Feature Unison and *that*-Omission

Shouji Yamamoto

(Part time lecturer, Fukuoka International University)

bpshf169@yahoo.co.jp

1. Introduction

It is well known that the omission of the complementizer *that* (henceforth *that*-omission) is allowed in the complement sentence of a bridge verb. *That*-omission is, however, prohibited in various environments. Stowell (1981) classifies the clauses where *that*-omission is prohibited; i) sentential subjects, ii) complement clauses of manner-of-speaking verb (henceforth MSV), and iii) topicalized clauses. Intuitively, I consider that the complementizer *that* functions as a marker of topicality. The problem here is how *that* functions as a topic marker.

In this article, I claim that *that*-omission is deduced from the interaction between *Feature Lifespan* in Pesetsky and Torrego (2001) (henceforth P&T (2001)) and *Feature Unison* in Yamamoto (2008, 2010). According to P&T (2001), it is not permitted to omit *that* in a sentential subject, because the embedded declarative clause without *that* is not able to check the uninterpretable feature on the matrix TP head. Similarly, the clauses without complementizer *that* lack the ability to check the uninterpretable feature on the head of TopP in the matrix clause or to satisfy S(emantic)-selectional property of MSV, so it is not permitted to omit the complementizer *that* in the clauses ii) and iii) in Stowell (1981). Erteschik-Shir (2007) claims that an MSV is inherently interpreted as focus and its complement is interpreted as topic. Furthermore, Nakajima (1996) claims that the topicalization is a movement to the specifier position of the functional head Top(ic). In accordance with Erteschik-Shir (2007) and Nakajima (1996), I assume that the clauses ii) and iii) are informational topic clauses, and that an interpretable feature [Top] has to be on the head of those clauses. Clauses lacking *that*, however, are not able to agree with the TopP head or satisfy the selectional property of the MSV, like P&T (2001) argue

that *that*-omission is not allowed in a sentential subject.

I propose the *Feature Unison* hypothesis as a theoretical apparatus that makes the complementizer *that* function as a topic marker. This hypothesis stipulates that a pair of features on the head of a phrase behave in unison. Once a couple of features form a pair, the pair shares the same fate. P&T (2001) gives an account of Stowell's (1981) (i) by assuming *Feature Lifespan*, which stipulates the timing of the disappearance of a feature. *Feature Unison* stipulates that if a feature of the pair disappears from the representation in accordance with the *Feature Lifespan*, the other disappears simultaneously. I assume that the feature [Top] in a CP head makes a pair with another feature on the head, and I will mention the details of *Feature Unison* later. It is deduced from the interaction between *Feature Unison* and *Feature Lifespan* that the [Top] disappears from the clause without *that*. If the disappearance of the [Top] occurs, the clause is not able to resolve the problem for the feature [uTop] on the head of matrix TopP or to satisfy the selectional restriction imposed on the complement of MSV. Thus *that*-omission is not allowed in ii) and iii) in Stowell (1981).

2. Hypotheses and assumptions

Before I give an account of *that*-omission, I introduce the hypotheses and the assumptions that I adopt in this article.

2.1. EPP

In the minimalist theory of syntax, it is broadly assumed that an uninterpretable feature motivates a movement. Chomsky (2005) proposes that the feature *Probe* that agrees with another feature *Goal* motivates a movement if the Probe is with an EPP feature. The theory of the movement that I presuppose is, however, slightly different from Chomsky (2005). As mentioned above, I explain *that*-omission as the interaction between *Feature Lifespan* and *Feature Unison*. Thus I also adopt the theory of movement and EPP in P&T (2001). In P&T (2001), EPP is not a feature, but a sub-property of a feature. P&T's (2001) EPP functions just like a strong/weak property that is assumed in Chomsky (1995). EPP with the positive value requires the checking of the feature by overt movement, but the EPP with the negative value does not.

2.2. Matching among the features [uφ], [T], and [uNom]

P&T (2001) assumes that the complementizer *that* is realization of the T-C amalgam that is generated by the T-to-C movement in an embedded declarative clause. Furthermore I assume syntactic relation among a nominative subject, tense, and a complementizer. The close relation between a subject and tense is found in various languages. In many European languages, tense is morphologically expressed in verbal inflection. On the other hand, in some languages, tense is morphologically realized on the nominative subject. For examples, future tense in Pitta-Pitta, a language of western Queensland, Australia, is realized as suffix to a nominative DP.

(1) Pitta-Pitta:
    a.   Ngapiri-ngu   thawa   paya-nha.
         father-FUT   kill   bird-ACC
         'Father will kill the bird (with missile thrown.)'
    b.   Thithi-ngu   karnta   pathiparnta.
         elder brother-FUT   go   morning
         'My elder brother will go in the morning.'

<div align="right">Pesetsky & Torrego (2001: 365 (15))</div>

In Pitta-Pitta sentences in (1), neither tense inflection nor affixation to the verb occurs, but future tense is morphologically realized as the suffix *ngu* which attaches to the nominative subject DP. The tense suffix in Pitta-Pitta indicates that tense is not always realized as a verbal inflection.

    Besides that, the complementizer inflection in West Flemish indicates that the feature on a CP head agrees with the subject, namely C-agreement in West Flemish in Haegeman (1994).

