TAKAHIRO HONDA

A NOTE ON THE EXPLETIVE *IT* AND THE SENTENTIAL SUBJECT CONSTRAINT *

1 INTRODUCTION

In this brief article, I will discuss the expletive *it*, which seems to have been less studied than the other English expletive (i.e. the expletive *there*) in the Minimalist literature. It is still a mystery why the expletive *it* exists or what it contributes to a derivation.

Investigating the true nature of the expletive *it* is also important for English language teaching. If Umehara's (2015) assumption that some EFL (English as a Foreign Language) learners tend to memorize or understand English lexical items by translating them into Japanese is correct, they might think that the expletive *it* corresponds to the Japanese pronoun *sore* 'it.' As the expletive *it* does not have a Japanese counterpart, this translation is deemed a probable equivalent of the English expletive *it*. However, this leads learners to misunderstand the English *it*; we thus need thoroughly examine this expletive.[1]

As seen below and based on Honda (2015a), I assume *it* to be the overt realization of D(eterminer), as in Fujita and Matsumoto's (2005) analysis of the expletive *there* (see also Sabel 2000), under the recent labeling theory (Chomsky 2013, 2015). I will show that this assumption can account for the contrast presented below:[2]

(1) a. *The teacher who that the principal would fire was expected by the reporters is a crusty old battleax.
b. The teacher who it was expected by the reporters that the principal would fire is a crusty old battleax. (Ross 1967: 241)

(2) a. *Who was [that the principal would fire *t*] expected by the reporters?
b. Who was it expected by the reporters that the principal would fire *t*? (Watanabe 2009: 137)

The ungrammaticality of (2a) is traditionally accounted for by the Sentential Subject

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[1] For the discussion of the method to teach the expletive *it*, see Honda (2015b).

[2] For simplicity, I will henceforth focus mainly on (2).

Constraint (SSC).

On the other hand, the sentence in (2b) is acceptable and has the same meaning as (2a). Then, we have two questions here: (i) Why do we have both (2a) and (2b), which have the same meaning? (ii) Why is only (2a) ungrammatical? We assume that the explanation of (2a)'s ungrammaticality and (2b)'s grammaticality clarifies what the expletive *it* is and what SSC is under the Minimalist perspective.

This paper aims to elucidate the syntactic derivation of (2b) and to account for why sentences like (2a) are impossible to derive.

This paper is organized as follows. Section 2 briefly reviews *wh*-movement in the recent Minimalist Program framework (Chomsky 2013, 2015). In section 3, I claim that there are two types of *that*-clauses. Section 4 proposes the syntactic structure for (2b), and I demonstrate that the proposed analysis can adequately explain the contrast in (2). Section 5 presents this paper's conclusion.

2 LABELING ALGORITHM IN CHOMSKY (2013, 2015)

2.1. Labeling and Phase Head Domains

In Chomsky (2013, 2015), labeling is the process of providing information required at the Sensory-Motor and Conceptual-Intentional interface. First, consider the following transitive verb construction:

(3) [C [$_{\alpha}$ Subj [T [(Subj) *v** [$_{\beta}$ Obj [V (Obj)]]]]]]

In (3), V inherits the φ-feature of *v**, which agrees with Obj. Although Merge (either External or Internal Merge) applies freely, only if Obj moves to SPEC-V, β can be labeled <φ, φ> by the agreeing feature. Otherwise, β cannot be labeled or interpreted at the interface because the root V is too weak to serve as a label. Thus, V must always be raised to *v**. Although V adjoins to *v**, it is *v** that affixes to the host. Thus, *v** is invisible to the labeling algorithm, which results in its de-phasing. β is then no longer a phase head domain, which means that Obj can be further raised to higher positions without violating the Phase-Impenetrability Condition (PIC, Chomsky 2000).

