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# Clausal complementation in Norwegian

Helge Lødrup

The purpose of this article is to give a description of the syntax of clausal complementation in Norwegian within the framework of Lexical-Functional Grammar (LFG). The data are mostly authentic sentences from text corpora and web pages. The description given is rather different from traditional descriptions. An important point to be made is that Norwegian (finite and non-finite) clausal complements are not homogeneous with respect to their syntactic properties. Even if most clausal complements behave like objects, Norwegian also has clausal complements that do not behave like objects. This phenomenon is well known from other languages, but has never been observed in the literature on Norwegian. The structure and function of non-object clausal complements are discussed, and the traditional idea that they are PP obliques is rejected.

**Keywords** complement clauses, complementation, control, infinitives, Norwegian

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## 1. INTRODUCTION

It is well known that complement clauses differ with respect to their external syntactic behavior (Stowell 1981, Foley & Van Valin 1984:249–256, Webelhuth 1992, Bošković 1995, Dalrymple & Lødrup 2000). Some complement clauses have the external syntactic properties of DP objects. They alternate with DP objects, topicalize, and correspond to a subject in the passive. An example is the complement of *believe*, as in (1)–(3).

(1) I believe that the earth is round/it.
(2) That the earth is round, everybody believed.
(3) That the earth is round was not believed.

Other complement clauses lack these properties. An example is the complement of *hope*, as in (4)–(6).

(4) I hope that it will rain/*it.
(5) *That it would rain, everybody hoped.
(6) *That it would rain was hoped.

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These facts raise interesting and difficult questions for syntactic theory. Dalrymple & Lødrup (2000) argue that the complement clauses in (1)–(3) and (4)–(6) have different grammatical functions. Their analysis is based upon Lexical Functional Grammar (LFG), and it will be useful to review some main features of this theory. (Some readers might want to skip to section 1.2.)

### *1.1 LFG*

Characteristic of LFG is its architecture with parallel levels which represent different aspects of grammatical information (Bresnan 2001, Dalrymple 2001, Falk 2001). Consider the representations of a sentence like (7).

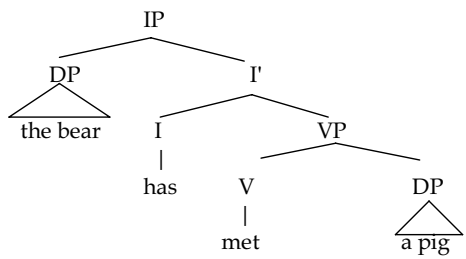
(7) The bear has met a pig.

Argument structure is basically a list of the thematic roles of the predicator, as in (8) (with some additional information).

(8) meet <agent theme>

Constituent structure is the syntactic tree for surface structure, respecting X-bar theory and the principle of lexical integrity, as in (9).

(9)




Functional structure is an attribute-value matrix, in which grammatical functions and morphosyntactic features are represented, as in (10).

(10)

| | |
|---|---|
| SUBJ | DEFINITE + |
| | NUMBER SG |
| | PRED 'bear' |
| OBJ | DEFINITE – |
| | NUMBER SG |
| | PRED 'pig' |
| PRED | 'meet<SUBJ OBJ>' |
| TENSE | PRESENT |
| ASPECT | PERFECT |

Functional structure is the 'deep' level of grammatical organization. It has no direct parallels in other syntactic theories. Functional structure represents other aspects of grammatical information than constituent structure does, and uses a different vocabulary. By abstracting away from constituent structure differences, functional structure makes a basis for simple and general theories of grammatical phenomena

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that depend upon deep grammatical organization, such as syntactic selection, agreement, secondary predication, control, binding and unbounded dependencies.

### 1.2 The functions of complement clauses

The grammatical functions of finite complement clauses are discussed in Dalrymple & Lødrup (2000). They propose that UG gives two options for realizing a clausal complement, as an object or as a non-object. In LFG, a non-object complement clause has the grammatical function COMP. A complement clause that is an object shares grammatical properties with a DP object, while a complement clause that is a COMP does not share these properties.

It is important, however, that the relevant properties are not any grammatical properties. The syntactic phenomena that are decisive for determining the grammatical function of an argument are those that belong to functional structure. Arguments that have the same grammatical function do not necessarily behave the same way in constituent structure. For example, what is an object in functional structure can have different realizations in constituent structure in the languages of the world: it can be a DP, a clitic, an affix, or a clause.

Clausal complements in English differ from DP objects in being positioned closer to the end of the sentence. Emonds (1970:74–76) gives examples like (11)–(13).

(11) The man taught the importance of books to his sons.
(12) *The man taught that books were important to his sons.
(13) The man taught his sons that books were important.

This difference is not decisive to the grammatical function of the clause. On the contrary, differences of this kind are expected when the objects belong to different formal categories (Bresnan 1994:104).

In this article, three criteria will be used to distinguish between clausal complements that are objects and clausal complements that are non-objects. These criteria are standard in the literature and unproblematic in most cases (Stowell 1981, Webelhuth 1992, Bošković 1995, Dalrymple & Lødrup 2000).

First criterion: Alternation with a DP object
The syntactic selection of a predicate is stated in LFG in terms of grammatical functions. The lexical entry of a predicate specifies the minimal functional structure in which it can appear. A predicate that takes an object is expected to take objects of different formal categories (semantics aside). An object clausal complement is therefore expected to alternate with a (thematic) DP object; this is a necessary condition for objecthood. A clausal complement that does not alternate with a DP object is a non-object.

Alternation with a DP object cannot be a sufficient condition, however. There are verbs that take a DP object as an alternative to a non-object clausal complement. One example is verbs like *begynne* 'begin', discussed in section 3.3.1.[1]

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Second criterion: Unbounded dependencies

Topicalization, left dislocation, clefting and pseudoclefting are cases of unbounded dependencies; topicalization will be used in the discussion here. A topicalized constituent is in its surface position in constituent structure. The function of the topic and restrictions on topicalization are accounted for in functional structure.

Topicalization is possible with nearly any kind of argument, and it is not surprising that it is possible with an object. The interesting fact is that topicalization is usually not possible with a non-object clausal complement. (This is 'Higgins' Generalization', see Higgins 1973, Dalrymple & Lødrup 2000, Lødrup 2001, and references there.) Topicalization is a necessary condition for objecthood. It is not a sufficient condition, however, because non-object clausal complements can topicalize in some cases.[2] A clausal complement that cannot topicalize is not an object.

Third criterion: Passivization

An object corresponds to a subject in the passive, while a non-object clausal complement does not. The reason is not that verbs with non-object clausal complements do not passivize; an impersonal passive is often possible, as in (14).

(14) It was hoped [that it would rain].

In LFG, this difference between object and non-object clausal complements follows from the way thematic arguments are mapped into grammatical functions. Subjects and objects share the feature [–restricted], while a non-object clausal complement must be [+restricted] (see Zaenen & Engdahl 1994). If the external argument is demoted (as in the passive), an argument that is [–restricted] can be realized as a subject. This option does not exist for a [+restricted] argument.

Corresponding to a passive subject is a necessary condition for objecthood with verbs that passivize. In practice, it is also a sufficient condition (with the reservation that the subject of a pseudo-passive corresponds to the verb's oblique's object).

There are also other criteria that could be used in addition to the three above. For example, arguments that can be coordinated must have the same grammatical function. A clausal complement can be coordinated with an object DP (Sag et al. 1985:164f.), cf. (15). If it is, it must then be considered an object.

(15) Pat remembered the appointment and [that it was important to be on time].

However, there are many factors, both grammatical and extragrammatical, that influence the acceptability of a coordination. This criterion will not be used in the present article.

### *1.3 Mixed languages and the case of Norwegian*

Dalrymple & Lødrup (2000) point out that some languages realize finite clausal complements as objects, some realize them as COMPs, and some are 'mixed', in the sense that different predicates take complement clauses with different functions.[3] Their examples of mixed languages include English, German and Swedish.

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Dalrymple & Lødrup (2000) do not discuss Norwegian, but they say that Norwegian realizes finite clausal complements as objects. An example is the complement clause of the verb *bevise* 'prove'. It alternates with a DP object, topicalizes and corresponds to a subject in the passive, cf. (16)–(19).

(16) Han har endelig bevist [at jorden er rund].
*he has finally proved that the-earth is round*

(17) Han har endelig bevist dette.
*he has finally proved this*

(18) [At jorden er rund] har han endelig bevist.
*that the-earth is round has he finally proved*

(19) [At jorden er rund] er endelig blitt bevist.
*that the-earth is round has finally been proved*

However, Dalrymple & Lødrup (2000) also note that Norwegian has some finite complement clauses that do not behave as objects. This is the point of departure for the present article, which investigates clausal complementation in Norwegian in some detail, and shows that Norwegian should also be considered a mixed language. This is shown for finite complements (section 2) as well as for infinitival complements (section 3), which were not discussed in Dalrymple & Lødrup (2000). There is also a discussion of clausal complements of adjectives and nouns (section 4). The structure and function of non-object clausal complements is discussed (section 5), and the traditional idea that they are really some kind of PP obliques is rejected. There are also some remarks on the typology of clausal complements (section 6).

