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SHIM, Ji Young, IHSANE, Tabea

Abstract
Most studies on the distribution of the null complementizers in English assume that overt that clauses and null that clauses have the identical underlying structure, where the overt/null COMP represents a C head (Stowell 1981, a.o.). This predicts that both overt and null that clauses show (nearly) the same syntactic distribution, contrary to fact. This paper explores a new outlook of overt and null complementizers in clausal complements of both non-factive and factive predicates in English, building on the assumptions that (i) feature specification on C differs from language to language and (ii) languages also differ as to lexicalizing a subset of these features on C. Adopting Rizzi’s (1997) split CP structure with two C heads, Force and Finiteness, we suggest that null that clauses are FinPs, whereas overt that clauses have an extra functional layer above FinP, lexicalizing either the Force head under non-factive predicates or the light demonstrative head d under factive predicates. These three different underlying structures also successfully account for different syntactic patterns found between overt and null that [...]

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English Overt and Null Complementizers* **

Ji Young Shim · Tabea Ihsane
(University of Geneva)

Shim, Ji Young, Ihsane, Tabea. English Overt and Null Complementizers. Studies in Generative Grammar, 27-3, 515-533. Most studies on English complementizer *that* assume that overt and null *that* clauses have the identical underlying structure, predicting they show (nearly) the same syntactic distribution, contrary to fact. This paper explores overt and null complementizers in clausal complements of both non-factive and factive predicates in English, building on the assumptions that (i) feature specification on C differs from language to language and (ii) languages also differ as to lexicalizing a subset of these features on C. Adopting Rizzi’s (1997) split CP structure with two C heads, Force and Finiteness, we argue that null *that* clauses are FinPs, whereas overt *that* clauses have an extra functional layer above FinP, lexicalizing either the Force head under non-factive predicates or the light demonstrative head *d* under factive predicates. These three different underlying structures also successfully account for different syntactic patterns found between overt and null *that* clauses in various contexts.

Keywords: (null) complementizer, factive, non-factive, clausal complements, main clause phenomena

1. Introduction

Since the seminal work by Kiparky & Kiparsky (1970), it has been generally

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** Abbreviations: ACC-accusative; COMP-complementizer; DAT-dative; DECL-declarative; DEM-demonstrative; DET-determiner; INT-interrogative; NEG-negation; NOM-nominative; PL-plural; PRES-present; PST-past; SG-singular; TOP-topic
assumed that the finite declarative complementizer (COMP) that can be omitted in clausal complements of non-factive verbs (e.g., believe, say, think), whereas it cannot be deleted in clausal complements of factive verbs (e.g., know, realize, regret) in English, as shown in (1).\(^1\)

(1) a. I believe/think/say (that) Mary doesn’t like linguistics
   b. I know/realize/regret *(that) Mary doesn’t like linguistics

Factive and non-factive clausal complements also behave differently regarding the so-called ‘main clause phenomena’ (MCP) or ‘root transformations’. While MCP are forbidden in factive complements, they are allowed in non-factive complements when the COMP is overt, but not when the COMP is null.

(2) a. *Nixon regrets that never before have prices been so high (Green 1976: 383)
   b. *Mary realizes that this book John read (Hegarty 1991: 52)
   c. *I regret that Mary my antics upset as much as they did (Alrenga 2005: 179)
   d. *John regrets that on the wall hangs a picture of Mao (de Cuba 2017: 2)

(3) a. I hope *(that) this book you will read
   b. She claims *(that) Guinness he likes but *(that) whiskey he hates
   c. This proves *(that) Cinque he’d read but *(that) Rizzi he hadn’t
   (Doherty 2000: 13)

This paper aims to develop an analysis of the distribution of the COMP that in (1)-(3). The central hypothesis is that overt that clauses and null that clauses have different underlying structures that result in different syntactic behavior. More specifically, we provide three different, yet closely related, underlying structures to represent (i) overt that non-factive complements (ForcePs), (ii) null that non-factive complements (FinPs), and (iii) factive complements (dPs). The proposed structures explain why the COMP can be optional in non-factive complements whereas it is obligatory in factive complements in (1), why MCPs are forbidden in factive complements in (2), and why the COMP is required for MCPs to be available in non-factive complements.

