

HOW TO GET RID OF THE COMP

Alex Alsina
Universitat Pompeu Fabra

KP Mohanan
National University of Singapore

Tara Mohanan
National University of Singapore

Proceedings of the LFG05 Conference

University of Bergen

Miriam Butt and Tracy Holloway King (Editors)

2005

CSLI Publications

<http://csli-publications.stanford.edu/>

1. Introduction

This paper argues for reducing the inventory of grammatical functions (GFs) by eliminating the GF COMP, standardly assumed in LFG to be assigned exclusively to clausal categories. We show that this move is desirable not only because it results in a simpler framework (a framework with fewer constructs), but also because it yields simpler and more perspicuous analyses.

Let us assume that phrasal categories can be classified as nominal or clausal (among other possibilities) depending on whether the lexical head of which they are a projection is a noun or a verb. Adopting Grimshaw's (1997:376) notion of *extended projection* ("a unit consisting of a lexical head and its projection plus all the functional projections erected over the lexical projection"), clausal categories would include VP, as the smallest verbal projection, and also IP and CP as extended projections of V, and, likewise, nominal categories would include NP, and also DP and PP. In this paper we focus on CP, when we refer to clausal categories (but see section 5). We note that, with respect to non-subject arguments in early LFG, the grammatical functions of nominal and clausal categories are in complementary distribution:

(1)		OBJ	OBJ _{th}	OBL _{th}	COMP
	NP/PP	√	√	√	*
	CP	*	*	*	√

Motivated by this redundancy in the framework, Alsina, Mohanan and Mohanan (1996) proposed that COMP be dropped from the inventory of GFs in LFG, since all references to COMP can be replaced by direct reference to CP complements of a predicate (taking "complement" as a non-subject argument).

Dalrymple and Lødrup 2000 (henceforth D&L) argue, contra Alsina et al., that an empirically adequate account of certain languages including English ("mixed language") requires a distinction between two kinds of clausal complements, one exhibiting and the other lacking object properties. In our earlier proposal (Alsina et al. 1996), we eliminated the redundancy by eliminating COMP and assuming that CPs were always OBJ/SUBJ. Based on the empirical inadequacy of this proposal, D&L make an alternative proposal: to retain COMP and allow CPs to be either COMP or OBJ. Under this proposal, we cannot predict the GF of an argument from the category CP. However, this does not entirely eliminate the redundancy: we can still predict the category of an argument from the GF COMP. D&L do not show that the patterns they account for in terms of OBJ vs. COMP are not attributable to other distinctions already available in standard LFG, namely, OBJ vs. OBL_θ, or OBJ vs. OBJ_θ. Their arguments for the retention of COMP in the inventory are therefore incomplete.

The proposal in this paper eliminates the redundancy completely by abandoning COMP and assuming that clausal categories have the same range of complement GFs as nominal categories, as shown in (2).

(2)		OBJ	OBJ _θ	OBL _θ
	NP/PP	√	√	√
	CP	√	√	√

Our proposal also reduces the redundancy implicit in the other GFs. In standard LFG, an OBJ and an OBJ_θ are always NP; in our proposal, they can be NP or CP. This move results not only in a smaller inventory of GFs, but also in a simpler and empirically more adequate theory for predicting the relevant facts involving clausal complements in Catalan, Spanish, Malayalam, and English.

Section 2 looks at different clausal complements in Catalan and shows that, if we were to assume that clausal complements that do not behave like objects are COMPS, the description of the facts would be considerably complicated. The facts can be explained in a simple way, without the GF COMP, if we assume that obliques (OBL_θ) can alternatively be realized as PPs or CPs. The difference between Catalan and Spanish regarding the possibility of clausal complements being introduced by a preposition can be explained through the interaction of competing constraints. Section 3 investigates different types of clausal complements in Malayalam and argues that all the relevant facts can be explained by appealing to independently required semantic distinctions, making the OBJ vs. COMP

distinction unnecessary. Section 4 shows that English clausal complements are best analyzed without assuming the GF COMP. Section 5 presents the main conclusions of the paper.

2. Catalan

2.1 The Catalan facts: Two types of clausal complements

In Catalan, verbs that select a particular preposition on their complement when the complement is nominal do not allow any preposition on the complement when it is a clause. This contrast is illustrated in (3) and (4). (3a) and (4a) contain two different predicates that select a different preposition for their NP complement; in (3b) and (4b), the same predicates take a clausal complement without a preposition.

- (3) a. *M' heu de convèncer de les seves possibilitats.*
 me have-2ndPL to convince of the 3POSS possibilities
 'You have to convince me of his possibilities.'
- b. *M' heu de convèncer (*de) que torni a casa.*
 me have-2ndPL to convince of that return-1stSG to home
 'You have to convince me to return home.'
- (4) a. *Estàvem d' acord en alguns punts.*
 were-1stPL of agreement on some points
 'We agreed on certain points.'
- b. *Estàvem d' acord (*en) que ens apugessin el sou.*
 were-1stPL of agreement on that us raised-SUBJ-3rdPL the salary
 'We agreed that they should raise our salary.'

Under standard assumptions in LFG, the PP/CP alternation in Catalan would have to be explained by assuming an alternative subcategorization frame. While the PP in examples like (3a) and (4a) would clearly be an oblique, the GF of clausal complements like those in (3b) and (4b) is not so clear. There is a generally held belief that an oblique has to be overtly marked by a preposition or a semantic case marker; the clausal complement in (3b) and (4b) has neither a preposition nor a case marker. Consequently, the standard position in LFG would be that this clausal complement is not an oblique.

D&L reject the possibility that the CP complement in such examples could be an OBL, like the corresponding PP. Since OBLs are normally realized as PPs, D&L claim, we would need to posit a principle of preposition deletion for an OBL to be realized as a CP, without a P. This suggests to D&L that we would have a PP with an unexpressed head: the clausal complement in such cases would be an OBL and a PP and we would thus expect it to behave just like a PP with an overt preposition. They observe that this expectation is contradicted by certain phenomena in German that show asymmetries between the PP and the CP realization of the same argument. In addition, D&L find that positing deletion operations or unpronounced elements does not fit well with a declarative theory of grammar such as LFG. (As we shall see, it is possible to assume that a clausal complement is an OBL, without assuming that it is a PP, that there is a process or P-deletion resulting in an unexpressed P.)

Following D&L, it seems we have a theoretical choice regarding the grammatical function of the CP complement in examples like (3b) and (4b): depending on its behavior, it can either be an OBJ or a COMP. For Catalan, we can take cliticization (pronominalization by means of the appropriate verbal clitic) and passivization as objecthood diagnostics.

Cliticization: Direct objects, or expressions bearing the OBJ function and having accusative or non-dative case, are pronominalized by means of a series of clitics including the third person singular *el* and *la* (and morpho-phonologically conditioned alternants) coreferential with masculine and feminine NPs respectively, and the so-called neuter *ho*, coreferential with a proposition, such as a clause:

- (5) a. *(La teva explicació) no l' he entesa.*
 the 2ndSG-POSS explanation not pron-3rdSG-FEM have-1stSG understood-FEM
 '(Your explanation_i) I didn't understand it_i.'
- b. *(Que hakis arribat tan tard) no ho he entès.*
 that have-2ndSG arrived so late not pron-3rdSG-PRO have-1stSG understood
 '(That you should have arrived so late_i) I didn't understand it_i.'

If we try to pronominalize the clausal complements of (3b) and (4b) by means of *ho*, we get ungrammatical results:

- (6) a. * *(Que torni a casa) ho heu de convèncer en Martí.*
 that return-1stSG to home pron-3rdSG-PROP have-2nd-PL of convince the Martí
 '(To return home) you have to convince Martin.'
- b. * *(Que ens apugessin el sou) ho estàvem d'acord.*
 that us raised-SUBJ-3rdPL the salary pron-3rdSG-PROP were-1stPL of agreement
 '(That they should raise our salary) we agreed on.'

The contrast between (5b) and (6) can be explained by assuming that the clitic *ho* functions as an OBJ coreferential with a proposition. Since the verb in (5) takes an OBJ, this OBJ can be encoded as the clitic *ho* when it is coreferential with a proposition. If we assume, on the other hand, that the verbs or predicates in (6) do not take an OBJ, but can instead take a COMP, there is no OBJ in these sentences that can be encoded as the clitic *ho*.

