MOOD AND COMPLEMENTIZER DELETION

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This paper presents a new analysis of complementizer deletion phenomena, focusing in particular on that-deletion in English. More specifically, I propose that in English, when a certain specific mood is projected up onto CP, that-deletion is disallowed, and vice versa. It is argued extensively that despite some differences in the way mood-marking is coded, the same analysis also holds for other languages. In addition, assuming that the definition of mood can be extended to the domain of intersentences, a certain specific mood is involved in the unavailability of complementizer deletion in constructions with factive, response-stance, and manner-of-speaking verbs.*

Keywords: mood-marker, projection, that-deletion

1. Introduction

The goal of this paper is to derive the distributional properties of complementizer deletion from their interaction with certain moods of the complement, focusing in particular on that-deletion in English. In recent work complementizer deletion has attracted some attention in terms of economy of derivation on the one hand (Doherty (1997)) and economy of representation on the other (Bošković (1997), Grimshaw (1993, 1997)). In principles-and-parameters theory, the ECP (Empty Category Principle) provided a principled account of some restricted phenomena. However, these analyses do not adequately explain a

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wide range of data concerning that-deletion, nor do they shed any light on a typological perspective. Thus, a convincing analysis has not yet been proposed. How then can we show the relationship between that-deletion in English and its equivalent in some other languages while simultaneously accounting for the differences? This question will be answered in this paper following a semantic approach.

Organization of this work is as follows: Section 2 reviews Stowell's (1981) earlier analysis in terms of the ECP, highlighting certain problems. Section 3 proposes a new analysis which is shown in Section 4 to provide a principled account of a much wider range of English data, as well as accounting for related phenomena in certain other languages. Section 5 will examine an effect of negation, whilst Section 6 will reconsider how that-deletion interacts with the problem of parsing difficulties. The findings of this paper will be drawn together in a conclusion.


First, consider the following English examples (asterisks indicate unacceptability).

(1) a. The journalist said (that) the senator took a bribe.
   b. *(That) the senator took a bribe was obvious.

In (1a) that is optional whereas in (1b) it is not. In order to account for the contrast in (1), Stowell (1981) proposes that empty complementizers are subject to the ECP. In (1a) the empty complementizer is properly governed by the verb, but in (1b) a proper-governor is not available in any fashion. Under the ECP analysis, therefore, the contrast in (1) can be straightforwardly accounted for. In addition, Stowell observes that with manner-of-speaking verbs, that-deletion cannot simply be allowed. This can be seen in:

(2) a. Bill muttered *(that) Denny was playing too much poker.
   b. Bill sighed *(that) he was sick of not getting fed.

1 As an anonymous EL reviewer pointed out, there is a difference in acceptability between (1b) and (2). That-deletion in (2a-c) is more acceptable than it is in (1b). Similarly, that-less constructions are even less problematic with factive verbs as shown in (5).
c. Francine whispered *(that) we should turn down the stereo.  

(Stowell (1981: 398))

Stowell argues that *that*-clauses with manner-of-speaking verbs cannot be topicalized nor passivized, as shown in (3) and (4):

(3)  
a. *That Denny was playing too much poker, which Bill muttered, ....  
b. *That he was sick of not getting fed, I think that Ben sighed.  

(4)  
a. *That Denny was playing too much poker was muttered by Bill.  
b. *That we should turn down the stereo was whispered by Francine.

(Ibid.)

Stowell argues, then, that the facts in (3) and (4) show that *that*-clauses with manner-of-speaking verbs are syntactic adjuncts, not arguments selected by the verb. Therefore, the empty complementizers fail to be properly governed, in violation of the ECP. The ungrammaticality of *that*-deletion in (2) can also be straightforwardly accounted for.

However, under the ECP analysis, there are some examples that cannot be explained. Consider the following examples:

(5)  
a. I request *(that) John be given the leave to go.  
b. The Selection Committee may insist *(that) he resign by the end of September.  
c. John regrets *(that) he betrayed his secret.

As (6) and (7) show, the *that*-clauses in (5) can be topicalized or passivized.

(6)  
a. That John be given the leave to go, I request.  
b. That he resign by the end of September, the Selection Committee insisted (on).  
c. That Bill betrayed his secret, John regretted.

(7)  
a. That John be given the leave to go has been requested by the school authorities.  
b. That he resign by the end of September may be insisted (on) by the Selection Committee.

2 According to my informants, the styles in (6) and (7) are old, used in a poetic context.
c. That Bill betrayed his secret was regretted by all of the students there.

Since (6) and (7) are acceptable, under the ECP analysis, it is incorrectly predicted that the examples in (5) should allow that-deletion to occur. However, the facts in (5) show that they do not.