(2)   a. dan-k ik   noa Gent goan
           that-I   I   to Ghent go
           'that I am going to Ghent'
    b. da-j   gie   noa Gent   goat
           that-you you   to Ghent   go
    c. da-se   zie   noa Gent   goat
           that-she she   to Ghent   goes
    d. da-me   wunder   noa Gent goan
           that-we   we   to Ghent go

e. da-j   gunder noa Gent goat

   that-you.pl you.pl to Ghent go

f. dan-ze   zunder noa Gent goan

   that-they.pl they   to Ghent go

Haegeman (1994: 654)

So I assume that the CP head and the TP head have an identical feature. In much literature, it is broadly assumed that such a common feature motivates T-to-C head movement. While there are many facts that support this assumption, a couple of questions arise. Why do the CP head and the TP head have a common feature? What causes the feature to appear on the CP head? In order to resolve these questions, I claim that the common feature is inherited from the CP head to the TP head in the manner of the feature inheritance in Chomsky (2005, 2008).

(3)   …The antecedent reason is that for T, ϕ-features and Tense appear to be derivative, not inherent: basic tense and also tense-like properties (e.g., irrealis) are determined by C…

Chomsky (2005: 10)

The CP head is the head of the Phase containing a TP. According to Chomsky's theory of Phase, the movement is driven by the property that is actually derivative, and the feature that motivates the movement is inherited from the CP head.

(4)   An uninterpretable feature on the TP head that motivates a movement is inherited from the CP head.

Thus, it is deduced from the feature inheritance that the CP head and the TP head have a common feature. In English, an uninterpretable ϕ-feature [uϕ] is inherited to the TP head and agrees with the feature on the subject. I assume that it is not prohibited that the original feature on the CP head remains after the inheritance in a language. Note that this assumption conflicts with Richard (2007). By assuming that uninterpretable features are indistinguishable from interpretable features once they are valued by Agree, Richard (2007) claims that an uninterpretable feature on the CP head have to descend to the TP head. However I do not follow Richard (2007), since C-agreement in West Flemish in (2) clearly indicates the agreement of

uninterpretable features on the CP head with the subject. So I assume that there is a case where the feature [uφ] doubly appears both at the CP head and the TP head.

It is notable that P&T (2001) proposes that the nominative case of the subject is equivalent to the uninterpretable tense feature [uT] based on the tense suffix in Pitta-Pitta.

(5) *The nature of nominative case*
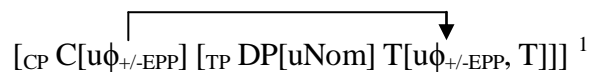   Nominative case is [uT] on D.

<div align="right">Pesetsky & Torrego (2001: 361 (8))</div>

P&T (2001) claims that the subject is able to check the [uT] on the TP and the CP head by assuming *the nature of nominative case* (5). As revision of (5) in the theory of feature inheritance, I assume *Matching among the features [uφ], [T], and [uNom].*

(6) *Matching among the features [uφ], [T], and [uNom]*
    Both the nominative case feature [uNom] on a subject DP and the tense feature [T] on a TP-head are able to match the feature [uφ$_{+/-EPP}$].
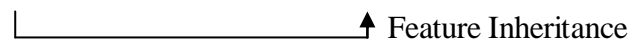   Inheritance:
    $[_{CP}$ C[uφ$_{+/-EPP}$] $[_{TP}$ DP[uNom] T[uφ$_{+/-EPP}$, T]]] [1]
    Matching:

In *Matching among the [uφ], [T], and [uNom]* (6), the feature [uφ$_{+/-EPP}$] that is inherited to the TP head is able to remain its original on the CP head.[2] For instance, in the simple yes/no-question (7), the feature [uφ] doubly occurs on the CP head and the TP head.

(7)   Will you buy that?
(8)   a. [C[Q, uφ] $[_{TP}$ you[~~uNom~~] [will[~~uφ~~, T] $[_{vP}$ buy that]]]]
       Feature Inheritance

       b. $[_{CP}$ Will$_i$[Q, ~~uφ~~, T] [C[~~uφ~~] $[_{TP}$ you[~~uNom~~] [t_i $[_{vP}$ buy that]]]]]
       T-to-C movement

P&T (2001) assume that the CP head of a matrix yes/no-question has an

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[1] I abbreviate a lexical item X with an (un)interpretable feature F as 'X[(u)F]'.
[2] In this article, I omit the EPP property unless misunderstanding arises.

uninterpretable feature [uT] unlike a matrix declarative clause. *Feature Unison* (9) stipulates that the CP head has a feature [uϕ] that co-occurs with the interrogative feature [Q]. [3]

(9)   *Feature Unison*
       Pair of features that behave in unison share their fate.

The order between the auxiliary *will* and the subject *you* are inverted in (7). Since Travis (1984), as far as I know, Sbj-Aux inversion is derived by a head movement of the Tense to the Comp.[4] In the derivation (8), the head movement occurs in order to check the feature [uϕ] on the CP head. According to (6), the original [uϕ] is on the CP head and inherited to the TP head. The [uϕ] on the TP head is checked by the nominative subject *you*, and the original [uϕ] is checked by the movements of the TP head *will* as illustrated in (8).