Passivization The verbs that can passivize are a subset of those that take OBJ in the active form. Not all verbs that take an OBJ can passivize: for example, possessive *tenir* 'have' or stative *pesar* 'weigh' take an OBJ in the active form, but cannot passivize. But the observation that only verbs that take an OBJ in the active form can passivize seems to be correct. Thus, *entendre* 'understand' (see (5)) can passivize with its clausal complement as the subject, as shown in (7a), whereas the clausal complement of *convèncer* and *estar d'acord* cannot be the passive subject of these verbs, as in (7b-c):

- (7) a. *Que votessin a favor de la proposta no va ser entès per una part del públic.*
 that vote-SUBJ-2ndSG in favor of the proposal not PAST-3rdSG be understood
 by a part of-the audience
 'That you should have voted in favor of the proposal was not understood by part of the audience.'
- b. * *Que tornés a casa va ser convençut en Martí.*
 that return-SUBJ-3rdSG to home PAST-3rdSG be convinced the Martí
 'That he return home was convinced Martín.'
- c. * *Que ens apugessin el sou va ser estat d'acord per tothom.*
 that us raised-SUBJ-3rdPL the salary PAST-3rdSG be been of agreement by everyone
 'That they should raise our salary was agreed on by everybody.'

The cliticization facts and the passivization facts shown above would follow from the assumptions below, using the OBJ vs. COMP distinction:

- clausal complements can be an OBJ or COMP.
- the clitic *ho* satisfies the OBJ function, but not the COMP function, and
- an argument can alternatively take the OBJ and SUBJ functions, by being specified as [-r].
- but an argument assigned the COMP function cannot alternately take the SUBJ function.

If we assume that the clausal complement of *entendre* is OBJ while that of *convèncer* and *estar d'acord* is COMP, it follows from the above that (i) the former, not the latter, permits the clitic *ho*, and (ii) the argument assigned the OBJ function in the active form of *entendre* can be assigned the SUBJ function in its passive form. Since the clausal complement of *convèncer* and *estar d'acord* is not an OBJ function, it cannot be assigned the SUBJ function in the passive form.

The proposal that a clausal complement can be either an OBJ or a COMP depending on the governing predicate seems to account for the facts observed so far. However, it is, in fact, an obstacle for an adequate description when a fuller range of facts is taken into consideration.

2.2 Four problems for the analysis using OBJ vs. COMP

Problem 1: The most important problem that this analysis encounters is the fact that the clausal complements we have just designated as COMPs alternate with either *en* or *hi*, both pronominal clitics, depending on the governing predicate. Thus, the clausal complement of *convèncer* can be expressed as *en*, whereas the clausal complement of *estar d'acord* can be expressed as *hi*:

- (8) a. *Me n' heu de convèncer.* b. *Hi estàvem d' acord.*
 me EN have-2nd-PL of convince HI were-1stPL of agreement
 'You have to convince me of that.' 'We agreed on that.'

The two pronominal clitics are not interchangeable and, so, replacing the one by the other in (8) creates ungrammatical structures. Thus, it seems we need to assume some abstract feature of the theory to distinguish those clausal complements expressible by *en* and those expressible by *hi*. Following the argument in the preceding paragraphs according to which we posit a GF distinction (OBJ vs. COMP) to predict which clausal complements are expressible by the clitic *ho* and which are not, we might want to posit two different GFs — say, COMP1 vs. COMP2 — to predict which clausal complements are expressible by the clitic *en* and which by the clitic *hi*.

If we took this approach, we would have to say that, for example, COMP1 can be encoded as the clitic *en* and COMP2 can be encoded by the clitic *hi*. Thus, a predicate like *convèncer* would have two alternative subcategorization frames: (a) <SUBJ OBJ OBL_{de}> and (b) <SUBJ OBJ COMP1>. And a predicate like *estar d'acord* would have the following two: (a) <SUBJ OBL_{en}> and (b) <SUBJ COMP2>. In both cases, the arguments involved are the same, so that the argument that can be realized as an OBL of *convèncer* can also be realized as a COMP1. We would also need to say that the clitic *en* can satisfy the OBL_{de} or COMP1 functions and that the clitic *hi* can satisfy the OBL_{en} or COMP2 functions.

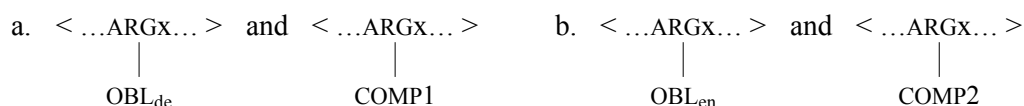
Problem 2: The COMP function (or, given the facts presented here, the COMP1 and COMP2 functions) is never the only possible GF that a given argument can bear, at least, in Catalan. All arguments that can be assigned a COMP1 or COMP2 function also have an alternative assignment of either OBL_{de} or OBL_{en}. In the approach that assumes the COMP function, this obligatory alternation is hard to explain and has to be stipulated for every predicate that subcategorizes for this function.

Furthermore, unlike what happens with other grammatical function alternations, such as the SUBJ-OBJ alternation in active-passive pairs, no verbal morphology is involved in the COMP1-OBL_{de} or COMP2-OBL_{en} alternation. Also, unlike what happens with the causative alternation in English, which also involves a SUBJ-OBJ alternation, this alternation does not involve any semantic difference. It is just a free alternation that depends on no feature or property of the governing predicate.

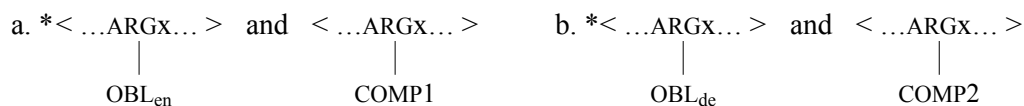
Problem 3: Whether the clausal complement of a particular verb is replaceable by *en* or by *hi* is not independent of the alternative forms of expression that the argument in question may have. Specifically, if an argument can be realized as a PP introduced by the preposition *de* or as a clausal complement, it can also be realized as the clitic *en*. And if an argument can be realized as a PP introduced by the prepositions *a*, *en* or *amb* or as a clausal complement, it can also be realized as the clitic *hi*. The PP/CP alternation is shown in (3) and (4) for the two classes of verbs and the possibility of the argument being expressed by means of the appropriate clitic is illustrated in (8).

If we tried to express this correlation in terms of the grammatical functions posited in the preceding paragraphs, we would somehow have to say that a predicate can have the alternative subcategorization frames in (9) but not those in (10):

(9) Possible alternative assignments of GF to a given argument:



(10) Impossible alternative assignments of GF to a given argument:



If verbs exemplifying (10a) existed in Catalan, they would require the preposition *en* on NP complements and the clitic *en* for clausal complements. (10b) corresponds to verbs that would take *de* on NP complements but the clitic *hi* for clausal complements. The non-existence of such verbs suggests that multiplying the number of GFs is not perhaps the right way to go.

The distributional patterns illustrated in (9) and (10) do not follow from anything in the theory and it is hard to imagine what kind of principle would explain the idea that a given argument can alternatively be assigned the GFs OBL_{de} and COMP1, but not the GFs OBL_{de} and COMP2, or that it can alternatively be assigned the GFs OBL_{en} and COMP2, but not the GFs OBL_{en} and COMP1. Thus, the facts—or, rather, the artifacts—shown in (9) and (10) are a problem for a theory that attempts to explain the properties of clausal complements that are not OBJ by assuming that they bear a special grammatical function such as COMP (or, possibly, COMP1 and COMP2).

Problem 4: Positing the COMP function (or COMP1 and COMP2) does not by itself explain why, in Catalan, the oblique functions (OBL_{de} or OBL_{en}) cannot be realized as a PP in which the head preposition is followed by an S (or CP). In order to account for the ungrammaticality of (11), we need to posit a constraint or principle excluding such structures.

- (11) a. * *M' heu de convèncer de que torni a casa.*
 me have-2ndPL to convince of that return-1stSG to home
 'You have to convince me to return home.'
- b. * *Estàvem d'acord en que ens apugessin el sou.*
 were-1stPL of agreement on that us raised-SUBJ-3rdPL the salary
 'We agreed that they should raise our salary.'

