

# Recherches linguistiques de Vincennes

33 | 2005 L'architecture propositionnelle, la syntaxe de la périphérie gauche

# The syntactic distribution of factive complements

# Javier Ormazabal



## Édition électronique

URL: http://journals.openedition.org/rlv/1284

DOI: 10.4000/rlv.1284 ISSN: 1958-9239

#### Éditeur

Presses universitaires de Vincennes

# Édition imprimée

Date de publication : 1 mai 2005

Pagination: 91-110 ISBN: 2-84292-167-4 ISSN: 0986-6124

### Référence électronique

Javier Ormazabal, « The syntactic distribution of factive complements », Recherches linguistiques de Vincennes [En ligne], 33 | 2005, mis en ligne le 16 septembre 2005, consulté le 21 avril 2019. URL : http://journals.openedition.org/rlv/1284; DOI: 10.4000/rlv.1284

© Presses universitaires de Vincennes

Javier ORMAZABAL
University of the Basque Country (EHU)
Basque Center for Language Research (LEHIA)

#### THE SYNTACTIC DISTRIBUTION OF FACTIVE COMPLEMENTS<sup>1</sup>

#### ABSTRACT

This paper analyzes Kiparsky & Kiparsky's (1970) observation that there exists a deep correlation between the semantics and the syntax of factive complements in the light of a wide range of (old and new) phenomena: the incompatibility of ECM and *that*-less complements with factive predicates, weak island effects, the incompatibility of pure propositional complements with verbs that contain aspectual prefixes (RE-, DIS-), restricted sequences of tenses in propositional contexts. I then propose a structural difference between propositional and factive complements with respect to the syntactic position they occupy that accounts for the syntactic phenomena discussed here, while providing a solid basis to capture the semantic difference with regard to the presupposition associated with each complement type: factive complements are argued to appear outside the VP at LF, while propositional complements must occupy their base-generated position within VP.

#### KEYWORDS

Factive, presupposition, proposition, complementizer selection, null complementizer, -affixation, syntax-semantics interface, Tense-predicate interactions, sequences of Tenses.

#### 1. Introduction

Kiparsky & Kiparsky's (1970) seminal work on factive predicates shows the existence of a deep correlation between the semantic properties of factive complements, in particular the presuppositional force associated with these complements, and their syntactic behavior with regard to a wide range of phenomena. Before and after Kiparsky & Kiparsky's paper [henceforth K&K], there have been numerous proposals and studies concerning factivity and presupposition, which approach the issue from very different theoretical perspectives. However, most of these studies focus on a very different side of the issue and mainly pay attention to the properties of presupposition from a semantic or a pragmatic perspective; in general, these analyses do not try to account for the syntax/semantics correlation that was central in K&K's paper in the first place, and generally ignore the question of the syntax of these constructions altogether<sup>2</sup>.

In this paper, I reconsider the syntax/semantic correlation discussed by K&K, extending the evidence to new properties where the parallelism they propose shows up even in a more systematic way. I then explore a possible way to derive all these phenomena from a deeper property of the predicates involved. In particular, I propose a structural difference between propositional and factive complements with respect to the syntactic position they occupy. In a nutshell, factive complements are argued to appear outside the VP at LF, while pure propositional complements must occupy their base-generated position within VP at LF. As I argue in section 4, this structural difference accounts for all the syntactic phenomena discussed here; at the same time, the analysis provides a solid structural basis to capture the semantic difference with regard to the presuppositional force associated with each complement type.

# 2. Syntactic differences between factive and propositional complements

## 2.1. Exceptional Case Marking

It is a property of factive predicates, known at least since K&K, that they do not take ECM complements, while accepting gerunds.

- (1) a. \*He regrets [Bacon to be the real author].
  - b. They reported/remember [the enemy's having suffered a decisive defeat].

Contra K&K's observation, Pesetsky (1992) associates the ability of predicates to allow ECM-complements to the lack of agentivity on the part of their subject, and he proposes that the relevant factor that determines whether a given predicate is able to assign accusative Case to the embedded subject or not is inversely related to its ability to assign an agent  $\Theta$ -role to its external

argument. The behavior of verbs like *remember* or *assume* seems to support this correlation; Pesetsky notes that these verbs allow ECM-complements in general, but this option becomes progressively less acceptable as the agentivity of the subject increases:

- (2) a. Sue assumed God to exist during the writing of her theology dissertation.
  - b. ??Sue was careful to assume God to exist during the writing of her theology dissertation.

However, several properties of the predicates involved suggest that K&K's original observation is on the right track, and that the relevant factor is not the degree of agentivity of the subject, but rather whether the clausal complement is interpreted as presupposed (and consequently the predicate is factive) or instead it is a pure propositional one. For instance, *remember*, which Pesetsky uses to support his claim, is semantically ambiguous between a propositional and a factive interpretation; as the continuation in (3a-b) shows (see Vendler 1967, Asher 1993, Ormazabal 1995), only when the clausal complement is interpreted as purely propositional is ECM possible:

- a. Mary thinks that she vaguely remembers Bill to have misplaced the keys in one occasion, but I doubt he ever did.
  - b. ?\*Finally, Mary remembered Bill to have misplaced the keys in one occasion, a fact that she couldn't recall for years.