On the other hand, although T inherits the φ-feature of C and agrees with Subj as observed in the *v**-V relation, C is not an affix and is thus visible to the labeling algorithm.[3] Then, α is transferred and Subj cannot be raised further. Therefore, we observe the subject-object asymmetry at least in English, where T is weak. In the next subsection, we will see how this labeling algorithm contributes to explaining the ECP.

[3] Here, according to Chomsky (2015), English T is too weak to serve as a label just like V.

2.2. ECP in Terms of the Labeling Theory

As Chomsky (1995: chapter 3, fn. 19) points out that "the ECP will now reduce to descriptive taxonomy, of no theoretical significance," we need to reformulate the ECP under a framework conforming to the Strong Minimalist Thesis. In other words, we need to deduce the ECP from a minimum architecture.

By utilizing the labeling algorithm shown in the previous subsection, Chomsky (2013) shows an interesting explanation to the following ECP violation, which is known as the *that*-trace effect:[4]

(4) a. How many cars did they say that the mechanics fixed ____?
b. *How many mechanics did they say that ____ fixed the cars?
(Chomsky 2013: 47)

As shown in (4), the *wh*-phrase subject in a *that*-clause cannot be extracted, whereas the *wh*-phrase object can. It is also known that the subject can be extracted if the complementizer *that* does not appear, as seen in (5).

(5) How many mechanics did they say ____ fixed the cars?

Chomsky (2013) assumes that T inherits the Q-feature of C as well as its φ-feature. Therefore, the *wh*-phrase subject in (4b) does not need to raise to SPEC-T and stays at SPEC-T and its Q-feature agrees with the Q-feature on T, as shown in (6).

(6) ... they say [that [$_{\alpha}$ how many mechanics$_{i<Q>}$ [$T_{<Q>}$ [t_i *v** [...

In (6), α is labeled Q and the *wh*-phrase subject cannot be raised due to *that* (i.e. the phase head C). On the other hand, the *wh*-phrase object in (4a) never drops in at SPEC-T and can raise to SPEC-C because *v** is de-phased. This is why (4a) is grammatical but (4b) is not.

Next, let us consider why (5) is fine. Firstly, note that *that* is dropped in (5). There is thus no phase head preventing the *wh*-phrase from moving outside the embedded clause.

Accordingly, labeling and phasehood are key factors for *wh*-movement. In the next section, I will show that the abovementioned labeling algorithm can solve the questions in Section 1.

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[4] Chomsky's (2013, 2015) analysis, however, may introduce a new problem that cannot be accounted for with the contrast shown below:
(i) a. Who did John kill?
b. * Who John killed?
If we assume the deletion of C, we need to show why an Auxiliary-Inversion is possible in a matrix clause. I leave this question open.

3 ON *THAT*-CLAUSES

3.1. Two Types of That-*Clauses*

As we see below, a *that*-clause can appear in a Case position.

(7) a. It is likely that John loves Mary.
b. That John loves Mary is likely.
(8) a. *It is likely the story.
b. The story is likely. (Inada 1989: 42)

The (8a)'s ungrammaticality is attributed to the uninterpretable φ-feature on T or the unvalued Case feature on DP, as in (9).

(9) [C [$_{\alpha}$ T$_{<u\varphi>}$ [*v* [$_{VP}$ is [$_{AP}$ likely [$_{DP}$ the story]$_{<uCase>}$]]]]]

Under the labeling theory, (8a) is ungrammatical because T is weak and cannot be the label of α (see fn. 3). In contrast, (8b) is grammatical because α is labeled <φ, φ> due to the Internal Merge (IM) of DP at SPEC-T.

Suppose that (7b), which is referred to as the Sentential Subject Construction, can be analyzed like (8b), we can claim that *that*-clauses behave like DP and have both the interpretable φ-feature and the unvalued Case feature. I put aside (7a)'s grammaticality for the time being.

In some cases, however, *that*-clauses seem to avoid Case positions, as illustrated below.