This could be achieved either with c-structure rules that do not generate structures such as [_{PP} P CP], but only generate PPs in which the P precedes an NP, or by allowing c-structure rules to generate these structures but then having a constraint ruling them out. Either of these options has a language-particular component, since there are languages that do allow [_{PP} P CP]. Spanish is an example of such a language, as we shall see shortly.¹

Summary: Positing COMP as part of the inventory of GFs and assuming it to be the GF assigned to clausal complements that cannot be analyzed as OBJ leads to a very complex description of the facts in Catalan. The complications are the following: we need to (a) make a distinction between COMPS expressed by means of the clitic *en* and those expressed by means of the clitic *hi* (possibly as COMP1

¹ Interestingly, Catalan also allows this structure when the preposition is not a governed preposition, but is, instead, the head of an adjunct phrase. *Sense* 'without' is an example of a preposition that can be used to introduce a CP, as in *sense que ho sabés* 'without his knowing it.' The idea is that in Catalan, a P is allowed to precede a CP when it heads an adjunct, but not when it heads a complement. If the c-structure rules did not generate the P-CP structure, we would incorrectly rule out this kind of adjuncts. In the OT approach to be presented later, an explanation is possible for the observation that the P-CP structure is possible, although only for adjuncts. When the "offending" preposition is governed, it can be left out because its features are recoverable from the governing predicate; when it is not governed, its features are not recoverable from the governing predicate and, so, it cannot be left out without losing semantically relevant information.

and COMP2 or in some other way); (b) stipulate that COMP1 alternates with OBL_{de} but not with other OBLs and that COMP2 alternates with certain OBLs including OBL_{en} but not with OBL_{de}; (c) stipulate that the two COMP functions (COMP1 and COMP2) always alternate with an OBL functions; and (d), in addition to positing the two COMP functions, assume a principle ruling out the structure [_{pp} P CP].

2.3 A solution without COMP

An adequate explanation of the Catalan facts involving clausal complements that avoids the problems just noted requires assuming the following:

- A predicate like *convèncer* in Catalan consistently maps its third argument (call it the theme) onto an OBL function, whether it is expressed as a PP, a CP or a pronominal clitic such as *en*.
- Whereas some languages allow a governed preposition to immediately precede a CP, as in Spanish, some languages do not, as in Catalan.
- If a language rejects the [_{pp} P CP] structure, an OBL function may correspond to a CP, without null or empty prepositions or headless PPs.
- Predicates like *convèncer* and *estar d'acord* require a specific case feature on their oblique argument. This case feature is carried by (or realized by) the appropriate preposition or the appropriate pronominal clitic.

The facts that need explaining can be given a simple explanation consistent with these assumptions by adopting an Optimality-Theoretic view of constraint interaction. Let us assume the existence of two universal constraints: a markedness constraint rejecting a PP consisting of a P and a CP, and a faithfulness constraint requiring the features in the f-structure (the output) to correspond to lexically specified features (the input) in the corresponding c-structure.

(12) **No P+CP:** star a structure containing the c-structure tree [_{pp} P CP].

(13) **C-to-F Faithfulness:** features in the f-structure must be lexically specified by the elements in the c-structure.

C-to-F Faithfulness is violated whenever a feature in a given f-structure is not part of the information carried by the set of lexical items in the c-structure that map onto that f-structure. As we shall see, different rankings of the two constraints (12) and (13) yield languages that have CPs introduced by prepositions, complying with (13) but not (12), such as Spanish, and languages that do not have CPs introduced by prepositions, complying with (12), but not (13), such as Catalan and English.

Another important constraint that we need to take into account is what we might call *Completeness*, formulated as follows:²

(14) **Completeness:** the requirements of argument structure must be satisfied in the f-structure.

This constraint requires that any feature that argument structure specifies must be found in the f-structure. We will assume that Completeness is a high-ranking constraint, and for present purposes, that there are no well-formed structures that violate it. The relevance of this constraint is apparent when we consider predicates like *convèncer* or *estar d'acord*, which require that one of their arguments bear a particular case feature.

Let us assume that the argument structure of *convèncer* is as follows:

(15) 'convince < [Ext] [Int] [CASE gen] >'

Implicit in this representation is the idea that arguments are ordered by prominence in the argument structure and are classified according to certain features such as "Ext" (designating the external

² This formulation of Completeness diverges formally from formulations of Completeness available in the literature (such as Bresnan 2001: 72: "every GF designated by a PRED must be present in the f-structure of that PRED."), although it plays a similar role. Here Completeness is taken to constrain the mapping between argument structure, represented as the value of the feature PRED, and grammatical functions.

argument) or “Int” (designating an internal argument). While this is not particularly relevant to the analysis being developed here, what is important for this analysis is the idea that certain arguments are required to have a particular case feature in their corresponding f-structure. In the example in (15), the third argument is required to have the feature [CASE gen] (genitive case). This means that the f-structure corresponding to this argument must include the feature, failing which Completeness would be violated. Such a case specification on an argument can be taken to be like a constraining equation: the corresponding f-structure must include the specified feature to satisfy Completeness.

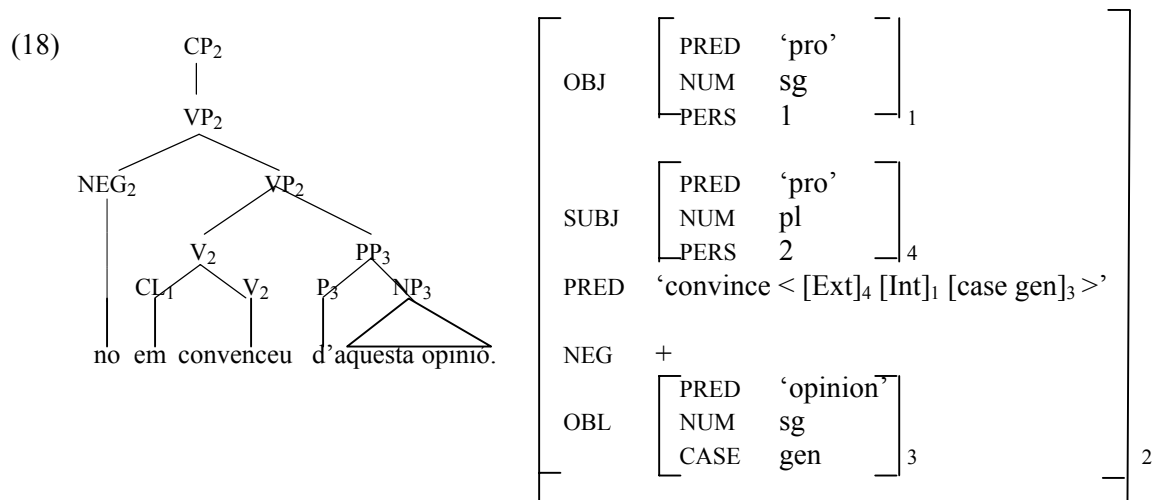
The case feature specified in (15) in Catalan may be provided by two different vocabulary items: the preposition *de* and the pronominal clitic *en*. The relevant lexical entries are given in (16):

- (16) a. *de*: P [CASE gen]
 b. *en*: cl $\begin{bmatrix} \text{PRED} & \text{pro} \\ \text{CASE} & \text{gen} \end{bmatrix}$

Given Completeness, a predicate with the argument structure in (15) requires the f-structure corresponding to its third argument to have the feature [CASE gen]. In order to respect C-to-F Faithfulness, the presence of this feature in an f-structure requires its c-structure correspondent to include a constituent that has this information in its lexical entry. This means that one of the two lexical entries in (16) has to be used in order to provide the required case feature for the third argument of (15). If the preposition in (16a) is used, it projects a PP structure and the PP occupies the expected positions for a PP. If the clitic is used, its position is that of a verbal affix: it attaches to the appropriate verb along with other clitics, if there are any.

