



Remarks on CP Complements to Nouns in English*

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ABSTRACT

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This paper proposes an RP-based analysis of the CP complement to nouns. The CP as predicate analysis of Moulton (2015, 2019) is compared to Hankamer and Mikkelsen's (2021, HM) analysis that adopts the division of CP complements to nouns into two types. It is argued that Moulton (2015, 2019) would need extra devices to deal with the two types of CP complements to nouns in English. The proposed analysis of this paper, led by the spirit of HM, is novel in that it captures HM's division in terms of the well-motivated relator phrase (RP). By adopting RP, we can overcome Moulton's problems, and dispense with potential problems of HM. RP and CP, as proposed in this paper (Wurmbrand 2021, Lohninger et al. 2022), can be nicely extended to deal with related phenomena of complementation of the factive/emotive verbs and the manner-of-speaking verbs, and recomplementation (or double *that*) in English.

KEYWORDS

CP complement, RP, complementation, complementizer, predicate, argument

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1. Introduction

It is well known that CP complements to verbs are different from those to nouns.

- (1) a. I believe [that John is innocent].
 b. My belief [that John is innocent]

Even though the CP [*that John is innocent*] seems to occupy the same position in (1), the apparent sameness does not hold in other contexts (Moulton 2015, 2019). For example, they diverge if the CP is replaced by *so* as shown below:

- (2) a. I believe so.
 b. *My belief so

A more interesting difference can be found in the obviation of Condition C as in (3c) below:

- (3) a. *Whose description [of John_i's face] does he_i hate most?
 b. Which book [from John_i's library] did he_i read?
 c. Whose claim [that John_i is guilty] did he_i refute?

(3a) shows that the reconstruction of the *wh*-phrase including an argument is the reason for the ungrammaticality, which is understood as a Condition C violation. (3b) shows that such reconstruction does not apply to an adjunct, obviating the Condition C. (3c) shows that the CP complement to nouns (*claim*) also obviates the Condition C in the same way as the adjunct PP in (3b). In this regards, it seems that the CP complements to nouns is not an argument of the preceding N head (Moulton 2015, 2019).

Based on the difference introduced above, this paper explores an explanation of the following contrast about the noun-complement CP constructions (NCP, henceforth) (Hankamer and Mikkelsen 2021):

- (4) a. This is a hypothesis which he made the claim that he had formulated himself on the basis of his earlier work.
 b. *This is a hypothesis which he resented the claim that he did not formulate himself.

The data point is that [*make the claim* + *that*-clause] allows the object of *that*-clause can be the head (or antecedent) of the relative clause as in (4a), but that [*resent the claim* + *that*-clause] does not as in (4b). At a first glance, this difference seems to be due to the lexical idiosyncrasy of *make* and *resent*, but a more careful scrutiny invites a deeper investigation of syntactic properties of NCPs. HM claims that the

contrast in (4) shows a closer resemblance to Bare DPs containing CP complements and Prepositional DPs containing CP complements distinction of Danish, which will be discussed in Section 3.

In this paper, Moulton's (2015, 2019) *CP as Predicate Hypothesis* will first be discussed to bring in an issue that it has some empirical problems of undergeneration. To overcome these problems, this paper proposes a new analysis adopting the notion of Relator Phrase (RP) of den Dikken (2006, 2021) (and later adopted by Wurmbrand 2021 and Lohninger et al. 2022), by which of Moulton's problems will be better explained as well as those of HM's. Additionally, the new analysis provides a better understanding of the complement clauses of factive and manner-of-speaking verbs, and the so-called recomplementation (Villa-Garcia 2012, Radford 2018).

2. Is the CP Complement an Argument or a Predicate?

This section reviews the *CP as a Predicate Hypothesis* of Moulton (2015, 2019), followed by HM's division of two types of CP complements to nouns. It will be discussed that Moulton (2015, 2019) would undergenerate some of HM's data.

2.1 CP as a Predicate Hypothesis

Moulton (2015, 2019) cast doubts about the traditional view that *that* CPs are simply selected by the matrix verb as its arguments, and argues that such CPs are actually its predicates. Let us call this *CP as a Predicate Hypothesis*. The following examples show that the CP complements are really different from the canonical DP complements. The first difference is concerned with the selection by adjectives.