\(^1\) However, this long-held assumption between factive and non-factive verbs regarding the deletion of the COMP seems to blur in contemporary English (See Shim & Ihsane 2017). In this paper, we focus on the widely-accepted view that the COMP is obligatory in clausal complements of factive predicates and offer an explanation for why it is the case. For an explanation of COMP deletion in factive complements, readers are referred to Shim & Ihsane 2017.
The remainder of the paper is organized as follows. After we briefly discuss previous accounts of the distribution of null COMPs, which fail to explain distributional patterns of the COMP that, we propose an alternative account of clausal complements headed by the overt and null COMP in Section 2. Section 3 concludes the paper.

2. Overt vs. null complementizers

Most studies on the distribution of the COMP that have an overarching view that overt that clauses and null that clauses have an identical underlying structure, in which the COMP, either overt or null, represents a C head (Stowell 1981, Pesetsky 1991, Bošković and Lasnik 2003). Under this assumption, both overt and null that clauses are predicted to show the same or at least very similar syntactic distribution. However, this prediction is not borne out. As shown in (3), the presence of the COMP seems to play a pivotal role in the availability of MCP in non-factive clausal complements. To account for examples such as (3), Doherty (2000) argues against a unified CP analysis of overt and null COMPs and proposes that overt that clauses are CPs whereas null that clauses are IPs. Adopting The Adjunction Prohibition (McCloskey 1992), which forbids adjunction to a phrase that is s-selected by a lexical head, Doherty argues that IP adjunction (e.g., topicalization) is allowed in an overt that clause where the IP is selected by a non-lexical C head. On the other hand, IP adjunction is forbidden in a null that clause where the IP is selected by a lexical verb. This explains why the COMP must be present in (3).

While Doherty’s dual structures of overt and null COMPs account for MCP in non-factive clausal complements, they are still problematic for factive clausal complements, where MCP are unavailable despite the presence of that. To explain the unavailability of MCP in factive complements, researchers have proposed two contrasting views: (a) the structure of factive clausal complements is more complex than that of non-factive complements, where a nominal head selects a clausal complement (Kiparsky & Kiparsky 1970, Melvold 1991, Hegarty 1992, Haegeman 2014) and (b) the structure of factive clausal complements is simpler than that of non-factive complements and the limited syntactic behavior of factive complements is due to the simpler/reduced CP structure (Haegeman 2006, de Cuba 2007). However, what is still missing in the literature, to our knowledge, is an explanation for why the COMP is obligatory in factive complements.

Thus we propose an alternative structural analysis to explain a myriad patterns
of the English COMP *that* in both non-factive and factive complements and explain different syntactic behavior found in these contexts. Building on the views that (i) the structure of overt *that* clauses is more complex than the structure of null *that* clauses (Dorherty 2000), (ii) factive complements are nominal in nature (Kiparsky & Kiparsky 1970), and (iii) the structure of factive complements are simpler than that of non-factive complements (Haegeman 2006, de Cuba 2007), we propose the following underlying structures of clausal complements of non-factive and factive predicates with an overt COMP and a null COMP.

Non-factive complements

(4) a. \[[\text{ForceP} \text{ Force} = \text{that} \ (\text{Topic}) \ \cdots \ (\text{Focus}) \ [\text{FinP} \ \text{Fin} = \emptyset ]]]
b. \[[\text{FinP} \ \text{Fin} = \emptyset ]\]

Factive complements

(5) \[[d \ a = \text{that} \ [\text{FinP} \ \text{Fin} = \emptyset ]]]

The structures in (4) and (5) show that not only do non-factive and factive complements have different structures but also non-factive complements are distinguished further depending on the presence and the absence of the COMP *that*. We propose that overt *that* clauses are ForcePs and null *that* clauses are FinPs under non-factive predicates (4) by modifying Rizzi (1997), who proposes an articulated structure of complementizers in (6), where C is split into two functional categories, Force and Fin(iteness), between which Topic and Focus are optionally projected.