The pair of c- and f-structures corresponding to an example like (17), in which the PP structure is used, are as in (18):

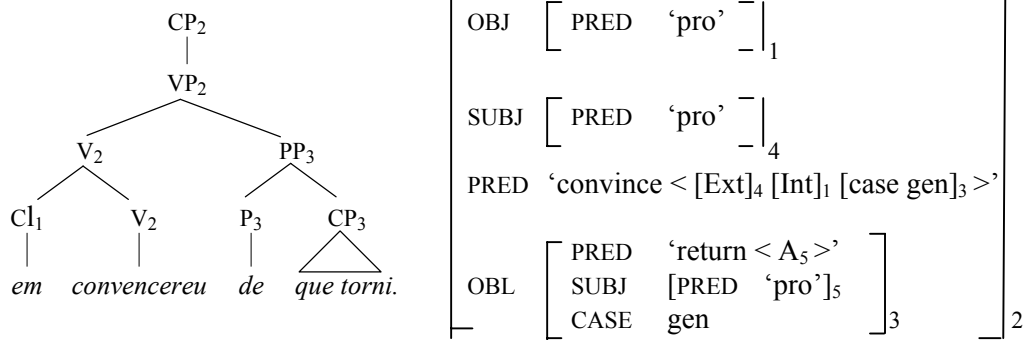
- (17) *No em convenceu d'aquesta opinió.*
 not me convince-2nd PL of this opinion
 ‘You are not convincing me of this opinion.’



The correspondence between the c-structure and the f-structure of the same expression is notated by subscripting each c-structure node and the corresponding f-structure with the same index; likewise regarding the correspondence between argument structure and grammatical functions. The correspondence between the c-structure and the f-structure is not regulated by annotations on the c-structure or the c-structure rules, but by general correspondence principles between the two structures (see Alsina 1996:21-34 for a proposal along these lines).

Both c-structure and f-structure are subject to well-formedness conditions applying internally to each structure; and the pairing of c-structure and f-structure is subject to the appropriate mapping constraints. For example, a well-formedness condition involved in the f-structure in (18) states that the GF attribute whose value is an f-structure containing the CASE feature ‘gen’ (and other “semantic”

(22)



The two f-structures are identical, in spite of the difference in c-structure, resulting from the presence of the preposition *de* in (22) and its absence in (21). Although there is no preposition *de* in (21) to license the case feature of the oblique (clausal complement), a competitor of (21) that lacked the feature [CASE gen] would violate Completeness. There is no reason to posit an empty P or a PP node in (21), as it would not add anything to the structure: such additional structure would be ruled out by a principle such as Economy of Expression (Bresnan 2001). Let us see how the two paired structures (21) and (22) are evaluated taking into account the two relevant constraints (12) and (13):

(23) Competition between (21) and (22), in Catalan:

	Completeness	(12) No P+CP	(13) C-to-F Faith
a. (21)			*
b. (22)		*!	

Thus, given the ranking of constraints (12) and (13) proposed for Catalan, the structure in which the oblique clausal complement is expressed as a CP without a preposition, (21), emerges as the optimal structure. Consequently, an analysis that does not assume the GF COMP and does not exclude the possibility that a CP may map onto the GF OBL is possible for the facts under consideration, and is much simpler than an analysis that assumes that non-object clausal complements are COMPs.

2.4 The Spanish facts

Unlike Catalan, Spanish allows clausal complements to be introduced by a preposition. In fact, it requires the governed preposition in these contexts, as the following Spanish examples illustrate, where (24b) and (25b) contain a preposition followed by a CP:

(24) a. *Lo tenéis que convencer de sus posibilidades.*
 him have-2ndPL to convince of 3POSS possibilities
 ‘You have to convince him of his possibilities.’

b. *Lo tenéis que convencer *(de) que vuelva a casa.*
 him have-2ndPL to convince of that return-3rdSG to home
 ‘You have to convince him to return home.’

(25) a. *Estábamos de acuerdo en algunos puntos.*
 were-1stPL of agreement on some points
 ‘We agreed on certain points.’

b. *Estábamos de acuerdo *(en) que nos subiesen el sueldo.*
 were-1stPL of agreement on that us raised-SUBJ-3rdPL the salary
 ‘We agreed that they should raise our salary.’

Following the ideas in D&L, one would have to say that Spanish differs from Catalan not only in lacking the constraint prohibiting the [_{PP} CP] structure, but also in not having verbs that subcategorize for COMP. Thus, there would be two parameters of variation distinguishing Spanish from Catalan: whether or not the constraint No P+CP is active, and whether or not the language has COMP (or COMP1

and COMP2). This second difference is not just stated once in the grammar (for instance, as the presence or absence of a constraint or as a difference in constraint ranking), but in fact is distributed throughout the lexicon. We need to stipulate for every lexical entry of a predicate that takes an OBL that can be realized by a CP (whether preceded by a preposition, as in Spanish, or not, as in Catalan) that the predicate in Spanish takes an argument that bears an OBL function not alternating with any other function and that the corresponding predicate in Catalan takes an argument that alternatively bears an OBL function and a COMP function.

Given the Optimality Theory approach taken above, all we need to assume is that Spanish differs minimally from Catalan (and English) regarding clausal complements in having a different ranking of the relevant constraints ((12) and (13)). Instead of (19), Spanish has the following constraint ranking:

(26) Constraint ranking in Spanish: (13) » (12)

As a consequence of this ranking, clausal complements bearing the OBL function in Spanish must be PPs: the preposition allows the structure to satisfy the faithfulness constraint (13), even though it violates the markedness constraint (12).

Let us compare the Catalan examples (20) with the equivalent examples in Spanish, which would have the same f-structures as the corresponding Catalan examples and whose c-structure is partially indicated in (27). The tableau showing the competition between these two structures is given in (28).

(27) a. * Me convenceréis [CP que vuelva]. b. Me convenceréis [PP [P de] [CP que vuelva]].
 me convince-FUT-2ndPL that return-1stSG
 ‘You will convince me to come back.’

(28) Competition between (27a) and (27b), in Spanish:

	Completeness	(13) C-to-F Faith	(12) No P+S
a. (24a)		*!	
b. (24b)			*

Thus, the simple re-ranking of two highly motivated constraints allows us to explain the fact that oblique functions alternate as PPs and CPs in Catalan and are consistently expressed as PPs in Spanish. This allows us to dispense with the grammatical function COMP, which, as we saw earlier, creates massive complications for the description of the facts.

3. Malayalam

3.1 Three declarative finite clause constructions

Our second source of evidence for abandoning the GF COMP comes from Malayalam, which has three declarative finite subordinate clause constructions schematically given in (29a-c):

(29) a. S-enn̄ b. S-ennat̄ c. S-at̄
 ... that ... that it ... it

The three types of clauses in (29) are illustrated in (30a-c) respectively:

(30) a. [iwiTe weLLam unD̄ enn̄] enik'k'̄ ariyunnuNDaayirunnilla.
 here water is that I-DAT know-PAST-NEG
 I didn't know that there is water here.

b. [iwiTe weLLam unD̄ enn̄at̄] enik'k'̄ ariyunnuNDaayirunnilla.
 here water is that-it I-DAT know-PAST-NEG
 I didn't know (the fact) that there is water here.

c. [iwiTe weLLam uLLat̄] enik'k'̄ ariyunnuNDaayirunnilla.
 here water is-it I-DAT know-PAST-NEG
 I didn't know about there being water here.

Complement selection involves these constructions, as illustrated in (31a-c). The examples provide a glimpse into some of the distributional restrictions that the constructions exhibit:

- (31) a. [kuTTi ciriccuwenn̄] amma wicaariccu / *kaNTu / *niSeedhiccu.
 child smiled-that mother thought saw denied
 Lit: Mother thought/ *saw/ *denied that the child smiled. (Mother thought that the child smiled.)
- b. [kuTTi ciriccuwennat̄] amma *wicaariccu / *kaNTu / niSeedhiccu.
 child smiled-that-it mother thought saw denied
 Lit: Mother *thought/ *saw/ denied it that the child smiled. (Mother denied that the child smiled.)
- c. [kuTTi ciriccat̄] amma *wicaariccu / kaNTu / *niSeedhiccu.
 child smiled-it mother thought saw denied
 Lit: Mother thought/ *saw/ *denied it the child smiled. (Mother saw the child smiling.)

Of the three types of clausal complements, the verb *wicaarikk* ‘think’ takes only S-*that* ((31a)), *niSeedhikk* ‘deny’ takes only S-*that-it* ((31b)), and *kaaN* ‘see’ takes only S-*it* ((31c)).

