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Revisiting 'It'-Extraposition in English: An Extended Optimality-Theoretic Analysis

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Abstract

In this paper I discuss a more complicated case of 'It'-Extraposition in English in the Optimality Theory [1] by further modifying and extending the analysis done in Khym (2018) [2] in which only the 'relatively' simple cases of 'It'-Extraposition such as 'CP-Predicate' was dealt with. I show in this paper that the constraints and the constraint hierarchy developed to explain the 'relatively' simple cases of 'It'-Extraposition are no longer valid for the more complicated cases of 'It'-Extraposition in configuration of 'CP-V-CP'. In doing so, I also discuss two important theoretic possibilities and suggest a new view to look at the 'It'-Extraposition: first, the long-bothering question of which syntactic approach between P&P (Chomsky 1985) [3] and MP (Chomsky 1992) [4] should be based on in projecting the full surface forms of candidates may boil down to just a simple issue of an intrinsic property of the Gen(erator). Second, the so-called 'It'- Extraposition phenomenon may not actually be a derived construction by the optional application of Extraposition operation. Rather, it could be just a representational construction produced by the simple application of 'It'-insertion after the structure projection with 'that-clause' at the post-verbal position. This observation may lead to elimination of one of the promising candidates of 'It_i...$[_{CP}$ that~$]_i$' out of the computation table in Khym [2], and eventually to excluding the long-named 'It'-Extraposition case from Extrsposition phenomena itself.

The final constraints and the constraint hierarchy that are explored are as follows:

- *Constraints: *SSF, AHSubj, Subj., Min-D*
- *Constraint Hierarchy: SSF<<>>Subj.>> AHSubj.*

Keywords: 'It'-*Extraposition, Optimality Theory (OT), Constraint Hierarchy, Constraints, *SSF, Subj., AHSubj., Min-D, CP-Predicate, CP-V-CP, Optimal candidates*

1. Introduction

Discussing the 'relatively' simple cases of 'It'-Extraposition in English which has long been analyzed arguably to go through the computational process either of (1) in P&P or of (2) in MP in the following, Khym (2018) suggests the constraints and the constraint hierarchy as shown in Tableau 1. Consider:

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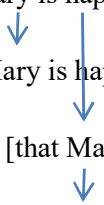
(1) [the P&P Approach] [3]

a. That Mary is happy is true. (D-structure)



a'. That Mary is happy is true. (S-structure without Extraposition)

b. t_i is true [that Mary is happy]$_i$

b'. It$_i$ is true [that Mary is happy]$_i$. (S-structure with Extraposition +'It'-insertion)

(2) [the MP Approach] [4]

a. Ø is true [that Mary is happy] (D-Structure)

a'. It is true [that Mary is happy]. (S-structure with No Extraposition/ 'It'-insertion)

(Khym 2018, p63) [2]

(1) shows the computational process in the derivational approach of P&P [3] from D-structure (a) to two possible surface structures of either (a') or (b'). As described, the derivation from (a) through (b) to (b') includes extraposition followed by 'It'-insertion. On the while, (2) shows the computation process in the representational approach of MP [4]. It shows 'that-clause' situated post-verbally at the start of operation. Then, 'It'-insertion follows. Note that in the P&P approach the expletive 'It' shares an index with the extraposed 'that'-clause, while in the MP approach the expletive 'It' does not, meaning there is nothing shared between the two grammatical units.

Trying to adopt both approaches in his theory, Khym suggests the following constraints and the constraint hierarchy, which is a repeat of Tableau 4 in Khym (ibid.). [2] Consider:

(3) **<Tableau 1> Selection of an Optimal Candidate #1**

Input : { that, Mary, is, happy, is true }

Output : "It is true that Mary is happy"

Candidates	Subj	AHSubj
a. [$_{IP}$ [$_{CP}$ That Mary is happy] is true]]		*!
b. [$_{IP}$ Ø is true [$_{CP}$ that Mary is happy]]	*!	
c.☞[$_{IP}$ It$_i$ is true [$_{CP}$ that Mary is happy]$_i$]		
d. [$_{IP}$ t_i is true [$_{CP}$ that Mary is happy]$_i$]	*!	
e.☞[$_{IP}$ It is true [$_{CP}$ O$_i$ that Mary is happy]$_i$]		