3. Proposal

3.1. A Minimalist View

Before launching into a new analysis, a comment on the operation “deletion” is in order. It has tacitly been assumed in the literature that the operation of deletion exists.\(^3\) Chomsky (1995: 267) argues that a derivational approach is possible only where there is a morphological reflex, as is the case when wh-movement occurs in a successive-cyclic fashion. In fact, as Collins (1993) shows, Irish and Ewe provide strong empirical support for the derivational approach. In light of this, it would seem that there is less evidence for that-deletion than there is for successive-cyclic wh-movement. However, as Chomsky (1995: 267) states, it still remains unclear whether such a morphological reflex accidentally occurs. In this paper we assume that the operation of “deletion” does exist.\(^4\)

3.2. A New Analysis

It has implicitly been assumed until now, at least within generative grammar, that the manifestation of complementizers is identified as clause-typing. (See Chomsky and Lasnik (1977), Cheng (1991), Inada and Imanishi (1997).) Clause Type is determined by a property present in the head of CP (C\(^0\)) (details omitted):

(8) a. Interrogatives

I wonder [CP who [C\(^0\)+Q] [IP you met]]

\(^3\) The question of where the operation “deletion” takes place has remained controversial for the past two decades.

\(^4\) An anonymous EL reviewer suggests that there is a possibility of PF-deletion. However, under the analysis that I am proposing, that-deletions are operative at LF as in the overt syntax, which is inconsistent with minimalist assumptions. As this same reviewer suggests, if complementizer deletion takes place at PF, then the operation assumes in effect that a PF operation can refer to the result of a covert I-to-C movement at LF.
b. **Exclamation**

\[
[CP \text{ How nice } [C^0+\text{Exc}] [IP \text{ that is}]]
\]

c. **Imperatives**

\[
[CP \ [C^0+\text{Imp}] [IP \text{ Do it}]]
\]

We assume that the certain specific property present in $C^0$ is mood, which is a grammatical category that indicates a speaker's mental attitude toward a proposition. In fact, for example, mood marking in English is coded by syntactic devices such as word order; morphological changes on the verb, or phonological devices such as intonation, vowel or consonant length.\(^5\) (See Bhatt and Yoon (1991), Frajzyngier (1995), Palmer (1986).)

\(9\)

\(\begin{align*}
\text{a.} & \quad \text{I wonder if she would marry me.} \\
\text{b.} & \quad \text{Bill insisted that I should go there.} \\
\text{c.} & \quad \text{John asked Mary, "Would you like to come with me?"}
\end{align*}\)

In (9b) the modal auxiliary *should* expresses the mood of obligation. In (9a) and (9c), *if* and inversion, respectively, express the mood of questioning.\(^6\) As we will see later, a mood-marker in many other languages manifests itself as a complementizer. This might suggest that in marking some specific mood in a complement, the lexical acquisition of a complementizer is more economical than a syntactic operation.

We are now in a position to explain the distributional properties of *that*-deletion in English. Regardless of grammatical and semantic devices, a certain specific mood in a complement is, by nature, an indicator of marked status. It is, therefore, predicted that when a certain specific mood manifests itself as a complementizer, verbal morphology, or as a modal auxiliary, then *that*-deletion cannot be allowed. Our prediction is, in fact, borne out by examples such as the following:

\(10\)

\(\begin{align*}
\text{a.} & \quad \text{Bill knew (that) the teacher was lying.} \\
\text{b.} & \quad \text{Jack demanded *(that) the charge should go fifty-fifty.} \\
\text{c.} & \quad \text{I ask *(that) John be given the leave to go.}
\end{align*}\)

In (10b) and (10c), as *should* and *be* indicate, the complements have a marked mood of subjunctive. Then, the mood marked within the IPs is projected up onto the entire complement, i.e. CP. Thus, *that* bears

\(^5\) In this paper I will not deal with phonological devices.

\(^6\) I will take, following Frajzyngier (1995: 497), that *yes/no* or *wh*-questions are markers of interrogative mood, since [+Q] present in $C^0$ triggers subject-auxiliary inversion, or *wh*-movements.
semantic content, which explains why it cannot be deleted, for the deletion would violate the Recoverability Condition. In (10a), on the other hand, no specific mood is marked within VP or IP and *that remains a mere subordinator without any semantic content, hence allowing the deletion to occur.7 Thus, in English, there would appear to be two different types of *that.

Because mood takes scope over the entire clause, we will formulate a licensing condition below:

(11) Mood Licensing Condition (MOLC):

A modal element must raise overtly or covertly to C0 to be checked off by a modal operator in Spec of CP via a Spec-Head relationship.