3.2. An OBJ-vs-COMP analysis

One way to account for these asymmetries would be to assume, à la D&L, that the verbs in (31) select different grammatical functions as their complements. For instance, one may stipulate that the verbs in (31b) and (31c) take OBJ, while that in (31a) selects COMP. As the S-*that* clause in (31a) is a CP, while both the S-*that-it* clause ((31b)) and S-*it* clause ((31c)) are NPs (or DPs), this suggestion appears quite reasonable. And its plausibility increases when we see that S-*that* clauses cannot be the object of a postposition ((32a), unlike S-*that-it* and S-*it* (32b) and (32c):

- (32) a. * [kuTTi ciriccuwenn] - ineppatti * [kuTTi ciriccuwenn̄] koNT̄
 child smiled-that about child smiled-that because of
- b. [kuTTi ciriccuwennat] - ineppatti [kuTTi ciriccuwennat̄] koNT̄
 child smiled-that-it about child smiled-that-it because of
 about (the statement) that the child smiled because of (the statement) that the child smiled
- c. [kuTTi ciriccat] - ineppatti [kuTTi ciriccat̄] koNT̄
 child smiled-it about child smiled-it because of
 about the child’s smiling because of the child’s smiling

An analysis based on the distinction between OBJ and COMP appears further confirmed by examples of passives ((33)), and of subject clauses ((34)):

- (33) a. * [kuTTi ciriccuwenn̄] ammayaal wicaarikkappeTTu.
 child smiled-that by the mother think-PASS-PAST
- b. [kuTTi ciriccuwennat̄] ammayaal niSeedhikkappeTTu
 child smiled-that-it by the mother deny-PASS-PAST
 That the child smiled was denied by the mother.
- c. ? [kuTTi ciriccat̄] ammayaal kaaNappeTTU
 child smiled-it by the mother see-PASS-PAST
 That the child smiled was seen by the mother.
- (34) a. * [kuTTi ciriccuwenn̄] ammaye santooSippiccu
 child smiled-that mother-ACC happy-CAUSE-PAST
- b. [kuTTi ciriccuwennat̄] ammaye santooSippiccu
 child smiled-that-t mother-ACC happy-CAUSE-PAST
 That the child smiled pleased the mother.
- c. [kuTTi ciriccat̄] ammaye santooSippiccu
 child smiled-it mother-ACC happy-CAUSE-PAST
 That the child smiled pleased the mother.

The asymmetry in (32) would follow from the assumption that in Malayalam, a P cannot take a COMP, and the facts of passives in (33) from the assumption that a COMP cannot alternate with a SUBJ. The asymmetry in (34) can be explained by assuming that Malayalam disallows CP subjects. This can be generalized as a constraint that CPs cannot be associated with SUBJ or OBJ (unrestricted [-r] functions).

3.3 Problems for the OBJ vs. COMP analysis

The contrast in Malayalam between the *S-that* clauses on the one hand, and the *S-that-it* and *S-it* clauses on the other, are eminently amenable to an analysis in terms of the GF distinction between OBJ and COMP. However, the analysis breaks down when we explore a bit further. We first note that it is indeed possible for some instances of *S-that* clauses to be subjects, as in (35):

- (35) a. [kuTTi ciriccuwennō] naataake parannu.
 child smiled-that throughout the land spread
 That the child smiled spread throughout the land.
- b. [kuTTi ciriccuwennō] urappaNō.
 child smiled-that certain is
 That the child smiled is certain.

Likewise, the idea that the non-passivizability of *S-that* and the passivizability of *S-that-it* and *S-it* stem from their being instances of COMP and OBJ respectively breaks down in (36)-(38):

- (36) a. [kuTTi ciriccuwennō] amma sthaapiccu
 child smiled-that mother establish-PAST
 Mother established that the child smiled.
- b. [kuTTi ciriccuwennō] ammayaal sthaapiikkappeTTu.
 child smiled-that by the mother establish-PASS-PAST
 That the child smiled was established by the mother.
- (37) a. [kuTTi ciriccuwennatō] amma nyuuspepparil kaNTu
 child smiled-that-it mother newspaper-in see-PAST
 Mother saw in the newspaper that the child (had) smiled.
- b. * [kuTTi ciriccuwennatō] ammayaal nyuuspepparil kaaNappeTTu
 child smiled-that-it by the mother newspaper-in see-PASS-PAST
- (38) a. [kuTTi ciriccatō] amma kaNNaaTiyil kaNTu
 child smiled-it mother mirror-in see-PAST
 Mother saw the child having smiled in the mirror.
- b. ? [kuTTi ciriccatō] ammayaal kaNNaaTiyil kaaNappeTTu
 child smiled-it by the mother mirror-in see-PASS-PAST

The application of D&L's other diagnostics also reveal clusterings that fail to converge on the OBJ-COMP distinction. The pronoun *atō* 'it' can occur as the complement of any of the verbs in (31), as in (39), taking as its antecedent any of the three clause types:

- (39) amma atō wicaariccu / kaNTu / niSeedhiccu
 mother it thought/ saw/ denied
 Mother thought/saw/denied **it**.

For each clause type, it can only conjoin with a clause of the same type. In (40d-f), the coordinate structures are unacceptable when the conjuncts differ in clause type, regardless of their order.

- (40) a. [kuTTi ciriccuwennum] [amma karaññuwennum]
 child smiled-that-and mother cried-that-and
 That the child smiled and the mother cried
- b. [kuTTi ciriccuwennatum] [amma karaññuwennatum]
 child smiled-that-it-and mother cried-that-it-and
 (The facts) that the child smiled and the mother cried

c.	[<i>kuTTi</i>	<i>ciriccatum</i>]	[<i>amma</i>	<i>karaññatum</i>]
	child	smiled-it-and	mother	cried-it-that
	The child's smiling and the mother's crying			
d. *	[<i>kuTTi</i>	<i>ciriccuwennum</i>]	[<i>amma</i>	<i>karaññuwennatum</i>]
	child	smiled-that-and	mother	cried-that-it-and
e. *	[<i>kuTTi</i>	<i>ciriccuwennum</i>]	[<i>amma</i>	<i>karaññatum</i>]
	child	smiled-that-and	mother	cried-it-and
f. *	[<i>kuTTi</i>	<i>ciriccuwennatum</i>]	[<i>amma</i>	<i>karaññatum</i>]
	child	smiled-that-it-and	mother	cried-it-and

To summarize:

- Distribution within a PP suggests an OBJ-COMP distinction between *S-that-it* and *S-it* on the one hand, and *S-that* on the other.

However, passivization, replaceability with a pronoun, and conjoinability show otherwise:

- some instances of all three clause types can occur as the SUBJ of a passive, others cannot;
- all three clause types can be replaced with a pronoun; and
- no clause type can be conjoined with another type.

Clearly, it is hard to tell a coherent OBJ-COMP story for the three clausal complement constructions.

3.4 The semantics of *S-that*, *S-that-it* and *S-it*

We would like to suggest a different story that assumes all three constructions to be instances of OBJ. To make this move, we draw on independently required semantic distinctions, which make the distinction between OBJ and COMP redundant.

Our appeal to semantics is in the spirit of Kiparsky and Kiparsky's (1971) proposal for [fact] as a semantic construct that interacts with syntactic patterns. Central to their proposal are two points:

- Verbs like *know* and *regret*, unlike verbs like *believe* and *consider*, carry the presupposition on the part of the speaker that the proposition expressed by the clausal complement is true; and
- Verbs that carry this presupposition disallow the subject-to-object raising construction.

Thus, rather than making a lexical stipulation directly in terms of syntax ((41a)), Kiparsky and Kiparsky state a general constraint on the syntax-semantics pairing ((41bii)), alongside the independently required lexical specification of the semantics of the verb ((41bi)):

- (41) a. *regret*: does not permit S-to-O raising.
- b. (i) *regret*: presupposition that the PROP of the clausal complement is true.
(ii) Constraint: Factive verbs do not allow S-to-O raising.