Independent evidence showing that the contrast in (3) is based on factivity and not on the degree of agentivity comes from the parallel behavior of tensed *that*-less clauses. Compare, for instance Pesetsky's original example in (2) with the following examples:

- (4) a. ?\*Sue was careful to assume [God to exist] during the writing of her theology dissertation.
  - b. ?\*Sue was careful to assume [ $\emptyset_{Comp}$  [God exists/existed]] during the writing of her theology dissertation.
  - Sue was careful to assume [that [God exists/existed]] during the writing of her theology dissertation.

The contrast in (4a-c) illustrates the fact that the distribution of *that*-less clauses coincides with ECM-complements. But, unlike in ECM-contexts like (4a), in the case of *that*-less clauses in (4b) there is no thematic or Case relationship between the matrix predicate and the subject of the embedded tensed clause which could be appealed to. Since Pesetsky's agentivity generalization cannot apply in this case, it plausibly does not in the ECM-constructions either. On the other hand, the factive/propositional distinction makes the right division in a unified way, as K&K originally proposed.

Moreover, the same paradigm reappears with causative predicates, and even in contexts where the subject is not animate -and presumably non-

agentive- (see Pesetsky 1992, Ormazabal 1995 for discussion); ECM and *that*-less clauses are possible when a non-presuppositional interpretation is possible, but only *that*-clauses may appear when the factive interpretation is forced somehow:

- (5) a. \*This experiment convincingly shows/demonstrates [cold fusion to be impossible], which we already knew
  - b. \*This experiment definitely/convincingly shows/demonstrates [cold fusion is impossible], which we already knew
  - c. This experiment convincingly shows/demonstrates [that cold fusion is impossible], which we already knew

In conclusion, we may consider Pesetsky's generalization as a subcase of the more general observations in (6), due to K&K (1970: 160):

(6) K&K's GENERALIZATION: Factive Verbs are incompatible with ECM-complements.

### 2.2. Complementizer deletion

What makes these paradigms particularly interesting is the fact that the parallel between ECM-complements and *that*-deletion in tensed clauses is general in factive contexts; thus, non-ambiguously factive verbs do not allow *that*-less complements either:

- (7) a. Mary pointed out [\*(that) [Sue wasn't there]]
  - b. Mary believed/thought [(that) [Sue wasn't there]].

Moreover, as we have seen, the parallelism also extends to ambiguous predicates of the kind discussed in (4)-(5) above, where the *that*-less alternative is impossible precisely in those contexts where ECM-infinitives are, and even to causative verbs with non animate subjects of the type discussed by Pesetsky. We can recast this observation in terms similar to K&K's generalization in (8):

(8) FACTIVE-COMPLEMENTIZER GENERALIZATION: Factive predicates do not take *that*-less tensed complements.

K&K propose an explanation for the impossibility of ECM-complements, aimed to account for the syntactic/semantic correlation. They postulate a fundamental difference in the internal structure they assign to factive and nonfactive complements: factive predicates have in the underlying representation an NP projection over the sentential complement whose head is an abstract noun *fact*; this projection prevents Case assignment to the embedded subject.

I will postpone the discussion of other aspects of K&K's analysis until the last section; it is worth noting, however, that the impossibility of ECM-infinitives and the restriction against *that*-less clauses in this analysis are not completely related, a fact that considerably weakens the hypothesis. Instead, Ormazabal (1995) extensively argues that ECM and *that*-less clauses have in common that they are CPs headed by a null complementizer, an affix <sup>3</sup>. Consequently, (6) and (8) together with this observation, may be recast in more general terms:

(9) Factive-complementizer Generalization: factive predicates do not allow complements headed by a null complementizer.

Of course, that distributional restriction on factive contexts could be stipulated as a selectional property of the factive predicates themselves. If the lexical complementizer *that* and the null complementizer were distinguished from one another and attributed different semantic roles, the semantic compatibility of one of the complementizers with the selectional properties of a given matrix predicate would not necessarily imply that the predicate must also be semantically compatible with the other, because these two complementizers would not be semantically equivalent. That is basically Hegarty's (1991) proposal, where the propositional complementizer is semantically meaningless and is deleted before LF, while the factive *that* is semantically contentful.

However, in my view both the null and the *that*-complementizer contribute exactly the same to the common propositional interpretation of the complement and whatever differences there are between *that* and the null complementizer must derive from the morphological properties of the  $\emptyset$ -affix and not from their syntactic or semantic function<sup>4</sup>. Consequently, the impossibility of  $\emptyset$ -complementizers in factive contexts must derive from their morphological properties.

In Ormazabal (1995), I extensively argue that the distribution of Ø-complementizers in a large variety of contexts is restricted by the fact that they must incorporate, an extension of Stowell's (1981) Null Complementizer Government requirement. If that is correct, the linkage between the structural position factive and pure propositional complements occupy and the distribution of null complementizers is immediate.

Observe that the system works in the opposite direction to what is generally assumed: the standard *that*-deletion approach to this problem assumes that the factive complementizer *that*, unlike the propositional one, contributes to the semantic content of the sentence and, consequently, it must be present at LF and cannot be erased. The approach pursued here attributes the same semantic role to the complementizer in both contexts. The impossibility of  $\emptyset_{\text{Comp}}$  in the head of factive CPs derives from the

morphological properties of this complementizer, which force it to incorporate; the overt complementizer *that* is thus the only syntactic option, not because of its particular semantic role, but because it is the only complementizer compatible with the factive interpretation that is not required to incorporate.

