and full interpretation, pull in the opposite direction.

## 5. The nature of *til*

In sentences like (35)-(36), the preposition *til* introduces a PP oblique with an infinitive phrase object.

- (35) Jeg vil gjerne bidra til å redde salamanderen  
I will gladly contribute to (PREP) to (INF.M) save the-newt  
'I will gladly contribute to save the newt'  
(36) Vi har overtalt ham til å betale  
we have persuaded him to (PREP) to (INF.M) pay  
'We have persuaded him to pay'

There are several important syntactic differences between a PP XCOMP in a raising sentence, and a PP oblique with an infinitive phrase object.

First difference: In raising sentences, control must be functional. In sentences like (35)- (36), control must be anaphoric. This follows from the fact that the

infinitive phrases are objects of prepositions. That control is not functional can be seen from (37), the passive version of (36), where there is no syntactically realized controller.

- (37) Det ble bidratt til å redde salamanderen  
it was contributed to (PREP) to (INF.M) save the-newt  
'People contributed to save the newt'

The normal, and expected, situation is that an infinitive phrase has anaphoric control when it is the complement of a preposition. Functional control is not available for an object. Besides, functional control is a lexical property of the verb. The verb cannot specify functional control of the complement of an oblique, which is too far "down" in the functional structure.

Second difference: Related to the difference in control is the fact that the infinitive phrase object in a PP oblique alternates with a DP object, cf. (38)-(39), while the infinitive phrase in a raising sentence does not, cf. (40)-(41).

- (38) Jeg vil gjerne bidra til dette  
I will gladly contribute to this  
'I will gladly contribute to this'  
(39) Vi har overtalt ham til dette  
we have persuaded him to this  
'We have persuaded him to this'  
(40) \*Han ser ut til dette  
he seems (particle) to this  
(41) \*Vi fikk ham til dette  
we got him to this

In some cases, like (42), the infinitive phrase in a raising sentence might seem to alternate with a DP.

- (42) De anslår antallet til en million  
they estimate the number to one million  
'They estimate the number to one million'

However, sentences like (42) are not grammatically parallel to the raising sentences discussed here; this is shown in section 7.

Third difference: A PP oblique can topicalize, cf. (43)-(44), while the PP in a raising sentence can not, cf. (45)-(46)<sup>8</sup>.

- (43) Til å redde salamanderen vil jeg gjerne bidra  
to (PREP) to (INF.M) save the-newt will I gladly contribute  
'To save the newt, I will gladly contribute '  
(44) Til å betale har vi overtalt ham  
to (PREP) to (INF.M) pay have we persuaded him  
'To pay, we have persuaded him'

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<sup>8</sup> If (43) and (44) sound slightly unnatural, the reason is probably that Norwegian prefers preposition stranding wherever possible.

- (45) \***Til** å sove ser han ut  
to (PREP) to (INF.M) sleep seems he (particle)
- (46) \***Til** å bli glad fikk vi ham  
to (PREP) to (INF.M) be happy got we him

This difference can also be related to control. It follows from an independent generalization which says that an XCOMP with a verbal (f-structure) head cannot enter into an unbounded dependency<sup>9</sup>. This restriction is in some way part of the classical "Higgins' generalization", which also prohibits a COMP to topicalize (cf. Dalrymple and Lødrup 2000, Lødrup 2001, and references there).

Fourth difference: The infinitive phrases show a corresponding difference concerning unbounded dependencies. The infinitive phrase of a PP oblique can topicalize, as expected, cf. (47)-(48), while the infinitive phrase of a PP in a raising sentence can not, cf. (49)-(50).

- (47) Å redde salamanderen vil jeg gjerne bidra til  
to (INF.M) save the-newt will I gladly contribute to (PREP)  
'To save the newt, I will gladly contribute '
- (48) Å betale har vi overtalt ham til  
to (INF.M) pay have we persuaded him to (PREP)  
'To pay, we have persuaded him'
- (49) \*Å sove ser han ut **til**  
to (INF.M) sleep seems he (particle) to (PREP)
- (50) \*Å bli glad fikk vi ham **til**  
to (INF.M) be happy got we him to (PREP)

The fact that the infinitive phrase in a raising sentence cannot topicalize indicates that the preposition is a functional head (see for example Corver and van Riemsdijk 2001:2-3). Being the complement of a functional head, the infinitive phrase has no grammatical function. In LFG, only a phrase that has a grammatical function can enter into an unbounded dependency, since unbounded dependencies are accounted for at the level of functional structure. This means that the ungrammaticality of (49)-(50) follows when the preposition is a functional head.