As we will see below, an investigation of the semantics of the three clausal complement constructions in Malayalam, though unrelated to the issue of raising, reveals the following generalizations:

- (42) a. *S-that* expresses a propositional function (i.e., a proposition, question, request, or wish);
b. *S-that-it* expresses (i) a [+def] proposition, along with
(ii) the presupposition that the proposition is true (=factive); and
c. *S-it* expresses an event/situation.

The *S-it* clause: Consider the following examples:

- (43) a. [*kuTTi* *aanaye* *nuLLi* *ennat̪*] *s'ariyalla*
child elephant-ACC pinched that-it right-is-NEG
It is not true that the child pinched the elephant.
(Not: It is wrong of the child to have pinched the elephant.)

- b. [kuTTi aanaye nuLLiyat̪] s'ariyalla
 child elephant-ACC pinched-it right-is-NEG
 It is wrong of the child to have pinched the elephant.
 (Not: It is not true that the child pinched the elephant.)

The word *s'ari* 'right' is ambiguous between an epistemic interpretation (true) and a pragmatic/moral interpretation (appropriate). Only the epistemic interpretation is available for (43a) as *S-that-it* expresses a proposition. In contrast, only the pragmatic/moral interpretation is available for (43b) as *S-it* expresses an event/situation. The examples given below highlight this contrast further:

- (44) a. [iwiTe weLLam unD̪ ennat̪] satyam / nuNa aaN̪
 here water is that-it truth / falsehood is
 (The statement) that there is water here is true/false.
- b. * [iwiTe weLLam uLLat̪] satyam / nuNa aaN̪
 here water is-it truth / falsehood is
 There being water here is true/false.

Truth and falsity apply to propositions, not events/situations. The unacceptability of (44b) follows from its embedded clause being an event/situation rather than a proposition.

The S-that and S-that-it clauses: The following examples show that an *S-that* clause allows the embedded clause to express not only assertions, but also questions, wishes, and requests:

- (45) a. [kuTTi rooD̪ kroos ceytuwoo ennat̪] enikk̪ ariyilla.
 child road cross do-PAST-QUES that to me know-NEG
 I don't know if the child crossed the road.
- b. [aar̪ rooD̪ kroos ceytu ennat̪] enikk̪ ariyilla.
 who road cross do-PAST that to me know-NEG
 I don't know who crossed the road.
- c. [kuTTi onn̪ rooD̪ kroos ceytenkil ennat̪] amma moohiccu.
 child one road cross do-past-IF that mother wished
 Lit: The mother wished that 'if only the child would cross the road!'
- d. [kuTTi onn̪ rooD̪ kroos ceyyu ennat̪] amma paraññu.
 child one road cross do-IMP that mother said
 Lit: The mother said that 'Child, please cross the road!'

This latitude is not available to *S-that-it* clauses, as shown in (46):

- (46) a. * [kuTTi rooD̪ kroos ceytuwoo ennat̪] enikk̪ ariyilla.
 child road cross do-PAST-QUES that-it to me know-NEG
 I don't know if the child crossed the road.
- b. * [aar̪ rooD̪ kroos ceytu ennat̪] enikk̪ ariyilla.
 who road cross do-PAST that-it to me know-NEG
 I don't know who crossed the road.
- c. * [kuTTi onn̪ rooD̪ kroos ceytenkil ennat̪] amma moohiccu.
 child one road cross do-past-if that-it mother wished
 Lit: The mother wished that 'if only the child would cross the road!'
- d. * [kuTTi onn̪ rooD̪ kroos ceyyu ennat̪] amma paraññu.
 child one road cross do-imp that-it mother said
 Lit: The mother said that 'Child, please cross the road!'

If we define 'propositional function' (PROP-F) as including propositions, questions, requests, and wishes, we may say that *S-that* expresses a PROP-F, while *S-that-it* expresses only a proposition.

There is a further property associated with *S-that-it*, that the proposition it expresses is [+def], i.e., an already existing assertion, shared by the speaker and listener; (47 shows this aspect of the clause:

- (47) a. [kuTTi rooD̂ kroos ceytu enn̂] amma prastaawiccu
 child road cross do-PAST that mother declared.
 Mother declared the child crossed the road.
- b. * [kuTTi rooD̂ kroos ceytu ennat̂] amma prastaawiccu
 child road cross do-PAST that-it mother declared.
- c. [kuTTi rooD̂ kroos ceytu ennat̂] amma niSeediccu
 child road cross do-PAST that-it mother denied.
 Mother denied (the statement) that the child crossed the road.
- d. * [kuTTi rooD̂ kroos ceytu ennat̂] amma prastaawiccu
 child road cross do-PAST that-it mother declared.

The asymmetry in the acceptability of (48c) below in the context of (48a) vs. (48b) illustrates the contrast between S-*that* and S-*that-it* in terms of the factive presupposition of the latter:

- (48) a. [patt̂ kuTTikaL warum enn̂] ñaan pratiikSiccirunnu.
 ten children will come that I was expecting
 I was expecting that ten children would come.
- b. [patt̂ kuTTikaL warum ennat̂] ñaan pratiikSiccirunnu.
 ten children will come that-it I was expecting
 I was expecting it that ten children would come.
- c. pakSe naal̂ kuTTikaLee wannuLLu
 but four children-only came-MOD
 But only four children came.

The sequence of (48a) and (48c) forms a coherent discourse. After (48b), however, (48c) is unacceptable. This unacceptability can be explained as resulting from the logical contradiction that combining (48b) and (48c) yields: (48b) carries the presupposition that the proposition expressed by the embedded clause is true, while (48c) asserts that this proposition is false. (48a) carries no such presupposition, and hence the combination is unproblematic. Interestingly, there are speakers for whom the English glosses for the Malayalam sentences exhibit the same contrast, depending on whether or not the pronoun *it* is present (Menzel (1973)).

The following examples illustrate the same contrast when these constructions appear as SUBJ:

- (49) a. [mukhyamantri warunnuND̂ enn̂] naaTaake paranniTTunT̂.
 chief minister is coming that land-all has spread
 That the Chief Minister is coming has spread all over the land.
- b. [mukhyamantri warunnuND̂ ennat̂] naaTaake paranniTTunT̂.
 chief minister is coming that-it land-all has spread
 It (= the news) that the Chief Minister is coming has spread all over the land.
- c. pakSe [warilla enn̂] enikk̂ urappaaN̂.
 but will come-NEG that to me certainty is
 But I am certain that (he) will not come.

(49c) can follow (49a) as a piece of continuous text, but it cannot follow (49b), as it asserts the opposite of what the embedded clause in (49b) presupposes. This presupposition is absent in (49a).

A caveat is in order at this point. Even though the S-*that-it* construction as a SUBJ carries the factive presupposition in examples like (48b) and (49b), it does not do so in the examples in (50):

- (50) a. [kuTTi rooD̂ kroos ceytu ennat̂] satymalla / nuNayaaN̂.
 child road cross do-PAST that-it truth-is-NEG falsehood-is
 (The statement) that the child crossed the road is not true/is false.
- b. [patt̂ kuTTikaL warum ennat̂] satymalla / nuNayaaN̂.
 ten children will come that-it truth-is-NEG falsehood-is
 (The statement) that ten children will come is not true/is false.

Likewise, the *S-that-it* clausal complement in (51b) does not carry the factive presupposition:

- (51) a. [kuTTi rooDð kroos ceytu ennð] ñaan wis 'wasikkunnilla.
 child road cross do-PAST that I believe-PRES-NEG
 I do not believe that the child crossed the road.
- b. [kuTTi rooDð kroos ceytu ennatð] ñaan wis 'wasikkunnilla.
 child road cross do-PAST that-it I believe-PRES-NEG
 I do not believe (the statement) that the child crossed the road.

The only semantic difference between (51a) and (51b) is that (51b) carries the presupposition of the existence of the proposition (as a claim that someone has made, for instance) in the relevant discourse context. We are faced here with what looks like an inconsistency in the data.

However, a comparison of the examples in (51) with those in (52) offers a clue to what is happening:

- (52) a. [kuTTi rooDð kroos ceytu ennð] awan wis 'wasikkunnilla.
 child road cross do-PAST that he believe-PRES-NEG
 He does not believe that the child crossed the road.
- b. [kuTTi rooDð kroos ceytu ennatð] awan wis 'wasikkunnilla.
 child road cross do-PAST that-it he believe-PRES-NEG
 He does not believe (the statement) that the child crossed the road.
- c. ñaanum wis 'wasikkunnilla.
 I-also believe-PRES-NEG
 I don't believe (it) either.