A group of clauses that will not be discussed in this article is 'extraposed' clauses, as in (20).

(20) Det plager meg [at Per vant].
*it bothers me that Per won*

Extraposed clauses have at least two of the properties of non-object complements: they do not topicalize, and they do not correspond to a subject in the passive; as is shown in (21)–(22).

(21) *[At Per vant] plager det meg.
*that Per won bothers it me*

(22) *[At Per vant] blir plaget meg.
*that Per won is bothered me*

Extraposed clauses can be replaced by a DP, at least when there is an intonational break. This DP is not an object, however; cf. (23).

(23) Det plager meg, det der.
*it bothers me that there*
'It bothers me, that thing.'

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The analysis of extraposed clauses presents several problems. In this article, it will be assumed that extraposed clauses are appositions to the subject or object pronoun (cf. Vikner 1995:239, Berman 2003:ch. 8). This accounts for the properties mentioned above. Appositions do not topicalize and do not correspond to a subject in the passive. Given the apposition analysis, extraposed clauses are not complements, and they are not directly relevant to the topic of this article.

### 1.4 The data

My data are mostly authentic, found by searching the Web and text corpora (especially The Oslo Corpus of Tagged Norwegian Texts). Many example sentences are authentic. The lists of predicates taking non-object clausal complements are based upon authentic data. (It goes without saying that these lists are not intended to be complete in any way.) This kind of data raises a number of problems. The approach taken here is rather pragmatic. A predicate is listed as taking a certain kind of clausal complement if authentic examples can be found and they do not intuitively give the impression of being deviant. As an example, consider the verb *insistere* 'insist'. The standard Norwegian dictionaries[4] give example sentences with an oblique PP complement (or no complement). However, a quick web search yields about 65 different sentences in which this verb takes a finite clausal complement, as in (24), and about 25 different sentences in which it takes an non-finite clausal complement, as in (25).

(24) Sharon insisterte [at han jobber for en våpenhvile].
*Sharon insisted that he works for a cease-fire*
(www.dagsavisen.no/utenriks/apor/2002/02/639470.shtml)

(25) (Han) insisterer [å spille profetien].
*he insists to play the-prophecy*
(158.36.60.206/pfu/99/99-071.htm)

Examples (24) and (25) do not sound bad, and I can see no reason to disregard these sentences. From now on, authentic example sentences will be given without sources, marked '(auth)'. Some of them, like (25) above, have been slightly edited.

## 2. FINITE COMPLEMENTS

A typical and unchallenged view of the grammatical function of clausal complements in Norwegian is as follows:[5]

> That-clauses are usually called nominal clauses, and the infinitive is called the nominal form of the verb. These terms imply that that-clauses and infinitival constructions, in addition to embedded questions, are NOMINAL ARGUMENT TYPES. That means that they can function in the same way as noun phrases. (Faarlund et al. 1997:1011; my translation)

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This view can also be found in Lødrup (1991). It has never been noticed in the literature (except in notes in Lødrup 1991, Dalrymple & Lødrup 2000) that some Norwegian predicates take finite complement clauses that do not have the syntactic properties of DP objects. One example is *insistere* 'insist'. This verb takes a clausal complement that does not alternate with a DP, cannot topicalize and does not correspond to a subject in the passive, as illustrated in (26)–(29).

(26) Sharon insisterte [at han jobber for en våpenhvile]. (auth)
*Sharon insisted that he works for a cease-fire*

(27) *Han insisterte dette.
*he insisted this*

(28) *[At han jobber for en våpenhvile] insisterte han.
*that he works for a cease-fire insisted he*

(29) *[At han jobber for en våpenhvile] ble insistert.
*that he works for a cease-fire was insisted*

The impersonal passive is possible:

(30) Det ble insistert [at han jobber for en våpenhvile].
*it was insisted that he works for a cease-fire*

The clausal complement of *insistere* 'insist' must be a COMP. Verbs that can take a finite complement with these properties include those in (31).

(31) *advare* 'warn', *anmode* 'request', *anse* 'consider', *argumentere* 'argue', *be* 'ask', *fantasere* 'have fantasies (about)', *finne* 'find', *fleipe* 'joke', *forhøre seg* inquire', *formane* 'exhort', *forsikre* 'ensure', *forvisse seg* 'make sure', *henstille* 'request', *informere* inform', *insistere* 'insist', *klage* 'complain', *konkludere* 'conclude', *orientere* 'inform', *overbevise* 'convince', *overtale* 'persuade', *regne* 'assume', *spekulere* 'speculate', *spørre* 'ask', *sverge* 'swear', *undres* 'wonder', *vedde* 'bet', *vitne* 'testify'

Some of these verbs, for example, *spørre* 'ask' and *undres* 'wonder', can take embedded questions. Embedded questions share their external syntactic properties with 'that'-clauses in Norwegian (selectional restrictions apart). Examples with finite COMPs are (32)–(34).

(32) Man regner [at det finnes omkring 5,5 millioner brukere]. (auth)
*one assumes that there are about 5.5 million users*

(33) Jeg spurte (henne) [hva de gjorde].
*I asked her what they did*

(34) (Han) informerte meg [at min kone hadde vært i retten]. (auth)
*he informed me that my wife had been to the-court*

Most of the verbs in (31) are verbs of asking, telling and convincing. Some of them can take a DP in front of the complement clause, as in (33) and (34). This

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DP is a direct object (LFG's OBJ), just as *meg* 'me' in (35), in which the clausal complement is replaced by a PP oblique.

(35) Han informerte meg om dette.
*he informed me about this*

Example (36) is syntactically different from (34). In (36), the verb *fortelle* 'tell' takes a clausal direct object (LFG's OBJ) with the object properties of section 1.2. The DP *meg* 'me' is an indirect object (LFG's OBJtheta), with the standard properties of indirect objects (for example, alternation with a PP oblique). Example (36) has the same analysis as (37), in which the clausal complement is replaced by a DP direct object.

(36) Han fortalte meg [at min kone hadde vært i retten].
*he told me that my wife had been to the-court*

(37) Han fortalte meg dette.
*he told me this*

In addition to the central group of verbs that take a finite COMP in (31), two minor groups could be mentioned.

First, there are some onomatopoetic verbs of sound emission that can be used as verbs of saying. Some of these are verbs of animal sounds; examples include those in (38).

(38) *hvese* 'hiss', *stønne* 'moan', *vræle* 'roar', *bjeffe* 'bark', *grynte* 'grunt, *kvitre* 'tweet'

Some other verbs that have a secondary use as verbs of saying also take a COMP; one example is *smile* 'smile' (in literary style).

The second group includes some verbs that take a formal subject and a clausal complement, as illustrated in (39).

(39) Det forlyder [at vi (. . .) vil få tusenvis av kroner]. (auth)
*it is-reported that we will get thousands of crowns*

The complement clause in (39) cannot be considered extraposed, because it cannot replace the formal subject. It satisfies the criteria for COMP; it does not alternate with a DP, cannot topicalize and does not correspond to a subject in the passive:

(40) *Det forlyder dette.
*it is-reported this*

(41) *[At vi vil få tusenvis av kroner] forlyder det.
*that we will get thousands of crowns is-reported it*

(42) *[At vi vil få tusenvis av kroner] forlydes.
*that we will get thousands of crowns is-reported*

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Other verbs with the syntax of *forlyde* 'be reported' are those in (43).

(43) *hete* 'be reported', *slumpe* 'happen', *spørs* 'be doubtful'

### 2.1 Alternation with a PP oblique

With the verbs in (31), there can be a preposition in front of the complement clause; an example is (44). (The exceptions are *anse* 'consider' and *finne* 'find'; the verbs in (38) and (43) do not have this option.)

(44) Han insisterte på [at han jobber for en våpenhvile].
*he insisted on that he works for a cease-fire*
'He insisted that he works for a cease-fire.'

With most of the verbs in (31), the use of a preposition is clearly the more frequent option.[6] It could also be noted that less than half of the verbs in the list (31) have an example sentence without a preposition in the standard Norwegian dictionaries (see note 4).

What is the analysis of (44)? The verb *insistere* 'insist' can take an argument PP. In LFG, an argument PP has the grammatical function oblique (OBLtheta). In (45), the oblique has a DP object.