In order for (11) to be licit, it must be independently motivated. In other words, evidence is needed to show that a modal operator is required in Spec of CP. Let us draw on some examples from French:

(12) a. Peut-être qu’il a fait cela.
    ‘Perhaps that he has done that’

b. Peut-être a-t-il a fait cela.
    ‘Perhaps has he done that’

c. *Peut-être qu’a-t-il a fait cela.
    ‘Perhaps that has he done that’

(Rizzi and Roberts (1996: 102))

In (12) peut-être is a modal adverb, which denotes an epistemic mood. It is compatible with que or inversion, but cannot simultaneously occur with both. Given the MOLC, in (12a) peut-être checks off the feature of mood in I that has covertly raised to que. In (12b), on the other hand, avoir (a), bound by the modal adverb, raises to C0, thus triggering inversion by virtue of the MOLC. In (12c) que-marking is incompatible with inversion-marking, since the two mark epistemic mood.

7 An anonymous EL reviewer points out that the problem remains as to why an option like (ib) below is not available in English:

(i) a. Jack demanded that the charge should go fifty-fifty.

b. *Jack demanded should the charge go fifty-fifty.

With respect to this problem, I have no clear answer now. However, it would be suggestive to say that the unavailability of (ib) can be attributed to the fact that embedded inversion in complement, not adjunct, positions is generally disallowed in English.
As a result, (12c) is ruled out by such a double-marking. Therefore, the legitimacy of the MOLC follows from French Complex Inversion.

3.3. A Typological Perspective

Let us turn our attention to some other languages. As in English, mood marking is crosslinguistically coded by syntactic devices such as word order or by morphological changes on the verb. Consider first Korean and Japanese examples as follows (underlines mine):

(13) **Korean**

a. John-i wa-ss-ta
   John-Nom come-Past-Decl
   ‘John came’

   Bill-Top John-Nom come-Past-Decl-Sub thinks
   ‘Bill thinks that John came’

(Bhatt and Yoon (1991: 42))

(14) **Japanese**

a. John-ga ki-ta
   John-Nom come-Past-Decl

b. Bill-wa [John-ga ki-ta to] omotta
   Bill-Top John-Nom come-Past-Decl-Sub thought
   ‘Bill thought that John came’

In (13) and (14) we can observe that Korean and Japanese are agglutinative languages and both possess a system of verbal affixes encoding mood. The fact that the mood markers appear in clause-final position indicates that they take scope over the complement clause. More interestingly, Polish has a morpheme which can be classified as a complementizer (underlines mine):

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8 As in English, there is a complementizer in Japanese that marks a certain mood. Observe the following:

   ( i ) a. Ano shibai-no omoshiro-katta koto.
       That play-Nom exciting-was Mood
       ‘How exciting that play was!’

   b. Natsuyasumi-wa mainichi hayanehayaoki-suru koto
       The summer break-Top every day keep early hours Mood
       ‘Keep early hours every day during the summer break’

In (i) *koto* occurs in clause-final position, implying a mood of exclamation or obligation.
In (15) it is observed that the complementizers represent two distinct categories of information: subordinator and mood-marker. In (15a) the sequence o-by expresses the deontic mood implying a wish. In (15b), on the other hand, the sequence ze-by expresses a mood of obligation. Again, it is obvious that the combination of the Polish complementizer with the morpheme as mood-marker has wide scope over the complement clause. Given the observation above, although the way in which mood-marking is grammaticalized is different, cross-linguistically a crucial property is shared. It is, then, predicted that when a certain specific mood is projected up onto a complementizer, as in English, it cannot be deleted and vice versa. In fact, the prediction is borne out by (16) (C/M, AUX/M, and VERB/M indicate that a complementizer, an auxiliary, or a verb respectively, carry a certain specific mood.):

<table>
<thead>
<tr>
<th>L1: Irish / Jacaltec / Kabre / Polish ...</th>
<th>C/M</th>
<th>AUX/M</th>
<th>VERB/M</th>
<th>DELETION</th>
</tr>
</thead>
<tbody>
<tr>
<td>L2: Spanish / French</td>
<td>O</td>
<td>O</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>L3: English</td>
<td>O</td>
<td>O</td>
<td></td>
<td>*</td>
</tr>
</tbody>
</table>


(17) Jacaltec

a. Xal naj tato chuluj naj presidente
said Art Comp will come Art president
‘He said that the president would come’

b. Xal naj chubil chuluj naj presidente
‘He said that the president would come’
According to Noonan (1985), while in (17b) chuluj implies that the information in the complement is accorded a high degree of credibility, in (17a) tato is used with complements about which there is some reservation on the part of the speaker or even outright disbelief. With the ne complementizer in (18a), there is an implication that the man ran, but in (18b) with zi there is no such implication. These facts show that a certain specific mood is involved in the complementizers. Hence, they have semantic content, yielding the impossibility of complementizer deletion.