#### 2.3. Island Effects

An additional, well known, property of factive contexts is that the complements of these predicates are weak islands (see Rizzi 1990; see also K&K's analysis based on the Complex NP Constraint and Melvold 1991). Compare the sentences in (10) and (11):

- (10) ¿Por qué piensas [que vinieron tan tarde]? why think (you) that came-they so late 'Why do you think they came that late?'
- (11) ¿Por qué descubriste [que vinieron tan tarde]? why discover (you) that came-they so late 'Why did you discover that they came that late?'

In (10), the matrix question is ambiguous and the interrogative element why may be interpreted either as belonging to the matrix predicate – «Why do you think so?» – or to the embedded non-factive complement – «In your opinion, why did they come that late?» –. Instead, the matrix question in (11), with a factive predicate, only has one interpretation, the one corresponding to the wh-phrase connected to the matrix clause – «Why did you discover so?» –, and the embedded reading is impossible; that is, the sentence in (11) cannot be interpreted as «According to your discoveries, why did they come so late?». Although neutral between an analysis, à la K&K, which postulates that the difference between factive and non-factive complements is in their internal structure and an alternative that considers it to follow from a difference in the structural position these complements occupy with respect to the matrix predicate, the contrast in (10)-(11), together with the previous arguments, strongly supports a structural approach to the problem.

## 2.4. Keyser's test

Following a suggestion by Keyser (personal communication), Ormazabal (1995, ch. 2) discusses the particular distribution of clausal complements when combined with matrix predicates that contain an aspectual prefix such as *re-* or *dis-*, a phenomenon also sensitive to the type of complement clauses. These verbs have the particularity that, under certain circumstances, the range of possible complements they take is highly more restricted than the ones their unprefixed counterparts do.

The phenomenon distinguishes two groups: on the one hand, non-factive propositional complements of all kinds -in particular *that*-clauses, *that*-less clauses and ECM-infinitives- are incompatible with verbs containing an aspectual prefix of this type, even if these complements are allowed with the unprefixed version of the predicate:

- (12) a. They (\*re-)considered [(that) Jane was intelligent]
  - b. They (\*re-)considered [Jane to be intelligent]
- (13) a. They (\*dis)believe [(that) Jane was heading the group]
  - b. They (\*dis)believe [Jane to have been heading the group]

On the other hand, factive complements of all kinds (*that*-clauses, gerund constructions, derived nominals), event-denoting nominals and control infinitives may combine with prefixed verbs; leaving aside the last cases (see Ormazabal 1995, sect. 2.4.4 and 4.5 for discussion), the examples in (14) illustrate the different factive complements:

- (14) a. They rediscovered [CP that [Jane was leading the expedition]]
  - b. They rediscovered having left the group.
  - c. We (dis)approve [the invasion of Irak]

An important property that distinguishes the phenomena previously discussed from this and the next phenomena is that while the former are cases where the factive context is more restricted than the propositional one, in the case of prefixed verbs in this section and the sequences of Tenses discussed next, the pure propositional contexts are more restricted than the factive ones.

## 3. Factive/Propositional Predicates and Tense Relations

## 3.1. Sequences of Tenses

Consider now the contrast in (15):

- (15) a. \* Mary believed/considered/thought [that John will arrive/we'll go hiking tomorrow]
  - Mary pointed out/forgot/remembered [that John will arrive/we'll go hiking tomorrow]

[Uribe-Etxebarria 1994; Ormazabal & Uribe-Etxebarria 1996]

In contexts like (15), when the predicate is non-factive – as in (15a) – certain sequences of tenses between the matrix and the embedded clauses are not allowed.

- (16) FACTIVE-TENSE GENERALIZATION (weak version):
  - a) When in factive contexts, future tense in the embedded sentence is possible.
  - b) Pure propositional predicates in the past tense do not allow a complement in the future tense.

Contrary to what could be thought by looking at (15a), it is not the case that there is an intrinsic incompatibility in the occurrence of propositional predicates like *think* and a future tense in their complement, as Uribe-Etxebarria (1994) observes; (17) shows that the future Tense may appear in the complement of *think*, provided that it is in the right syntactic context. Nor is there a semantic incompatibility between propositional predicates and a future interpretation of the embedded clause: when *would* appears under a past Tense, it may be interpreted as future with regard to both the matrix and the utterance time.

- (17) a. Mary thinks/believes [that John will arrive tomorrow]
  - b. Mary thought that Sue would defend her thesis tomorrow.

Thus, it may be easily shown that the problem is due to the sequence of tenses. In a first approximation, it seems that *will* may not appear in a propositional complement when a [+PAST] Tense appears in the matrix clause. Given that, an interesting question arises as to why the sentential complement of factive predicates may have a *will* form when the matrix tense is [+Past], as in (15b). A structural hypothesis along the lines of Stowell (1993) and especially Uribe-Etxebarria (1994) and Ormazabal & Uribe-Etxebarria (1996) may account for these restrictions in the possible sequences of Tenses in a natural way, if the assumption concerning the position of propositional and factive complements proposed in this article is correct; but in order to show that this is so, a short digression is necessary to present some of the properties of the constructions at stake in more detail.