(10) a. I'm certain of his honesty.
b. I'm certain (*of) that he is honest.
(11) a. John read the book quickly.
b. *John read quickly the book.
(12) a.?*Mary said [that she wanted to drive] quickly.
b. Mary said quickly [that she wanted to drive]. (Stowell 1981: 161)

With regard to (10)–(12), it seems that DPs appear in Case positions while *that*-clauses appear in Caseless positions. In (10a), the preposition *of* is inserted as a last resort repair strategy to save the otherwise Caseless DP. In contrast, the *that*-clause in (10b) rejects the *of*-insertion. In (11), the DP is required to move adjacent to the verb. This is naturally explained by assuming that the object of V is raised to SPEC-V, as shown in (13).

(13) $[_{v*P}\ v^*$+read$_j$ $[_{VP}$ $[_{DP}$ the book$]_i$ $[_{V'}$ quickly $[_{V'}\ t_j\ t_i]]]]$

However, this analysis cannot be applied to (12).

We thus reach the tentative conclusion that there are two types of *that*-clauses, one behaving like a DP while the other does not.

3.2. Categories of That-*Clauses*

To the best of my knowledge, few investigations have explored which syntactic category corresponds to *that*-clauses, which are usually considered as CPs. This analysis is of course on the right track, explaining a vast number of phenomena including the core cases of ECP like (4). The analysis, however, creates a further question of why DP-like and non-DP-like *that*-clauses exist.

To solve this question, I propose (14), based on Honda (2015a).

(14) *That*-clauses are (i) CPs or (ii) DPs, where D selects CP.

In addition to (14), I also assume (15).

(15) a. C does not bear any Case features nor any φ-features accessible from the outside.[5]
b. D bears an "uninterpretable" φ-feature and an unvalued Case feature.

The assumption in (15a) provides a natural explanation to (10)–(12). Since C does not have any unvalued Case feature, IM of a *that*-clause at the Case position is not required.

On the other hand, (15b) explains *there* constructions like (16b), as well as the Sentential Subject Construction like (7b).

(16) a. The ship appeared on the horizon.
b. There appeared a ship on the horizon.
(Fujita and Matsumoto 2005: 58)

According to Fujita and Matsumoto (2005), (16a) and (16b) are both derived from the following base structure:

(17) $[_{TP}$ T $[_{vP}$ appeared $[_{DP}$ $[_{D}$ the$]$ ship$]]]$

[5] C of course bears the φ-feature, which is usually inherited by T. The φ-feature mentioned in (15) is irrelevant to this φ-feature.

They propose that (16a) is derived if the whole DP (i.e. *the ship*) raises to SPEC-T. They further stipulate that (16b) is derived if only the D (i.e. *the*) raises to SPEC-T, where D is phonetically realized as *there*. Fujita and Matsumoto have not given a detailed analysis for this phenomenon, but I propose that D agrees with *n*P, as illustrated below:

(18) $\{D_{<u\varphi,\ uCase>}, [_{nP}\ ship]_{<i\varphi>}\} \rightarrow \{D_{<i\varphi,\ uCase>}, [_{nP}\ ship]_{<i\varphi>}\}$

I also assume (19).

(19) D is too weak to serve as a label.

In order for {D, *n*P} to be labeled, *n* must adjoin to D. This then causes the amalgam D-*n* to raise to SPEC-T and thus deriving (16a).[6] Here, D-*n* is the label of (18) and I propose that it is realized as *the*. Otherwise, D alone raises to SPEC-T. This gives SO {D, TP} the label <φ, φ> due to the agreement between D and T. This is how (16b) is derived. In this case, D is realized as *there*, and thus number agreement is always with the expletive's associate in *there* constructions, as in (20).

(20) a. There is *a man* in the room.
b. There are *men* in the room. (Chomsky 1995: 155)

As I assumed in (14), *that*-clauses can be DPs. I thereby propose (21) for the derivation of (7b).