Secondly, let us take a close look at L2. It is generally agreed that French and Spanish do not allow complementizer deletion to occur, with the exception of (19) and (20):

(19) **French**

a. Tu veux (que) je vienne? (=que je vienne?)
   You want (that) I come-Sjunct
   ‘I hope I will come’

b. Faut (que) je m’en aille? (=Faut-il que je m’en aille?)
   Must (that) I leave-Sjunct
   ‘Do I have to leave?’

(20) **Spanish**

a. Le rogo’ (que) fuese a Ca’diz.
   to him (she) begged (that) go-Sjunct to Cadiz
   ‘She begged him to go to Cadiz’

b. Temi’a (que) no lo denunciasen los vecinos.
   Feared (that) not it denounce-Sjunct the neighbors
   ‘I feared that the neighbors would not denounce it’

Note that in French and Spanish modal auxiliaries are not available. Instead, a main verb is substituted for them. When it is unmarked

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*In French it is possible to analyse a main verb, which carries some mood, as semi-auxiliary.*
with some specific mood, then, we predict that, by virtue of the MOLC, complementizer deletion should invariably be allowed to occur. In fact, however, it does not (Indi; indicative):

(21) French
   a. Je suis heureux *(qu)'il est parti avec nous.
      I am happy that he left with us

   Spanish
   b. Es bueno *(que) usted llega a tiempo.
      It is good that you arrive-Indi on time

((21b): Bosque (1990))

Any more than when some specific mood is marked:

(22) French
   a. Je suis heureux *(qu)'il parte avec nous.
      I am happy that he (should) leave with us

   Spanish
   b. Es bueno *(que) usted llegue a tiempo.
      It is good that you arrive-Sjntc on time

((22b): Bosque (1990))

Here, however, a question arises: Why is complementizer deletion possible only under circumstances like that shown by examples (19) and (20)? This might suggest that CP-structures in French and Spanish are different from some L₁ languages. In the next section we will take a closer look at CP-structures in the two languages.

4. CP-Structures

4.1. French and Spanish

In section 3.2, we have argued that in English there are two kinds of that: the one that has semantic content (marked with a specific mood) and the other that does not. We would like, as a first approximation, to suggest that complementizers can be decomposed into mood and clause-markers. Bhatt and Yoon (1991) and Bhatt (to appear) argue that the complementizers of the German and English type lexicalize/conflate the two: mood-marker and subordinators (in our term, clause-marker), while those of Yiddish, Icelandic, and Kashimiri do not, dissociating the two.¹⁰ The proposal we are making here is very much in

¹⁰ In order to account for both Asymmetric Verb Second language like German
the spirit of Bhatt and Yoon (1991) and Bhatt (to appear). We assume the structures schematized below (MP; mood phrase):

(23) a. Conflation-type (German/English)

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[C/M]-P (=CP)
          
Spec    [C/M]
          
[C/M]    TP

[+/-WH]
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b. Dissociation-type (Yiddish/Kashmiri)

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CP
   
C       MP
   
Sub Spec M'
   
M        TP

[+/-WH]
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(Inada (1998))

In light of the structures above, we find that *that* in English simultaneously conflates the two categories of information: mood and clause-markers. When some specific mood is projected up onto CP, it serves simultaneously as both mood and clause-markers, whereas when it is not, it is a mere clause-marker.

Now, there is a principled criterion that distinguishes between conflation and dissociation-type structures: the linear order of *wh*-phrases and *that*. Observe the examples below:

(24) French (non-literary)

a. Je me demande quand que Pierre arrivera.
   I wonder when that Pierre will arrive

and Parallel V2 languages like Yiddish, Icelandic, and Kashmiri in a principled way, Bhatt and Yoon (1991) and Bhatt (to appear) propose that the category known as “Comp” should be decomposed into mood-marker and subordinator.
Spanish

b. Bri preguntó que cuántas charlas planeaban
   Bri asked that how many talks were planning
   los estudiantes.
   the students

In (24) que precedes the wh-phrase in Spanish but not in French. A
wh-phrase is sensitive to mood since a [+wh] feature on C0 attracts the
wh-phrase to Spec of CP by Spec-Head agreement. Hence, the CP-
structures of French and Spanish are:

(25) a. [CP wh [C0 que] ...] (French)
    b. [CP que [ModP wh [M0] ...]] (Spanish)

(25) shows that French CP-structures are conflation-type, whereas the
Spanish counterparts are dissociation-type.