   Note that the pair of the features [Q] and [uϕ] which co-occur in accordance with *Feature Unison* (9) is not crucial only to Sbj-Aux inversion in matrix interrogative clauses, but also to other syntactic phenomena. For instance, the co-occurrence of [uϕ] with [Q] is crucial in the explanation of superiority effects in English multiple wh-questions.

(10)   a. *What did who buy?
       b.   Who bought what?
(11)   [$_{C'}$ C[Q,uϕ$_{+EPP}$,u-wh$_{+EPP}$][$_{TP}$ who[uNom,wh]   buy   what$_i$[wh]]]
(12)   a.[$_{CP}$ what$_i$[wh][$_{C'}$ did$_j$-C[Q,~~uϕ$_{+EPP}$,u-wh$_{+EPP}$~~][$_{TP}$ who[uNom,wh] t_j buy t'_i]]]
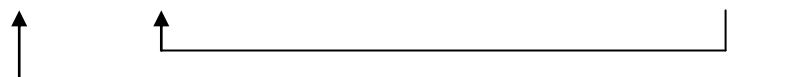
       b. [$_{CP}$ who$_i$[uNom,wh][$_{C'}$ C[Q, ~~uϕ$_{+EPP}$, u-wh$_{+EPP}$~~] [$_{TP}$ t_i T buy what[wh]]]]

It is broadly known that the subject wh-phrase is superior to other wh-phrases in a

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[3]   While Chomsky (1995) does not distinguish between a wh-feature and an interrogative feature, I propose that these features have to be distinguished. Cross-linguistically the interrogative force of a clause is realized in manners that are morpho-syntactically different from wh-movements, for example Sbj-Aux inversion or a clause peripheral question particle.

[4]   In Travis (1984), the functional head is I(nfl) instead of T(ense.)

multiple wh-question like (10). Yamamoto (2008, 2010) explains superiority effects by assuming that the head of a matrix wh-question has an interpretable feature [Q], which encodes the meaning of interrogativity. Just like the derivation of a matrix yes/no-question in (8), the feature [Q] makes a pair with the feature [uϕ] on the CP head in the structure (11). The pair of the derivations in (12), which are derived from (11), are in competitive relation. In this competition, (12b) is more economical than (12a), because the derivation including less movements is more economical than that including more movements in the framework of the derivational economy. While the derivation (12a) includes a couple of movements, namely the phrasal movement of the object wh-phrase and the T-to-C movement, (12b) is derived by just a movement of the subject wh-phrase *who*. Thus (12b) wins the competition, and (12a) is excluded as the loser.

Based on these assumptions, the *that*-t effect is also explained as the result of an economical competition.
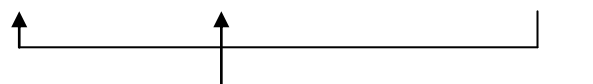
(13)   Who$_i$ did John say (*that) t_i will buy the book?

(14)   [$_{CP}$ C[uϕ, u-wh] [$_{TP}$ who[wh, ~~uNom~~] will[T, ~~uϕ~~$_{+EPP}$] [$_{vP}$ buy the book]]]

(15)   a. [$_{CP}$ who$_i$[wh,~~uNom~~] C[~~uϕ~~$_{+EPP}$,~~u-wh~~][$_{TP}$ t_i will[T,~~uϕ~~$_{+EPP}$][$_{vP}$ buy the book]]]
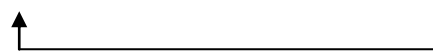
        b. [$_{CP}$ who$_i$[wh,~~uNom~~] T$_j$[T]-C[~~uϕ~~$_{+EPP}$,~~u-wh~~][$_{TP}$ t_i will$_j$ [$_{vP}$ buy the book]]]

The complement clause in (13) from which the subject wh-phrase is extracted is derived from the structure (14). In the structure (14), there are a couple of features to be checked on the CP head, namely the uninterpretable features [uϕ] and the [u-wh]. According to *Matching among the [ϕ], [T], and [uNom]* (6), in addition to the head movement of the TP head with an interpretable feature [T] to the CP head (henceforth T-to-C movement), the [uϕ] on the CP head can be checked by the phrasal movement of the subject phrase *who*. Note that, following P&T (2001), the complementizer *that* is a realization of the C-T amalgam that is generated by T-to-C movement. The uninterpretable features [uϕ] and [u-wh] on the CP head are simultaneously checked by the movement of *who* in the derivation (15a), while the features are separately checked by the phrasal movement and the T-to-C head movement in (15b). There is disparity between the derivations (15a) and (15b). I

assume that the operation Move needs *cost*, and that a syntactic derivation is evaluated with such *cost*. Comparing the alternative derivations (15a) and (15b) from the basic structure (14), the grammar chooses (15a) since (15a) is derived by less *cost* than (15b), which includes more movement operations. Thus (15a) survives as the winner of the competition, while (15b) is excluded as the loser.[5]

2.3. Feature lifespan

As mentioned in section 1, P&T (2001) explains the prohibition of *that*-omission in a sentential subject in (16) by their theory of derivational economy.

(16)   *(That) Bush will be elected is unlikely.