The assumption that the preposition is a functional head also accounts for the fact that functional control takes place "across" the preposition. Functional control is accounted for in the functional structure, in which a functional head is not present. Structure sharing will therefore take place as if there was no preposition.

The preposition *til* in raising sentences is a head with a minimal meaning, which is there to satisfy the need for a head in the PP. Seen this way, the preposition *til* could be compared to English *do* in *do*-insertion (Bresnan 2000).

An important fact to be accounted for is that the need for the preposition *til* varies with the choice of verb. As shown in section 2, the pattern is rather

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<sup>9</sup> This generalization gives correct predictions for complements of Norwegian raising verbs, except for complements of auxiliaries (Lødrup 1996). It is not universal, however, Wurmbrand (2001:159) says that topicalization is possible in German raising sentences.

complicated, with some verbs requiring it, some verbs not allowing it, and some verbs taking it optionally. However, verbs that take an XCOMP are known to have differing requirements for the formal category of their XCOMP. (Cf. for example *Kim grew poetical / \*a success, Kim ended up poetical / a success*. See Pollard and Sag 1987:122-23.) It is therefore necessary that a verb that takes an XCOMP specifies the formal category of this XCOMP (Falk 2001:129-30).

## 6. Equi sentences

So far, only raising verbs have been discussed. But if my analysis is correct, there is no reason the functional head *til* should be restricted to raising sentences. In LFG, an equi verb takes a complement with functional control (an XCOMP) or a complement with anaphoric control (a COMP or an OBJ). An equi verb that takes an XCOMP differs syntactically from a raising verb only in giving a thematic role to the controlling argument. My analysis is therefore compatible with the existence of equi verbs that take an XCOMP with the functional head *til*.

A clear case is the verb *tenke* 'think, intend'. This verb can take an infinitival complement or a PP with the preposition *til*, as in (51)-(52). The two seem to be synonymous. The verb can also take a PP with the preposition *på* 'on', as in (53), which gives a slightly different meaning.

- (51) Jeg har tenkt å gjøre det  
 I have thought to (INF.M.) do it  
 'I intend to do it'
- (52) Jeg har tenkt **til** å gjøre det  
 I have thought to (PREP) to (INF.M.) do it  
 'I intend to do it'
- (53) Jeg har tenkt på å gjøre det  
 I have thought on to (INF.M.) do it  
 'I have thought about doing it'

The PP with the preposition *på* 'on' is an ordinary oblique, with the expected properties. The PP with the preposition *til* is an XCOMP; it has the same properties as the corresponding PP in a raising sentence. (54)-(58) show the differences concerning alternation with DP objects, topicalization and passivization.

- (54) Jeg har tenkt på / \***til** oppdraget  
 I have thought on / to the-assignment  
 'I have thought about the assignment'
- (55) På / \***til** å gjøre det har jeg tenkt lenge  
 on / to (PREP) to (INF.M) it have I thought long  
 'About doing it, I have thought for a long time'
- (56) Å gjøre det har jeg tenkt på / \***til** lenge  
 to do it have I thought on / to long  
 'Doing it, I have thought about for a long time'

- (57) Å gjøre det er blitt tenkt på / \***til** lenge  
 to do it has been thought on / to long  
 'Doing it has been thought about for a long time'  
 (58) Det er blitt tenkt lenge på / \***til** å gjøre det  
 it has been thought long on / to (PREP) to (INF.M) do it  
 'It has been thought for a long time about doing it'

Especially striking is the contrast in (57) and (58). The verb *tenke* 'think, intend' can passivize when it takes the preposition *på*, allowing both the pseudopassive (57) and the impersonal passive (58). With the preposition *til*, however, it does not allow passivization at all. The reason must be that the complement with the preposition *til* is an XCOMP and needs a syntactically realized controller<sup>10</sup>.

Other cases include some inherently reflexive verbs. The verb *bestemme seg* 'decide' can take a PP with either the preposition *for* 'for' or the preposition *til*. The differences between the PPs are as expected cf. (59)-(62).

- (59) De bestemte seg for / **til** å gjøre det  
 they decided (reflexive) for / to (PREP) to (INF.M.) do it  
 'They decided on doing it'  
 (60) De bestemte seg for / \***til** dette  
 they decided (reflexive) for / to this  
 'They decided on this'  
 (61) For / \***til** å gjøre det må vi bestemme oss  
 for / to (PREP) to (INF.M.) do it must we decide (reflexive)  
 'On doing it, we must decide'  
 (62) Å gjøre det må vi bestemme oss for / \***til**  
 to (INF.M.) do it must we decide (reflexive) for / to (PREP)  
 'Doing it, we must decide on'

A problem with *bestemme seg* 'decide' is that passivization is unavailable because the verb is inherently reflexive. This makes it difficult to establish that control is functional.