(21) $[C\ [[_{\alpha}\ D\text{-}[_{C}\ that]_j\ [t_j\ John\ loves\ Mary]]_i\ [T\ [v\ [_{VP}\ is\ [_{AP}\ likely\ t_i]]]]]]$

In (21), C adjoins to D, which labels α "D-C." Note that in contrast to Merge (D, *n*P), Merge (D, CP) does not trigger an agreement between φ-features because C does not bear any externally accessible φ-feature, as assumed in (15a). I thus propose (22).

(22) a. Agreement between uninterpretable features results in a default agreement.
b. The default value of φ-feature in English is 3rd-person singular.

Therefore, the uninterpretable φ-feature of (21)'s matrix T agrees with the uninterpretable φ-feature of D-C, which results in a default agreement.

Next, let us consider situations where C does not adjoin to D. In this scenario, D

[6] Strictly speaking, D adjoins to *n* as in the relation between *v** and V. However, I still use the traditional notion that structurally lower categories adjoin to higher categories for expository purposes.

alone raises to the SPEC position of the matrix T, which gives SO {D, TP} the label <uφ, uφ> thanks to the default agreement between D and T. In this case, (7a) is derived. I assume here that the expletive *it* is the overt realization of D, which bears the uninterpretable φ-feature.

In summary, depending on its φ-feature value and what adjoins to it, D is realized as follows:

(23) a. $D_{<u\varphi>}$ ⇒ the expletive *it*
b. $D_{<u\varphi>}$-C ⇒ Ø-*that*
c. $D_{<i\varphi>}$ ⇒ the expletive *there*
d. $D_{<i\varphi>}$-*n* ⇒ the determiner *the*

Therefore, by assuming (23), we can account for the derivation of *it* expletive constructions, Sentential Subject Constructions, and *there* expletive constructions. Furthermore, (23) can also explain why two types of English *that*-clauses exist.

3.3. The Case-assignment of P

One might claim it is still possible for sentences like (24)(= 10b) to be derived if the *that*-clause is a DP.

(24) *I'm certain of that he is honest.

As seen in Section 2.1, the subject of a sentence is assigned Case by the C-T relation while the verbal object receives its Case through the *v**-V relation. However, it remains unclear how the prepositional object is assigned Case.

In this subsection, I suggest the following to explain P's Case-assignment:

(25) a. P bears unvalued Case feature [uCase].[7]
b. P is a phase head.
(26) a. Agreement between unvalued features results in a default agreement.
b. The default value of Case feature in English is oblique.[8]

Given that (25)–(26) are true, Merge (P, DP) causes both the P and the DP to be assigned an oblique Case. However, why is (24) ungrammatical?

Let us consider the derivation of (24). If the *that*-clause is a CP, [uCase] on the preposition *of* cannot be valued, which causes the derivation to crash. On the other

[7] I assume that the [-V] feature, which both P and N have, is related to the Case feature.
[8] According to Zushi (2015), the default Case in Japanese is dative Case. There may be some cross-linguistic relations in the default Case assignment, but I leave this for future research.

hand, if the *that*-clause is a DP, which is actually the amalgam D-C(P), the uninterpretable φ-feature on D cannot agree with any elements due to PIC although the unvalued Case features on P and D agree. Thus, regardless of the *that*-clause's category, sentences like (24) cannot be derived.[9]

4 A SOLUTION TO SSC

Based on the proposal in the previous section, I will now reformulate SSC under the labeling theory.[10]

Let us first address extracting *wh*-phrases from *that*-clauses in the object position. As shown in (27), this is a licit operation.

(27) The teacher who the reporters expected that the principal would fire is a crusty old battleax. (Ross 1967: 241)

The structure in (28) roughly shows the derivation of the *that*-clause in (27).

(28) $[_{CP}$ who$_{i<F>}$ $[_{C'}$ that$_{<uF>\rightarrow<F>}$ $[_{TP}$ the principal would fire $t_i]$

In (28), *who* raises to SPEC-C, agreeing with what Chomsky (2013: 47) calls "uF" on C. If (28) further merges with D, C adjoins to D. However, C will still bear the valued [F] feature, which will intervene between *who* in (28) and any elements outside of the DP. Thus, the *that*-clause in (27) must be a CP, otherwise *who* in (28) cannot be extracted.