The point of their theory is that a declarative clause without the complementizer *that* is not able to check the uninterpretable feature [uφ] on the TP head that is usually checked by the nominative DP. Conversely, if a clause is marked with the complementizer *that*, it adequately functions as the checker of the feature [uφ]. P&T (2001) proposes *Feature Lifespan* (17) in order to stipulate the disappearance of such subjecthood from declarative clauses without the complementizer *that*.

(17)   *Feature Lifespan*
         A feature F on α marked for deletion disappears at the end of the CP cycle unless F on α is an attractor and is -EPP.

                                                                    P&T (2001: 386 (67))

         The lexical information of the head of an embedded declarative clause is stipulated below.

(18)   *Embedded declarative clause with no wh-extraction*

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[5] Kandybowicz (2006) explains the ill formedness of *that*-t sequence as the violation of the constraint on prosodic structure.
    (i)   *$<C^0, t>$ iff:
            i. C^0 & *t* are adjacent within a prosodic phrase   AND
            ii. C^0 is aligned with a prosodic phrase boundary
                                                            Kandybowicz (2006 (14))
    While this approach to *that*-t effect is descriptively adequate, I do not adopt it, since the problem is not where *$<C^0, t>$, but why *$<C^0, t>$ there.

Features of C: $[uT_{+EPP}]^6$

Deletion of [uT]: by T-to-C movement or subject movement (looks like *that*-deletion)

According to (18), the complementizer of an embedded declarative clause has an uninterpretable feature $[uT_{+EPP}]$, and the feature $[uT_{+EPP}]$ is checked by the phrasal movement of the subject DP or the T-to-C movement of the TP head. Following *Feature Lifespan* (17), however, the feature [uT] disappears at the end of the derivation of the embedded CP.

(19)   C[uT$_{+EPP}$] [$_{TP}$ Bush[~~uNom~~] [$_{T'}$ will[T] [$_{VP}$ be elected]]]]

(20)   a. [$_{CP}$ Bush[~~uNom~~] [$_{C'}$ C[~~uT$_{+EPP}$~~] [$_{TP}$ [$_{T'}$ *t*   will[T] [$_{VP}$ be elected]]]]]

       b. [$_{CP}$ that[T]-C[~~uT$_{+EPP}$~~] [$_{TP}$ Bush[~~uNom~~] [$_{T'}$ will[T] [$_{VP}$ be elected]]]]
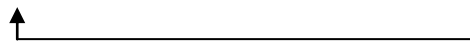
The structure immediately before the movement to check the feature $[uT_{+EPP}]$ on the head of the sentential subject in (16) is illustrated in (19). In (19), the feature [uT] attracts the subject DP *Bill* or the TP head. (20a) is derived by the phrasal movement of the subject *Bill*, and (20b) by the T-to-C movement. The overt complementizer *that* appears in (20b), but not in (20a), because it is a realization of the T-C amalgam in P&T (2001). According to *Feature Lifespan* (17), both the feature [uT] on the CP head and the feature [uNom] on the subject DP are invisible to the later syntactic computation, since these features, whose EPP properties are positive, disappear at the end of the derivation. Thus the sentential subject in (20a) does not have any feature that is able to check the [uϕ] on the matrix TP head, and the [uϕ] is left unchecked, even if it merges with the matrix TP as shown in (21a).

(21)   a.*[$_{TP}$[$_{CP}$ Bush[~~uNom~~]][$_{C'}$ C[~~uT$_{+EPP}$~~]][$_{TP}$[$_{T'}$ *t* will[T, uϕ]][$_{VP}$ be elected]]]]]
                                        [$_{T'}$ is [T, uϕ] unlikely]].^{7}

     b.[$_{TP}$[$_{CP}$ that[T]-C[~~uT$_{+EPP}$~~]][$_{TP}$ Bush[~~uNom~~]][$_{T'}$ *t* will[T,uϕ]][$_{VP}$ be elected]]]]
                                        [$_{T'}$ is [T, ~~uϕ~~] unlikely]].

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6 $[uT_{+EPP}]$ is equivalent to $[uϕ_{+EPP}]$. See (6).

7 I notate the disappeared feature by double stripes like "[~~Feature~~]."

The derivation (21a) does not converge. Hence *that*-omission in the sentential subject is not allowed. On the other hand, the interpretable Tense feature [T] on the T-C amalgam in (20b) is able to check the [uφ] on the matrix TP head. The derivation (21b), in which the T-C amalgam is realized as the complementizer *that*, does not crash, though the feature [uT$_{+EPP}$] on the head of the sentential subject disappears like (20a).

3. *That*-omission and *Feature Unison*

In Stowell (1981) and Erteschik-Shir (2007), the informational status of the declarative clause is relevant to whether it is possible to omit the complementizer *that* or not. In this section, I propose *Feature Unison,* which stipulates that a couple of features in a lexical item share their fate, in order to give an account to *that*-omission phenomenon in the framework of the derivational economy approach. By assuming *Feature Unison*, it is possible to reinterpret the implication of Stowell (1981) and Erteschik-Shir (2007) that a declarative clause must be marked by the complementizer *that* if it is interpreted as old information, namely as topic.

3.1. *That*-omission

In English, it is possible to omit the complementizer *that* in the complement clause of a bridge verb as in (22a) and in an object relative clause as in (22b).