(6) Force \cdots (\text{Topic}) \cdots (\text{Focus}) \cdots \text{Fin} \ \text{IP}

Rizzi proposes that *that* represents Force in English whereas the null COMP originates under Fin. When there is no intervening head such as Topic or Focus, the Force-Finiteness system can be expressed on a single head, which can remain null or be spelled out as *that*, for economy reasons. When Topic or Focus is optionally projected between Force and Fin, the Force-Finiteness system must remain split, and Force is lexicalized by *that* and Fin realized by the null COMP. In summary, the COMP *that* can be base-generated on Force or Force-Fin, whereas the null COMP can be under Force-Fin.

According to Rizzi, the split CP structure is forced by the activation of Topic and Focus (p. 314). Thus, when a TopP or a FocP is projected, Force and Fin remain separate and Force is lexicalized by *that*, which explains why *that* is
present when MCP occur in non-factive clausal complements. On the other hand, if Topic and Focus are not activated (in other words, no MCP), a single head Force-Fin is projected, which, in principle, can be spelled out either as that or can be null. Since MCP are allowed in that clauses but prohibited in null that clauses, it seems that the Force-Fin head cannot be spelled out as that, but must be null in this case. However, it is not clear when the Force-Fin head can or cannot be spelled out as that in Rizzi’s proposal.

This approach seems to be more problematic when it extends to factive complements, where the COMP is obligatory but MCP are not possible. Since neither Topic nor Focus are allowed in factive complements, Force and Fin cannot be separate but must form a single head. While Force-Fin must be phonetically null in non-factive complements, it must be spelled out as that in factive complements. Since Rizzi himself does not discuss factive complements, we do not know how he would deal with this dilemma.

Thus we take the idea that the COMP that lexicalizes the Force head and the Fin head remains phonetically null, but abandon the projection of a complex Force-Fin head in (6). We further depart from Rizzi and propose that Force is not projected when the COMP is null, an idea hinted at in Rizzi and Shlonsky (2007, Section 9). Under this line of thought, we propose that non-factive complements have two different structures; overt that clauses are ForcePs and null that clauses are FinPs, as in (4a) and (4b), respectively. The proposal that ForceP is not projected when the COMP is null as in (4b) builds on the following assumptions: the Fin head contains a feature [+finite] or [-finite] as proposed by Rizzi in his original work, perhaps along with phi-features. Also a functional category may remain phonetically null if there is no lexical item to spell it out. Since English has no lexical item to spell out Fin with [+finite], the functional head Fin remains phonetically empty in finite embedded clauses. As for Force, it cannot be null because there is a lexical element that can spell it out, namely that.

Crucially, the structures in (4) provide a satisfying answer to why that is obligatory for MCP to be allowed in (3). In an overt that clause with the structure in (4a), Topic and Focus may be optionally projected between ForceP and FinP, allowing MCP. In a null that clause with the structure in (4b), on the other hand, we argue that Topic and Focus can be, in principle, projected above FinP, the view that we differ from Rizzi. However, when TopP and/or FocP are projected, they cannot be selected by a matrix predicate: Topic and Focus are projected optionally, expressing

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2 Alternatively, one may assume that Fin with [+finite] is spelled out as that, which raises on to Force (Roberts 2008). On this assumption, however, it is not clear how to account for a null COMP. It seems that Fin with [+finite] is then spelled out as that or phonetically null.

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the information structure of a clause. Thus, neither TopP nor FocP are qualified to be a complement of a predicate, which cannot be optional.

Rizzi suggests that the COMP delivers the information of the clausal type or the specification of force. However, this view is challenged by the fact that both clausal complements with and without the COMP that are interpreted as declarative in English. In other words, the COMP that itself does not mark declarative force. Our proposal that the COMP that originates under the head Force but declarative force itself is not delivered by the COMP suggests that declarative force is not encoded on the head Force per se. Then a question arises where declarative force is encoded in the structures in (4). We further argue that declarative is granted as the unmarked sentence type at the level FinP based on the observation that both overt that clauses and null that clauses are interpreted as declarative. Roberts (2008) argues that ForceP is either absent or inert in root declaratives, suggesting that root declaratives are the unmarked clause type. But ForceP is present in embedded clauses, in which the COMP that raises from Fin to Force. We take this view with modification and suggest that declaratives are the unmarked clause type both in root and embedded clauses in English. Thus, given the structures in (4), where overt that clauses are ForcePs and null that clauses are FinPs, this implies that declarative force may not be encoded on Force per se, but it is granted as the unmarked sentence type at the level of FinP. In contrast, information delivering other sentence types than declaratives, such as interrogatives, is encoded on Force by their relative features. For instance, if Force has a feature like Q or [+wh], it is spelled out as if or whether in English. On this assumption, the label of Force in (4a) seems to be misleading and needs to be reconsidered. We will nonetheless continue to use this label for expository reasons.