- (5) a. I was aware that John left.
b. *I was aware that.

As shown above, adjectives can select CPs as a complement, but they cannot select DP complements. In addition, they show difference with respect to the selection by nouns.

- (6) a. rumors that John disappeared
b. *rumors John's disappearance

Nouns can take CP complements as in (6a), but not DP complements as in (6b). On the basis of these differences, Moulton emphasizes that CP complements to verbs are qualitatively different to CP complements to nouns (or adjectives). In fact, the literature on the nature of CP complements has been seriously studied in the generative tradition. Stowell (1981), for example, tried to derive the difference from the difference of Case assigning/taking properties. The basic consensus among linguists is that

complement CPs are not a full-fledged argument. Moulton (2015, 2019), based on Kratzer's (2006) study on the semantics of complements to nouns and verbs, argues that CP complements are not an argument but a predicate of $\langle e, t \rangle$ type. He divides CPs into two types: saturating CPs and non-saturating CPs. The former can saturate the argument requirement of a predicate if it comes in an argument position. The latter, on the other hand, being a non-saturator, cannot saturate the argument requirement of a predicate. According to Moulton, *that*-clauses in English are not a saturator, while ECM complement clauses are a saturator. The division is given below.

(7) CPs in English¹

- a. Non-saturating: English (Germanic) *that*-clauses
- b. Saturating: English ECM complements

The point here is that the former is a predicate to him. He provides at least two justifications for it.

First, nouns can select CPs as the complement, but it cannot select DPs as its complement without the *of* insertion for Case assignment.

- (8) a. The destruction *(of) the city. [N *(P) DP]
 b. The idea *(of) that Fred would leave. [N CP]

This is a piece of evidence that the CP complement to nouns are not an argument.²

Second, the CP complement to nouns behaves like modifiers rather than arguments with respect to binding:

- (9) a. *Which depiction [of John's_i face] does he_i hate most?
 b. Which book [from John's_i library] did he_i read?
 c. Which book [that John_i hated most] did he_i read?
 (10) a. The fact that [John_i has been arrested] he_i generally fails to mention.
 b. Whose allegation [that Lee_i was less than truthful] did he_i refute vehemently?

(9a) shows that a Condition C violation occurs when the PP involving *John* is reconstructed to its original position, where *John* will be bound by *he* in the subject position. If the PP is a modifier

¹ Traditionally, as a reviewer points out, ECM complements in English were considered as TPs. Moulton (2015, 2019) and this paper, however, take a different track from the traditional view that ECM complements in English are CPs from the saturability point of view. The two types of CP complements in (7) are not restricted to English, for sure, but applicable across languages. Korean *-ko* CP complements, for example, belong to non-saturating CPs.

² The examples below show that proposition-denoting arguments cannot be used as the CP complement to nouns.

- (i) a. He claimed that./*His claim of that
- b. I believe the story./*My belief of the story

rather than argument as in (9b), Condition C can be obviated as in (9b). The same situation holds for (9c), where the relative clause acts as a modifier with respect to Condition C obviation. Turning to the CP complements to nouns, the examples in (10) show that they are not different from (9c) in that they do not induce Condition C violation. (10b), in particular, shows that the CP complement does not bring about the Condition C violation even if reconstructed. With this evidence Moulton (2015, 2019) argues that his division in terms of saturability would nicely explain the properties of CP complements. Differently from *that*-clauses, ECM clauses can be the complements to nouns as an argument. The following examples show that *that*-clauses can be used as a modifier to N, but ECM clauses cannot.

- (11) a. the idea that Fred would leave
 b. *the belief (of) Fred to leave

The difference comes from the saturability. Being a saturator, ECM clauses cannot be a modifier to nouns as shown in (11b). On the other hand, (11a) shows that *that*-clauses, being a non-saturator, can be used as a modifier to nouns.