Given the dissociation-structures in Spanish, the subjunctive mood
marked within VP in (20), to be more precise, within V0 is projected
up onto M0 at LF, entering into a checking relation with a modal oper-
ator in Spec of MP by virtue of the MOLC. It follows, then, that que
in Spanish is a clause-marker, and we would expect que-deletion to
occur. The facts in (20) show that it does not. Note further that que-
deletion is highly restrictive under some circumstances in which predi-
cates implying volition, fear, and wish, which select for a mood of sub-
junctive on V0, as exemplified in (26) below (TP irrelevant, Op; oper-
ator):

(26) ..V ..[CP que [ModP Op [M0+Sjuct] [VP [V0]]]]

However, one might expect a problem to arise regarding a selectional
restriction; the scheme presented above does not satisfy the selectional
requirements of the matrix verb. But, M0, not que, does enter into a
selectional relation vis-a-vis the matrix verb, hence raising no problem.
At LF, V0 adjoins to M0, forming a [V+M0] complex. By virtue of
the MOLC, the [V+M0] complex is licensed. In this case, que does
not enter into LF interpretation. This is an undesired result.

The problem, then, is that we must prove that que does have seman-
tic content, undergoing an interpretation at the LF-interface when a
complement is unmarked with some specific mood. Compare first (27)
with (28) (IQ; indirect question, SQ; semi-question):

(27) Bri preguntó que cuántas charlas planeaban los estudiantes.

   ‘Bri asked how many talks the students were planning’

(28) Bri sabía cuántas charlas planeaban los estudiantes.

   (SQ)
‘Bri knew how many talks the students were planning’

(29) The students were planinng five talks.

According to Suñer (1991, 1993), the use of *que* in Spanish can be a reflex of the distinction between *IQ* and *SQ*. In (26), without the mediation of *que*, the sentence yields a declarative interpretation, for, given the situation in (29), (28) entails, for example, that Bri knows the students or the like. In (27), on the other hand, the presence of *que* induces a genuine *IQ*, asking for information. The contrast in (27) and (28) leads us to the conclusion that *que* does correspond directly to a specific meaning, hence deriving the impossibility of the deletion.

As for the French counterpart in (19), we can observe that the predicates are quite similar to the Spanish. Yet, as illustrated in (25), French CP-structures differ crucially from Spanish ones in that, as in English, the former conflates the two categories of information. Given the structure, we incorrectly predict that when some mood is projected up onto the CP, *que*-deletion should inevitably be allowed to occur. Because the matrix predicates in French typically select for a mood of subjunctive in a complement, we assume the following structure (Subj; subject):

\[
\text{(30) } \ldots V \ldots [CP \text{ Op } [C^0+Sjuct] [TP \text{ Subji } [T^0 \text{ VP } t^i [V^0]]]]
\]

Given the structure in (30), a *[V^0+T^0]* complex can be formed in the overt syntax. In order for the *V*^0* to carry mood, a *[V^0+T^0+C^0]* must be formed. However, under the analysis presented here, the surface word order cannot be derived. We will leave these puzzling facts open for further research.

### 4.2. Remaining Problems

In the preceding sections we have argued that complementizer deletion can be captured in terms of mood. However, there seem to be prima facie some phenomena in English that our proposal incorrectly predicts. Consider the following examples:

(31) a. John regrets *(that) he betrayed his secret.
    b. Bill admitted *(that) he was guilty.

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11 Inada and Imanishi (1997) argue that *que* in Spanish is a quotative marker.
12 An anonymous *EL* reviewer suggested that complementizer deletion is basically disallowed in both Spanish and French and that the verbs in (19) and (20) can exceptionally encompass the complementizers with some mood in one way or another.
c. Jack whispered *(that) the X-files were strictly confidential.

The matrix verbs in (31) are classified as factive, response-stance, and manner-of-speaking verbs, respectively. As exemplified in (31), they cannot allow that-deletion to occur. The problem is, then, that some specific mood does not appear to be involved in these cases.

When complementizer deletion is disallowed, as a starting point we have dealt mainly with subjunctive mood, which is projected up onto CP. However, what makes a complement marked is not necessarily confined to the mood. Revising the version of Nakamura (to appear), then, we assume that mood in English occurs as follows:

(32) (i) a. Indicative mood: [0]
    b. Indicative mood: [Op(FACT) / Op(TRUE)]

(ii) Subjunctive mood: [Op(+sjnt)]

Nontrivially, we take the moods of (ib) and (ii) in (32) to be specific moods, which are an indicator of a marked status. As we shall see, a mood of probability or possibility has the same status. In (32), for example, Op(FACT) indicates that there is a modal operator of FACT in Spec of CP in a complement. For the sake of generality, a comment on the assumption concerning (32) is in order. One might argue that to assume that the factivity or truth in the content of a complement constitutes mood would be bizarre under the standard analysis of mood. However, it seems plausible to say that the factivity or truth is a speaker’s mental attitude toward a proposition. Therefore, our claim would not be so unnatural.