The view that the COMP that does not deliver the information of clausal type (pace Cheng 1991) or the specification of force (pace Chomsky 1995) can be bolstered by Korean. The COMP ko does not convey the force of the embedded clause, and the specification of force is marked by a separate

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3 This may not be universal across languages. While it is reasonable to assume that ForceP may be absent in English root declaratives, it is always projected in Korean, for instance, where a declarative sentence must be marked by a declarative morpheme -ta.

(i) Mari-nun yeppu-*(ta)
Mari-TOP pretty-DECL
"Mari is pretty"

(ii) Joon-i Mari-lul cohahan-*(ta)
Joon-NOM Mari-ACC like-PRES-DECL
"Joon likes Mari"
morpheme, the declarative marker -ta in (7a) and the interrogative marker -nya in (7b).4

(7) a. Joon-un [Mari-ka yachae-lul mek-ess-ta-(ko)] mit-ess-ta
   Joon-TOP Mari-NOM vegetables-ACC eat.PST-DECL-COMP believe-pst-decl
   ‘Joon believed that Mari ate vegetables’

b. Joon-un [Mari-ka yachae-lul mek-ess-nya-(ko)] mwul-ess-ta
   Joon-TOP Mari-NOM vegetables-ACC eat.PRES-INT-COMP ask-PST-DECL
   ‘Joon asked if Mari ate vegetables’

The above examples in Korean show that the COMP itself does not deliver the specification of force, and the structure in (4b) can still deliver the specification of force without the COMP. Thus, the role of COMPs seems to differ from language to language, and the left periphery of CP needs to be further investigated.5

Let us now turn to factive complements. We argue that the structures in (4) cannot represent the clausal complement of factive predicates. The structure for the null COMP in (4b) is not a possible underlying structure for factive clausal complements, for the COMP cannot be null. Also the underlying structure for an overt that clause in (4a) is problematic, for it fails to account for the absence of MCP in factive complements. If (4a) represented clausal complements of both non-factive and factive predicates, it needs an explanation for why Topic and Focus can be projected under non-factive predicates, but not under factive predicates.

Researchers have tried to account for the absence of MCP in factive complements and offered various accounts. One of the most influential work on this topic is by Haegeman (2006), who argues that the head Force is the locus of ‘speaker deixis’, which encodes the anchoring of the proposition to the speaker. Based on the fact that speaker-oriented adverbials are not easily compatible with factive complements, she further argues that speaker deixis is arguably lacking and the factive reading arises from the lack of speaker deixis. Based on this, Haegeman proposes a reduced/truncated CP structure for clausal complements of

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4 Shim and Ihssane (2016) propose that the COMP ko represents a functional category higher than Force, corresponding to Report as in Saito (2010).

5 A reviewer suggests that the possibility that ko is not a COMP but a link(er) that mediates between the main clause and the embedded clause should be explored. However, this is precisely one of the functions of a complementizer; it introduces a complement clause and links the matrix predicate/clause and an embedded clause. In fact, it is generally agreed in the literature that ko is a COMP and merges as a C head (Choe 1988, Ahn and Yoon 1989, Whitman 1989, Sells 1995).
factive predicates, where ForceP is not projected in (8). Assuming that Topic and Focus are licensed by speaker deixis (of the Force head), neither TopP nor FocP are projected when Force is missing in the structure.

\[(8) \text{that} \quad \text{Mod}^* \quad \text{Fin} \quad \text{Haegeman (2006:1665)}^7\]