2.2. A Deeper Look at CP complements to Nouns

Moulton's claim, though fairly reasonable so far, has a undergeneration problem. This paper pays a particular attention to HM's (2021) scrutiny to the differences among CP complements. HM (2021) suggests that the CP complements to nouns in English can be divided into more subtypes in much the same way as those in Danish. They divide the CP complements to nouns in Danish into two types: one with a preposition before CP and the other without. The latter is called the bare DC (BDC, bare CP complements to D), and the former the prepositional DC (PDC). BDC has the properties of reference-establishing CP complements to nouns, while PDC has the properties of anaphoric CP complements to nouns).³ To put it simply, HM's division can be conceptually represented as below:

- (12) a. the idea that-clause (BDC)
 b. the idea about that-clause (PDC)

According to them, the Danish BDCs correspond to the reference-establishing DCs, while PDCs to the

³ The division of reference-establishing and anaphoric CPs comes from Hawkins (1978: 131).

- (i) What's wrong with it? Oh, the woman he went out with last night was nasty to him. (3.16)
 (ii) a. The woman was nasty to him. (3.17)
 b. The woman who's from the south was nasty to him. (3.18)

He differentiates the relative clauses in (i) from those in (ii). The definite article in the relative clause in (i) is used for the first mention of the woman. In contrast that in the examples in (ii) are in need of previous mention of a woman. Hawkins call (i) having the reference-establishing use the relative clauses, and (ii) having the anaphoric use.

anaphoric DCs (Hawkins 1978). The following examples from Danish are known to correspond to each type of DCs. Note that the PDC has *om* ‘about’ before the complement DC.

- (13) den ide at ingefær gavner fordøjels-en (BDC)
 the idea that ginger aids digestion-DEF
 ‘the idea that ginger aids digestion’
- (14) en ide om at ingefær gavner fordøjels-en (PDC)
 an idea aboutthat ginger aids digestion-DEF
 ‘an idea that ginger aids digestion’

HM discusses a lot of syntactic differences between them. One clear difference is about the absence or presence of a preposition before the CP complement. (13) has no preposition but (14) has *om* ‘about’ before *at* ‘that’. This is why they call them BDC and PDC, respectively.⁴ They suggest that English also has such division as is shown in the following two different N+CP complements.

- (15) a. We hereby make the pledge that we will refrain from doing syntax.
 b. We broke the pledge that we would refrain from doing syntax.

For them, (15a) belongs to BDC, while (15b) to PDC. They propose that BDC is analyzed as involving head raising and PDC is formed with DP-adjunction as shown below:

- (16) a. BDC⁵
 $[_{dP} d [_{DP} NP [_{D'} D CP]]] \Rightarrow [_{dP} [d D d] [_{DP} NP [_{D'} t_d CP]]]$
- b. PDC
 $[_{DP} [_{DP} D NP] [_{PP} P CP]]$

In (16a), the head D moves up and adjoins to the functional category *d*. In (16b), there is no such movement but the CP complement, as the complement of P, adjoins to DP in the form of PP. Assuming these structural differences, they claim many different syntactic properties can be explained in Danish. Although they do not specifically show the structural difference for English, the following representations would conform to their line of reasoning.⁶

- (17) a. make $[_{dP} \text{the} [_{DP} [_{NP} \text{pledge}] [_{D'} [D t_{\text{the}}] [_{CP} \text{that} \dots]]]$ (BDC)
 b. break $[_{DP} [_{DP} \text{the pledge}] [_{PP} \emptyset_P [_{CP} \text{that} \dots]]]$ (PDC)

⁴ Actually, PDC is not their abbreviation but of this paper.

⁵ They use *De* for *D* with a subtle difference, but the distinction is not relevant in this paper.

⁶ They do not actually provide the structural analysis of English examples.

At first glance, the difference looks complicated, but the parallelism is clear in that (17a) has the same structure with BDC, and (17b) with PDC. The gist is that the *that*-clause after *make the pledge* is the complement of D, and that the one after *break the pledge* is the adjunct to DP under PP. This boils down to the distinction between complements and adjuncts.

HM's analysis has the following advantages. First, it explains why extraction is possible from the CP complements but not from the adjunct CPs, The following is reproduced from (4).

- (18) a. This is a hypothesis which he made the claim that he had formulated himself on the basis of his earlier work.
 b. *This is a hypothesis which he resented the claim that he did not formulate himself.