(22) a. Bill {thought, said, believed, and so on} (that) Denny was playing too much poker.
      b. the maid (that) the butler murdered *t*

According to Stowell (1981), however, the omission of the complementizer *that* is prohibited in these environments; i) subject clauses as in (23), ii) complement clauses of manner-of-speaking verb (MSV) as in (24), and iii) topical clauses as in (25).

(23) *Subject clause*
      *(That) Bush will be elected is unlikely.
(24) *Complement clause of an MSV*
      Bill {muttered, murmured, mumbled, lisped, and so on}
                              *(that) Denny was playing too much poker.

(25)   *Topical clause*
        *(That) the teacher was lying Ben already knew.

        Although the prohibition of *that*-omission in a subject clause is explained in
the framework of the derivational economy approach with *Feature Lifespan* (17) as
mentioned in section 2.3, this explanation does not deduce the prohibition of
that-omission in a complement clause of MSV (24) and a topical clause (25). The
point of P&T (2001) is that a declarative clause without the complementizer *that*
lacks the ability to check the uninterpretable feature [uϕ] on the TP head that is
usually checked by the nominative subject. This reasoning is, however, not suitable
to account for *that*-omission in clauses other than the sentential subject, since no
feature [uϕ] remains unchecked in the structures of the matrix clauses. It has been
assumed by Chomsky (1977), Lasnik and Saito (1992), Nakajima (1996), Rizzi
(1997), and so on, that the landing site of a topicalized constituent is the specifier
position of a functional head occupying a higher position than TP, and that the
movement of the topicalized constituent shows the properties of A'-movements. In
Chomsky (2005), A'-movements including topic movement are motivated by an
edge feature, not by a feature [uϕ], and then the ability to check the feature [uϕ] is
irrelevant to the legitimacy of topic movement. So it is necessary to seek a novel idea
to account for the prohibition of *that*-omission in those clauses.

        Besides that, it is notable that the complement clause of MSV has a
common property with a topical clause, that is, it also has topical meaning.
Erteschik-Shir (2007) proposes that there is strong tendency for the complement
clause of an MSV to be interpreted as topic. As shown in (24), *that*-omission is not
allowed in the complement clause of MSV like in a topical clause. Thus I give
generalization (26).

(26)   If a declarative embedded clause is topical, its complementizer must not be
        omitted.

        Erteschik-Shir (2007) claims that it is impossible to extract a wh-phrase
from a constituent that has topical meaning, because the dependency between the
wh-antecedent and its trace in a topical phrase violates *I-dependency* (27), which

requires the dependency to be linked from focus domain.[8]

(27)   *I-dependency*
       $SUBJECT_{top}/sTOP_t [\dots X \dots]_{foc}$
                              |
                ← I-dependency

The topicality of a complement clause corresponds to the heaviness of meaning of the matrix verb. According to Erteschik-Shir (2007), the weight of the meaning of the matrix verb is in inverse proportion to that of the informational meaning of the complement clause. For instance, the verb *say* has very light meaning, so the informational meaning of its complement clause is relatively heavy. Thus the complement clause of a verb with light meaning is interpreted as focus, and the wh-extraction from such a complement maintains *I-dependency* (27). On the other hand, the meaning of *mumble* is heavier than *say*, and *lisp* is heavier than *mumble*. The complement clause tends to be interpreted as topic in proportion to the heaviness of the matrix verb. Thus *I-dependency* (27) constraints the wh-extraction from the complement of a verb with heavy meaning, namely the constituent interpreted as topic. Thus it is predicted that the extraction out of the complement clause of MSV is prohibited, if the clause has topical meaning. As shown in (28), this prediction is true.

(28)   a. Who did John say that he had seen?
       b.? Who did John mumble that he had seen?
       c.*Who did John lisp that he had seen?

       A similar correspondence is maintained in *that*-omission. *That*-omission is possible only if the meaning of the matrix verb is light as shown in (29a).

(29)   a. John said   (that) he had seen the Flying Spaghetti Monster.
       b. John mumbled   *(that) he had seen the Flying Spaghetti Monster.
       c. John lisped   *(that) he had seen the Flying Spaghetti Monster.

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[8] This is equivalent to the ban of (wh-)movement out of non-dominant domain in Erteschik-Shir (1973).

If the verb has comparatively heavy meaning, *that*-omission is not allowed as shown in (29b) and (29c). I propose that the complementizer *that* functions as a topic marker and that *that*-omission is prohibited if topic marking is necessary. Two of the three types of clauses in Stowell (1981), namely a complement clause of MSV (24) and a topical clause (25), are commonly assigned topicality. The tendency that a sentential subject has topical meaning is indicated by the subscript in the canonical information structure illustrated in *I-dependency* (27) in Erteschik-Shir (2007). The prohibition of *that*-omission in the complement clause of MSV and a topical clause is accounted for as follows. The complementizer *that* is a marker of topicality, and it is impossible that the clauses keep the topicality if such a topic marker is omitted. In short, *that* marking is necessary to appropriately interpret the topical clauses. Thus I consider that the grammar has some apparatus that links *that*-marking to the interpretation of the topical clause. In the next section, I propose a hypothesis that formalizes such a linking.