(45) Han insisterte på en ny våpenhvile.
*he insisted on a new cease-fire*

The preposition in (45) is the head of a PP, not a verbal particle. Topicalization shows that the preposition and its object are a constituent, cf. (46).

(46) På en ny våpenhvile insisterte han.
*on a new cease-fire insisted he*
'He insisted on a new cease-fire.'

A verbal particle can be preceded by an object, as in (47) with the particle verb *slå på* 'turn on'. This is impossible with *insistere* 'insist', cf. (48).

(47) Han har ikke slått det på.
*he has not turned it on*

(48) *Han har ikke insisterte det på.
*he has not insisted it on*

Example (44) (with a clause as prepositional object) has the same analysis as example (45) (with a DP as prepositional object). Norwegian prepositions can take clausal complements as objects. A clausal prepositional object has, as expected, the object properties listed in section 1.2: it alternates with a DP object (as shown by (44)–(45)), topicalizes, as in (49), and corresponds to the subject of a pseudopassive (to the extent that a pseudopassive is possible), as in (50).

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(49) [At han jobber for en våpenhvile] insisterte han på.
*that he works for a cease-fire insisted he on*
'That he works for a cease-fire, he insisted.'

(50) (?)[At han jobber for en våpenhvile] ble insistert på.
*that he works for a cease-fire was insisted on*

In the theory of Dalrymple & Lødrup (2000), the alternation between a COMP and a PP oblique represents different ways of realizing a thematic argument position. It can be compared to the well-known fact that a group of verbs can realize their benefactive argument as an object or as a PP oblique (*give somebody something* ∼ *give something to somebody*). This alternation is discussed further in section 5.

It was shown in section 2 that a number of Norwegian verbs take a finite clausal complement with the grammatical function COMP, often alternating with a PP oblique. However, the traditional view that finite complement clauses are objects seems to be correct for the majority of cases.

## 3. INFINITIVAL COMPLEMENTS

Dalrymple & Lødrup (2000) discuss only finite complements, but they note that infinitival complements can also be objects or non-objects.

It was mentioned above that the traditional view that finite complement clauses are objects is correct for the majority of cases. This is also true for infinitival complements. Examples of verbs that take an infinitival complement with the grammatical function object are in (51). Some of these verbs can take an indirect object (LFG's OBJtheta) in addition to the infinitival direct object (LFG's OBJ).

(51) *akseptere* 'accept', *anbefale* 'recommend', *avslå* 'reject', *avtale* 'arrange', *benekte* 'deny', *beslutte* 'decide', *bestemme* 'decide', *diskutere* 'discuss', *foreslå* 'propose', *foretrekke* 'prefer', *forlange* 'demand', *forsøke* 'try', *glemme* 'forget', *godta* 'accept', *kreve* 'demand', *lære* 'learn, teach', *nekte* 'deny', *oppnå* 'achieve', *overveie* 'consider', *planlegge* 'plan', *prioritere* 'give preference to', *prøve* 'try', *unngå* 'avoid', *unnlate* 'fail', *utsette* 'postpone', *velge* 'choose', *vedta* 'decide', *vurdere* 'consider', *ønske* 'wish'

The complement clauses of the verbs in (51) alternate with a DP object, topicalize and correspond to a subject in the passive, as shown for *akseptere* 'accept' in (52)–(55).

(52) De har akseptert [å betale høyere skatt].
*they have accepted to pay higher tax*

(53) De har akseptert dette.
*they have accepted this*

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(54) [Å betale høyere skatt] har de akseptert.
*to pay higher tax have they accepted*
(55) [Å betale høyere skatt] er blitt akseptert.
*to pay higher tax has been accepted*

The quotation from Faarlund et al. (1997:1011) given at the beginning of section 2 above includes reference to 'infinitival constructions' in the categories that 'can function in the same way as noun phrases'. However, even in traditional grammar, it is clear that some infinitival complements are not objects. Some grammars (for example, Faarlund et al. 1997:1006–1011) include a grammatical function called 'object infinitive' for these cases, but recognize them only with a handful of verbs. To approach this problem, it is necessary to discuss the possible functions of infinitival complements.[7]

### 3.1 Functions of infinitival complements

It was shown above that infinitival complements can be objects (cf. (52)–(55) above) and COMPs. As COMPs, they have the same external syntactic properties as the corresponding finite COMPs (Bresnan 1982a). As an example, consider the infinitival complement of the English verb *decide*, which does not alternate with a DP object, does not topicalize and does not correspond to a subject in the passive, as shown in (56)–(59).

(56) Mary decided [to fix the car].
(57) *Mary decided it.
(58) *[To fix the car] Mary decided.
(59) *[To fix the car] was decided.

A question that is crucial to the syntax of infinitival complements is how the unrealized subject of the infinitive is controlled (Bresnan 1982a, 2001:267–301). With an infinitival complement that is an object or a COMP, there is no requirement that a syntactically realized controller be present. These infinitival complements have a phonologically unrealized pronominal subject in functional structure. PRO can be controlled by a DP in the clause, or it can have arbitrary reference. In LFG, this kind of control is called anaphoric control.

Consider the Norwegian verb *akseptere* 'accept'. The unrealized subject of its infinitival object is controlled by the subject of *akseptere* 'accept'. However, it allows the passive, where no syntactically realized controller is present, as in (55) above, repeated as (60).

(60) [Å betale høyere skatt] er blitt akseptert.
*to pay higher tax has been accepted*

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Control is therefore anaphoric, and there must be a PRO in functional structure. The (simplified) functional structure for the active *De har akseptert å betale* 'they have accepted to pay' is (61).

(61)
SUBJ 'they'
PRED 'accept'
OBJ [SUBJ **PRO**, PRED 'pay']

The English verb *decide*, which takes an infinitival COMP (cf. (56)–(59)), also allows the (impersonal) passive, as in (62).

(62) It was decided [to fix the car].

Again, there must be anaphoric control of a PRO subject here.

Control is also anaphoric with a Norwegian verb like *anbefale* 'recommend', which takes an infinitival direct object. This verb can be used with or without an indirect DP object. When the indirect object is present, it is a controller; when it is not, control is arbitrary; cf. (63).

(63) Jeg vil anbefale (deg) [å bruke høye støvler].
*I will recommend you to use high boots*

The English verb *signal* shows parallel control behavior. It takes an infinitival COMP and an optional (direct) object that is a controller when present; cf. (64).

(64) Louise signaled (Tom) [to follow her]. (Bresnan 1982a:373)

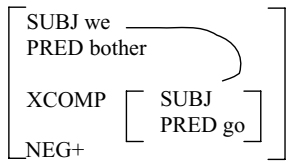
LFG has yet another grammatical function for an infinitival complement, namely XCOMP. XCOMP is also the grammatical function for the traditional predicate complements (*become* ***a doctor***, *paint the car* ***red***). A verbal XCOMP has the external syntactic properties of a COMP, but in addition it has a subject position that is obligatorily controlled. An XCOMP must always have a syntactically realized controller present, and this controller must be a subject or an object. What argument is the controller is specified in the lexicon for each verb. (These specifications can be generated by a lexical rule for most verbs, cf. Bresnan 1982a:322.) The controller must always be syntactically realized; this implies that it cannot be removed by passivization or detransitivization. Examples are *bother* and *teach*, which both take an XCOMP, illustrated in (65)–(66) and (67)–(68).

(65) We didn't bother [to go].
(66) *It wasn't bothered [to go].
(67) Louise taught Tom [to smoke]. (Bresnan 1982a:373)
(68) *Louise taught [to smoke]. (Bresnan 1982a:373)

This kind of control is called functional control in LFG. A complement with functional control must have the grammatical function XCOMP.

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Functional control is accounted for without a PRO. In functional structure, there is structure sharing between the controlling subject or object and the controlled subject. Example (65) has the simplified functional structure (69), where the curved line indicates structure sharing.

(69)



### 3.2 Raising complements

An important feature of LFG's theory of control is that raising is considered a case of functional control. What distinguishes raising from other cases of functional control is that the 'raised' controller does not get a thematic role from its governing verb.[8] This makes it necessary to assume that there is structure sharing; if there were not, a raised subject or object[9] would not get a thematic role from any predicate. This means that a raising complement cannot be an object or a COMP, it must be an XCOMP. This is an old insight; infinitival complements in raising sentences are the prototypical non-object clausal complements. They do not alternate with DP objects, do not topicalize (but see note 2) and do not correspond to a subject in the passive. This is shown for the raising to subject verb *forekomme* 'appear' in (70)–(73), and for the raising to object verb *forvente* 'expect' in (74)–(77).[10]

(70) Han forekommer meg [å være smart].
*he seems me to be smart*
'He seems to me to be smart.'