As was mentioned before, the movement of the null operator in the relative clause is possible in (18a), but it is not in (18b). This is because the former is the movement from a complement but the latter is from an adjunct. If we adopt the consensus that Adjunct Condition is real, the ungrammaticality of (18a) is understandable.

Second, as was also mentioned, extraposition of the CP complements is possible but such a rightward movement is not possible with the adjuncts.

- (19) a. They made the claim at the meeting [that the layoffs were absolutely necessary].
 b. ??They denied the claim at the meeting [that the layoffs were absolutely necessary].

Although not explicitly mentioned by HM, the ungrammaticality of (19b) is understandable from the fact that rightward movements cannot proceed leaving a preposition behind. Look at the following examples:

- (20) a. Which man_i do you want to talk to t_i?
 b. *I want to talk to t_i every day the man_i.

(20a) is all right with P-stranding leftward movements, but (20b) is bad with P-stranding rightward movements.⁷

Nevertheless, their proposal still has drawbacks as well. First, the preposition phrase, which is crucial for PDC, is not always overtly required.

- (21) a. *the belief (of) Mia to be the best
 (*the idea of that Mia is the best)
 b. the sight (of) Mia to be happy

⁷ Readers are referred to Drummond, Hornstein, and Lasnik (2010) for a possible explanation to it in terms of LCA.

Belief is a noun that takes arguments, but *sight* is not. The examples in (21) tell us that the presence of prepositions depend on the nature of the head noun. *Belief* cannot take *of* for its ECM complement, but nouns like *sight* can, as shown in (21b). This demonstrates that the presence of prepositions depends on more than one factor. If these factors cannot be identified more cautiously, HM's division would be on a shaky ground.

Second, with respect to ellipsis, CP complements are expected to be elided while CP adjuncts cannot, if ellipsis is done by the phase: a phase or its complement can only be elided (Bošković 2014).

- (22) a. John made one pledge [that he will keep his promises] yesterday and make another *e* today.
 b. John broke one pledge [that he will quit smoking] today and will break another *e* tomorrow.

HM would predict that (22b) would be degraded in comparison to (22a), but actually (22b) seems to have the same grammaticality status as (22a) even though the *that*-clause in (22a) is a complement but that in (22b) is an adjunct.

To wrap up, although HM have a lot of advantages, their proposal would need some extra device to take care of both advantage and disadvantage at the same time.

2.3. Moulton Redux

As was discussed before, Moulton (2015, 2019) says that the CP complements to nouns are non-saturating and therefore can be a modifier to nouns. His claim, however, has problems in explaining the properties of HM's two types of CP complements to nouns. In other words, regardless of whether the CP complement is a BDC or a PDC, they are assumed to be non-saturators and therefore they have no reason why they behave differently in their syntax. His analysis seems inevitably to have an undergeneration problem since the two CP complements are different with respect to grammaticality. To be concrete, Moulton will not be able to explain the following difference. First, extraction from the CP complements is possible but not from adjuncts as was discussed about (18), reproduced below:

- (23) a. This is a hypothesis which he made the claim that he had formulated himself on the basis of his earlier work.
 b. *This is a hypothesis which he resented the claim that he did not formulate himself.

Moulton will judge (23a) ungrammatical because the CP complement to the noun *claim* would count as a modifier, from which extraction is not possible in the same way as (23b) is ungrammatical. This is a serious undergeneration problem.

Second, extraposition from the CP complements are possible, but the rightward movement from the adjunct CPs are not.

- (24) a. They made the claim at the meeting that the layoffs were absolutely necessary.
 b. ??They denied the claim at the meeting that the layoffs were absolutely necessary.

Moulton would have a similar undergeneration problem as above with respect to (23). He would judge (24a) as bad as (24b) since they have the same syntactic properties as modifiers.

Next section proposes a revised HM's analysis and shows how this revision will explain Moulton's problems as well as HM's drawbacks.

3. Proposed Analysis

3.1. Further Observation

BDC and PDC have many more differences than those about extraction and extraposition (HM). First, they differ with respect to the indefiniteness of the head noun.

- (25) a. We made the/an allegation that the game was fixed. (BDC)
 b. We resented the/*an allegation that the game was fixed. (PDC)

BDC can be used with an indefinite article, but PDC cannot as shown above.