3.2.   Feature Unison

In the last section, I showed that the informational status of the clause is crucial for *that*-omission. Besides that, I proposed that the complementizer *that* functions as a marker of topicality. Following this proposal, the *that* that appears in the complement of a bridge verb and the topic marker *that* are homonyms. That is because the complement of a bridge verb is able to be interpreted as informational focus. The complementizer *that* with the feature [Top], however, conflicts with focus interpretation. Thus the complementizer *that* without the feature [Top] has to be distinguished from its homonym. Although this idea is descriptively right, it is necessary to give an account to the problem why *that*-omission is prohibited in (24), (23), and (25).

Recall that I assumed that *that* is a realization of the C-T amalgam that is generated by a T-to-C movement. While P&T (2001) explains various phenomena in their theory of the derivational economy, *that* realization of the C-T amalgam is crucial in their theory. This explanation is completely derivational in syntax, not in morphology. In the account of the prohibition of *that*-omission in section 2.3, the sentential subject without *that* marking lost the ability to check the feature [uϕ] on the head of the matrix TP, since the feature [uϕ] on the head of the sentential subject disappears in accordance with *Feature Lifespan* (17). Now, following Nakajima (1996) and Rizzi (1997), I assume that topicality is realized as an interpretable

feature [Top] on the head of the topicalized phrase, and that topicalization is a movement that is driven by the uninterpretable feature [uTop$_{+EPP}$] on the functional head Top as illustrated in (30).

(30)   … [$_{CP}$ C [$_{TopP}$ Top[uTop$_{+EPP}$] [$_{TP}$ … [$_{XP}$ … X[Top] …]]]] …

By analogy with the sentential subject, I claim that the feature [Top] on the head of a topical clause disappears at the end of the derivation of the clause unless *that* is realized. If *that* is not marked, the clause loses the ability to check the feature [uTop] on the Top. This lapse of the ability is done by *Feature Unison* (9) (repeated as (31).)

(31)   *Feature Unison*
        Pair of features that behave in unison share their fate.

Feature Unison (31) assumes that a feature forms a pair with another feature in some case, and the pair shares the same fate in the syntactic derivation. If one of the pair disappears according to *Feature Lifespan* (17), its partner also disappears. I stipulate that the feature [Top] and the feature [uϕ] which includes the feature [(u)T] form a pair in the head of a topical clause.

(32)   *Features on the head of a topical clause*
        C [Top, uϕ$_{+EPP}$]; The feature [uϕ$_{+EPP}$] includes the feature [uT] that forms a
                        pair with the feature [Top].

By assuming *Feature Unison* (31) and *Features on the head of a topical clause* (32), the prohibition of *that*-omission phenomenon in both the complement clause of an MSV and a topical clause is explained. Firstly, I will argue about the former. As mentioned above, an MSV, for example, *murmur*, *mumble*, *whisper*, *lisp*, and so on, tends to be interpreted as informational focus, and its complement as informational topic. So the structure of the complement clause of an MSV includes the feature [Top] on the CP head as indicated in (34).

(33)   Bill {murmured, mumbled, whispered, lisped, …} *(that) Denny was playing
        too much poker.

(34)   [C [Top, uφ$_{+EPP}$] [$_{TP}$ Denny was playing too much poker]]

The feature [uφ$_{+EPP}$] motivates the phrasal movement of the subject (35a) or the head movement of the TP head (35b) as well as in the derivation of a complement clause of a bridge verb. Thus the pair of derivations in (35) is in competitive relation.

(35)   Bill {murmured, mumbled, whispered, lisped, …}
   a. [$_{CP}$ Denny$_i$[~~uNom~~]][$_{C'}$ C[~~Top, uφ$_{+EPP}$~~]][$_{TP}$ t_i was playing too much poker]]

   b. [$_{CP}$ that[T]-C[Top, ~~uφ$_{+EPP}$~~] [$_{TP}$ Denny was playing too much poker]]

There is no economical discrepancy between the derivations in (35a) and (35b), since both of them are derived by a movement, so the theory of the derivational economy approach never predicts any asymmetry of grammaticality. A *that*-omission effect is, however, definitely shown in (33). I claim that (35a) is excluded by a condition on S(emantic)-selection of MSV. In accordance with *Feature Lifespan* (17) and *Feature Unison* (31), both of the features [Top] and its partner [uφ$_{+EPP}$] in (35) disappear at the end of the derivation of the embedded CP. So the embedded CP is never interpreted as topic, and then the semantic condition mentioned around (29) that the complement of an MSV must be topic is not satisfied. Contrary to this prediction, (35b) in which *that* is not omitted is grammatical. In this case, while the [uφ] certainly disappears, the feature [Top] survives by making a new partnership with the feature [T], which is equivalent to a [uφ] following *Matching among the [uφ], [T], and [uNom]* (6). Thus the semantic requirement of the MVS is satisfied in (35b). Such a remedy for the disappearance of feature [Top], however, is not available in (35a), since in the CP projection there is no feature that is able to make a partnership with [Top] instead of the deleted [uφ] and the [Top] is not able to survive after the derivation of the embedded clause. Hence the requirement of the MVS is not satisfied and *that*-omission is illicit.

   Similarly, the prohibition of *that*-omission in a topical clause is explained.