As shown in T1 above, candidates (3c) and (3e), both having a 'small' Subject 'It', have been selected as optimal candidates on the constraint hierarchy of Subj.>>AHSubj, which is a sure sign of including both approaches of P&P for (3a, c&d) and MP for (3b&e) together within OT. In addition, quite impressively, (3a) with a 'marginal' reading has been saved, not thrown out as an ungrammatical candidate. Though the argumentation for selecting both (3c) and (3d) as optimal candidates at the same time looks not so persuasive especially in the aspect that it neglects the importance of 'index-sharing' between the expletive 'It' and its associate 'that'-clause – for detailed discussion of his, refer to Khym (2018: pp.63-64) [2] - , his theory is surely distinctive in explaining (a) not as ungrammatical but as 'marginal'

With all these strengths, however, his theory may be put in trouble when the following data are suggested. Consider:

(4) a. That John has blood on his hand proves that Mary is innocent.

b. *$It_i/_{\varnothing}$ proves [that Mary is innocent] [that John has blood on his hand]$_i/_{\varnothing}$.

What the data in (4) suggest is clearly a critical problem against Khym (2018) [2] in which a 'heavy' Subject is to be avoided at any cost. Note that (4a) is a data with a 'heavy' Subject of "That John has blood on his hand", which is surely a violation of the constraint of AHSubj in (3), indicating that it has a 'marginal' reading at best. And this judgement is not correct at all. Further, whether the big Subject of "That John has blood on his hand" in (4a) is extraposed and followed by "It'-insertion to form (4b) following the P&P approach, or the big Subject of "That John has blood on his hand" is supposed to project originally at the end of the whole sentence following the MP approach, the grammatical judgement of (4b) is a 'least optimal' or ungrammatical sentence. Moreover, when (4b) applies to the computation of (3) above, it would be selected as an optimal candidate, and there is nothing the constraint hierarchy of (3) can do to rule out (4b) in Khym (2018)'s theory. That is a really big problem.

In the following section, I will discuss the clear-looking counter examples of (4a&b) together with some important theoretical weaknesses of Khym (ibid) [2], and I will suggest an extended version of Constraints and a new Constraint hierarchy to solve those of (4).

2. Discussion

In this section, I will first make a discussion to answer the two important questions: (1) Which syntactic approach between P&P (Chomsky 1985) [3] and MP (Chomsky 1992) [4] should be based on in projecting the full surface forms of candidates? (2) Is the so-called 'It'- Extraposition phenomenon really Extraposition? Then, I will discuss introduction of new Constraints and a new Constraint hierarchy to explain both a 'relatively' simple case and a more complicated case of the so-called 'It'-Extraposition.

2.1 It's All about Gen(erator)

Discussing the projection of the 'It'-Extraposition construction, Khym (ibid) [2] suggests the following two distinctive computational procedures. Consider:

(5) A Derivational & Representational Process of 'It'-Exraposition (= a Repeat of Khym (ibid, p63))

a. [$_{IP}$ [$_{CP}$ that Mary is happy] is true] .....< a P&P analysis >

a'. [$_{IP}$ Ø is true [$_{CP}$ that Mary is happy]]

a''. [$_{IP}$ It_i is true [$_{CP}$ that Mary is happy]$_i$]

b. [$_{IP}$ Ø is true [$_{CP}$ O_i that [$_{IP}$ Mary is happy]$_i$]] .....< an MP analysis >

b'. [$_{IP}$ It is true [$_{CP}$ O_i that [$_{IP}$ Mary is happy]$_i$]]

(5a) shows that CP to which the Extraposition operation applies occupies the Subject position at S1, the starting stage of operation. Note that it has a 'heavy' Subject. In contrast, (5b) shows that a 'heavy' Subject is located at the end of the sentence at S1.