### 3.2. A short digression: Tense and Negative Polarity Items

Within the context of her LF theory of Negative Polarity Items (NPIs) and in a discussion about Tense/NPI interactions, Uribe-Etxebarria (1994) observes the following paradigm:

- (18) a. Mary didn't say [that Ann would read any books tomorrow].
  - b. Mary didn't say [that Ann had read any books last year].
  - c. \*Mary didn't say [that Ann will read any books this fall]. [Uribe-Etxebarria 1994, ch. 3, ex. (17)]

As she observes, the ungrammaticality of (18c) is due to the unappropriate combination created by the negative polarity item *any* in the embedded clause and the wrong sequence of tenses -i.e., the future tense *will* of the complement clause embedded under a [+Past] Tense.

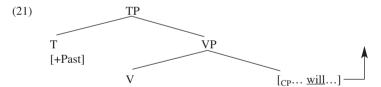
That the negative polarity item may appear within a clausal complement in future Tense may be seen in (19), also from Uribe-Etxebarria:

(19) Mary will not believe/say [that Ann will read any books this fall] [ibid ex. (18)]

On the other hand, contrary to the case of *think* discussed above, the form *will* may appear in the embedded clause even when the matrix clause has a past tense, as far as we replace the negative polarity item with a «regular» definite NP, provided the matrix verb is *say*, rather than *believe*. This is illustrated by the contrast in (20):

- (20) a. \*Mary didn't say [that Ann will read any books this fall].
  - b. Mary didn't say [that Ann will read those books this fall].

To account for the ungrammaticality of cases like (20a), Uribe-Etxebarria shows that there is a basic incompatibility between the syntactic conditions licensing the negative polarity item and the morphological requirements imposed on the Tense form will, both of them independently well-motivated. On the one hand, the negative polarity item any must be bound by a "close" negative element, a well-known property of these elements that has been discussed elsewhere in the literature. On the other hand, the distribution of will and would is driven by the different morphological requirements imposed on these two future forms; simplifying things a bit, we may assume that, as a consequence of its morphological conditions, will cannot remain within the scope of a past tense (see Ogihara 1995, Uribe-Etxebarria 1994, and references there). As a consequence of this requirement, when the embedded clause has a tense morphologically realized as will and the matrix Tense is specified as [+Past], will must move out of the c-command domain of the matrix Tense at LF, pied-piping the entire complement clause with it. Details aside, this is represented in (21):



However, it is precisely this movement that makes NPIs incompatible with will in contexts like (20a). If this movement operation takes place, when the clausal complement escapes from the c-command domain of the matrix Tense it also moves to a position structurally higher than the negative head attached to it, and the negative polarity item inside is not in a position c-commanded by Neg any longer. If, instead, the sentential complement stays in situ, the NPI is c-commanded by the negative element; that is precisely what happens when the embedded future Tense is morphologically realized as would. In the case of will, however, the derivation will not converge, because the morphological requirement of this head, which requires it to be outside the scope of the [+Past] Tense, will not be satisfied when the complement stays in its base-generated position.

#### 3.3. Tense and the Structural Position of Factive Complements

Keeping this discussion in mind, let us go back to the difference between pure propositional and factive predicates with respect to the [+Past]-will sequence presented at the beginning of this section:

- (22) a. \*Mary believed/considered/thought that Sue will defend her thesis tomorrow.
  - b. Mary pointed out/forgot/remembered that Sue will defend her thesis tomorrow. [=(15)]

As observed earlier, the ungrammaticality of the propositional cases in (22a) is due to the sequence of tenses; in particular, only when *will* appears under a past tense are these constructions ungrammatical. In that respect, these cases may be subsumed under the NPI constructions discussed by Uribe-Etxebarria (1994) and presented in the previous section; compare the sentence in (22a) with that of (20a), also ungrammatical, where the negative polarity item and the future form *will* coappear under the matrix past tense.

However, notice that in the NPI cases in (20) there is an independent reason, the requirement that the negative polarity item be c-commanded by the negative element not, that generated the conflict with the future form will. When the NPI is not present, the morphological condition imposed on will is syntactically "active" and strong enough to override the effects of the Last Resort Condition on movement, and the complement moves out of the scope of [+Past] Tense, as the grammatical result in (23) (= (20b)) shows.

#### (23) Mary <u>did</u>n't say [that Ann <u>will</u> read <u>those</u> books this fall].

If the explanation proposed for (20) is expected to extend to the propositional cases in (22a), there must be an independent condition, parallel to the c-command requirement imposed on the NPI, that forces the sentence to be in the VP-internal position also in this case, conflicting with the morphological requirement on *will*. Otherwise, the clausal complement, driven by this condition, would be able to move out of the scope of [+Past] Tense and the sentence would be incorrectly predicted to be grammatical.

Given the absence of other independent motivation and, especially, given the contrast between factive and propositional contexts illustrated in (22), a structural difference on the lines of the hypothesis defended in this paper appears to be a strong candidate. If, as proposed, the complement of pure propositional predicates must be in a VP-internal position at LF, it is precisely this requirement that conflicts with the morphological properties of will, which must be outside the c-command domain of the [+Past] Tense – hence, outside VP –, and consequently it is responsible for the ungrammaticality of the constructions under discussion.