Let us first consider factive verbs. As is well-known, the speaker presupposes that the content of the complement is a fact. Thus, the complement structure is schematized as in (33):

(33) Complement Structure in Factive Verbs:
    \[ V \ldots [CP \text{Op(FACT)} [C^n \text{that}] [IP [I] \ldots]] \]

In factive verbs the factivity of the complement is lexically ensured. The mood is lexically dependent, so to speak. Assuming the licensing condition in (11), again, we can straightforwardly provide a principled account of (31a). Some feature concerning mood, presumably in I^0, raises covertly to C^0, entering into a checking relation with the modal operator in Spec of CP. There is, in fact, empirical evidence that supports our analysis. According to Manzini (1997: 142), the property of factivity in Greek is realized as a specialized C^0, namely pou, as opposed to the ordinary declarative oti (underlines mine).
(34)  
  a. Jati nomizis oti aghorase i Maria to spiti.
     ‘Why do you think that Mary bought the house?’
  b. *Jati metaniose o Yanis pu aghorase to spiti
     ‘Why did John regret that he bought the house?’

This morphological reflex of factivity in Greek provides further support for the analysis presented here.13

Let us next consider response-stance verbs. With response-stance verbs some statement, which corresponds to the content of the complement, must be already present, and the speaker must think that it is true. In Bill admitted that he was guilty, for instance, without the statement Bill was guilty, Bill might, or might not, admit it. Thus, the content of the complement is presupposed in the discourse concerned. The mood is discourse dependent. The complement structure will be as in (35):

(35) ..V.. [CP OP(TRUE) [C0 that] [IP [I] ...]]

As with factive verbs, once again, the fact that that is obligatory can be straightforwardly accounted for if we assume the licensing condition given in (11).

Let us finally consider manner-of-speaking verbs. This verb type seems to be involved with some mood, for root transformation is disallowed in that-clauses, as illustrated in (36):

(36)  
  a. *John whispered that never in his life did he dream of it.

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13 Ormazabal (1995) argues that the difference between factive and propositional complements with respect to that-deletion can be derived from the morphological properties of a zero-affix. Consider the paradigm below (0: zero-affix):

(i)  
  a. John believes that/0 [Max visited London].
  b. *Mary pointed out [0 [Sue wasn’t there]].

In (ib) the zero-affix, which heads the embedded clause, must be incorporated into the matrix verb in overt syntax by virtue of the Stray Affix Filter, a morphological requirement on affixes. Ormazabal (ibid.) assumes that the complement of a factive verb moves out of VP at LF, whereas those of propositional verbs do not. Then, after the incorporation has taken place in overt syntax, it leaves the trace of the zero complementizer in a position where it is not c-commanded by the head of the chain adjoined to the V, in violation of the Proper Binding Condition. In (ia), on the other hand, no problem arises. First, the that-less option, i.e. zero-affix, must be incorporated into the matrix verb as well. However, the trace is c-commanded by the head, since complements of propositional verbs do not move out of VP at LF. Second, the overt complementizer that is not an affix and so is not required to incorporate.
b. *Sue muttered that more important would be the daycare of children.

Root transformation syntactically ensures a negative emphasis or emphatic effect that fits smoothly into an information structure, and it is the assertive content that the speaker focuses on. Hence, as observed in (37), it is natural that the domain where it is applied is restricted to the complement of an assertive predicate.

(37) a. He claimed that never in his life had he seen such a crowd.

b. The inspector reported that each part he had examined very carefully.

In non-assertive predicates, on the other hand, root transformation cannot be applied. This can be seen in:

(38) a. *It was likely that never in his life had he seen such a crowd.

b. *I forgot that playing in the concert was a genius pianist.

Non-assertive predicates are characterized by a weak claim toward truth value of a complement, and, thus, probability or possibility is included in the semantic structure. Therefore, the fact that root transformation is disallowed leads us to the conclusion that with manner-of-speaking verbs, there is a mood of probability or possibility in Spec of CP.\(^{14}\)

The complement structure is schematized as (39):

(39) \( \ldots \text{V} \ldots [\text{CP Op(Probability/Possibility)} [C^0 \text{that}] [\text{IP [I \ldots ]}]] \)

Moreover, as Zwicky (1971) points out, the that-clauses with these verbs are interpreted non-factually. This means in our terms that there are also non-factive operators that prohibit root phenomena in manner of speaking verbs. By virtue of the MOLC in (11), it follows that that-deletion cannot be allowed with manner-of-speaking verbs.