(71) *Han forekommer meg dette.
*he seems me this*

(72) *[Å være smart] forekommer han meg.
*to be smart seems he me*

(73) *[Å være smart] ble forekommet meg.
*to be smart was seemed me*

(74) Ingen forventer lærere [å være perfekte]. (auth)
*nobody expects teachers to be perfect*

(75) *Ingen forventer lærere dette.
*nobody expects teachers this*

(76) *[Å være perfekte] forventer ingen lærere.
*to be perfect expects nobody teachers*

(77) *[Å være perfekte] blir ikke forventet lærere.
*to be perfect is not expected teachers*

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Raising to subject verbs do not allow the impersonal passive, as (78) shows.

(78) *Det ble forekommet meg [å være smart].
*it was seemed me to be smart*

The reason is obvious; passivization would remove the subject argument and leave the XCOMP without a realized controller. Raising to object verbs also disallow the impersonal passive, cf. (79).

(79) *Det blir ikke forventet lærere [å være perfekte].
*it is not expected teachers to be perfect*

The reason why raising to object verbs disallow the impersonal passive is not clear. Passivization does not remove the controller, and the personal passive is perfect (when the passive subject corresponds to the active object). However, there seems to be a more general restriction, which says that objects of impersonal sentences cannot be functional controllers. Other cases are (80)–(81).

(80) *Det ble funnet en mann kjedelig.
*it was found a man boring*

(81) *?Det ble malt en bil rød.
*it was painted a car red*

It is not clear why there should be a restriction like this. A possible explanation might be that it is related to focus. Both the object and the XCOMP want to be the main focus of the sentence. However, they cannot be the main focus at the same time, and there is no way to resolve this conflict. There are some complications, however. The restriction is not exceptionless, and there is some speaker variation. For example, some speakers find (81) acceptable. And all speakers accept a sentence like *Det var ingen plasser ledige* 'there were no seats free' (see Teleman et al. (1999a:360, 389) on Swedish).

### 3.3 Complements with subject control

It is uncontroversial that raising sentences have infinitival complements that are not objects. The real question concerns the infinitival complements of non-raising sentences. It was mentioned in section 3 that the traditional view is that infinitival complements are objects in Norwegian, and that this seems to be correct for the majority of verbs that take an infinitival complement. This situation makes it necessary to focus upon the existence of non-object infinitival complements.

An example of a verb that takes an infinitival complement that is not an object is *hjelpe* 'help' (which is used with or without the intransitive particle *til* 'to'). Its infinitival complement does not alternate with a DP, does not topicalize and does not

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correspond to the subject of a passive, as shown in (82)–(85).

(82) Per hjalp til [å rydde].
*Per helped* PARTICLE *to tidy-up*
'Per helped to tidy up.'

(83) *Per hjalp til dette.
*Per helped* PARTICLE *this*

(84) *[Å rydde] hjalp han til.
*to tidy-up helped he* PARTICLE

(85) *[Å rydde] ble hjulpet til.
*to tidy-up was helped* PARTICLE

The infinitival complement of *hjelpe* must be a COMP or an XCOMP. To decide between these possibilities, it is necessary to see if the controller has to be syntactically realized. The impersonal passive is impossible:

(86) *Det ble hjulpet til [å rydde].
*it was helped* PARTICLE *to tidy-up*

The ungrammaticality of the impersonal passive shows that the controller has to be syntactically realized (because the verb can passivize, and there seems to be no other explanation that the impersonal passive is impossible). Control must be functional, which makes the infinitival complement an XCOMP. Verbs that can take an infinitival complement with these properties include the ones in (87);[11] examples are (88)–(89).

(87) *akte* 'intend', *anse* 'consider', *bidra* 'contribute', *finne* 'find', *hjelpe* 'help', *insistere* 'insist', *nøle* 'hesitate', *regne* 'assume', *streve* 'strive', *sverge* swear', *true* 'threaten'

(88) (Hun) akter [å kjøre snowboard]. (auth)
*she intends to ride snowboard*

(89) (De) må sverge [å ha høy moral]. (auth)
*they must swear to have high moral*

Most of the verbs in (87) take a PP oblique as an alternative to the XCOMP, as in (90) (exceptions are *akte* 'intend', *anse* 'consider', *finne* 'find').

(90) Per hjalp til med [å rydde].
*Per helped* PARTICLE *with to tidy-up*
'Per helped to tidy up.'

With most of the verbs in (87), the PP oblique is the more frequent option. (The empirical basis for this claim is as in note 6.) Only one of the verbs in (87) has an example sentence with a non-object clausal complement in the standard Norwegian dictionaries (see note 4).

There are also other verbs that take a non-object infinitival complement. Verbs like *lykkes* 'succeed' and *være med* 'join' behave like *hjelpe*, with one exception: they

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never passivize, for reasons that are independent of control.[12] This makes it impossible to use the impersonal passive as a test if control is functional or anaphoric. Other criteria (Bresnan 1982a) are not useful for these verbs, and it cannot be established if their infinitival complement is an XCOMP or a COMP.

The same problem arises with some verbs that take an infinitival complement and a reflexive, like those in (91).

(91) *beslutte seg* 'decide', *bestemme seg* 'decide', *forplikte seg* 'commit oneself', *forte seg* 'hurry', *gi seg* 'give up', *skynde seg* 'hurry'

The infinitival complements of these verbs also alternate with a PP oblique, do not alternate with a DP, do not topicalize and do not correspond to the subject of a passive; cf. (92)–(95).

(92) Han skyndte seg [å gjøre det].
*he hurried* REFLEXIVE *to do it*
'He hurried to do it.'

(93) Han skyndte seg med [å gjøre det].
*he hurried* REFLEXIVE *with to do it*
'He hurried to do it.'

(94) *Han skyndte seg dette.
*he hurried* REFLEXIVE *this*

(95) *[Å gjøre det] skyndte han seg.
*to do it hurried he* REFLEXIVE

The reflexive, *seg*, with the verbs in (91) does not alternate with other DPs. It is non-thematic and obligatory (at least with the relevant use of the verbs); the verbs are inherently reflexive. Inherently reflexive verbs do not passivize in Norwegian. Without passivization, it is again difficult to establish if control is functional or anaphoric.

### 3.3.1 Aspectual verbs

It is difficult to find clear cases of verbs that take an infinitival COMP in Norwegian. Aspectual verbs like *begynne* 'begin', *fortsette* 'keep on' and *stoppe* 'stop' represent a possible case. These verbs can be used as raising verbs (as shown by the raised expletive in *Det begynte å sne* 'It began to snow'). As non-raising verbs, they can take an infinitival complement or a DP object, or a PP oblique,[13] as in (96)–(98).

(96) Per begynte [å lage show].
*Per began to make show*

(97) Per begynte showet.
*Per began the-show*

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(98) Per begynte med showet.
*Per began with the-show*
'Per began the show.'

Aspectual verbs are interesting in that the infinitival complement alternates with either a PP oblique or an object. Even if it can alternate with an object, it does not have the syntactic properties of an object. It does not topicalize and does not correspond to the subject of a passive, cf. (99)–(100).[14]

(99) *[Å lage show] har han begynt.
*to make show has he begun*

(100) *[Å lage show] ble begynt.
*to make show was begun*

On the other hand, the impersonal passive is possible (although somewhat stilted, examples can be found in texts[15]); cf. (101).

(101) Det ble begynt [å spille . . . rugby]. (auth)
*there was begun to play rugby*
'People began to play rugby.'

This means that control must be anaphoric and that the infinitival complement is a COMP (at least for speakers who accept sentences like (101)).

### 3.3.2 Reflective verbs

One group of non-object infinitival complements, exemplified in (102), deserves a separate discussion.

(102) Han beviste/ rapporterte [å veie hundre kilo].
*he proved reported to weigh hundred kilos*
'He proved/reported that he weighed a hundred kilos.'

The verbs *bevise* 'prove' and *rapportere* 'report' belong to a group of verbs that can take a DP object, a finite complement or an infinitival complement. The group includes the verbs in (103).

(103) *anslå* 'estimate', *anta* 'assume', *avsløre* 'reveal', *bekjenne* 'confess', *bekrefte* 'confirm', *bevise* 'prove', *erkjenne* 'admit', *erklære* 'declare', *fastslå* 'ascertain', *formode* 'presume', *forstå* 'understand', *forutse* 'foresee', *forutsette* 'presuppose', *hevde* 'claim', *melde* 'report', *mene* 'mean', *oppdage* 'discover', *oppfatte* 'understand', *oppgi* 'state', *påstå* 'claim', *rapportere* 'report', *si* 'say', *tenke* 'think, intend', *tro* 'believe'

Many of these verbs express a belief, the communication of a belief, or something related. They seem to correspond to what Miller (2002:36) calls reflective verbs.