What is crucial in (8) is that Force is not projected and the COMP that sits above Fin, but it is not clear where it is exactly located. While adopting Haegeman’s idea that the structure of factive clausal complements does not have a full-fledged CP, we would like to suggest an alternate structure in order to account for the fact that the COMP that is obligatory and MCP are not permitted in clausal complements of factive predicates. The structure in (5) represents factive clausal complements, repeated below.

\[(5) \quad [dP \quad \text{that} \quad [\text{FinP} \quad \text{Fin} = \emptyset ]]\]

The structure in (5) differs from the structure in (4a) in several ways. First, instead of a ForceP, a dP is projected above the FinP. While both the Force head in (4a) and the d head in (5) are spelled out as that, they are different in nature: we argue that that in (5) is a demonstrative and that in (4a) is a complementizer, which originates as a demonstrative (Roberts and Roussou 2003). Thus, the dP structure in (5) supports the widely-held view that the clausal complement of a factive predicate is nominal in nature (Kiparsky & Kiparsky 1970). In addition, the structure in (5) can also explain why that is obligatory under factive predicates. Assuming that a functional category may remain phonetically null only if there is no lexical item to spell out, and the fact that there is a lexical item to spell out the head d, namely that, it must be spelled out.

In (5) there is a D element preceding the clausal/FinP complement, which may seem odd at first glance. However, there are various cross-linguistic data

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6. De Cuba (2007) makes a similar proposal on the distinction between factive and non-factive complements: while non-factive complements have a full-fledged CP structure, cP and CP, which roughly correspond to ForceP and FinP, factive complements have a smaller structure, where the higher cP is not projected. He argues that the COMP that can merge either as the c head or the C head. However, it is not clear on what conditions that spells out c or C, and when it is not spelled out at all, leading a null COMP.

On the other hand, Basse (2008) maintains the view that ForceP is projected both in factive and non-factive complements, with its head being spelled out as that. The difference between factives and non-factives lies in the absence and the presence of an assertive feature on Force, respectively.

7. Mod stands for Modifier.
showing that a D element such as a determiner or a demonstrative may appear before a finite clausal complement.

(9) a. man mi-dun-am (in) ke Giti mi-a-d Persian
   I DUR-know-1SG DEM COMP DUR-come-3SG
   'I know that Giti is coming' (modified from Farudi 2007: 6)
b. (to) oti perase to ksero Modern Greek
   DET.ACC COMP passed-3SG it.ACC know-1SG
   'I know that he passed the exam' (Roussou 1991: 92)

The examples in (9) provide morphological evidence of a D element combining with a COMP in a clausal complement across languages. Thus, it gives us an indirect support to analyze factive clausal complements as the structure in (5), in which a \(d\) head takes a clausal complement.8

The view that a clausal complement may be optionally realized as a DP rather than a CP was postulated by Takahashi (2010), who proposes a covert determiner structure. Although English does not show an overt spell-out of a determiner or a demonstrative before the COMP that in a clausal complement, Takahashi claims that an English sentential complement is in fact a DP, in which the D head is realized by a covert determiner THE, as in (10).

(10) [DP THE [CP that …]]

The structure in (10), in which a null D head takes a CP complement, is in line with our view to analyze clausal complements headed by that as a nominal/\(dP\) structure. Yet, we limit this to clausal complements of factive predicates only, not those of non-factive predicates. In other words, we claim that non-factive complements are ‘clausal’ whereas factive complements are ‘nominal’, a prevailing view in generative linguistics (Kiparsky & Kiparsky 1970, Haegeman 2014, Hegarty 1991, Melvold 1991).

The structure we propose for factive complements, (5), also differs from (10), in that (i) the \(d\) head is not null but lexicalized by a demonstrative that and (ii) that is

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8 An anonymous reviewer mentions that for the examples in (9) to be more corroborative, the demonstrative selecting clausal complement should be limited to factive complements only. While we agree with the reviewer’s point and acknowledge that this is not the case (e.g., a demonstrative may precede a non-factive complement in Hungarian and Swedish), we emphasize that the main reason to show the cross-linguistic examples in (9) is to support the structure in (5), where a clausal complement is analyzed as a \(dP\) rather than a CP.
a weak, light demonstrative in the sense that it lacks phi-features. A strong
demonstrative that has a plural form those, showing phi-features/number agreement
with the following nominal element (e.g., that woman vs. those women). But that in
sentential complements has no plural counterpart, as exemplified in (11).