Second, they differ in taking possessives as the specifier of nouns.

- (26) a. *I hereby make Sue's claim that her pig can fly.
 b. We denied Sue's claim that her pig could fly.

BDC cannot have possessives but PDCs can.

Third, they also differ in the possibility of taking plural noun head.

- (27) a. I hereby make that allegation that they cheated on the exam.
 b. We resented that allegation that they cheated on the exam.
 (28) a. *I hereby make the allegations that they were cheating.
 b. I resented the allegations that they were cheating.

They can take a singular head noun without problems as in (27) but BDC cannot take a plural noun head while PDC can as in (28).

Fourth, they also differ in the possibility of noun incorporation.

- (29) a. Who did Kerry start [the/a rumor that Kelsey is fond of]?⁸
 b. *Who did Kerry start her rumor that Kelsey is fond of?
 c. *Who did Kerry start that rumor that Kelsey is fond of

Davis and Dubinsky (2003) argue that extraction is possible in (29a) because the verb *start* and the noun *rumor* are incorporated and therefore the DP becomes transparent to extraction. According to HM's differentiation of BDC and PDC, (29a) can be understood as a BDC in that the head noun can be either definite or indefinite. (29b) and (29c), on the other hand, have a PDC in that the head noun is either a possessive or a demonstrative. If this is the case, the extraction out of the embedded clause would become possible since there would be no barrier to block the movement out of DP. However, as for PDC (29b) and (29c), noun incorporation does not seem to have occurred and therefore extraction would not be possible.

Moulton (2015, 2019) would need an extra device to explain these differences since the two CP complements would have the same syntactic structure. This paper looks for a solution that aims to be more specific about the nature of *that*-clauses. For this, a phase-based concept of clauses will be considered seriously, and the RP (Relator Phrase) hypothesis will be considered seriously, which was proposed by den Dikken (2016 *et seq.*) and further developed by Wurmbrand (2021) and Lohninger et al. (2022). In particular, this paper proposes that a clause can be CP, RP, and the combination of the two (CRP) (Wurmbrand 2021 and Lohninger et al. 2022).⁹ The schematic representation for BDC and PDC are given below following HM's intuitive spirit:

- (30) a. make [_{dP} the [_{DP} pledge [_{CP} that ... [_{TP} ... (BDC)
 b. break [_{DP} [_{DP} the pledge [_{PP} Ø_P [_{RP} that ... [_{TP} ... (PDC)

This paper proposes that BDC has a direct CP complement to the head noun, and PDC has an adjoined PP under which is RP as the complement of the null P. In BDC, the determiner [_D the] head-raises to the higher functional head *d*, as is assumed by HM. This is shown in the following trees.¹⁰

- (31) a. ... make [_{dP} [_d the] [_{DP} [_{NP} pledge] [_{D'} t_d [_{CP} that ...
 b. ... break [_{DP} [_{DP} the pledge] [_{PP} Ø_P [_{RP} that ...

⁸ In contrast, if the verb is *hear*, which is not a causative, noun incorporation is not applied and therefore extraction becomes not possible.

(i) *Who did Kerry hear the rumor that Kelsey is fond of?

⁹ CRP is a category which is proposed to incorporate the dual properties of CP and RP by Wurmbrand (2021) and Lohninger et al. (2022). The exact terminology by Wurmbrand (2021) is CP.R as the combination of the two heads.

¹⁰ This paper assumes that D can be realized a null D in English.

In (31a), CP is the complement of the head D and RP is fully saturated by definition (den Dikken 2006, 2021). The examples given in (26-27) show that the restrictions on determiners in BDC come from the uniqueness interpretation of CPs. Since CPs are propositional, they are invariably unique. Anything unique cannot be plural, nor can combine with an indefinite, a demonstrative, or a possessive (HM).

While the specifier of CP has A' properties, the specifier of RP has A properties. Wurmbrand (2021) and Lohninger et al. (2022) introduce this new notion to differentiate the types of complement clauses across languages from the prolepsis point of view to be concrete.¹¹

The gist of the proposal is that *make the pledge* leads a *that*-CP as the complement of D, and that *break the pledge* leads a *that*-RP which is an adjunct in the form of PP. To repeat, the difference boils down to the difference between complements and adjuncts. Next section discusses the possible extension of the proposed CP/RP distinction to a wider range of CP complements.