Khym (ibid)'s discussion starts from (5a-a") and sets up the following Constraints and Constraint hierarchy. Consider:

(6) **<Tableau 2> Selection of an Optimal Candidate #2** (= a Repeat of Khym (2018, p60)) [2]

Input : { that, Mary, is, happy, is true }

Output : "It is true that Mary is happy"

Candidates	Subj	AHSubj
a. [$_{IP}$ [$_{CP}$ That Mary is happy] is true]]		*!
b. [$_{IP}$ Ø is true [$_{CP}$ that Mary is happy]]	*!	
c.☞[$_{IP}$ It$_i$ is true [$_{CP}$ that Mary is happy]$_i$]		
d. [$_{IP}$ t$_i$ is true [$_{CP}$ that Mary is happy]$_i$]	*!	

Surely it is successful in selecting (6c) as the most optimal candidate. (The broken line between the two Constraints in the Tableau 2 indicates that they are tied in importance.) At this point of discussion, Khym takes another step so that his theory successfully captures the 'marginal' reading issue, one of the most controversial problems to explain in this field. Note that in T3 below, there is a continuous line between the two Constraints, indicating that the higher-ranked Constraint of Subj. dominates the lower-ranked AHSubj. in importance. The result is following.

(7) **<Tableau 3> Selection of an Optimal Candidate #3** (= a Repeat of Khym (ibid, p62))

Input : { that, Mary, is, happy, is true }

Output : "It is true that Mary is happy"

Candidates	Subj	AHSubj
a. [$_{IP}$ [$_{CP}$ That Mary is happy] is true]]		*!
b. [$_{IP}$ Ø is true [$_{CP}$ that Mary is happy]]	*!	
c.☞[$_{IP}$ It$_i$ is true [$_{CP}$ that Mary is happy]$_i$]		
d. [$_{IP}$ t$_i$ is true [$_{CP}$ that Mary is happy]$_i$]	*!	

Next, his attempt to include both syntactic approaches of P&P and MP to 'It'- Extraposition finally leads to the following computational table with conceptual distinction between derivational and representational. Consider:

(8) **<Tableau 4> Selection of an Optimal Candidate #4** (= a Repeat of (3))

Input : { that, Mary, is, happy, is true }

Output : "It is true that Mary is happy"

Candidates	Subj	AHSubj
a. [$_{IP}$ [$_{CP}$ That Mary is happy] is true]]		*!
b. [$_{IP}$ Ø is true [$_{CP}$ that Mary is happy]]	*!	
c.☞[$_{IP}$ It$_i$ is true [$_{CP}$ that Mary is happy]$_i$]		
d. [$_{IP}$ t$_i$ is true [$_{CP}$ that Mary is happy]$_i$]	*!	
e.☞[$_{IP}$ It is true [$_{CP}$ O$_i$ that Mary is happy]$_i$]		

It is undeniable that Khym's theory [2] has suggested a solution successfully to explain selection of two possible optimal candidates of (8c&e) together with (8a) in its 'marginal' reading. And he also shows in his discussion that OT may be said to have a more explanatory power than the other previous syntactic frameworks of P&P and MP especially when the topic of 'It'- Extraposition is concerned.

However, one question that we need to raise immediately from his discussion is that "Is it necessary to state or remember in OT that some possible candidates are derived from a certain base structure?" Unlike the other previous syntactic frameworks, OT cares neither for S1, the beginning stage S_0 of derivation (or representation), nor for S_N-$_1$ or S_N. It just projects the grammatical units collected in the INPUT by way of X'-Schema to create possible candidates all at once. It is just an intrinsic property of Gen(erator). In short, when we discuss in OT, we don't have to pay attention to the history of a certain so-called surface structure. This means that there is no need to maintain the question of "which syntactic approach we should follow in having candidates". It is just all about what Gen(erator) does.

2.2 Is 'It'- Extraposition a Real Extraposition?

In this section, I will discuss the issue of co-indexation in 'It'-Extrspoaition first. Then, I will suggest a possibility of 'It'-Extraposition being excluded out of 'Extraposition' phenomena.

2.2.1 The Co-Indexation Issue in the "It'- Extraposition Construction

Let's take a look at the following sentences both of which start with an expletive 'there'.

(9) a. There **is/*are** a unicorn in the garden.
b. There ***seems/seem** to be several snowmen in the mountain.