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With some of these verbs, an infinitival complement is not colloquial; a finite clause would often be preferred. The infinitival complements with reflective verbs alternate with a DP object or a finite complement (or a PP oblique with *tenke* 'think, intend' and *tro* 'believe'). The finite complement has the traditional object properties. It topicalizes and corresponds to a subject in the passive, as shown in (104)–(106).

(104) Hun har bevist/ rapportert [at han veier hundre kilo].
*she has proved reported that he weighs hundred kilos*

(105) [At han veier hundre kilo] har hun bevist/ rapportert.
*that he weighs hundred kilos has she proved reported*

(106) [At han veier hundre kilo] ble bevist/ rapportert av henne.
*that he weighs hundred kilos was proved reported by her*

The infinitival complement behaves differently. Topicalization is impossible, and the same is the case for both the personal and the impersonal passive, as shown in (107)–(109).

(107) *[Å veie hundre kilo] beviste/ rapporterte han mange ganger.
*to weigh hundred kilos proved reported he many times*

(108) *[Å veie hundre kilo] ble bevist/ rapportert.
*to weigh hundred kilos was proved reported*

(109) *Det ble bevist/ rapportert [å veie hundre kilo].
*it was proved reported to weigh hundred kilos*

The fact that the impersonal passive is not possible shows that control must be functional. The infinitival complements are XCOMPs.

An interesting property of the reflective verbs is that they can also be used as raising verbs. (This claim might surprise some readers, but see Lødrup 2002.) As raising verbs, they take a non-thematic argument in addition to their thematic arguments. Some of the verbs are regular raising to object verbs; an example is *anslå* 'estimate', as in (110). Other verbs allow raising of a reflexive object; an example is *bevise* 'prove', as in (111). The rest of the verbs allows raising in the passive only; an example is *tenke* 'think', as in (112).

(110) (De) fant det de anslår [å være over 10 tonn]. (auth)
*they found that they estimate to be over 10 tons*
'They found what they estimate to be more than 10 tons.'

(111) De har bevist seg [å være sannferdige]. (auth)
*they have proved themselves to be truthful*
'They have proved to be truthful.'

(112) Pasienten . . . kan tenkes [å være gravid]. (auth)
*the-patient can be-thought to be pregnant*
'The patient might be assumed to be pregnant.'

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For the reflective verbs, there seems to be some kind of connection between their use as raising verbs and their use as subject control verbs. In both cases, their infinitival complement is an XCOMP. The exact nature of this connection is far from clear, however. English usually allows raising to object, but not control from a thematic subject, with this kind of verbs; cf. (113), from Kayne (1981:359).

(113) *I believe/acknowledge/affirm [to have made a mistake].

French, on the other hand, follows the Norwegian pattern in allowing both raising to object and control from a thematic subject (Kayne 1981, Bošković 1997:3.4, Miller 2002:151–156). The reflective verbs raise difficult questions for the theory of complementation, which cannot be discussed here.

### 3.4 Complements with object control

There are also verbs that take a non-object infinitival complement that is controlled by a thematic object. The verb *be* 'ask' is a good example. Its infinitival complement does not alternate with a DP, does not topicalize, does not correspond to the subject of a passive and alternates with a PP oblique; cf. (114)–(118).

(114) Jeg ba ham [synge].
*I asked him sing*
'I asked him to sing.'

(115) *Jeg ba ham dette.
*I asked him this*

(116) *[Synge] har jeg bedt ham.
*sing have I asked him*

(117) *[Synge] ble bedt ham.
*sing was asked him*

(118) Jeg ba ham om [å synge].
*I asked him about to sing*
'I asked him to sing.'

In traditional Norwegian grammar (for example Faarlund et al. 1997:1006–1008), the complement of *be* 'ask' is given a special status. It is not an object, but an 'object infinitive'. The only other verbs that take an 'object infinitive' are some raising to object verbs: perception verbs and the verb *la* 'let'. An 'object infinitive' seems to be equivalent to an object controlled XCOMP. It is striking that all the infinitival complements that are considered 'object infinitives' lack the infinitival marker; this seems to be an implicit criterion.

However, there are many other Norwegian verbs that take an object and a non-object infinitival complement. These infinitival complements all have the infinitival marker. An example is *hjelpe* 'help', in (119)–(123), which shows the same pattern

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as *be* 'ask'.

(119) Per hjalp meg [å flytte].
*Per helped me to move*

(120) *Per hjalp meg dette.
*Per helped me this*

(121) *[Å flytte] hjalp han meg.
*to move helped he me*

(122) *[Å flytte] ble hjulpet meg.
*to move was helped me*

(123) Per hjalp meg med [å flytte].
*Per helped me with to move*
'Per helped me to move.'

This group includes the verbs in (124).

(124) *anmode* 'request', *be* 'ask', *bistå* 'assist', *bønnfalle* 'entreat', *formane* 'exhort', *hindre* 'prevent', *hjelpe* 'help', *mistenke* 'suspect', *oppfordre* 'urge', *oppmuntre* 'encourage', *overtale* 'persuade', *råde* 'advice', *tvinge* 'force'

Many of these verbs are verbs of asking, telling and convincing; the same is true of the verbs that take a finite COMP (see (31) above). Most of these verbs can take a PP oblique as an alternative to an infinitival complement, and with many of them, this is the more frequent option. (The empirical basis for this claim is as in note 6.) The standard Norwegian dictionaries (see note 4) give example sentences with clausal complements for only three of the verbs in (124).

Examples with infinitival complements are in (125)–(126).

(125) Han anmoder deg [å be mer]. (auth)
*he requests you to pray more*

(126) (Han) formante dem [å gjøre alt]. (auth)
*he exhorted them to do everything*

The object argument must be a direct object (LFG's OBJ), just as in (127), in which the clausal complement is replaced by a PP oblique.

(127) Han anmoder deg om [å be mer].
*he requests you about to pray more*
'He requests that you pray more.'

The verbs in (124) are syntactically different from verbs like *anbefale* 'recommend' (see the discussion of (63) above). This verb can take an infinitival direct object (LFG's OBJ) in sentences like (128).

(128) Han anbefaler deg [å be mer].
*he recommends you to pray more*

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The DP *deg* 'you' is an indirect object (LFG's OBJtheta). Example (128) has the same analysis as (129), in which the clausal complement is replaced by a DP direct object.

(129) Han anbefaler deg dette.
*he recommends you this*
'He recommends this to you.'

One striking difference between a verb like *anbefale* 'recommend' and the verbs in (124) concerns the impersonal passive (cf. the discussion in section 3.2). Verbs like *anbefale* 'recommend' allow the impersonal passive, cf. (130).

(130) Det ble anbefalt dem [å be mer].
*it was recommended them to pray more*
'They were recommended to pray more.'

A verb like *anmode* 'request', which takes a non-object infinitival complement, does not allow the impersonal passive, cf. (131).

(131) *Det ble anmodet dem [å be mer].
*it was requested them to pray more*

The reason the impersonal passive is impossible must be the restriction mentioned in section 3.2 above, which says that objects of impersonal sentences cannot be functional controllers.[16]

It is not obvious if non-object infinitival complements of the verbs in (124) should be considered XCOMPs or COMPs, or in other words, if control is functional or anaphoric. Passivization, which is an important criterion with subject control verbs, cannot be used with object control verbs (because the controlling argument is still present in the passive). A useful criterion with these verbs is the omissibility of the controlling object. With most of the verbs in (124), it is impossible to omit the controlling object; which is an indication that control is functional. Examples are *be* 'ask' and *anmode* 'request', as in (132)–(133).[17]

(132) Jeg ba *(ham) [gjøre det].
*I asked him do it*
I asked him to do it.'

(133) Han anmoder *(oss) [å be mer].
*he requests us to pray more*
'He requests that we pray more.'

A small group of the verbs in (124) (*bistå* 'assist', *hjelpe* 'help', *hindre* 'prevent') are different in allowing the object to be omitted. The infinitival complement then has arbitrary control. This shows that the infinitival complements are COMPs, with anaphorically controlled PRO subjects. An example is *hjelpe* 'help', as

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in (134).

(134) Å forstå kundens vaner . . . kan hjelpe [å holde
*to understand the-costumer's habits can help to keep*
på kundene]. (auth)
*on the-costumers*
'To understand the costumer's habits can help keeping the costumers.'

### 3.5 Summary of section 3

The traditional view of infinitival complements in Norwegian has to be modified. It has been shown that there are non-object infinitival complements, both with subject and object controllers, which are not restricted to raising constructions or the traditional 'object infinitive'. A number of the non-object complements have the grammatical function XCOMP, some have the grammatical function COMP, and some are indeterminate. The groups of verbs that take an infinitival complement as a non-object seem to be relatively small, and the verbs in question often prefer to realize their complement as an oblique (except for the reflective verbs).