There are also a number of verbs with a thematic object that seem to take an XCOMP with the preposition *til*. An example is *spesifisere* 'specify', as in (63).

- (63) Han spesifiserte utgiftene **til** å gjelde kost og losji  
 he specified the-expenses to (PREP) to (INF.M.) concern food and lodging  
 'He specified the expenses to concern food and lodging'

Neither the PP nor the complement can topicalize, cf. (64)-(65).

- (64) \***Til** å gjelde kost og losji spesifiserte han utgiftene  
 to (PREP) to (INF.M.) concern food and lodging specified he the-expenses

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<sup>10</sup> Nominalizations give more evidence for this difference in control. The nominalization *tanke* 'thought' can take a PP with *på*, but not a PP with *til*. (Cf. *tanken på/\*til å gjøre det* 'the-thought on / to (PREP) to (INF.M.) do it'.) This follows from the fact that nouns cannot induce functional control.

- (65) \*Å gjelde kost og losji spesifiserte han utgiftene **til**  
to (INF.M.) concern food and lodging specified he the-expenses to (PREP)

Verbs with this option include the ones in (66).

- (66) *akseptere* 'accept', *bedømme* 'judge', *beskrive* 'describe', *betrakte* 'regard',  
*etablere* 'establish', *forandre* 'change', *presisere* 'make clear', *spesifisere* 'specify',  
*tolke* 'interpret', *utpeke* 'appoint', *utnevne* 'appoint'

Again, it is difficult to establish that there is functional control. However, it seems to be impossible to leave out the controlling object with these verbs, this might be taken as an indication that control is functional.

## 7. Another XCOMP with *til*

A possible parallel to the use of the preposition *til* discussed here can be found in sentences like (67)-(69), which contain a a DP object and a PP XCOMP with the preposition *til*.

- (67) Han pratet meg til nervevrak  
he chatted me to nervous-wreck  
'He chatted me into a nervous wreck'  
(68) De anslår antallet til en million  
they estimate the number to one million  
'They estimate the number to one million'  
(69) Vi har spesifisert målsettingen til en million  
we have specified the-aim to one million  
'We have specified the aim to one million'

The use of the preposition *til* in sentences like (67)-(69) can be explained in the same way as in sentences with infinitive phrases. Again, the point is the relation between form and function. Being an XCOMP is a marked function for a DP. Norwegian only has a handful of verbs that allow a DP XCOMP (for example *være* 'be', *bli* 'become', and *hete* 'be-called'). Both with DPs and infinitive phrases, the preposition *til* is used to avoid a marked form - function assignment, and to get a formal category that is suited for the function XCOMP. However, there are arguments that the PPs in (67)-(69) do not have the same analysis as the ones with infinitival complements.

First argument: With a DP complement, the preposition *til* seems to have some meaning. There is at least a tendency that it is used only with non-stative verbs. Stative verbs usually take the preposition *som* 'as' instead (Eide and Åfarli 1999:170), as in (70).

- (70) De betrakter ham som / \*til en ydmyk mann  
they regard him as / to a humble man  
'They regard him as a humble man'

With an infinitival complement, on the other hand, the preposition *til* is also used with stative verbs (see examples (1), (6), (7)).

Second argument: The preposition does not behave like a functional head in sentences like (67)-(69). Its complement can topicalize, cf. (71).

(71) En million har vi spesifisert den til  
a million have we specified it to  
'A million, we have specified it to'

This fact precludes an analysis of *til* as a functional head with a DP complement. (See for example Corver and van Riemsdijk (2001:2-3). This kind of elements have been called semi-lexical, cf. Eide and Åfarli (2001), Rafel (2001).) The topicalized complement must have some grammatical function, which in turn requires an analysis in which the head is lexical.

If the non-functional preposition *til* takes an object, there is no reason this object should not be realized as an infinitive phrase. (72) is an example.

(72) Vi har spesifisert målsettingen til å unngå tap  
we have specified the-aim to (PREP) to (INF.M.) avoid losses  
'We have specified the aim to avoid losses'

This infinitive phrase does not behave like the infinitival complement of the functional head *til*. It has the syntactic properties of an object of a preposition. It can topicalize, as in (73), and the whole PP can topicalize, as in (74).