Traditionally we have assumed co-indexation between an inserted expletive like 'there' and a post-verbal argument which is just like in the case between a trace and its antecedent in movement. In (9a&b) the expletive 'there' in both sentences apparently has the same agreement features as the post-verbal NP's. That is, what (9a&b) show is that agreement is triggered by the post-verbal NP rather than the expletive 'there' in IP-Spec. This observation is one of the motivations of the 'expletive replacement' theory in Chomsky (1992). [4] He adds that "*although agreement is manifested at S-structure between Infl(ection) and the NP in the post-verbal position, it is checked at LF between Infl and the very NP, which would move to IP-Spec by 'expletive replacement*". This means that the expletive 'there' is co-indexed with the post-verbal NP, and only the NP with the same index can replace the expletive. Therefore, in (9a&b) the second post-verbal NP's such as 'the garden' for (9a) and 'the mountain' for (9b) respectively cannot replace the expletive at LF.

Concerning co-indexation between an expletive and its post-verbal argument, Lasnik (1990) [5] also agrees with Chomsky (ibid), only with a little difference in computational details. He maintains that "to begin with, the expletive 'there' is "unspecified" in the agreement features. When the expletive is inserted, its agreement features would be specified according to (1) those of the post-verbal NP through co-indexing and (2) those of Infl through Spec-Head agreement."

Applying his theory to (9a&B), the sentences of (9) would be ruled in or ruled out in the following way. When the agreement features of Infl are the same as those of the post-verbal NP, there would be no feature conflict when the features of the expletive 'there' are specified, which is accomplished through Spec-Head agreement.

Let's take a look at another approach that also supports co-indexation between an expletive and its associate. Milsark (1974, 1977) [6], [7] suggests that " (the expression of) 'there be' can be interpreted as an expression

of existential quantification on the post-verbal NP in that it has an existential import."

Assuming that the post-verbal NP is a variable, he suggests that "*a weak NP like an indefinite NP is a non-quantificational expression, whereas a strong NP like a definite NP is a quantification expression*." Thus, the expression 'there be' is only compatible with a weak NP, but not with a strong NP since there would be a double quantification with the latter (the definiteness effects).

Heim (1982) [8] also has a similar stance. Heim proposes that "*an indefinite has no quantificational force of its own and it is like a variable.*" This perspective is actually the same as to suggest that only when an indefinite is bound by a quantifier or a quantificational expression, it can have a quantificational force. Consider her data that show her point.

(10) a. If a man owns a donkey, he always beats it.
b. for every man and every donkey such that the former owns the latter, he beats it.
c. { always $_{i/j}$ [if a man$_i$ owns a donkey$_j$, he$_i$ beats it$_j$]}

(10b) is the interpretation of (10a). The adverb 'always' plays a role as an unselective binder, and the indefinites as variables that are bound by their binder, as is shown in (10c).

Thus, in the 'there'-construction, the post-verbal indefinite NP is a variable according to Milsark and Heim, and this variable is bound by the null existential quantifier. When expletive 'there' is inserted into Spec-IP at S-structure, it shares every feature, including the index, with the null existential quantifier. Under their theories, the expletive 'there' must have no specification of its features; that is, 'there' is unspecified in its agreement features.

As the theories of various scholars posit, it seems plausible to assume the co-indexation between the expletive 'there' and its post-verbal NP. What all these perspectives boil down to is that whether derivational or representation, there must be strong evidence which argues for the con-indexation between the expletive 'there' and its post-verbal NP.

When it comes to the other expletive 'It', however, it becomes a different story. There is no reason that we should posit the co-indexation between the expletive 'It' and its long-called post-verbal 'that'- clause. And this finding may lead to a significant modification to Khym (2018) [2]. Consider the following data from many scholars:

(11) a. John's coming and Mary's leaving ***bothers/bother** Tom.
b. That John came and that Mary left **bothers/*bother** Tom. (Abney 1987) [9]

Based on the data of (11), Abney says that "*while conjunction of two gerundive Subjects triggers plural agreement, that of two sentential Subjects does not*." McCloskey (1991) [10], however, shows that this is not always true. Consider the following data:

(12) a. That UNO will be elected and that sanctions will be lifted **is/??are** now likely.
b. That the position will be funded and that Mary will be hired now **seems/??seem** likely.
(McCloskey, ibid)

As we can see from McCloskey's data of (12), it appears certain that a conjunction of two sentential Subjects does not trigger agreement *if a certain condition is met*. And as such "certain" conditions, he adds that "*when conjoined propositions are compatible, that is, they jointly specify a single complex state of affairs, or*

situation-type, a conjunction of two sentential Subjects is not likely to trigger plural agreement."