(11) we think that/*those you're wrong (Roberts & Roussou 2003, 112)

Our claim that that in (5) is a light or weak demonstrative lacking
phi-features can be further supported by cross-linguistic evidence from Korean.
While it is generally assumed in the literature that ko is a COMP and merges as
a C head, ko may be used as a demonstrative in modern Korean, which is
rarely, if not all, discussed in the literature. When it is used as a demonstrative,
however, it seems to lack phi-features in stark contrast to other types of
demonstratives. As shown in (12), Korean has three types of definite
descriptions/demonstratives: i ‘this’ (a proximal form), ku ‘the’ or ‘that’ (a neutral
form: close to the hearer or known to both the speaker and the hearer), and ce
‘that’ (a distal form). In (13b), ko may be used instead of the
demonstrative/definite marker ku.10

(12) a. i ai-nun cham yeppu-ta
this child-TOP really pretty-DECL
‘This child is really cute’

b. ku/ko ai-nun cham yeppu-ta
the/that child-TOP really pretty-DECL
‘The/that child is really cute’

9 There is a further difference when ko is used as a demonstrative, as a reviewer points out.
While the COMP ko is a suffix, attaching to a declarative marker -ta, for instance, the demonstrative ko
is not a suffix but an independent word, which needs an explanation. Korean is generally a head-final
language, and agglutinative in its morphology particularly in the verbal domain. Thus, it is expected
that the COMP ko, the head of the complement clause, occurs at the end of a sentence, as a suffix.
However, in the nominal domain, all noun-modifying elements precede the noun, showing the same
word order as in English, which is heavily head-initial. Thus, the demonstrative ko cannot occur as a
suffix. Ko could appear as a prefix instead, but noun-modifying elements are not agglutinative in
Korean.

10 An anonymous reviewer mentions that ko as a demonstrative is not very productive and its
occurrence is limited to handful of nouns, unlike that in English, which is not subject to this kind of
restrictions. Although it needs to be investigated further, we suspect that it is related to the fact that
ko is used as a diminutive form of ku. Thus, while examples such as ko ai ‘the/that child’, ko kungai
‘the/that puppy’, and ko cakun cip ‘the/that small house’ are possible, *ko eorun ‘the/that adult’ or *ko
khun cip ‘the/that big house’ are not accepted or sound marginal. On the other hand, that in English
does not have a diminutive variant, thus not showing such restrictions.
Similar to English demonstratives such as this and that, the demonstratives in Korean may be used as a pronoun and be inflected by the plural morpheme tul. What is striking is that unlike other demonstratives, ko cannot be inflected by the plural morpheme tul in (13b), which strongly suggests that ko is lacking its phi-features (Semoon Hoe, p.c.). Thus, the existence of the phi-feature lacking demonstrative ko in Korean, which is also used as a COMP in a clausal complement, supports our hypothesis that that is a phi-features lacking demonstrative in (5).

(13) a. i-tul
   this-PL
   ‘these people’

b. ku/*ko-tul
   the/that-PL
   ‘the/those people’

c. ce-tul
   that-PL
   ‘those people’

The structure in (5) captures two more characteristics of factive complements: that is obligatory and MCP are not allowed. As mentioned earlier, we assume that a functional category may remain phonetically null if there is no lexical item to spell it out. As English has a lexical item realizing d, namely that, d cannot be empty and it is spelled out as that in factive complements. As for the unavailability of MCP, we need to figure out what prevents Topic and Focus from being projected in (5). Assuming that the projection of Topic and Focus is optional above FinP, Topic and Focus should be allowed above FinP in (5). To explain why this is not the case, we build on Ilhane and Puskás (2001), who propose a split DP structure where two DPs, a Determiner Phrase and a Definite Phrase, correspond to ForceP and FinP in Rizzi’s split CP structure. Parallel to the clausal domain, Topic and Focus may optionally appear between DetP and DefP, as shown in (14).