(36)   *(That) the teacher was lying Ben already knew.
(37)   a. [$_{CP}$ the teacher$_i$[~~uNom~~] [$_{C'}$ C[~~Top, uφ$_{+EPP}$~~] [$_{TP}$ t_i was lying]]]
   b. [$_{CP}$ that[T]-C[Top, ~~uφ$_{+EPP}$~~] [$_{TP}$ the teacher was lying]]

As shown in (37), there is an interpretable feature [Top] on the CP head of the topical clause as well as in the complement clause of an MSV (35). The feature [Top] disappears if the subject *the teacher* moves to the specifier position of the CP. The TP head has to move to an adjoined position of the CP head and to amalgamate with the CP head in order for the feature [Top] to survive. If the dislocation of a topicalized phrase is an A'-movement, the movement of a topical clause is driven by an uninterpretable feature on a functional head Top that occupies a left peripheral position of the sentence as shown in (30).

(38) a. [$_{TopP}$ Top[uTop$_{+EPP}$] [$_{TP}$ Ben already knew
   * ⬆——[$_{CP}$ the teacher$_i$[u̶N̶o̶m̶] [$_{C'}$ C[T̶o̶p̶, u̶ϕ̶₊̶ₑₚₚ] [$_{TP}$ t_i was lying]]]]]

(39) b. [$_{TopP}$ Top[uTop$_{+EPP}$] [$_{TP}$ Ben already knew
   ⬆—————— [$_{CP}$ that[T]-C[Top, u̶ϕ̶₊̶ₑₚₚ] [$_{TP}$ the teacher was lying]]]]

In the dislocation of topical clause (38a), the embedded clause without *that* marking has no feature to check the uninterpretable feature [uTop$_{+EPP}$] on the matrix TopP head, because the feature [Top] in the embedded CP has disappeared at the end of the derivation of the CP in accordance with *Feature Lifespan* and *Feature Unison*. On the other hand, it is not a problem for the clause (37b) with the overt *that* to check the feature [uTop], since such a clause maintains the feature [Top] on the CP head by forming a pair with the [T] on the C-T amalgam as well as the feature [Top] in (37b). Thus the overt *that* is indispensable to the topical clause.[9]

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[9] An anonymous reviewer points out that the derivational economy approach in which *Feature Unison* is assumed, is not able to explain the prohibition of *that*-omission in a right dislocated declarative clause.
    (i) They consider it important $^{??}$(that) he should also change his idea.
Quirk, Greenbaum, Leech and Svartvik (1985) (henceforth Quirk *et. al* (1985)) claim that a right dislocated constituent is interpreted as an amplificatory tag and contextually old. So it is natural to assume that the clause has a feature [Top] as topic. According to *Feature Unison*, if the complementizer *that* is omitted in the right dislocated clause in (i), the clause loses the feature [Top] as soon as the feature [uϕ$_{+EPP}$] disappears like the derivation in (37a). Thus *that*-omission is prohibited in the right dislocated clause.
    The topical interpretation of the right dislocated clause in (i) is, however, falsified by the wh-extraction test based on the I-dependency (27).
    (ii) What do they consider it important $^{??}$(that) he should change?
Unless *that*-omission is applied, the wh-extraction from the right dislocated clause is

In this section, I showed that there is close relation between the appearance of the overt complementizer *that* and the meaning of a clause like subjecthood or topicality. If a clause lacks *that* marking, the clause is not dislocated as a topical clause, but not appears as a complement clause of an MSV. I proposed that topicality, which is essentially a meaning related to discourse, is connected with the syntactic feature [uφ] in the CP head. That is, the feature [Top] makes a pair with the [uφ], and the pair shares the same fate.

4.   Conclusion

In this article, I explained why *that*-omission is prohibited in the three types of the clause that Stowell (1981) classified. Stowell (1981) claims that *that*-omission is one of the ECP effects, since it is assumed that the head of the clause without an overt complementizer is a null complementizer. Whereas the null complementizer has to be properly governed according to ECP, the null complementizers in the three types of clauses in Stowell (1981) have neither antecedent nor lexical governor. Hence they violate the ECP, and *that*-omission is prohibited in these types of clause. It is well known, however, that the concept of government is abolished in the minimalist syntax. Therefore the ECP effects like *that*-omission have to be explained without resorting to ECP. In the last section, I give an account to the prohibition of *that*-omission by assuming *Feature Unison* (31) in the framework of derivational economy. The derivation of the clause without *that* does not include any defect, but there is no discrepancy among the derivations in the economical competition. In accordance with *Feature Lifespan* (17) and *Feature Unison* (31), the clause without *that* loses the feature indispensable to resolve the feature problem from the outside of the clause, while the clause with *that* is able to keep the feature relevant to resolve the feature problem by remaking the partnership with the feature [T] on the T-C amalgam. Hence *that*-omission in the clause that is interpreted as informational topic is prohibited.

The derivational economy approach, I believe, is superior to other approaches, though it includes the intricate designation of features like (18) as Landau (2007) points out. Landau (2007) explains the prohibition of *that*-omission in sentential subject clauses by assuming the condition (40).

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perfectly acceptable, while it contradicts to the presumed topicality. Unfortunately, this problem is left open for future research.