3.2. Factive/Emotive Verbs and Manner-of-Speaking Verbs

The primary task of the typical complementizer *that* in English is to lead the embedded clauses.¹² This section discusses atypical properties of the complementizer *that* in English with respect to complementation. Look at the following:

- (32) a. John thinks that he loves Mary.
 b. John regrets that he loved Mary.¹³
 c. John quipped that he loved Mary.

The three sentences above show no difference when the complementizer *that* is canonically used for the embedded clause. However, they show a few remarkable differences with respect to omissibility.

¹¹ Readers are strongly recommended to view <https://youtu.be/yB4srmeoByY> for more concrete examples.

¹² It shows a variety of distributional properties in the embedded context. Radford (2018) lists the following examples:

- (i) a. (*That) he can't stand garlic
 b. I suspect [*(that) garlic, he can't stand (it)]
 c. *He says [garlic, that he can't stand (it)]
 d. I wonder [why (*that) he doesn't like garlic]
 e. (You'd never believe) [how much (*that) he hates garlic!]
 f. Garlic is something [(*)which] that he can't stand]
 g. He doesn't like gazpacho [because (*that) he can't stand garlic]

(ia) shows that it does not show up in matrix clauses. (ib) shows that when a topic is fronted in the embedded clause, *that* must be present. (ic-g) demonstrates that *that* should be the first element in the embedded clause, whatever may come as the first element before *that*.

¹³ More examples are given below:

- (i) a. John resented/hated *(that) Mary was ill. [factive/emotive verbs]
 b. John whispered/groaned/shouted *(that) Mary was ill. [manner-of-speaking verbs]

First, if *that* is omitted, they are reported to show a clear difference in grammaticality as in (33):

- (33) a. John thinks he loves Mary.
 b. *John regrets he loved Mary.
 c. *John quipped he loved Mary.

The regular attitude verbs like *think* allow *that*-omission without grammaticality difference, but the factive/emotive verbs like *regret* and the manner-of-speaking verbs like *quip* do not allow *that*-omission. About this division, Esterik-Shir (1992) divides verbs into the so-called bridge and non-bridge verbs. The former allows *that*-omission, but the latter does not. Questions naturally arise about the source of the difference: how to explain them and other related but maybe hidden links. This attracts a more scrutinized look at the nature of the complementizer *that*.

Second, extraction out of the embedded clause is not possible with factive/emotive verbs and manner-of-speaking verbs, while it is with regular verbs (Franks 2000, 2005).

- (34) a. What did Billy say [(that) he saw ___]?
 b. *What did Billy quip [that he saw ___]?

Non-bridge verbs do not allow the extraction of *what* out of the embedded clause but bridge verbs like *say* do. Franks proposes a PF-insertion analysis for this difference. According to him, *that* is inserted at PF after the bridge verbs, so it does not block any syntactic movement before insertion. In constraint, *that* is inserted at the syntactic component with non-bridge verbs and this is why it is obligatory in (34b). *That* naturally becomes a barrier to the extraction out of the embedded clause. His solution, however, bears some problems.

First, why do the two types of verbs require different components for *that*-insertion? What motivates the insertion of the same lexical item to differ by the types of the matrix verb? This stipulation needs more justification.

Second, it is not always the case that the insertion in the syntactic component blocks movements. There are many cases found in which the complementizer *that* blocks syntactic operations. One example would be the well-known anti-*that*-t effect in which the movement of the embedded subject (or its operator) is blocked in the presence of the complementizer *that*.

Third, there are more empirical challenges against Franks (2000, 2005). Consider the following examples from Radford (2018):

- (35) He quipped *(that) the assignments you do in a bilingual class, (%that) if you do them in one language, (%that) you shouldn't be expected to rewrite them in the other.

According to Radford (2018), while the first *that* is required after *quip*, but the second and the third *that* is awkward if it is inserted. Franks (2000, 2005) would need an extra device to explain why the PF insertion takes the complementizer positions into consideration such that the insertion to the first position is required but the second and the third positions are not.