## 4. CLAUSAL COMPLEMENTS WITH NON-VERBAL HEADS

Clausal complements with non-verbal heads are important for the investigation of the grammatical functions of complement clauses (see Dalrymple & Lødrup 2000). Prepositions are a transitive category. In languages that have object complement clauses, prepositions are expected to take complement clauses with object properties. This is the case in Norwegian, as shown in section 2.1.[18] Adjectives and nouns are basically intransitive categories (but see note 21). In languages that have non-object complement clauses, adjectives and nouns are expected to take complement clauses with non-object properties. This is the case in for example Swedish, German and English (cf. *proud to do this*, *an attempt to find a way out*, see Dalrymple & Lødrup 2000). In sections 2 and 3, it was established that some Norwegian verbs realize their complement clauses as non-objects, and the expectation is that some adjectives and nouns should do so as well. This is, however, a somewhat restricted option in Norwegian, and its dialects vary.

In all variants of Norwegian, the most important type of complement with adjectives and nouns is a PP oblique, whose prepositional object can be a clausal complement, as in (135)–(136).

(135) et forsøk på [å finne en vei ut]
*an attempt on to find a way out*
'an attempt to find a way out'

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(136) stolt over/ ivrig etter [å gjøre dette]
*proud over eager after to do this*
'proud/eager to do this'

In my own (Oslo) dialect, clausal complements with adjectives and nouns are close to non-existant. Nouns don't take clausal complements,[19] and there are only a couple of adjectives that take a (finite) clausal complement,[20] namely *glad* 'happy' and *redd* 'afraid'.[21] Their complement clause does not alternate with a DP object, and does not topicalize, cf. (137)–(139).

(137) Jeg er glad [at jeg var først]. (auth)
*I am happy that I was first*

(138) *Jeg er glad dette.
*I am happy this*

(139) *[At jeg var først] er jeg glad.
*that I was first am I happy*

Other variants of Norwegian seem to come closer towards fulfilling the expectation that non-object clausal complements should be possible with nouns and adjectives. There is practically no relevant information in the literature; what follows is based upon authentic texts (and some informant work).

Adjectives that can be found with a finite COMP include the ones in (140).

(140) *forbauset* 'surprised', *fornøyd* 'pleased', *glad* 'happy', *lykkelig* 'happy', *skyldig* 'guilty', *stolt* 'proud', *takknemlig* 'grateful'

With all the adjectives in (140), the complement clause alternates with an oblique PP.

The adjectives in (141) can be found with an infinitival complement, which can be considered a COMP.

(141) *behjelpelig* 'helpful', *dyktig* 'clever', *ferdig* ready', *flink* 'clever', *god* 'clever', *interessert* 'interested', *ivrig* 'eager', *klar* 'ready', *kompetent* 'competent', *nødt* 'obliged', *skyldig* 'guilty', *stolt* 'proud', *vant* 'accustomed', *villig* 'willing'

An example is in (142). The complement clause does not alternate with a DP object, and does not topicalize, as (143) and (144) show.

(142) Jeg er flink [å lage pizza]. (auth)
*I am clever to make pizza*
'I am clever at making pizza.'

(143) *Jeg er flink dette.
*I am clever this*

(144) *[Å lage pizza] er jeg flink.
*to make pizza am I clever*

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The complement clauses of the adjectives in (141) all alternate with an oblique PP. Infinitival complement clauses with adjectives are found in Western and Northern Norwegian, according to Faarlund et al. (1997:406).

With nouns, examples with finite clausal complements are hard to find (see note 19). A possible example is (145).

(145) (De) har beviset [at pucken var inne]. (auth)
*they have the-proof that the-puck was in*

Nouns that can be found with an infinitival COMP include those in (146), an example is (147).

(146) *behov* 'need', *formaning* 'exhortation', *forsøk* 'attempt', *hjelp* 'help', *unnlatelse* 'omission', *vedtak* 'decision'

(147) Vi fikk hjelp [å bære opp kajakkene]. (auth)
*we got help to carry up the-kayaks*

Even if there are clear cases of non-object complements with both adjectives and nouns in Norwegian, this option is somewhat restricted, and subject to dialect variation. Of the adjectives and nouns that were found with non-object clausal complements in texts (see (140), (141) and (146) above), only two (adjectives) have this kind of example sentence in the standard Norwegian dictionaries (see note 4).

The reluctance of nouns and adjectives to take non-object clausal complements contributes to the conclusion from sections 2 and 3 that even if Norwegian can realize clausal complements as non-objects, the object strategy is more prominent.

## 5. IS A NON-OBJECT CLAUSAL COMPLEMENT A PP OBLIQUE?

An idea that can be found in different versions in both traditional and current syntax is that a non-object clausal complement is in some way really a PP oblique. There are basically two ways of implementing this analysis. First, one could say that the analysis concerns the form of the complement; it is then a PP with a deleted (or zero) preposition in the syntactic tree. Secondly, one could say that the analysis concerns the function of the complement; it then has the grammatical function oblique in functional structure (the same function as an argument PP).

### *5.1 Preposition deletion*

Rosenbaum (1967:4.4) proposed for English that non-object clausal complements are always governed by a preposition in deep structure, and that the preposition is deleted when the clause is in complement position, as in (148), but not when the clause is topicalized, as in (149), or the subject of a passive verb, as in (150).

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(148) We all hoped ~~for~~ [that John would come].
(149) [That John would come] we all hoped for.
(150) [That the plane flew at all] was marveled at by them.

(Rosenbaum 1967:83)

Preposition deletion is also used in Swedish grammar (Ralph 1975, Teleman et al. 1999b:533). Swedish is like Norwegian in allowing a preposition to take a clause in its complement position. In Swedish and Norwegian, preposition deletion will be optional (with the relevant predicates) when the clause is in complement position,[22] and impossible when the clause is topicalized or passivized. Each predicate must specify whether or not preposition deletion is possible, because there are many predicates that take a PP oblique, but not a clausal complement (examples are verbs like *stole* 'trust' and *lure* 'wonder', and adjectives like *urolig* 'anxious' and *negativ* 'negative'). With some predicates, preposition deletion would have to be obligatory, because there are verbs that take a COMP or an XCOMP that does not alternate with a PP oblique (Norwegian examples are verbs like *anse* 'consider', *finne* 'find', *forlyde* 'be reported', *hete* 'be reported', and most of the reflective verbs).

Preposition deletion is an unsatisfactory analysis (see Dalrymple & Lødrup 2000). There seems to be no independent motivation that an operation like preposition deletion should be allowed by syntactic theory. It is not clear at what level deletion should take place. It is not even obvious what the category of the 'beheaded' PP should be. It must probably still be a PP, since there is no accepted way the PP node can be pruned. This creates an important problem. The preposition deletion analysis makes the non-object clausal complement a PP, even if it does not have the grammatical properties of a PP. For example, a PP topicalizes, while a non-object clausal complement does not.

Preposition deletion has been used to account for both finite and infinitival complements (Rosenbaum 1967:4.4.2, Ralph 1975, Teleman et al. 1999a:595f.). Its inadequacy is especially striking when it comes to infinitival complements. One problem is that such an account has nothing to say about complements in raising constructions, which have the same syntactic properties as other infinitival complements with functional control (i.e. XCOMPs; see section 3.2 above). There seems to be no way to incorporate this insight into the preposition deletion analysis. Other problems for the preposition deletion analysis arise in languages like Swedish and Norwegian, where preposition deletion would have to be optional. The general point to be made is that an infinitival complement of a realized preposition has properties that are different from (what in the preposition deletion analysis would have to be) an infinitival complement of a 'deleted' preposition.

Consider a verb like *hjelpe* 'help'. It allows the impersonal passive when the infinitival clause is the object of a realized preposition, but not when the preposition is 'deleted', as shown in (151)–(152).

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(151) Det ble hjulpet til med [å rydde].
*it was helped PARTICLE with to tidy-up*
'People helped to tidy up.'

(152) *Det ble hjulpet til [å rydde].
*it was helped PARTICLE to tidy-up*

It is difficult to see how the choice between a realized and a 'deleted' preposition could account for this difference in passivizability. In the theory applied here, this difference follows by itself (see section 3). The infinitival complement that is the object of a realized preposition has a PRO subject, and doesn't need a realized controller, while the infinitival complement with a 'deleted' preposition is an XCOMP and needs a realized controller.

With a verb like *anmode* 'request', the object is optional when the infinitive phrase is the object of a realized preposition, but it is obligatory when the preposition is 'deleted', as shown in (153)–(154).

(153) Jeg anmodet (ham) om [å gjøre det].
*I requested him about to do it*
'I requested (him) to do it.'