If a *wh*-phrase stays at SPEC-C and further movement is unnecessary, the CP can merge with D, as in (29).

(29) $[_{\alpha}$ When John left] is still a mystery.

The label of α must be D-C. If the label of α were CP, the matrix T's uninterpretable φ-feature cannot agree with any elements, which causes the derivation to crash.

Next, let us consider why (30)(= 2a) is illicit.

(30) *Who was [that the principal would fire *t*] expected by the reporters?

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[9] With regard to the ungrammaticality of (12a), see Kuwabara and Matsuyama (2001).

[10] Watanabe (2009) claims that the SSC is subsumed by the Subject Condition. However, as Chomsky (2008) claims, the extraction from a subject is possible in some cases. Chomsky points out the following example:

(i) Of which car$_i$ was [the (driver, picture) t_i] awarded a prize? (Chomsky 2008: 147)

I do not discuss this matter here. For criticism of this claim, see Matsubara (2008).

The *that*-clause in (30) is an internal argument of the verb, as illustrated below:[11]

(31) [C [T [$_{v\mathrm{P}}$ expect [$_{\alpha}$ who [that the principal would fire *t*]]]]]

If α is a CP, then the derivation crashes because the matrix T's uninterpretable φ-feature cannot agree with any elements. However, even if we assume α to be a DP, it is impossible to derive (30). This is due to the valued [F] on C, which adjoins to D; it also intervenes between [uF] on the matrix C and *who*, which is confined in the *that*-clause.

Finally, let us clarify why (32)(= 2b), which seems to have the same meaning as (30), is fine.

(32) Who was it expected by the reporters that the principal would fire *t*?

As proposed in Section 3, the *that*-clause in (32) must be a DP since it contains the expletive *it*. Note that D requires either IM to the position where its φ-feature can agree or adjunction of C or *n*. In the derivation of (32), the D with the uninterpretable φ-feature raises to SPEC-T in the matrix clause, as in (33).

(33) [$C_{<uF>}$ [$D_{j<u\varphi>}$ [T [$_{v\mathrm{P}}$ expect [t_j [$who_{i<F>}$ [that the principal would fire t_i]]]]]]]

In accordance with (23a), $D_{<u\varphi>}$ is realized as the expletive *it*. Note that there is nothing intervening the agreement between [uF] on the matrix C and [F] on *who*. Therefore, *who* can be raised to SPEC-C in the matrix clause, as shown below:

(34) [$who_{i<F>}$ [$C_{<uF>}$ [$D_{j<u\varphi>}$ [T [$_{v\mathrm{P}}$ expect [t_j [t_i [that the principal would fire t_i]]]]]]]]

This is why (32) is fine whereas (30) is not. Consequently, we can deduce SSC from the labeling algorithm.

5 CONCLUSION

In this paper, I have reconsidered SSC under the labeling theory by assuming that the English expletives *it* and *there* are overt realizations of D. I have also revealed that two types of *that*-clauses exist; one is a CP, and the other is a DP. I have assumed

[11] I avoid detailed discussion of passive constructions' structure. I only assume here that an internal argument is raised to SPEC-T and is assigned nominative Case in the passive.

that D is not strong enough to be a label, and that D is overtly realized depending of the value of its φ-feature and what adjoins to it. This assumption can account for the core SSC cases.

In addition, we have found that there is a parallel between the expletives *it* and *there*. This finding under the labeling theory could be a stepping-stone to teach EFL learners the difference between the expletive *it* and the pronoun *it*. I assume that this difference can be instructed similarly to the distinction between the expletive *there* and the adverb *there*, but I leave this issue for future research.

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Takahiro Honda
t-honda@yg.kobe-wu.ac.jp