In addition, examples are found without *that* even in clauses with *quip* kind of verbs (Radford 2018):

- (36) a. McCoy can certainly identify with original Tampa Bay Buccaneers coach John McKay, who, when asked about his team's woeful execution, famously *quipped* he was 'all for it'.
 b. Yup, one DU'er *quipped* they are the 'Green Tea-Baggers'.
 c. GOOD Morning Britain fans *quipped* they would turn OFF the show
 d. Kim Kardashian West has *quipped* she would be a better manager than her mother is.

Radford (2018) proposes an analysis that *quip* is derived from *make the quip*. This makes a barrier to extraction according to him. His analysis, however, has a problem from HM's point of view. HM predicts that *make the quip* would belong to BDC which allows extraction out of it. Look at the reproduced examples again.

- (37) a. This is a hypothesis which he made the claim that he had formulated himself on the basis of his earlier work.
 b. *This is a hypothesis which he resented the claim that he did not formulate himself.

When the object is extracted out of a relative clause that contains a BDC like *make the claim*, then the result is fairly good. This is contrary to Radford's (2018) prediction. What interests us more here is that the PDC like (37a) is grammatical. Radford (2018) has both under and over-generation problems. The proposed clausal structure of the present paper clearly differentiates the two different positions of the complementizer *that* as shown below:

- (38) a. ... quip [_{CP} that ... [_{RP} that ... (extraction impossible)
 b. ... think [_{RP} that ... (extraction possible)

The gist is that the embedded clause of *quip* is CP and that of *think* is RP. The former blocks extraction, but the latter does not. This is what the proposed analysis of this paper predicts.

3.3. Recomplementation

An additional phenomenon worth considering is that the presence of *that* can be multiple, as shown below (Radford 2018):¹⁴

- (39) a. My hope is [*that* by the time we meet *that* we'll have made some progress].
 b. I just wanted to say [*that* despite all these short term problems *that* they needed to keep in mind the needs of the poor].
 c. It's something [*that* off the pitch *that* we've got to help the players deal with].
 d. I put it to him [*that* with such a huge event and with so many vessels on the water, *that* safety should be the number one priority].

This is also known as recomplementation (Villa-Garcia 2012, Radford 2018). Compare the following contrast:

- (40) a. My hope is [*that* by the time we meet *that* we'll have made some progress]
 b. My hope is [*that* by the time we meet we'll have made some progress]

(40a) has two *thats*, while (40b) has a single *that*. If *by the time* in the embedded clause is a topic, then the highest *that* alone is enough to carry the intended meaning of the sentence as in (40b). In contrast, (40a) has two *thats*. What would be the meaningful analysis of recomplementation in English? The answer to this question is clear under the proposed analysis of this paper. If we adopt RP into the CP domain of the clausal architecture, two positions of double *that* are guaranteed.

- (41) ... V [_{CP} *that* [_{RP} *that* [_{TP} we'll have made ...]]]

As shown above, the head of CP and the head of RP can host each *that*. This is in line with the proposed structure for the factive/emotive and the manner-of-speaking verbs above.

So far, by introducing RP and CP distinction, more intuitively plausible analyses become possible about the seemingly unrelated constructions.

4. Conclusion

This paper has discussed the proper analysis of the CP complement to nouns. This paper compared the *CP as Predicate* analysis of Moulton (2015, 2019) with HM's analysis with respect to the division of CP complements to nouns and draw a conclusion that Moulton (2015, 2019) will need extra devices to deal with both PDC and BDC in English. The proposed analysis of this paper, led by the spirit of HM, is novel in that it captures HM's division in terms of the well-motivated relator phrase (RP). By adopting RP, we can overcome Moulton's problems, and may dispense with a potentially problematic PP in PDP of HM. RP, CP, (and their combination,) as proposed in this paper, can nicely extended to deal with related phenomena of complementation of factive/emotive and manner-of-speaking verbs, and

¹⁴ This is called recomplementation, which Villa-Garcia (2015) reports a lot of examples from Spanish and English.

recomplementation in English.

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Examples in: English

Applicable Languages: English

Applicable Level: Tertiary