An independent difference between the predicate Uribe-Etxebarria chooses to argue her case and the propositional predicates discussed in this section also supports the same conclusion; consider, for instance, the following examples, where no independent morphological requirement is imposed on the embedded Tense:

- (24) a. Mary didn't say that Sue was defending her thesis.
  - b. Mary didn't think that Sue was defending her thesis.

The two sentences in (24) are grammatical; however, notice that the sentence in (24a) is semantically ambiguous, and may be interpreted with wide or narrow scope with respect to the matrix predicate and negation. Unlike the complement in (24a), the complement of *think* in (24b) must be interpreted with narrow scope, as expected if this complement must be in its basegenerated position within VP at LF in accordance with the hypothesis presented here.

Going back to the original contrast in (22), repeated here, the grammaticality of the [+Past]-will sequence in (22b), where the predicates are factive, suggests that the clausal complement has moved from the VP-internal position to some higher position where the head of TP is not c-commanded by the matrix [+Past] at LF.

- (22) a. \*Mary believed/considered/thought that Sue will defend her thesis tomorrow.
  - b. Mary pointed out/forgot/remembered that Sue will defend her thesis tomorrow.

Once again, this leads us to conclude that the condition forcing the propositional complement to stay within VP, which accounts for the ungrammaticality of the non-factive constructions in (22a), is not operative in the case of factive complements. These are precisely the expected results if the structural difference between factive and propositional complements postulated in this paper is on the right track, and factive complements are outside VP at LF. This claim is also supported by K&K's observation that factive complements optionally undergo expletive replacement of IT – what they call «extraposition» –, but non-factive ones never do <sup>5</sup>:

- (25) a. It makes sense to me that there are porcupines in our basement
  - b. That there are porcupines in our basement makes sense to me.
- (26) a. It seems to me that there are porcupines in our basement.
  - b. \*That there are porcupines in our basement seems to me.

In the next section I will analize the possible source of this difference in a more systematic way.

## 4. The Nature of the Propositional/Factive Distinction

## 4.1. The Factivity of Derived Nominals

Vendler (1967) already observed that derived nominals are ambiguous between an eventive and a propositional interpretation (see Asher 1993, Zucchi 1993, Ormazabal 1995 and references there). The event reading of these constructions is obtained when embedded in contexts where the matrix predicate requires an event-type complement, as in (27), while the propositional interpretation may be seen in cases like (28):

- (27) a. [The collapse of the Germans] was fast/took place in Russia.
  - b. [Her decision to leave the company] was difficult.
  - c. We witnessed [the destruction of the building].
- (28) a. Mary admitted/mentioned [her decision to leave the company].
  - b. The general regretted [the collapse of the Germans].
  - c. We were informed of [the destruction of the building].

It has also been observed in the literature that pure propositional predicates like *claim* or *believe* do not easily combine with nominal complements: when derived nominals have propositional content, their distribution is nevertheless restricted to factive contexts, and they can never be in the complement position of propositional attitude predicates, as the contrast between the cases in (28), where the predicates are all factive, and the ungrammatical (29) illustrates.

- (29) a. \*Mary claims/believes [the collapse of the Germans in Russia].
  - b. \*[Your decision to leave the company] is false.

In a theory where factive and propositional complements are assumed to have different internal structure<sup>6</sup>, a stipulation regarding the semantic nature of derived nominals as obligatorily factive would suffice to account for the contrast illustrated here. If derived nominals, unlike *that*-clauses, are inherently factive, these complements cannot satisfy the selectional requirement of propositional attitude predicates; their combination would create a conflict between the selectional properties of the predicate, which requires a (non-factive) propositional complement, and the factive interpretation of the complement.

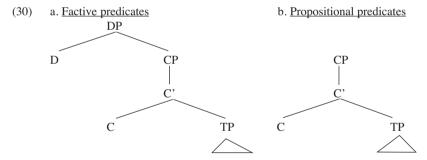
If the structural hypothesis I have been defending is correct, however, the difference between factive and propositional complements cannot be due to an internal difference, but its syntactic reflex is the structural position these two complement-types occupy. Consequently, the presuppositional interpretation associated with proposition-denoting nominals must be related to their structural position. But notice that this is precisely what we expect

independently given the nature of the definite DPs, since these phrases must move out of the VP for independent reasons.

# **4.2.** Case *vs.* Definiteness: the Structure and Properties of Factive Complements

## 4.2.1. A Case-Theoretic Approach to the Syntactic Differences

Given the behavior and syntactic properties of derived nominals just discussed, it could be argued that the difference between factive and propositional complements that motivates the different position they end up occupying at LF is syntactically driven; the logic of the argument would be based on some syntactic feature present in factive clauses, as well as in derived nominals, but missing in propositional complements, which would motivate the movement up in the former but not in the latter. An obvious possibility that comes to mind is to assume K&K's original idea that factive complements have a more complex structure, with a nominal-like projection over CP. Interpreted in terms more in accordance with current theoretical assumptions, the internal structure K&K's hypothesis attributes to factive and propositional complements would then be as in (30a) and (30b) respectively:



Given that structural difference, one could appeal to a Case-theoretic difference to derive the different structural position the two complement types occupy at LF from their internal structure, given that the DP/CP distinction with regard to Case-features seems to be a quite steady one; thus several facts suggest that clauses, unlike nominal phrases, do not check Case with the verbal head <sup>7</sup>.