On the other hand, when coordinated propositions are contradictory or incompatible, or specify distinct states of affairs or situation-types, then the plural agreement will be triggered. Consider:

(13) a. That the march should go ahead and that it should be cancelled ***has/have*** been argued by the same people at different times.
b. That he will resign and that he will stay in office ***seems/seem*** at this point equally possible.

Now lets' take a careful look at the extraposed sentences of (14) which are corresponding to the sentences of (13). They will give a very important insight to my argument.

(14) a. It **has/*have** been argued by the same people at different times that the march should go ahead and that it should be cancelled.
b. It **seems/*seem** at this point equally possible that he will resign and that he will stay in office.

The contrast in number agreement between (13a&b) and (14a&b) clearly shows that "the expletive 'It' does not share any agreement features with its so-called post-verbal argument. More specifically speaking, the expletive 'It' is always specified as singular in its number agreement regardless of its post-verbal sentential Subject." If such is the case, then very unlike the instances of the expletive 'there', there would be no reason for us to posit co-indexation between the expletive 'It' and its typically called 'extraposed' associate. Even further, there would be no reason for us to maintain the 'It'- Extraposition operation at all.

2.2.2 Elimination of '[It_i~ CP_i]'- Extraposition

With all these generalization in mind, let's get back to the big table of (8) in which Khym (2018) [2] showed many "possible" candidates. Consider:

(15) **<Tableau 5> Selection of an Optimal Candidate #5** (= a Repeat of (8))
Input : { that, Mary, is, happy, is true }
Output : "It is true that Mary is happy"

Candidates	Subj	AHSubj
a. [$_{IP}$ [$_{CP}$ That Mary is happy] is true]]		*!
b. [$_{IP}$ Ø is true [$_{CP}$ that Mary is happy]]	*!	
c.☞[$_{IP}$ It_i is true [$_{CP}$ that Mary is happy]$_i$]		
d. [$_{IP}$ t_i is true [$_{CP}$ that Mary is happy]$_i$]	*!	
e.☞[$_{IP}$ It is true [$_{CP}$ O_i that Mary is happy]$_i$]		

Among the 5 possible candidates of (15) above, (15c) must be eliminated from the set of the possible candidates, since we have found that there would be no 'It'- Extrsposition operation existent which derives [It_i~CP_i] in syntax, and the X'-Schema will not project such a structure.

2.3 Exploring a New Constraint Hierarchy

In this section, I will discuss a more complicated cases of Extraposition in the configuration of 'CP_1-V-CP_2'. I will first show that the Constraints and the Constraint hierarchy developed in Khym (ibid) are not working for the more complicated 'CP_1-V-CP_2' construction. Then, I will suggest a new set of Constraints with new members and a new Constraint hierarchy by which the more complicated cases of 'CP_1-V-CP_2' construction will be properly dealt with.

Consider the following sentences:

(16) a. [$_{CP1}$ That John has blood on his hand] proves [$_{CP2}$ that Mary is innocent].
b. *It proves [$_{CP2}$ that Mary is innocent] [$_{CP1}$ that John has blood on his hand]
(= a partial Repeat of (4) on p.3)

(16a) has the configuration of 'CP_1-V-CP_2'. It is a typical structure Extrsposition can apply to in the respect that it has a big Subject of 'That-clause'. As briefly discussed in the Introduction section of this paper and in Khym (2018) [2], there is a very general preference not to locate a big Subject in the front position of a sentence, which aspect is also captured by AHSubj. in the Constraint hierarchy of Subj. >> AHSubj. in Khym (ibid). According to the Constraint hierarchy, a sentence that has a big Subject but does not go through Extraposition will be judged as 'marginal' at best, though not completely ungrammatical.