Parallel to what we saw in (48) and (49), (52c) can only follow (52a) to yield a coherent piece of text. (52b) carries the presupposition that the child did cross the street, which (52c) contradicts.

The difference between (51b) and (52b) is that in (51b), the SUBJ of the matrix clause, explicitly negating the truth of the embedded clause, is also the speaker, unlike in (52b). To explain the absence of factivity in (51b), we will assume a special exemption when the matrix SUBJ explicitly denying the presupposition is the speaker.-

3.5 An explanation for the facts

Contrary to the hypothesis suggested in section 3.2, suppose we assume that *S-that*, *S-that-it* and *S-it* clauses can all be SUBJ or OBJ. If so, it should not be surprising that all three clause types allow being replaced by a pronoun ((39)). If they all have the same range of GFs, their differences in behavior must come from their categorial or semantic properties.

Taking categories first, as mentioned earlier, the *S-that* clause is a CP while the *S-that-it* and *S-it* clauses are NPs: it is only to be expected that a clause headed by *it* is an NP. Support for this position comes from the fact that *S-that-it* and *S-it* can be hosts of case inflections, but not *S-that*. This categorial distinction is sufficient to account for their distribution in a PP ((32a-c)): the sister of a P in a PP must be an NP, i.e., the constraint “no P+CP” ((12)) is ranked higher than the constraint of C-to-F faithfulness ((13)):

- (53) In Malayalam:
 a. *S-that* is a CP; *S-that-it* and *S-it* are NPs.
 b. (12) >> (13)

Let us review the remaining facts that we saw in sections in 3.1-3.3 in the light of the semantic properties of these clauses that we saw in (42).

The non-conjoinability of different clause types (40d-f) can be explained by assuming that the constituents of a conjoined expression must have the same propositional features, i.e., EVENT vs. PROP-F, PROPOSITION vs. REQUEST/QUESTION/WISH, and FACTIVE vs. NON-FACTIVE.

Turning to the non-passivizability of examples like (33a), it is worth noting that explanations of passivizability in terms of GFs are illegitimate if we accept LMT. Granted that an argument specified as [+r] cannot be the SUBJ or OBJ, and hence is disallowed from being the subject of a passive, we still need to explain why some clauses are assigned [-r] and others [+r]. Saying that the former are OBJ and the latter COMP is simply a restatement of what needs to be explained. Hence, regardless of the solutions we come up with, non-passivizability does not constitute an argument in support of COMP.

Furthermore, passivizability does not distinguish any clause type from the others. While the S-*that* clause is not passivizable in ((33a)), it is indeed passivizable in (36b). Likewise, the S-*that-it* clause is passivizable in ((33b)), but not in (37b). Precisely how these asymmetries are to be explained, we will leave to a more fine-grained account of semantics that tells us when an argument that is eligible for objecthood (i.e., a [-r] argument) is also eligible to be a passive subject.

For an explanation of the facts of complement selection illustrated in (30) and (31), we need to go no further than events and factivity. For instance, consider the following specifications in the lexical semantics of these verbs:

- (54) a. *ariy*- ‘know’: OBJ clause: PROP-FUNCTION/FACTIVE PROP/EVENT
 b. *wicaarikk*- ‘think’: OBJ clause: PROPOSITION
 c. *niSeedhikk*- ‘deny’: OBJ clause: [+def] PROPOSITION
 d. *kaaN*- ‘see’: OBJ clause: EVENT
kaaN- ‘infer through seeing’: OBJ clause: PROPOSITION

Given these specifications, it would follow that *ariy*- ‘know’ can take all the three clause types ((30)); *wicaarikk*- ‘think’ takes only S-*that* ((31a)); *niSeedhikk*- ‘deny’ takes only S-*that-it* ((31b)); *kaaN*- ‘see’ takes only S-*it* ((31c)); and *kaaN*- ‘infer through seeing’ takes only S-*that-it* ((37a)). Nothing further needs to be said about the facts of complement selection associated with these clause types.

What remains to be explained is the asymmetry between (34a) on the one hand, and (35a,b), (36b) and other similar examples on the other. A possible clue to a solution for the distribution of S-*that* as SUBJ in these sentences may be found in the following examples in English:

- (55) a. *That John flunked the test has spread far and wide. I happen to know that he didn’t flunk, though.*
 b. *That John flunked the test upset him. *I happen to know that he didn’t flunk, though.*

The above contrast indicates that the SUBJ clause of *upset*, like the OBJ clause of *regret*, carries the presupposition that the proposition it expresses is true. Taking the contrast in (55) as a clue, we propose that:

- (56) If: the grammatical system of a language marks the semantic type of embedded clauses in structural terms,
 then: in that language,
 a verb that carries the presupposition that its SUBJ/OBJ is factive will only allow a clause marked for factivity in that position, and
 a verb that takes a [+def] proposition will allow only a clause marked for [+def] proposition in that position.

The verb in (34a) is the causative *santooSippikk* ‘make x happy’. If a causer must be a person, thing, event or a definite proposition, it follows that the subject of *santooSippikk*, if clausal, must be an EVENT or [+def] PROP. By (56), then, it cannot be S-*that*. Hence the ungrammaticality of (34a).

With direct access to the semantics of arguments in complement selection and other grammatical phenomena in Malayalam, COMP once again becomes redundant.

4. English

Once we accept the idea that a clause may bear the same range of GFs that nominal structures are assumed to bear, most of the arguments presented in D&L for distinguishing COMP from OBJ in

languages like English can be straightforwardly reinterpreted as arguments for distinguishing OBJ from OBL. The fact that certain clausal complements alternate with nominal complements, whereas others don't, is taken in D&L as evidence for the claim that the former are OBJ and the latter COMP. This contrast is illustrated in (57) (from D&L: 107):

- (57) a. *I believe [that the earth is round] / it.*
 b. *I hope [that it will rain] / *it.*

If we assume that *believe* takes an OBJ, it is to be expected that, semantics permitting, the OBJ should be alternatively a CP or an NP. If, on the other hand, we assume that the complement of *hope* is a COMP, as in D&L, then it follows that this complement should not be expressed as an NP, given the claim that COMPs are always CPs. However, if we assume that *hope* takes an OBL (only) as its complement, it also follows that this complement should not be expressed as an NP, given the claim that OBL in English cannot be a prepositionless NP.

The contrast in passivizability in examples like (58) (from D&L: 108–109) has been argued to be evidence for the distinction between OBJ and COMP.

- (58) a. *That the earth is round was not believed.*
 b. * *That it would rain was hoped.*

D&L assume that OBJ alternates with SUBJ because both are [–r] arguments and that COMP does not alternate with SUBJ because it is a [+r] argument. Thus, the grammaticality of (58a) follows from assuming that the internal argument of *believe* is [–r] and can, therefore, be either OBJ, or SUBJ (in a passive), and the ungrammaticality of (58b) follows from assuming that the internal argument of *hope* is [+r] and, therefore, not compatible with either OBJ or SUBJ, but is compatible with COMP. However, it is clear that a [+r] argument is also compatible with OBL. Consequently, the contrast in (58) can just as well be taken as evidence for the distinction between OBJ and OBL. Furthermore, in D&L there is an indeterminacy as to whether a [+r] argument should be assigned the OBL or the COMP function, since both are compatible with [+r]. How does the mapping theory discriminate between [+r] arguments to be assigned an OBL function and those to be assigned a COMP function? In the present proposal, this indeterminacy disappears because, without COMP, all [+r] arguments would be OBLs.