(154) Jeg anmodet *(ham) [å gjøre det].
*I requested him to do it*

Again, it is difficult to see how the choice between a realized and a 'deleted' preposition could account for this difference in object optionality. And again, this difference follows by itself in the theory applied here. The object of a realized preposition has a PRO subject, and doesn't need a realized controller, while the infinitival complement with a 'deleted' preposition is an XCOMP and needs a realized controller.

It must be concluded that the preposition deletion analysis is not viable. This conclusion is theoretically important, because Chomskyan syntax assumes that arguments with different grammatical functions should be distinguished by having different phrase structural positions; see Baker 2001 for an explicit defense of this position. The preposition deletion analysis would give the difference necessary to distinguish object and non-object clausal complements in the syntactic tree. Without preposition deletion, object and non-object clausal complements do not seem to have different phrase structural positions. Chomskyan syntax would then have to represent the difference between them as an abstract property, which must come from the governing predicate. This abstract property is the presence or absence of abstract case in Bošković (1995) (see also Pesetsky 1993). This analysis is rather similar to the analysis of Dalrymple & Lødrup (2000) and the present article, because abstract case can be seen as 'another name for grammatical function' (quote from the title of Alsina 2001).

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### 5.2 Non-object clausal complements as obliques

More interesting than preposition deletion is the idea that a non-object clausal complement has the grammatical function oblique in functional structure, the same grammatical function as a syntactically selected PP. This analysis is independent of assumptions about the phrase structure position of the complements (at least in LFG).

In traditional German grammar, non-object clausal complements that alternate with PP obliques are included in the *Präpositionalobjekte* 'prepositional objects', a functional term that corresponds roughly to oblique in LFG (see for example Breindl 1989, Zifonun et al. 1997:1097).

An LFG version of this analysis can be found in Berman (2003:ch. 7). She proposes that clausal arguments in German have the same function as the nominal or prepositional arguments that they alternate with (Berman 2003:131). Berman focuses upon finite clausal arguments in German. The discussion below confronts her analysis with Norwegian, drawing on both finite and non-finite clausal complements.

The proposal that clausal complements have the same function as the nominal or prepositional arguments that they alternate with cannot stand without modification. There are verbs that can realize a thematic argument position as either a clausal complement or a DP object or a PP oblique; examples are *begynne* 'begin' and *tro* 'believe'. The alternation facts are not sufficient to determine the grammatical function of the clausal complement. However, when other syntactic properties are considered, it can be shown that *begynne* takes a COMP (section 3.3.1) while *tro* takes a finite object complement or a non-finite XCOMP (*tro* belongs to the reflective verbs in (103)).

Two arguments will be given against the idea that non-object complements are obliques, which will be referred to as the oblique analysis. The first argument concerns unbounded dependencies. Non-object clausal complements cannot topicalize (as a main rule), while PP obliques can. Berman (2003:137–141) proposes an explanation for the topicalization facts which is compatible with her assumptions. However, this explanation is based upon properties of German, and it is not clear how it can be extended to other languages.

The second argument against the oblique analysis concerns syntactic selection. In the oblique analysis, a predicate that selects an oblique is expected to realize this function as a PP or as a clause. With many predicates, this expectation is not fulfilled, however. There are many predicates that take a PP oblique, but not a non-object clausal complement (examples are verbs like *stole* 'trust' and *lure* 'wonder', and adjectives like *urolig* 'anxious' and *negativ* 'negative').

Against the argument from syntactic selection, one could say that it is possible to stipulate that a predicate must realize a grammatical function as a certain formal category (see, for example, Falk 2001:129f.). However, this kind of stipulation must be avoided as much as possible, because it undermines LFG's theory of syntactic

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selection (which says that syntactic selection is stated in terms of grammatical functions). The oblique analysis would make it necessary to stipulate for most oblique-taking predicates in Norwegian that their oblique cannot be realized as a clause.

This problem with syntactic selection is even more general. A number of Norwegian control verbs take an infinitival complement with the grammatical function XCOMP (cf. section 3). With most of these verbs, the XCOMP alternates with a PP oblique. (The exception is the reflective verbs, whose XCOMP usually does not alternate.) How should the oblique analysis be applied to these cases? One possible solution would be to give up XCOMP as a grammatical function. This solution would have important consequences for the architecture of LFG, which cannot be discussed here. Without the grammatical function XCOMP, all non-object infinitival complements would be obliques. Most reflective verbs would then need a stipulation that their oblique must be realized as a clause. The oblique analysis would also be open to some of the criticisms against preposition deletion set out in section 5.1 above (especially the argument from *hjelpe* 'help' and *anmode* 'request'). On the other hand, keeping the grammatical function XCOMP would make the oblique analysis less general. There seems to be no way to relate the option of taking an XCOMP to the option of taking a PP oblique. The oblique analysis would also make it necessary to stipulate that a verb that takes an XCOMP cannot realize an oblique as a clause (because the clause that the verb takes must be an XCOMP).

The oblique analysis is in some ways similar to the analysis of Dalrymple & Lødrup (2000) and the present article. It assumes that clausal complements can have different grammatical functions, and that mixed languages exist. However, it creates problems for the account of unbounded dependencies and syntactic selection.

## 6. SOME TYPOLOGY

The only predicates that have to realize their clausal complements as non-objects are raising verbs (which will be disregarded in this section). Where do the other predicates that take non-object clausal complements 'come from'? Three groups can be distinguished.

1) There are onomatopoetic verbs of sound emission, in (38), that can be used as verbs of saying (for example *hvese* 'hiss' and *kvitre* 'tweet'). They are not integrated in the group of transitive verbs, and their clausal complements do not have object properties.

2) There are verbs that can be used as raising or equi verbs (for example, the aspectual verbs in section 3.3.1 and the reflective verbs in (103)). Their use as raising verbs must have some connection to their use with other kinds of non-object clausal complements, even if the exact nature of this connection is difficult to grasp.[23]

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3) There are verbs (and to some extent adjectives and nouns) that can take a PP oblique as an alternative to the clausal complement. It was mentioned in sections 2, 3 and 4 that with most of these predicates, a PP oblique is the more frequent option.[24]

From the point of view of Norwegian syntax, the non-object clausal complements might seem to be a relatively small group with exceptional behavior. However, they instantiate options of UG that are regular in other languages.

It was mentioned in section 1.3 that languages treat clausal complements in different ways syntactically. Foley & Van Valin (1984:249–256) show that using a finite clause as a core argument represents a marked situation in UG. In their theory, the distinction between non-object and object clausal complements is a difference in grammaticalization. A non-object clausal complement is a peripheral argument; it is not really integrated into the syntax of the sentence, and does not take part in syntactic processes like other core arguments. An object clausal complement, on the other hand, is syntactically integrated, and takes part in syntactic processes. (This way of looking at finite complements can be extended to infinitival complements.)

There seems to be a typological scale for the syntactic treatment of clausal complements. This scale has 'objects only' at one end and 'non-objects only' at the other end, with different mixed systems in between (Dalrymple & Lødrup 2000). The traditional view of clausal complementation in Norwegian placed Norwegian at the 'objects only' end of the scale, together with for example, Icelandic (Thráinsson 1979, Andrews 1982). The picture given in this article makes Norwegian move on the scale, to the section for 'mixed' languages. This section is not homogeneous, however; Norwegian is a language in which realization as an object is the dominant strategy. Norwegian is similar to Swedish (Ralph 1975, Teleman et al. 1999b:533f.), but the non-object strategy is more established in Swedish, especially with adjectival and nominal heads. On the other hand, both Norwegian and Swedish allow prepositions to take clausal objects; this contributes to making the object strategy more prominent than in English and German, for example (Dalrymple & Lødrup 2000).

## 7. CONCLUSION

The point of departure for this article was the fact that UG allows clausal complements to be realized as different grammatical functions. What has been achieved is a picture of the realization of clausal complements in Norwegian that is different from the traditional one. Norwegian is a mixed language in the terminology of Dalrymple & Lødrup (2000). Even if realization as object is the dominant strategy for clausal complements, Norwegian also has a number of predicates that take finite or non-finite clausal complements that are non-objects. Non-object clausal complements alternate with PP obliques in many cases. This does not mean that they are PP

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obliques, however; they realize options of UG, as established by LFG's theory of complementation.

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## NOTES

1. Some verbs that take a non-object clausal complement allow one DP complement, namely the 'surface proform' *det* 'it/that' (Lødrup 1994). This proform is special in that it cannot be deictic, it must have an antecedent in the linguistic context. This is exemplified by the raising verb *pleie* 'use to', as in *Han pleier å jukse* 'he uses to cheat'. The complement can be replaced by the 'surface proform' *det* 'it/that' (*Han pleier det* 'he uses to (do) that'). However, this requires a linguistic antecedent, preferably (in) the previous utterance (e.g. *Jukser han*? 'cheats he?, Does he cheat?').