\(^{14}\) An anonymous EL reviewer points out that there are some counterexamples to this claim, as observed below:

(i) a. "Do you think it's likely he'll make a confession at this stage?"

b. It was hardly likely the Hungarian had overlooked anything incriminating.

(Konishi (1989))

However, I have no answer now, leaving the issue open. Moreover, the same reviewer suggests that the unavailability of that-deletion with manner-of-speaking verbs is attributed to the fact that the manner is profiled, and that there is a different operator from Op(Probability/Possibility).
5. Effect of Negation

A further circumstance under which *that*-deletion is disallowed is when a matrix predicate is negated. Consider (40)–(42):

(40) a. Bill said (that) the teacher was lying.
   b. Bill didn’t say *(that) the teacher was lying.

(41) a. It’s clear (that) he did it.
   b. It’s unclear *(that) he did it.

(42) a. It’s true (that) they can’t help it.
   b. It’s untrue *(that) they can’t help it.

((41) and (42): Bolinger (1972: 39))

(40) shows a negation with *not* whereas (41) and (42) involve lexically incorporated negation. When a matrix predicate is negated, the selectional property of a complement can undergo change. Consider English and Icelandic examples:

(43) a. *I knew if the bartender was happy.
   b. Julie didn’t know if the bartender was happy.

(44) a. *It was obvious if the bartender was happy.
   b. It wasn’t obvious if the bartender was happy.

(45) Icelandic
   a.?*Eg veit hvort Jon er farinn.
      I know whether John has left
   b. Eg veit ekki hvort Jon er farinn.
      I know not whether John has left

(Adger and Quer (1997))

That the selectional property of a complement changes indicates that the mood of the complement undergoes change, for, as the facts in (43)–(45) show, the matrix predicates, which cannot select indirect questions, come to do so when they are negated. Since, in contrast to (43a)–(45a), in (43b)–(45b) the effect of negation enables [+Q] in C0 of the complement to be licensed, as a result of which *if* or *hvort* ‘whether,’ a lexical reflex of [+Q] is allowed. Given the observation above, even in (40b)–(42b), it seems plausible that the effect of negation shows up in one way or another. Therefore, the complementizers found in constructions like (40b)–(42b) are, at least, not a declarative marker.

With this in mind, let us take a closer look at (40b)–(42b). What (40b)–(42b) have in common is that one denies what the other affirms in general, which is irrelevant for the truth value in the complements.
Thus, when matrix (assertive) predicates are negated, the semantic structure of the complement can be represented as follows ((46a); not-negation, (46b); incorporated negation):

(46) a. NOT V [CP Op(Possibility) [C that ] ...]
    b. [V V-not] [CP Op(Possibility) [C that ] ...]

Regardless of the distinction between not- and incorporated negation, the negation of a matrix predicate has an effect on the content of the complement being presupposed, yielding the mood change. Hence, as shown in (46), we have good reason to assume that there is a modal operator of possibility in Spec of CP. Once again, the obligatoriness of that in (40b)–(42b) follows if we assume the MOLC.

Interestingly enough, correlating with the observation above is the fact that the negation of a matrix predicate seems to have a counter-effect since, although the matrix predicates are negated, that-deletion is allowed in constructions with semi-factive verbs:

(47) a. I didn’t know you’re that gullible. (colloquial)
    b. I didn’t know you did anything to be creative.

In semi-factive verbs, in general, the content of the complement undergoes two interpretations. Take, for instance, (48).

(48) I didn’t know that Mary was wrong.  
On one reading it is interpreted such that Mary was wrong but I didn’t know it. On the other it is also compatible with the situation that there is no fact that Mary was wrong, so I didn’t know about it. The complements in (47) are forced to take the latter reading. It follows, then that the complements in (47) have no presupposition that they are facts, indicating that there is no operator of Op(FACT). Under the analysis presented here, therefore, the facts can be naturally accounted for that that is unnecessary. Given this, the modal operator in semi-factive verbs is unspecified for factivity.

6. Interaction with Parsing

In the previous sections we have argued that when that serves solely as a clause-marker (i.e., no mood is projected up onto CP), that-deletion is possible. Under certain circumstances in which it is not licensed as a clause-marker, however, that-deletion is disallowed. Consider (49):

(49) a. She said *(that) never would she work so hard again.
b. Sue said *(that) more important would be the day-care of children.