11 Unlike plurality, neither person nor gender features are morphologically marked in Korean.
(14) DefP · · · (Topic) · · · (Focus) · · · DefP

Ihsane and Puskás argue that specificity and definiteness are separate notions, which are encoded on different functional heads, Topic and Def, respectively. Assuming that demonstratives have [+specific, +definite], they merge under Def and move up to Topic. Since Ihsane and Puskás do not employ phi-features in their nominal system, the role of phi-features with respect to movement of demonstratives is not discussed. Yet, if the distinction between strong and weak demonstratives holds real in English, and such as phi-features, the weak demonstrative that in (5) does not move in the course of derivation but remains in situ, due to the lack of certain features, such as phi-features, whereas strong demonstratives move further up to Topic (or even higher), this means that the $dP$ in (5) is lower than Topic and Focus. In other words, Topic and Focus may optionally appear above $dP$, not below it. As TopP/FocP cannot be projected between $dP$ and FinP in (5), MCP in factive complements are not possible, despite the presence of that. Yet, notice that topicalization is still forbidden above $dP$, as shown in (15).

(15) *John know/realize/regret vegetables that Mary doesn’t eat

The ungrammaticality of (15) is expected as TopP/FocP cannot be the highest projection of a complement clause, since they cannot be directly selected by the matrix predicate, as explained earlier to account for the unavailability of MCP in null that non-factive complements.

We mentioned that the structure in (5) is in line with the earlier approach to factive complements that factive clausal complements are nominal in nature. Kiparsky and Kiparsky (1970), for instance, analyze factive complements as a nominal structure where an abstract nominal head fact takes the clausal complements. Under a more recent DP analysis, this can be illustrated as in (16).

(16) [DP THE [NP FACT [[CP that · · · ]]]]

The structure in (16) is reminiscent of the so-called complex NP structure, except that the head noun fact and the determiner are not spelled out. The $dP$ structure in (5) and the DP structure in (16) may resemble each other on the surface. But (5) is significantly different from (16) in the sense that the former is a light $dP$ and the latter is a strong DP. We show that the light $dP$ in (5) exhibit some properties of DPs, yet it is still distinguished from a DP in several ways.
It is well documented that object extraction is marginally allowed out of factive complements (Hegarty 1992, Basse 2008, Melvold 1991), but it is not possible out of the complex NP structure (the complex NP constraint; Ross 1967), as shown in (17).

(17) a. *What did you regret [\(\text{\textit{that}}\) that John stole]? (Basse 2008:54)  
b. *What did you believe [\(\text{\textit{the}}\) claim that John stole]?  

Also factive complements and DPs are distinguished each other in terms of their distribution. While DPs can be complements of adjectives and prepositions, factive complements can only be complements of adjectives, but not prepositions (Haegeman & Ürögdi 2010).

(18) a. *John forgot about [\(\text{\textit{that}}\) Jane left too early] (H & Ü 2010:136)  
b. John forgot about [\(\text{\textit{the}}\) news that Jane left too early]  

Under a DP structure as in (16), such differences between factive complements and DPs cannot be accounted for. On the other hand, the light \(d\)P structure in (5) suggests that there is a difference between light \(d\)Ps and DP regarding their distributions and syntactic behavior. At the moment, we do not know how a light \(d\)P is further distinguished from a DP, and further research is required in order to understand the nature of \(d\)Ps in comparison with DPs.\(^{12}\)

3. Conclusion

We have postulated three different underlying structures of clausal complements of factive and non-factive predicates, to account for the distribution of overt and null COMPs and (un)availability of MCP with respective to the presence and the absence of the COMP. More specifically, we have proposed that (a) overt \(\text{\textit{that}}\) non-factive complements are ForcePs, (b) null \(\text{\textit{that}}\) non-factive complements are FinPs, and (c) factive complements are \(d\)Ps, repeated in (19a-c), respectively.