If this conclusion is correct, an internal difference along the lines of K&K's hypothesis would account for the different position these two complement types occupy at LF: factive complements, being DPs, would have to move to check their Accusative Case features with the verb, while propositional complements would stay in situ. A head-incorporation mechanism, which seems to be associated with – at least some – propositional

contexts could be the alternative way to satisfy the Visibility Condition in the case of arguments other than DPs<sup>8</sup>.

However, some properties of factive complements suggest against postulating a higher DP-type projection over CP. Consider, for instance, their properties with regard to expletive-elements; when factive complements form part of expletive-argument chains, the expletive they associate with must be IT, the same expletive associated with clausal complements, and they can never form part of a chain with expletive THERE:

- (31) a. They never mentioned **it** to the candidates [that the job was poorly paid].
  - b. Don't spread it around [that I am giving you this assignment].
     [Postal & Pullum 1988, eexx. (22a, g)]
- (32) a. \*They never mentioned **there** to the candidates [that the job was poorly paid]
  - b. \*Don't spread **there** around [that I am giving you this assignment].

Although the question of how the distribution of *it/there* expletives may be derived has not been successfully answered 9, the right descriptive generalization seems to involve a CP/DP partition in the generality of the cases, which would have to be abandoned if factive complements are not CPs but DPs.

Moreover, there are strong theory-internal reasons to reject a higher projection over CP. Notice that if a DP-projection is postulated over CP, that projection must be headed by a null determiner; but, according to what I have been arguing, this head would have to incorporate in order to satisfy the morphological filter on stranded affixes. However, I have extensively argued that it is precisely the impossibility of incorporation that accounts for the distribution of zero-headed propositional clauses with factive verbs and, in particular, for the impossibility of ECM and *that*-less clauses in these contexts. Of course, the general proposal could be weakened in some way so that two types of zero-affixes are distinguished, but this move would cast serious doubts on the entire approach and does not seem motivated by any reason other than the factive structure itself.

# 4.2.2. A « Definiteness » Approach to the Syntactic Differences

The factive/pure propositional distinction seems to be of a fundamental semantic nature, given their distribution and properties; this is supported by the fact that the set of predicates that select factive complements and the group of those that select pure propositional ones constitute closed groups, as already observed by K&K <sup>10</sup>. The fact that non-factive predicates do not allow their complements to be presupposed strongly indicates that factivity is part of the selectional properties of the predicates, and does not derive from purely syntactic considerations.

The same conclusion is also supported by the incompatibility of propositional predicates and complements introduced by inherently factive expressions such as *the fact that*, even in cases where the propositional predicate checks Accusative Case [see K&K], or with any complement that cannot be non-factive, such as gerundival constructions.

- (33) a. \*John thought/believed [the fact that the earth is round].
  - b. \*John thought/believed [Mary going to the movies].

Finally, Elliot (1974) and Grimshaw (1977) observe that only factive predicates allow exclamations.

- (34) a. Bill knows how I suffered.
  - b. I found out what a rat he was. [Grimshaw 1977, ch. 3, ex. 53]
- (35) a. \*Bill assumed how I suffered.
  - b. \*I expected what a rat he was [Ibid., ex. (54)]

Given the different syntactic structure of exclamative complements, as compared to regular propositional CPs, this distribution strongly suggest that we are dealing with a property related to semantic selection.

Melvold (1989), extending a suggestion in previous works in the literature 11, characterizes the difference between factive and non-factive contexts as a difference in the definiteness of the complements. This possibility, more consistent with the general view of this paper than the Casetheoretic approach sketched above, would take advantage of the fact that factive complements share with DPs the property of being definite expressions, and associate this property to some syntactic feature of the construction. In the line of recent work on the syntax of scope of definite DPs and quantified expressions <sup>12</sup>, we could then assume that definite expressions, independently of whether they belong to the category C or D, must move to the specifier of a specific projection, which – following Beghelli & Stowell (1995) - could be called Ref(erence) P, where they take scope. If, as these authors argue, quantified expressions are selective with respect to the position they occupy at LF and if that position determines their scopal properties, the internal property that will determine what that particular position should be for each quantified expression must be of a syntactic nature. However, this syntactic property is clearly associated with a semantic property of the complement and, at least in some cases, required by the selectional properties of the matrix predicate.

#### 5. Conclusions

In combination, all the phenomena discussed through this paper present a picture where the position purely propositional complements occupy at LF is necessarily different from the position of factive complements: the impossibility of null complementizers with factive predicates – whether in ECM or *that*-less clauses – and the islandhood effects show that the sentential complement is forced to move from the complement position inside VP, making the incorporation of the  $\emptyset$ -affix impossible. On the other hand, tense dependencies of the type discussed in section 3 and Keyser-type phenomena in 2.4 support the need for a complementary requirement that forces non-factive complements to be within VP at that level.