As observed in (49), under the circumstance where inversion occurs in the positions that immediately follow *that, it is not licensed as a clause-marker. Under this circumstance, parsing difficulties seem to be involved, for, before we begin to consider the semantics, a clause boundary cannot be structurally parsed. Still yet other examples are:

(50) a. *She prayed next Wednesday that the check would arrive.

b. *We concluded in the future that he should be closely watched.

c. *We maintain in London that a nice flat is hard to find.

d. *John claims during the party that John threw a punch at Fred.

(Doherty (1997))

In (50) there are prepositional or (sentential) adverbial phrases intervening between the matrix verbs and complementizers, which are not arguments selected by the matrix verbs.

Note cases where (sentential) adverbs appear to the right of complementizers. Doherty (1997) argues that, assuming that the matrix verbs in (51) and (52) select CP, the contrast in (51) and (52) cannot be made since there is no structural difference between them.

(51) a. She prayed that next Wednesday the check would arrive.

b. We concluded that in the future he should be closely watched.

c. We maintain that in London a nice flat is hard to find.

d. John claims that during the party John threw a punch at Fred.

(52) a. *She prayed next Wednesday the check would arrive.

b. *We concluded in the future he should be closely watched.

c. *We maintain in London a nice flat is hard to find.

d. *John claims during the party John threw a punch at Fred.

(Ibid.)

Doherty concludes, therefore, that under the CP-hypothesis, the facts in (51) and (52) cannot be accounted for, which in turn suggests that
parsing difficulties are involved.\textsuperscript{15}

Moreover, in constructions with sentential subjects, a phenomenon that is subject to the ECP under Stowell’s (1981) analysis, \textit{that}-deletion is disallowed. Consider the following examples:

(53) a. *(That) the senator took a bribe was obvious.
    b. *(That) John was here surprised me.

In constructions like (53), there seem to be two factors involved: parsing difficulties on the one hand (Chomsky and Lasnik (1977)) and a certain mood on the other. In (53), when \textit{that}-deletion occurs, one cannot identify the clause boundaries. As for the latter factor, the content of a sentential subject is presupposed, showing that there is a modal operator of $\text{O}_{\text{P(TTRUE)}}$ in Spec of CP.\textsuperscript{16}

\textsuperscript{15} Doherty (1997) argues that the complements in (52) are IP, not CP. Given the IP status, the structure of (52) will be as in (i):\footnote{Doherty (1997) argues that the complements in (52) are IP, not CP. Given the IP status, the structure of (52) will be as in (i):}

(i) $V^0 [\text{IP Adverb [IP ...]}$

This can be straightforwardly accounted for if we assume the Adjunction Prohibition, first proposed in Chomsky (1986):

(ii) Adjunction Prohibition

Adjunction to a phrase which is s(emantically)-selected by a lexical head is ungrammatical.

In (52) it is IPs that are selected by the matrix verbs. Thus, they are excluded by the Adjunction Prohibition. In (51), on the other hand, it is CPs, not IPs, that are selected by the matrix verbs. The adjunction to the IPs are, therefore, possible.

\textsuperscript{16} Bošković (1995) deals with the possibility of \textit{that}-deletion in a different context. He notices the descriptive generalization that clauses, i.e. a maximal projection of the head that, need Case only when they function as subjects or undergo Topicalization, and attempts to derive the obligatoriness of that in both cases from interaction between the Greed Principle and Case Theory.

(i) a. [That Peter likes Mary] is surprising ti.
    b. [That John likes Mary] Peter believed ti. (Bošković (1995))

Given that \textit{that} is taken from the lexicon with Case-features, movement of the clause in (ia) is motivated by Case-checking of the moved element, which is in accordance with the Greed Principle. As for Topicalization in (ib), on the other hand, Bošković assumes the Minimize Chain Links Principle, which requires that chain links be as short as possible.

(ii) a. Each chain link must be at least of length 1.
    b. A chain link $\alpha$ to $\beta$ is of length $n$ if there are $n$ XPs that cover $\beta$ but not $\alpha$. (Chomsky and Lasnik (1993))

Given the Minimize Chain Links Principle, then movement within the matrix VP in (ib) is excluded. Thus, Spec, AgroP is a potential landing site for the clause. If the clausal head is taken from the lexicon with Case-features, movement to Spec, AgroP is motivated by checking of the Case-features of the clause.
7. Concluding Remarks

In this paper we have argued that complementizer deletion is disallowed in languages where the property carrying some mood is contained in a complementizer. The hypothesis follows from a more general principle of “economy of representation,” i.e. the Recoverability Condition, that an element with semantic content cannot be deleted. Therefore, our analysis is more general than that previously posited. In addition to handling a number of cases of complementizer deletion across languages, in constructions with factive, response-stance, and manner-of-speaking verbs in English, phenomena that appeared to be irrelevant for mood-marking, we have argued that a certain specific mood is involved in the that-complement and associated verb.

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