

English Cleft Sentence and Split Projection

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Park, Se-Young. (2012). English cleft sentence and split projection. *The Linguistic Association of Korea Journal*, 20(4), 97-108. This paper studies analytic approaches of English cleft sentence, particularly cleft constituents. Whether they are base-generated in the main clause or moved from the cleft clause has ever been the main subject of argument. In this paper I accept the latter contention and introduce Park(1996)'s OSHA¹⁾ based upon split projection on the analysis of English cleft sentences. If we assume Park(1996)'s OSHA as the available theory, English cleft construction can have more explanatory power to analyze cleft constituents consistently.

Key Words: cleft constituent, OSHA, split projection, cleft clause, functional category

1. Introduction

In English, *It*-Cleft sentence, one of cleft sentences²⁾ can be generally

1) OSHA is short for Outer Spec-Head Agreement. According to Park (1996), every functional category (CP, TP, *v*P, or DP) can have both Spec-Head Agreement(SHA) and Outer Spec-Head Agreement(OSHA), and besides SHA is an obligatory rule but OSHA is an optional rule. In other words, the outer specifier can appear if only another head of functional category(Hc, H_T, H_V, or H_D) which is Chomsky-adjoined to head of each functional category(C, T, *v*, or D) is base-generated from the lexicon. Refer to 3.2 for further explanation.

2) Cleft sentences are generally classified into three types in English: (*It*-cleft) 'It was a Fiat that he wanted to buy.', (*Wh*-cleft) 'What he wanted to buy was a Fiat.', and (*All*-cleft) 'All he wanted to buy was a Fiat.' *Wh*-cleft sentences and *All*-cleft sentences are sometimes called pseudo-cleft sentences. In this paper, only *It*-cleft sentences will be studied. I am particularly interested in the movement of clefted constituents associated with syntactic argumentation.

constructed as follows:

(1) It +be (copula) + X (cleft constituent) + subordinate clause (cleft clause)³⁾

The English cleft sentence which is a complex sentence to have a meaning that could be expressed by a simple sentence like (1) is the subject of our study. The complex sentence is comprised of a main clause and a cleft clause, and the cleft constituent is involved in the main clause.

I will suggest that clefted constituents move to Outer Spec2 of CP via Outer Spec2 of TP, according to Park (1996)'s OSHA. If we accept OSHA based on split projection about the analysis of English cleft sentences, we can explain this linguistic phenomena more consistently.

According to Park(1996), if necessary, functional categories (CP, TP) can be projected by OSHA. That is, another head (H_C, H_T) which is Chomsky-adjoined to the functional head(C, T) has an agreement relation with Outer Spec2 of functional categories(CP, TP) which is the landing site of cleft constituent. More concretely, if another head (H_C, H_T) with a feature [+Cleft] is base-generated, a cleft constituent is moved to Outer Spec2 of TP or CP.

In the following section, I will briefly look at the previous analyses on *It*-cleft sentences, including a new analysis called CP Specifier Analysis(hereafter, CPSA). Section 3 provides my alternative that various analyses on *It*-cleft sentence can be uniformed by OSHA, an operational framework for our investigation. Section 4 is devoted to the brief summary of what I claim in this study.

2. Previous Analyses on *It*-Clefts

The Previous analyses can be classified roughly into four types: Cleft-Extrapolation Rule, Null Operator Analysis, Cleft Constituent Movement, and CPSA. I will discuss them somewhat, respectively.

3) Kim J-B (2012) calls the cleft constituent the focus expression.

2.1. Cleft-Extraposition Rule

Akmajian(1970) suggests that the cleft sentence is syntactically derived from the pseudo-cleft sentence by a rule which extraposes the initial clause of the pseudo-cleft sentence to the end of the sentence.

- (2) a. The one who Nixon chose was Agnew.
 b. It was Agnew who Nixon chose.

- (3) a. [S₁ [NP₁ the one [S₂ who Nixon chose] [V be] [NP₂ Agnew]]
 b. [S₁ [NP₁ it] [V be] [NP₂ Agnew] [S₂ who Nixon chose]]

In (3a) called the pseudo-cleft sentence, the cleft constituent *Agnew* is base-generated in the complement of copula, 'be', and the clause in the main clause is extraposed to the end of the sentence and the element *It* is left in subject position. This analysis of *It*-cleft sentence can be also seen in Gundel (1974).