In fact, this requirement forces the propositional complement to be interpreted within VP even when independent conditions have moved it to a higher position. For instance, when a purely propositional clause undergoes passive (A)-movement to a position outside VP, 'reconstruction' is forced to satisfy the LF-requirement for the propositional complement to be in VP, and the tense dependencies reappear.

In conclusion, this systematic distinction between factive and non-factive complements is what we expect from the point of view of the hypothesis proposed at the beginning of this talk.  $That/\emptyset_{Comp}$  clauses are assumed to have the same internal structure when they denote a fact or a proposition and, in particular, the semantic import of the complementizers is assumed to be the same in both cases. It is thus the position of the complement that will ultimately determine how the sentence is interpreted, thus whether the entire sentential complement is presupposed or not.

#### NOTES

- 1. The present paper has its origins in chapter 4 of my dissertation (Ormazabal 1995) and is part of the material I presented at the *Sentence Architecture-CP: the fine structure of the domain and the relation CP-IP*, held at the EHESS, Paris, Décembre 13th, 2002. I am grateful to the organizers of the workshop, especially to Hans Obenauer, for the opportunity they gave me to present this material, and to the Research Group *Typologie et universaux linguistiques* of the CNRS. I am particularly grateful to Rikardo Etxepare, Fernando García Murga and Myriam Uribe-Etxebarria for their helpful comments. This research was supported in part by the Basque Government grant number PI-1998-127, the Spanish Government grant number BFF2002-04238-C02-01, and the University of the Basque Country grant number 9/UPV 0033.130-138888/2001 to the Basque Center for Language Research (LEHIA).
- 2. For some recent examples see Asher & Lascarides (1998), Beaver (2001) and Kratzer (2002).
- 3. See Pesetsky (1992) and Ormazabal (1995) for discussion, and Boškovič & Lasnik (2003) for a recent analysis of null complementizer incorporation recasting Pesetsky's proposal in different terms.
- 4. There is one respect in which the statement in the text is not entirely accurate. In addition to their morphological differences, there is a second potential source for other distinctions, since *that* and the null complementizer might differ with regard to

the type of complement they select. Consider, for instance, the fact that there are no ECM-infinitives in English introduced by the overt complementizer *that*, an option that would be logically possible in the system developed here. Although it is not clear to me why this is not possible, the fact that the null complementizer and *that* differ in this respect is perfectly compatible with the general hypothesis in this paper, because infinitival and [+Tense] Tenses are not semantically equivalent, thus they may be selected by different heads.

- 5. There is an additional difference between these two predicate types that mirrors the ones in the text Uribe-Etxebarria (1994: ch. 3, fn 22) attributes this observation to Mamoru Saito (personal communication)-. This difference is related to the different degree of acceptability that results from topicalizing the complement of factive and propositional predicates, as the contrast in (ia-b) shows:
  - (i) a. That Mary was smart, I didn't say
    - b. ??That Mary was smart, I didn't think
- 6. See references in Ormazabal (1995, ch. 1) for discussion.
- 7. Notice that the DP/CP distinction with regard to Case-checking properties would reintroduce the old PF Case filter in the theory, although in somehow different terms. The descriptive generalization then, intended to derive from Visibility, would be as follows: «CASE FILTER: Argument NPs/DPs must check Case».
- 8. See Baker (1988), Uriagereka (1988, 1994), Koopman (1994) and references cited there.
- 9. See McCloskey (1991), Den Dikken (1993), Lasnik (1995), Groat (1999) and references cited there for discussion.
- 10. Of course, this does not preclude lexically ambiguous predicates, as discussed above.
- 11. See K&K, Karttunen (1973, 1974), among others.
- 12. See, among others, Beghelli (1995), Beghelli & Stowell (1995), and references cited there.

#### REFERENCES

- ABUSH, Dorit (1991). The present under past as a *de re* interpretation. *Proceedings of WCCFL* 10: 1-12.
- ASHER, Nicholas (1993). Reference to Abstract Objects in Discourse. Dordrecht: Kluwer.
- ASHER, Nicholas; LASCARIDES Alex (1998). The Semantics and Pragmatics of Presupposition. *Journal of Semantics* 15: 219-299.
- BAKER, Mark (1988). Incorporation Theory, Chicago: University of Chicago Press.
- BEAVER, David I. (2001). Presupposition and Assertion in Dynamic Semantics. Stanford: CSLI Pub. FoLLI.
- Beghelli, Fillipo (1995). The Phrase Structure of Quantifier Scope, UCLA PhD. Dissertation.
- Beghelli, Fillipo; Tim Stowell (1995). Distributivity and Negation: the syntax of *each* and *every*. In A. Szabolcsi (ed.), *Ways of Scope Taking*, Dordrecht: Kluwer Academic Press.