2. One case concerns complements of auxiliaries (Lødrup 1996), cf. *Regne vil det nok ikke* 'rain will it probably not'. Auxiliaries are also special in that they always allow the 'surface proform' *det* 'it/that' as a complement (Lødrup 1994), cf. (*Vil det regne?*) *Det vil nok ikke det* '(will it rain?) it will probably not that'. Wurmbrand (2001:159) says that topicalization is possible in German raising sentences, and topicalization of finite non-object complements can be found in the German of Goethe's times (Breindl 1989:206).

3. The position that finite clausal complements can have different grammatical functions can also be found in Berman (2003:ch. 7). The main difference between her approach and the one taken here is that she assumes that a non-object clausal complement has the same grammatical function as a PP oblique. Berman's analysis is discussed in section 5.

4. The dictionaries are *Norsk riksmålsordbok* (1937–1957), *Bokmålsordboka* (1986) and *Norsk illustrert ordbok* (1993).

5. Norwegian original:

   > At-setningar blir gjerne kalla substantiviske leddsetningar, og infinitiv blir kalla den substantiviske forma til verbet. I desse nemningane ligg det at at-setningar og infinitivskonstruksjonar, ved sida av spørjesetningar, er **nominale leddtypar**. Det vil seie at dei kan fungere på same måten som substantivfrasar. (Faarlund et al. 1997:1011)

   A generative implementation of this view can be found in Nordgård and Åfarli (1990:72), who suggest that the complementizer *at* 'that' has the features [+N −V], like nouns.

6. The empirical basis for the claim about frequency is the number of hits I got searching the Norwegian web for relevant strings of verb-complementizer and verb-preposition-complementizer (in some cases adding a pronominal object and/or substituting a *wh*-word

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for the complementizer). The differences are clear for most verbs. A notable exception is *spørre* 'ask', which is more often used without a preposition.

7. This article does not discuss infinitival complements in complex predicate (or reanalysis) constructions, like *Vi lot løslate fangene* 'we let release the-prisoners' (Taraldsen 1991). In LFG, the two verbs correspond to one predicate in functional structure (Alsina 1996). The infinitival complement does not have a grammatical function at all; it is a complement only in the X-bar sense of the term.

8. In traditional Chomskyan syntax, the distinction between raising and equi was decisive for the syntactic properties of controlled complements. It is interesting that some recent work within Chomskyan syntax is approaching a view that is more similar to LFG's, diminishing the difference between raising and equi (see Hornstein 1999, Manzini & Roussou 2000; for a different view, see Culicover & Jackendoff 2001).

9. This might be a good place to inform (or remind) the reader that LFG does not assume 'small clauses' in constituent structure. In a sentence like *Nobody expects teachers to be perfect*, the syntactic tree has *teachers* in the object position of *expects*, not in the subject position of *be*. (An equivalent view seems to be common in current Chomskyan syntax, see for example Miller (2002:6.4) and references there.) In functional structure, however, the object of the main verb is also a subject of the XCOMP; the XCOMP might therefore be looked upon as a 'small clause'.

10. A number of Norwegian verbs can take a PP XCOMP with an infinitival complement (see Lødrup 2002). This is possible both with subject control and object control, in both raising and equi sentences. Examples are (i)–(ii).

    (i) Vi fikk ham til [å sove].
    *we got him to-PREP to-INF.MARKER sleep*
    'We made him sleep.'

    (ii) Jeg har tenkt til [å gjøre det].
    *I have thought to-PREP to-INF. MARKER do it*
    'I intend to do it.'

    The preposition is usually *til* 'to'. Lødrup (2002) argues that it is a functional head in sentences like (i)–(ii). Sentences with PP XCOMPs will not be discussed in this article.

11. The verb *ha* 'have' takes an XCOMP in sentences like *Du har å gjøre det* 'you have to do it'. This also seems to be the case with *få* 'get' in sentences like *Du får gjøre det* 'you get (to) do it', even if the complement can topicalize and alternate with *det* 'it, that' (see notes 1 and 2).

12. The verb *være med* 'join' (literally 'be with') does not passivize because *være* 'be' never passivizes, and *lykkes* 'succeed' does not passivize because Norwegian verbs that end in *-s* never passivize.

13. The verbs *holde opp* 'stop' and *holde på* 'keep on' have the same syntax, except that they do not take a DP object. The verb *slutte* 'stop' is minimally different in that it does not take an object (with the relevant sense of the verb) – its second argument can only be realized as a COMP or a PP oblique. The verb *stanse* 'stop' is the 'opposite' of *slutte* in that it does not take a PP oblique (with the relevant sense of the verb).

14. For verbs like *begynne* 'begin', it is necessary to stipulate that their object must be realized as a DP. (This can be done as in Falk 2001:129f.)

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15. A complicating fact is that verbs like *begynne* 'begin', *fortsette* 'keep on' and *stoppe* 'stop' often take part in complex predicate formation (or reanalysis) in the world's languages (Wurmbrand 2001). There are indications that this might take place for at least some speakers of Norwegian, to judge from the existence of 'long passives', i.e. passives with a subject corresponding to the object of an embedded verb. These passives do not sound good to me, but they can be found in texts. An authentic example is (*Den*) *ble sluttet å bygge i* 1990 'it was stopped to build in 1990, They stopped building it in 1990'.

16. This restriction cannot account for the small group of verbs that are shown below to take a COMP with anaphoric control. It is not clear what prohibits them to occur in impersonal sentences. However, there seem to be restrictions on impersonal sentences that are not understood. (For example, what is wrong with **Det ble informert en mann om problemet* 'there was informed a man about the problem'?)

17. I have to disregard the well known 'controller shift' phenomenon (see for example, Pollard & Sag 1994:308–317), which means that a verb like *få* 'get' in the complement gives a marked choice of controller. However, it should be mentioned that controller shift can be easier with anaphoric control, as in (i) than with functional control, as in (ii).

    (i) Jeg ba ham om å få penger. (subject control preferred)
    *I asked him about to get money*
    'I asked him to get money.'

    (ii) Jeg ba ham få penger. (object control preferred)
    *I asked him get money*
    'I asked him to get money.'

18. It is not clear if there are prepositions that take a COMP. One candidate is the traditional subordinating conjunctions, such as *fordi* 'because' and *hvis* 'if'. A traditional view is that they are really prepositions (see, for example, Jespersen 1924:89, Jackendoff 1977:79), at least those that are not complementizers. A way to implement this view is to say that they take a COMP. An argument for this view is that their complements do not alternate with DPs or topicalize.

19. I disregard examples like *den beslutning* [*at det var for dyrt*] 'the decision that it was too expensive', where the clause and its head have the same referent. The clause is not a complement, but rather a restrictive apposition (Stowell 1981:7.1; Faarlund et al. 1997:272f., 1011–1014).

20. Two special constructions in which an adjective takes an infinitival non-object complement will be disregarded. First, an adjective can take an infinitival COMP in the '*tough*-movement' construction, as in (i).

    (i) Dette er vanskelig [å forstå].
    *this is difficult to understand*

    Second, there are sentences with expressions like *være snill* 'be kind', as in (ii).

    (ii) Vær snill [å hjelpe oss].
    *be kind to help us*

    The complement clause in (ii) must be a COMP, but it seems to be selected by the expression *være snill* 'be kind'; the adjective cannot occur with the complement clause in other contexts.
    It should also be noted that Norwegian does not have raising adjectives (like English *likely*).

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21. The adjective *redd* 'afraid' belongs to the small group of Norwegian adjectives that are transitive (cf. Platzack 1982 on Swedish). Even so, the complement clause with *redd* seems to be a non-object. Topicalization is impossible, cf. (i).

    (i) *[At det er for sent] er jeg redd.
    *that it is too late am I afraid*

22. A similar analysis with optional deletion of a head, could also be developed for German. German would delete a 'prepositional proform' like *darüber* 'thereover' in a sentence like *Ich freue mich ~~darüber~~*, [*dass Hans krank ist*] 'I am happy thereover that Hans is ill' (example modified from Webelhuth 1992:104f.).

23. It is not the case that all raising verbs must take non-object complements when they are used as non-raising verbs; for example, *vedta* 'decide' and *vurdere* 'evaluate' are raising verbs which take an object clausal complement when they are used as non-raising verbs.

24. Some informants have suggested to me that using these predicates with a non-object clausal complement might be a recent innovation. Platzack (1992) shows that non-object clausal complements can be found in older Scandinavian. The development within Norwegian is less than clear, however, and researching it encounters several problems (including the fact that modern Norwegian has existed as a separate written language for only a hundred years).

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