(40)   In [$_{HP}$ ZP [$_{H'}$ H$_{[P]}$ …]], Z must be pronounced.

Landau (2007: 489 (6))

Landau (2007) assumes that the EPP feature [P] on the head of HP requires a phonologically visible head in the specifier ZP of HP.[10] *That*-omission in topicalized clauses is not permitted, if the clauses are selected by the feature [P] on a head of TopP. It is notable, however, that the EPP approach to *that*-omission in Landau (2007) does not deal with other ECP effects except *that*-omission. In contrast, the derivational economy approach, assuming *Feature Lifespan* (17) and *Feature Unison* (31), is able to give accounts for various ECP effects, namely that-omission, *that*-trace effects in (13), and the superiority effect in (10).[11]

References

Chomsky, Noam (1977) On Wh-Movement. In: Peter W. Culicover, Thomas Wasow and Adrian Akmajian (eds) *Formal Syntax*. 71-131. New York: Academic Press.

Chomsky, Noam (1995) *The Minimalist Program*. Cambridge, Mass: MIT Press.

Chomsky, Noam (2001) Derivation by Phase. In: Michael Kenstowicz (ed) *Ken Hale: A life in language*: 1-52. Cambridge, Mass: MIT Press.

Chomsky, Noam (2005) On Phases. MS. MIT.

Chomsky, Noam (2008) On Phases. In: Robert Fraidin, Carlos P. Otero, and Maria Luisa Zubizarreta (eds) *Foundational Issues in Linguistic Theory: Essays in Honor of Jean Roger Vergnaud*: 133-166. Cambridge, Mass: MIT Press.

Erteschik-Shir, Nomi (2007) *Information Structure: The Syntax-Discourse Interface*. New York: Oxford University Press.

Haegeman, Liliane (1994) *Introduction to Government and Binding Theory*. Second edition. Cambridge: Blackwell.

Huang, C.-T. James (1982) *Logical relations in Chinese and the theory of grammar*. Doctoral dissertation. MIT.

Landau, Idan (2007) EPP Extensions. *Linguistic Inquiry* 38: 485-523.

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[10] The feature [P] is the EPP feature that is an independent feature as generally assumed in the minimalist syntax.

[11] In recent literature, superiority effect is explained by the condition of Minimality, like Attract Closest or Minimal Link Condition in Chomsky (1995). In government and binding era, however, Huang (1982) and Rudin (1988) argue that superiority effect is the asymmetry deduced from ECP.

Lasnik, Howard and Mamoru Saito (1992) *Move α: Conditions on Its Application and Output*. Cambridge, Mass: MIT Press.

Nakajima, Heizo (1996) Complementizer selection. *The Linguistic Review* 13: 143-164.

Pesetsky, David and Esther Torrego (2001) T-to-C Movement: Causes and Consequence. In: Michael Kenstowicz (ed) *Ken Hale: A life in language*: 355-426. Cambridge, Mass: MIT Press.

Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech and Jan Svartvik (1985) *A Comprehensive Grammar of the English Language*. London: Longman.

Richard, Marc D (2007) On Feature Inheritance: An argument from the Phase Impenetrability Condition. *Linguistic Inquiry* 38: 563-572.

Rizzi, Luigi (1997) The Fine Structure of the Left Periphery. In: Liliana Heageman (ed) *Elements of Grammar*: 281-337. Netherlands: Kluwer Academic Publishers.

Rudin, Catherine (1988) On Multiple Questions and Multiple WH fronting. *Natural Language and Linguistic Theory* 6: 445-501.

Stowell, Timothy (1981) *Origins of Phrase Structure*. Doctoral dissertation. MIT.

Travis, Lisa deMena (1984) *Parameters and Effects of Word Order Variation*. Doctoral dissertation. MIT.

Yamamoto, Shoji (2008) Keizaisei-no Genri-e Yuuikouka-o Kangen-suru Kokoromi-nonakano Ichikousatsu. *Kyushu University Papers in Linguistics* 29: 71-96.

Yamamoto, Shoji (2010) Keizaisei-no Genri-ni Yuuikouka-o Kangen-suru Kokoromi-nikansuru Ichikousatsu II - Saidaikouka-no Jooken-o Megutte -. *Bungakukenkyuu* 107: 205-222.

素性調和と *that* 省略

山本　将司

（福岡国際大学非常勤講師）

英語において、文主語、話題要素として文頭に転移された節、発話様態動詞の補文節では補文標識 *that* の省略が許されない。このような補文標識 *that* の省略不可能性に対して、Stowell (1981) は空範疇の原理に則った説明を提案している。しかしながら、空範疇の原理は近年の最小主義統語論において廃棄されるべき概念であり、従って、*that* 省略不可能性もそれを仮定せずに説明されることが求められる。Pesetsky and Torrego (2001) は素性寿命 (Feature Lifespan) を提案することで Stowell (1981) が取り扱った三つの従属節のうち文主語における *that* 省略不可能性を説明しているが、本稿はこの仮説に加えて素性調和 (Feature Unison) を仮定することで残り二つの従属節の補文標識 *that* が示す省略不可能性を導く。これにより、補文標識 *that* の省略に対して最小主義統語論の枠組みに従った統一的な説明を与えることが可能となる。