\(^{12}\) A reviewer asks how the light \(d\) head in (5) differs from the little \(d\) head in Larson (2014), a work we did not know. While we need to understand the details of this work, it seems that the \(d\)P structure in (5) differs from the Larsonian DP shell in two respects; in (5) the \(d\) head hosts the light, phi-feature lacking demonstrative \(\text{\textit{that}}\) and the \(d\) head in Larson hosts the determiner \(\text{\textit{the}}\). Also the light \(d\) head in (5) selects a CP whereas little \(d\) in Larson selects a DP, similar to \(v\) selecting VP. We thank the reviewer for mentioning this work.
The novel proposal that *that* is a lexical spell-out of an extra functional head above FinP, either Force under non-factive predicates or *d* under factive predicates whereas the null *that* clauses are FinPs provides an explanation for the distribution of overt *that* clauses and null *that* clauses outside sentential complementation. For instance, a sentential subject must be headed by *that* in (20).

\[(20)\]
\[
\begin{align*}
\text{a. } & *(\text{That}) \text{ Mary doesn’t eat vegetables is true} & \text{factive} \\
\text{b. } & *(\text{That}) \text{ Mary doesn’t eat vegetables turns out to be false} & \text{non-factive}
\end{align*}
\]

We take the view that a sentential subject headed by overt *that* is not at Spec, TP but occupies the matrix Topic position linked to a null DP at Spec, TP (Koster 1978, Alrenga 2005), as illustrated in (21).\(^{13}\) And the fact that *that* must be present in (21) can be explained by adopting a syntactic derivational approach to information structure in López (2009), where Topic and Focus are redefined as Anaphor and Contrast. López argues that syntactically dislocated constituents, such as left or right dislocates or hanging topics, are strong anaphors, having an antecedent in the previous discourse or the immediate context. Adopting this, we suggest that the element occurring in the Topic position should be a strong anaphor in order to be linked to an antecedent.

\[(21)\]
\[
\begin{align*}
\text{TopP } & [\text{ That Mary doesn’t eat vegetables], } [\text{TP DPØ, is true}]
\end{align*}
\]

Building on the observation that the COMP *that* originates as a demonstrative (Roberts & Roussou 2003), we argue that *that* lexicalizing the Force head in the structure of non-factive complements can be referential. To put it differently, both the weak demonstrative *that* in (19c) and the COMP *that* in (19a) are referential, which allows the clausal complements that they head to serve as Topic.\(^{14}\) On the other hand, the *that*-less clause in (19b) cannot be referential.

We conclude this paper by mentioning some puzzling data that seem to challenge our analysis of sentential subjects. It has been documented in the literature that MCP are not allowed in clausal subjects, as in (22).

\(^{13}\) Alrenga (2005) further argues that the null DP at Spec, TP is a thematic argument of the matrix predicate in the sentence.

\(^{14}\) The assumption that *that* is referential differs from the idea that clausal complements are referential (de Cuba 2007, 2017, Haegeman & Úrđi 2010. a. o.).
(22) a. *That this book Mary read thoroughly is true (Authier 1992: 332)
    b. *That Mary your antics will upset is obvious (Alrenga 2005: 179)

(22a) is a factive sentence, and the ban on MCP in the that clause can be
explained by the proposal that the sentential subject headed by the weak
demonstrative that is a dP, where MCP are not allowed.15 On the other hand, it
is not clear whether (22b) is factive or not. If it is not factive, similar to (20b),
the clausal subject is a ForceP, and MCP should be possible, contrary to fact. De
Cuba (2007) argues that only factive complements can appear in the subject
position, based on the examples in (23).

(23) a. [That there are porcupines in our basement] makes sense to me
    b. *[That there are porcupines in our basement] seems to me

If it is the case that only factive complements can serve as subject, as de
Cuba argues, the ban on MCP in clausal subjects can be easily explained by the
dP structure in (19c). However, we suspect that the contrast found in (23a) and
(23b) has nothing to do with factivity but is due to different syntactic behavior
of the matrix predicates, make sense and seem: seem does not allow raising of the
that clause from its underlying position. We leave this topic for future research.

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Ji Young Shim
Department of Linguistics
University of Geneva
24 rue du Général-Dufour
Geneva 1211
Switzerland

jiyoung.shim@gmail.com

Tabea Ihsane
Department of English
University of Geneva
24 rue du Général-Dufour
Geneva 1211
Switzerland

tabea.ihsane@unige.ch