However, unlike such expectation, (16a) with a big Subject is clearly an optimal candidate, that is, a completely grammatical sentence. This result is definitely against the Constraint hierarchy of Subj. >> AHSubj.. Thus, we need a further research to modify or correct what we have established in the previous discussion in Khym (ibid). (cf.: •'Subj.': A clause must have a surface Subject. • 'AHSubj.': Avoid a heavy Subject.)

Consider the following possible candidates projectable from the INPUT with the same lexical members of (16a):

(17) a. [$_{CP1}$ That John has blood on his hand] proves [$_{CP2}$ that Mary is innocent]
b.* Ø proves [$_{CP2}$ that Mary is innocent] [$_{CP1}$ that John has blood on his hand]
c. *t_i proves [$_{CP2}$ that Mary is innocent] [$_{CP1}$ that John has blood on his hand]$_i$
d. *It proves [$_{CP2}$ that Mary is innocent] [$_{CP1}$ that John has blood on his hand]

The bottom line in exploring new Constraints and a new Constraint hierarchy which are needed to explain (17) in 'CP_1-V-CP_2' as well as (15) in 'CP-Predicate' is that we want to maintain the key Constraints of Subj. and AHSubj.. They are neither theory-specific nor language-specific. Rather, they belong to universal Constraints.

One immediate observation we can make from the candidates set of (17) is that what the three ungrammatical candidates of (17b) and on to (17d) shows in common is the double CP's being packed up at the same side of each sentence. So, this combination of 'CP_2-CP_1' must be avoided at all cost, which implies that we need a new constraint prohibiting such CP's packing up in the same side of a sentence, and it must be ranked probably higher than (the) others, since every candidate against such requirement will fail.

One still-bothering question is, "Does the soon-to-be-created Constraint hierarchy still possibly capture the 'marginal' reading problem of (15a) and the completely grammaticality of (17a) at the same time?"

With all these points in mind, let's take a look at the following computation table in which Constraint SSF will be defined as follows:

(18) Same Side Filter (SSF): Avoid adjacent clauses on the same side of a verb. (Williams 1980) [11]

(19) **<Tableau 6> Selection of an Optimal Candidate #6**

Input : { that, John, has, blood, on, his, hand, proves, that, Mary, is, innocent }

Output : "That John has blood on his hand proves that Mary is innocent."

Candidates	SSF	Subj	AHSubj
a. ☞ [$_{CP1}$ John…hand] proves [$_{CP2}$ Mary…innocent]			*!
b. Ø proves [$_{CP2}$ Mary…innocent] [$_{CP1}$ John…hand]	*!	*	
c. t_i proves [$_{CP2}$ Mary…innocent] [$_{CP1}$ John…hand]$_i$	*!	*	
d. It proves [$_{CP2}$ Mary…innocent] [$_{CP1}$ John…hand]	*!		

As Tableau 6 above shows, the optimal candidate of (19a) has been correctly selected by the new Constraint hierarchy of SSF>>Subj.>>AHSubj.. At this stage of discussion, we may raise a question as to the rank of 'SSF' which is located in the highest at T6.

The Constraint hierarchy of SSF in the lowest such as Subj.>>AHSubj.>>SSF may fail to work properly: it will select (19d) as an optimal candidate, a wrong judgement.

Next, what about the case where SSF is ranked between Subj. and AHSubj.? It depends on how we set up the relative ranking between SSF and AHSubj. Consider the possible Constraint hierarchies and judgement according to them:

(20) Possible Constraint Hierarchies and Judgement

a. SSF>>Subj.>>AHSubj. ⇒ Correct

b. Subj.>>AHSubj.>>SSF ⇒ Wrong

c. Subj.>>SSF>>AHSubj. ⇒ Correct

d. Subj.<<>>SSF>>AHSubj. ⇒ Correct

e. etc.