(73) Å unngå tap har vi spesifisert den til  
to (INF.M.) avoid losses have we specified it to (PREP)  
'To avoid losses, we have specified it'

(74) Til å unngå tap har vi spesifisert den  
to (PREP) to (INF.M.) avoid losses have we specified it  
'To avoid losses, we have specified it'

Control of the infinitival subject is not functional in (72). The infinitival subject could be understood to be either somebody who is not mentioned in the sentence, or the subject. The subject cannot be a functional controller, however, since it can be left out in the passive, as in (75).

(75) Målsettingen ble spesifisert til å unngå tap  
the-aim was specified to (PREP) to (INF.M.) avoid losses  
'The aim was specified to avoid losses'

There must be a PRO subject for the infinitive phrase in (72)<sup>11 12</sup>.

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<sup>11</sup> A difficult question is what is obligatorily controlled in the PP XCOMP in (72). It cannot be the subject position of the infinitive phrase, it seems to be the PP as a whole, or the infinitive phrase as a whole.

<sup>12</sup> A complication is that some stative verbs allow the preposition *som* 'as' as a functional head. This means that even with *som*, there can be a contrast between an infinitive phrase with anaphoric control, as in (i), and an infinitive phrase with functional control, as in (ii).

(i) Dette må betraktes som å bli degradert  
this must regard-PASS as to be degraded  
'This must be regarded as being degraded'

[This note continues on the next page]

## 8. Other strategies

Norwegian also has other ways to get a less marked form – function relation with XCOMPs, even if they are less important in terms of the number of verbs involved.

A small number of verbs take a complement without the infinitival marker as an XCOMP, both raising and equi verbs. Cf. (76)-(77).

- (76) Vi så ham svømme  
we saw him swim  
'We saw him swim'
- (77) Vi ba ham gjøre det  
we asked him do it  
'We asked him to do it'

I assume that an infinitive phrase is an IP with the infinitival marker in I. Without an infinitival marker there is no IP, only a VP. The unmarked function of a non-finite VP is XCOMP (see section 4). This means that not using the infinitival marker can be seen as a strategy for providing a form that is suitable for the function XCOMP<sup>13</sup>.

A number of raising verbs can sometimes be found with a VP XCOMP in texts. This sounds somewhat strange to me, but sentences like (78) - (79) are not uncommon.

- (78) Det synes være kommet nye folk der (authentic)  
there seem be come new people there  
'There seem to have come new people there'
- (79) Produksjonen 2001 forventes bli på ca. 4-500 tonn (authentic)  
the-production 2001 expect-PASS be about 4-500 tons  
'The production in 2001 is expected to be about 4-500 tons'

Norwegian has still another strategy to realize an XCOMP. (80)- (81) are so-called pseudocoordinations.

- (80) Det sitter en mann på kontoret og skriver dikt  
there sits a man in the-office and writes poems  
'A man is writing poetry in the office'
- (81) Det driver og blir varmere (authentic)  
it carries-on and gets warmer  
'It is getting warmer'

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(ii) De blir betraktet som å likne den gitte situasjonen (authentic)  
they are regarded as to resemble the given situation  
'They are regarded as resembling the given situation'  
The differences concerning topicalization are as expected.

<sup>13</sup> It is an old insight that phrases without the infinitival marker are often non-nominal. It should be mentioned, however, that the distribution of the infinitival marker in Norwegian is more complicated, see Johannessen (1998).

In Lødrup (2002), I show that most pseudocoordinations are really subordinations, in which an XCOMP copies the morphosyntactic features of its governing verb. Most verbs that take pseudocoordinations are equi verbs, a couple are raising verbs. This means that what seems to be the second coordinated VP in (80)- (81) is really an XCOMP. This could be seen as another way of avoiding an infinitive phrase as an XCOMP.

## 9. Conclusion

The functional head *til* introduces complements with functional control both with raising verbs and equi verbs. This requires a theory in which the complement of an equi verb can have (but does not need to have) the same syntactic properties as the complement of a raising verb. LFG's theory of control and complementation gives the framework needed.

LFG's theory of control and complementation was proposed twenty years ago (Bresnan 1982), and it has been remarkably stable over the years (see Bresnan 2001:267-301). When it was proposed, its distinction between anaphoric and functional control and its grammatical function XCOMP had no parallels in competing theories. In traditional Chomskyan syntax, the raising - equi distinction was taken to be decisive for the syntactic properties of controlled complements. It is striking that recent Chomskyan syntax is diminishing the difference between raising and equi (Hornstein 1999, Manzini and Roussou 2000), thus approaching a view that is more similar to LFG's.

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