- Boškovič, Želko; Lasnik, Howard (2003). On the Distribution of Null Complementizers. *Linguistic Inquiry* 34-4: 527-546.
- Bresnan, Joan (1972). Theory of Complementation in English Syntax, MIT Ph.D. Dissertation.
- DEN DIKKEN, Marcel (1995). Binding, Expletives and Levels. *Linguistic Inquiry* 26-3: 347-354
- ELLIOT, D. (1974). Towards a Grammar of Exclamation. *Foundations of Language* 11: 231-246.
- GIORGI, Alessandra; PIANESI, Fabio (1997). Tense and Aspect. From Semantics to Morphosyntax. Oxford: Oxford University Press.
- GRIMSHAW, Jane (1979). Complement Selection and the Lexicon. *Linguistic Inquiry* 10-2: 279-326.
- Groat, Erik (1999). Raising the Case of Expletives. In S. Epstein & N. Hornstein, eds. *Working Minimalism*, Cambridge: MIT Press: 26.
- HEGARTY, Michael (1991). *Adjunct Extraction and Chain Configurations*. MIT PhD. Dissertation, Cambridge.
- KARTTUNEN, Lauri (1973). Presupposition of Compound Sentences. *Linguistic Inquiry* 4: 169-193.
- KARTTUNEN, Lauri (1974). Presupposition and Linguistic Context. *Theoretical Linguistics* 1: 181-194.
- KIPARSKY, Paul; KIPARSKY Carol (1970). Fact. In M. Bierwisch & K. Heidolph (eds.), *Progress in Linguistics*. The Hague: Mouton. [Reprinted in D. Steinberg & L. Jakobovits, eds. *Semantics. an interdisciplinary reader*, Cambridge: Cambridge University Press.]
- Koopman, Hilda (1994). Licensing Heads. In D. Lightfoot & N. Hornstein, eds., *Verb Movement*, Cambridge: Cambridge University Press: 261-296.
- Kratzer, Angelika (2002). Facts: particulars or information units? *Linguistics and Philosophy* 25: 655-670.
- LASNIK, Howard (1995). Case and Expletives Revisited: On Greed and other human failings. *Linguistic Inquiry* 26: 615-633.
- McCloskey, James (1991). *There, It* and Agreement. *Linguistic Inquiry* 22-4: 563-567.
- MELVOLD, Janet (1989). Factivity and Definiteness. In MIT Working Papers in Linguistics 15, Cambridge: MIT.
- OGIHARA, T (1995). Double Access Sentences and Reference to States. NLLT 3: 177-210.
- ORMAZABAL, Javier (1995). The Syntax of Complementation: on the connection between syntactic structure and selection. University of Connecticut PhD. Dissertation.
- Ormazabal, Javier; Uribe-Etxebarria, Myriam (1996). Sobre la construcción de la estructura sintáctica: la sintaxis del tiempo y los tipos de cláusulas complement. *Interlingüística* 4.
- PESETSKY, David (1992). Zero Syntax II: Infinitival Complements. Manuscript MIT.
- Postal, Paul; Pullum, Geoffrey (1988). Expletive Noun Phrases in Subcategorized Positions. *Linguistic Inquiry* 19-4: 635-670.
- Rizzi, Luigi (1990). Relativized Minimality. Cambridge: MIT Press.

ROCHETTE, Anne (1988). Semantic and Syntactic Aspects of Romance Sentential Complementation. MIT Ph.D. Dissertation.

STOWELL, Tim (1982). Origins of Phrase Structure. MIT PhD. Dissertation.

STOWELL, Tim (1993). The Syntax of Tense. Manuscript, UCLA.

URIAGEREKA, Juan (1988). *On Government*, University of Connecticut Ph.D. Dissertation.

URIAGEREKA, Juan (1994). Comments on the Paper by Koopman. In D. Lightfoot & N. Hornstein (eds.), *Verb Movement*, Cambridge: Cambridge University Press: 297-304.

URIBE-ETXEBARRIA, Myriam (1994). *Interface Licensing Conditions ons Negative Polarity Items: a theory of polarity and Tense interactions*, University of Connecticut Ph.D. Dissertation.

VENDLER, Zeno (1967). *Linguistics and Philosophy*. Ithaca: Cornell University Press. WILKINSON, Robert (1970). Factive Complements and Action Complements. *Chicago Linguistic Society* 6: 425-444.

ZUCCHI, Alessandro (1993). The Language of Propositions and Events. Issues in the Syntax and the Semantics of Nominalization. Dordrecht: Kluwer.

#### RÉSUMÉ

Cet article analyse l'observation de Kiparsky et Kiparsky (1970), selon laquelle il existe une corrélation profonde entre la syntaxe et la sémantique des compléments factifs à la lumière d'un large ensemble de phénomènes déjà connus et nouveaux : l'incompatibilité des compléments à marquage de cas exceptionnel et sans complémenteur that avec les prédicats factifs, les effets d'îlots faibles, l'incompatibilité des compléments purement propositionnels avec les verbes contenant des préfixes aspectuels (RE-, DIS-), les restrictions sur la concordance des temps dans les contextes propositionnels. Je propose qu'il existe une différence structurale entre compléments propositionnels et factifs relative à la position syntaxique qu'ils occupent, différence qui rend compte des phénomènes syntaxiques discutés ici, et qui fournit en même temps une base solide pour l'expression de la différence sémantique présence vs absence d'une présupposition – entre les types de compléments : les compléments factifs apparaissent, en FL, à l'extérieur de VP, tandis que les compléments propositionnels doivent occuper leur position «de base» à l'intérieur de VP.

#### Mots-clés

Factive, précupposition, proposition, sélection du complémenteur, complémenteur zéro, affixation d'éléments zéro, interface syntaxe-sémantique, interactions entre temps et prédicats, concordance des temps.