Taking a careful look at the possible Constraint hierarchies in (20), we can find two important facts. Consider:

(21) a. Subj. dominates AHSubj. (⇐ a, c, d)

b. SSF and Subj. are un-ranking (or tied) to each other. (directly from (d), and (a) supporting it)

Thus, I will set up the new Constraint hierarchy as SSF<<>>Subj.>>AHSubj. Note that we are successful in maintaining the Constraint hierarchy of Subj.>>AhSubj. of Khym (2018). Tableau 7 in the following will show the result that the new Constraint hierarchy has been applied to.

(22) **<Tableau 7> Selection of an Optimal Candidate #6**

Input : { that, John, has, blood, on, his, hand, proves, that, Mary, is, innocent }

Output : "That John has blood on his hand proves that Mary is innocent."

Candidates	SSF	Subj	AHSubj
a. ☞ [$_{CP1}$ John…hand] proves [$_{CP2}$ Mary…innocent]			*!
b. Ø proves [$_{CP2}$ Mary…innocent] [$_{CP1}$ John…hand]	*!	*	
c. t_i proves [$_{CP2}$ Mary…innocent] [$_{CP1}$ John…hand]$_i$	*!	*	
d. It proves [$_{CP2}$ Mary…innocent] [$_{CP1}$ John…hand]	*!		

The final task we need to do in order to test the validity of the newly-established Constraint hierarchy of SSF<<>>Subj.>>AHSubj. is to see whether it is working properly for a 'relatively' simple case of 'CP-Predicate' construction as well. Consider:

(23) **<Tableau 8> Selection of an Optimal Candidate #7**

Input : { that, Mary, is, happy, is, true }

Output : "It is happy is true that Mary is happy."

Candidates	SSF	Subj	AHSubj
a. [$_{CP}$ Mary is happy] is true			*!
b. Ø is true [$_{CP}$ that Mary is happy]		*!	
c. t_i is true [$_{CP}$ that Maryis happy]$_i$		*!	
d. ☞It is true [$_{CP}$ Mary is happy]			

As Tableau 8 in (23) clearly shows, the new Constraint hierarchy with the newly-added Constraint SSF is perfectly working for the 'relatively' simple case of 'CP-Predicate' construction, which was analyzed on the name of "It'-Extraposition. (23d) is selected as the most optimal candidate – a correct judgement. In addition to this, (23a) is judged as a 'marginal' reading case, which is shown by the importance of Constraints violated: (23a), a marginal reading case, violates AHSubj. once, but AhSubj. is the lowesr-ranked Constraint, while both (23b&c) violate Subj. once, but Subj. is ranked higher than AhSubj. Thus, Considered from the importance of Constraints violated, (23a) is judged less optimal, while (23b&c) least optimal. Therefore, we can say that the newly-established Constraint hierarchy is working well enough.

3. Conclusion

In this paper I have shown that the Constraints such as Subj. and AHSubj., and the Constraint hierarchy such as Subj. >> AHSubj. which are developed in Khym (2018) [2] are in trouble when they are employed to explain the more complicated cases of the so-called 'It'- Extraposition ~~such as~~ in 'CP_1-V-CP_2'. In order to deal ~~well~~ properly with the more complicated cases of 'It'- Extrasposition ~~such as~~ in 'CP_1-V-CP_2' in OT, I have introduced a new Constraint of SSF (Same Side Filter), and a new Constraint hierarchy such as SSF<<>>Subj.>>AhSubj. I have shown that the new Constraint of SSF and the newly-established Constraint hierarchy such as SSF<<>>Subj.>>AhSubj. can successfully explain selection of an optimal candidate, and solve the long-controversial 'marginal' reading problem without failure as well. In doing so, I have also suggested, based on the many previous arguments by Lasnik (1990) [5], Heim (1982) [8] , Milsark (1974) [6], [7], McCloskey (1991) [10], and Williams (1980) [11] among others, that the constructions of 'CP-Predicate' and 'CP_1-V-CP_2' should not be called by the typical name of 'It'- Extraposition. Instead, they should be separated from the Extraposition phenomena.

<The New Constraints Needed>
SSF (Same Side Filter), Subj., AHSubj.

<The New Constraint Hierarchy>
SSF<<>>Subj. >> AHSubj.

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