The observation that nouns and adjectives cannot take NP complements, but do take CP complements is interpreted by D&L as evidence for the existence of the GF COMP: if we assume a restriction against OBJ appearing in f-structures headed by N or A, the fact that CPs can be complements of these categories can be explained by assuming that these CPs are COMPs. The contrast between NPs and CPs as complements of Ns and As is illustrated in (59): the verb *fear* takes an OBJ, which can either be an NP or a CP, as in (59a), whereas the noun *fear*, in (59b), and the adjective *scared*, in (59c), allow only a CP complement, not an NP complement:

- (59) a. *Tim fears {that he may be found out / thunderstorms}.*
 b. *Tim's fear {that he may be found out / *thunderstorms}.*
 c. *Tim is scared {that he may be found out / *thunderstorms}.*

The prohibition against having OBJ assigned to an argument of an N or A does not imply that these categories should not take clausal complements, according to D&L, since clausal complements can bear the GF COMP. However, positing the GF COMP is not the only way to explain the fact that Ns and As can take clausal complements. Since it is clear that these categories can take OBLs as complements, typically expressed as PPs, as shown in (60), the assumption that clausal complements may also bear the GF OBL readily explains the possibility of a clausal complement of these categories.

- (60) a. *Tim's fear of thunderstorms.*
 b. *Tim is scared of thunderstorms.*

All we need to assume is that nouns and adjectives only take OBLs as complements, by default introduced by the preposition *of*. The OBL is either a PP or a CP, and it is predictable that, when the complement is clausal, there is no preposition introducing the oblique phrase because of the constraint excluding a PP in which the preposition precedes a CP ((12)).

Finally, the contrast between CP complements that can be topicalized, or, more generally, enter into an unbounded dependency, and those that cannot has also been taken by D&L as evidence for the distinction between OBJ and COMP. The examples in (61) (from D&L: 109 and Dalrymple 2001: 81) illustrate this contrast:

- (61) a. *That it would rain, everybody believed.*
b. * *That Chris yawned we weren't aware.*

According to D&L, all that needs to be assumed to explain this contrast is that the clausal complement of *believe* is an OBJ, whereas that of *aware* is a COMP, and that there is a stipulation that a COMP cannot enter into an unbounded dependency. It is not immediately obvious how this contrast is to be accounted for in the proposal that dispenses with COMP. Given the fact that *aware* can take either a CP or PP complement, as shown in (62) (from Dalrymple 2001: 81), we would have to assume that *aware* takes an OBL, which, as explained, is realized alternately as a CP or as a PP (in contrast to Dalrymple's (2001) assumption that it has an alternative subcategorization with a COMP and with an OBL):

- (62) a. *We weren't aware that Chris yawned.*
b. *We weren't aware of the problem.*

It is not possible to stipulate that an OBL cannot enter into an unbounded dependency, since this is clearly incorrect, as shown by an example like (63):

- (63) *Of the problem we weren't aware.*

Furthermore, topicalization of the clausal complement of *aware* is possible provided the preposition that introduces the oblique is retained, stranded in post-verbal position (from Dalrymple 2001: 81):

- (64) *That Chris yawned we weren't aware of.*

The contrast between (61b) and (64) seems to show that preposition stranding, which is normally an option alongside preposing of the entire PP, is obligatory when the phrase that enters into an unbounded dependency is a CP. Optimality Theory provides a simple way to account for that contrast without introducing additional constraints. Let us assume that the options of preposition stranding and of preposition pied-piping are in competition and are equally optimal (in English and other languages with these options), unless one of the options violates a constraint that the other does not. Normally, then, both options are possible, e.g., the pied-piping option in (63), and the P-stranding option in (65).

- (65) *The problem we weren't aware of.*

So, how do we explain that only the P-stranding option is allowed when an oblique CP is involved in the unbounded dependency? The answer is that the structure without the preposition, corresponding to example (61b), violates C-to-F Faith, whereas the competing structure *with* the preposition, corresponding to example (64), does not violate this constraint. Let us assume that an adjective like *aware* subcategorizes for an OBL with the case feature 'of'. This case feature is only provided by the lexical item *of*; therefore, we expect this preposition to appear, introducing the oblique complement of *aware*. Otherwise, C-to-F Faith is violated. However, in English, as in Catalan, the constraint No P+CP ranks higher than C-to-F Faith, accounting for the failure of the preposition to appear just in case the preposition should precede a CP.

In a topicalization structure (or, more generally, in an unbounded dependency construction), the topicalized phrase bears the discourse function TOPIC (in other cases, FOCUS), which is functionally identified with an in-clause, or non-discourse, function in its f-command domain. When an oblique is involved in an unbounded dependency, either the entire oblique or just the object of the oblique preposition is functionally identified with the phrase bearing the discourse function (and is, therefore, missing from its expected position). The first case requires preposition pied-piping and the second case requires P-stranding, as otherwise the structure would violate C-to-F Faith. However, when the oblique is a CP, preposition pied-piping is not possible, as the structure would violate No P+CP, which is worse than a violation of C-to-F Faith. That leaves P-stranding as the only option: the CP bears the discourse function TOP and is functionally identified with OBJ in the f-structure of the oblique.

In conclusion, all of the facts of English concerning clausal complements can be explained without appealing to the GF COMP, and in a simpler way than if COMP is assumed. In essence, these facts are explained without positing any constraint that is not independently required. The most important constraint involved is ‘No P+CP’, which is assumed even in theories that posit COMP, such as D&L.

5. Concluding remarks

To summarise, we have argued that, given the restricted assignment of GFs to nominal vs. clausal categories shown in (1), the GF COMP is redundant in LFG. In a framework without COMP, the regularities attributed to COMP can be restated in terms of CP OBJ or CP OBL_θ. Our reanalysis of the English facts cited as evidence in support of COMP serves as an illustration of how this can be done. The facts of Catalan and Malayalam show that the strategy of increasing the number of grammatical functions beyond what is necessary and appealing to these distinctions to express all aspects of complement selection fails to provide satisfactory grammars.

Clausal complements in languages like Catalan exhibit a contrast between OBJ and OBL_θ, showing that many of the phenomena that are appealed to in motivating the alleged distinction between OBJ and COMP cannot be expressed solely in terms of grammatical functions, but need reference to f-structure features that constrain the realization of the arguments. Clausal complements in languages like Malayalam show that many of the phenomena appealed to in motivating the distinction between OBJ and COMP must be expressed in terms of the semantics of the arguments, the relevant distinctions in this case being EVENT vs. PROP-F, PROP vs. REQUEST/QUESTION/WISH, [+/-def], and FACTIVE.

Given such independently required distinctions, the attribute COMP becomes redundant in the inventory of GFs, particularly within the multi-dimensional co-present architecture of LFG. If we allow CP complements to be associated with the same range of GFs as NP complements, the patterns that allegedly motivate the postulation of COMP, but are not attributable to independent categorial and semantic distinctions, can be explained in terms of functional contrasts already available within LFG.

If we abandon the function COMP in LFG, the obvious question is, what about the function XCOMP? Given that they are both clausal complements, and that XCOMP may be considered a special case of COMP, XCOMP should probably go the same way as COMP. The label signals that the unit in question is a clause whose subject is obligatorily controlled. Instead of such a diacritic, what we need is a theory of control that tells us under what conditions the SUBJ of a clause is obligatorily controlled. The elimination of COMP and XCOMP from the inventory of GFs has a desirable offshoot. Current mapping theory, with two features, [+/-r] and [+/-o], can express only four distinctions among subcategorizable GFs, namely, [-r,-o] (SUBJ), [-r,+o] (OBJ), [+r,+o] (OBJ_θ) and [+r,-o] (OBL_θ). This feature system does not provide for COMP and XCOMP. And rightly so.

References

- Alsina, A. 1996. *The role of argument structure in grammar*. Stanford: CSLI Publications.
- Alsina, A., T. Mohanan, and K. P. Mohanan. 1996. Untitled submission to the LFG List. 3 Sept 1996.
- Bresnan, J. 2001. *Lexical-functional syntax*. Oxford: Blackwell.
- Dalrymple, M. and H. Lødrup. 2000. The grammatical functions of complement clauses. In M. Butt and T. H. King (eds.), *Proceedings of the LFG00 Conference*. CSLI Publications.
- Dalrymple, M. 2001. *Lexical Functional Grammar*. San Diego: Academic Press.
- Grimshaw, J. 1997. Projections, heads and optimality. *Linguistic Inquiry* 28: 373–422.
- Kiparsky, C. and P. Kiparsky. 1971. Fact. In D. Steinberg and L. Jakobovitz (eds.), *Semantics*. Cambridge: Cambridge University Press.
- Menzel, P. 1973. A constraint on the deletion of embedded subjects. *Papers in Linguistics* 6:141–179.