2.2. Null Operator Analysis

Chomsky(1977) assumes that the cleft constituent should be base-generated in TOP of CP, like the topic of topicalization constructions:

- (4) a. This book, I really like.
 b. [S' TOP s']
- (5) a. It is this book that I really like.
 b. it is [S' TOP S']

He postulates that *wh*-movement should occur in the cleft clause of (4), and the cleft constituent and *wh*-operator moved to COMP are semantically related like (6):

- (6) It is [S' TOP this book] [S[COMP O_i that] [S I like t_i]]

Williams(1980) and Delahunty(1982) analyze that in the *It*-cleft sentences, the cleft constituent has to be base-generated in the place of Subject, and *wh*-operator or PRO in the cleft clause has the same index with the cleft constituent.

- (7) a. $X \quad S' \longrightarrow X \text{ sub}_i \quad S' \text{ pred}_i$
 b. It was [_{NP} Judy]_{sub_i} [_{S'} that Wh_i / PRO_i I met]_{pred_i}

In the same vein, Heggie(1993) suggests the structure of cleft sentences as follows:

- (8) [_{IP} it [_{VP} be [_{CP} XP_i [_{CP} O_i that_i [_{IP} ... [_α] ...]]]]]

2.3. Cleft Constituent Movement

Unlike the cleft constituent base-generated, Pinkham & Hankamer (1975) argues that non-NP is moved from the cleft clause to the complement of 'be', and Chomsky (1977) also argues that the cleft constituents, NP and PP are base-generated, but only the cleft clause, adverb phrase syntactically moves from the cleft clause to TOP of the main clause.⁴⁾

- (9) a. It was reluctantly that Bill concluded that Jack would marry Judy.
 b. It was [_{S'}TOP reluctantly]_i [_{S'} that [_S Bill concluded [_{S'} that _{t_i} Jack would marry Judy]]]]

Rochemont (1986) proposes that all the cleft constituent moved from the cleft clause should be adjoined to *V'* in the main clause.

- (10) a. It was John that I saw yesterday.
 b. It [_{VP} was [_V [_V John_i] [_S t_i' that [_S I saw t_i yesterday]]]]

4) As for the cleft constituent movement, it has been noted that phrases such as NP, AdvP, PP, S can function as the cleft constituent. (Prince 1978, Collins 1991, Huddleston and Pullum 2002, Kim J-B 2007)

John, the cleft constituent is syntactically adjoined to V' in the main clause by way of S' , starting from the cleft clause.

2.4. CP Specifier Analysis

Jhang & Yang(1998) suggests that in the analysis on cleft sentences, the cleft constituent moves to Spec of CP, like *Wh*-movement. This is because cleft constructions and *Wh*-constructions show similarities in Complex NP Constraint, *Wh*-island Constraint, IP Ellipsis in embedded clauses, and Superiority Condition.

Firstly, both cleft constructions and *Wh*-constructions observe the Complex NP Constraint:

- (11) a. *Which book did you accept the argument that John should give?
 b. *It is this book that I accept the argument that John should read.

Secondly, both cleft constructions and *Wh*-constructions observe *Wh*-island Constraint:

- (12) a. *What do you wonder who read?
 b. *It is this book that I wonder who read.

Thirdly, both cleft constructions and *Wh*-constructions show similar ellipsis in the embedded clause:

- (13) a. Someone shot Mary but I don't know who.
 b. Something hit the van, but I don't know what.

- (14) a. Someone shot Mary, but it wasn't JOHN.
 b. Something hit the van, but it wasn't the TRUCK.

Fourthly, both cleft constructions and *Wh*-constructions observe Superiority Condition:

- (15) a. ?Who(m) did who shoot?
 b. ?What did what hit?
- (16) a. *I don't know wh(o)m who shot.
 b. *I don't know what what hit.

So far we have examined the structures of cleft sentences and we can get four types of them as follows:

- (17) a. Cleft-Extraposition Rule
 $[IP\ it_i\ be\ XP\ [CP_i\ that\ [IP\ \dots\]]]$
- b. Null Operator Analysis
 $[IP\ it\ be\ XP_i\ [CP\ OP_i\ [CP\ that\ [IP\ \dots\ t_i\ \dots]]]]$
- c. Cleft Constituent Movement
 $[IP\ it\ be\ [VP\ V'\ XP_i\ [CP\ that\ [IP\ \dots\ t_i\ \dots]]]]$
- d. CP Specifier Analysis(CPSA)
 $[IP\ it\ be\ [CP\ XP_i\ [c\ that\ [FP\ t_i'\ [IP\ \dots\ t_i\ \dots]]]]]$

(17a) and (17b) have one thing in common that the each cleft constituent is base-generated in the main clause, not moved from the cleft clause; ((17c) and (17d) also have one thing in common that the each cleft constituent is moved from the cleft clause to the main clause, not base-generated in the main clause.

The difference between (17c) and (17d) is that while the cleft constituent of (17c) is moved to V' in the main clause, that of (17d) is moved to [Spec, CP] in the cleft clause.

3. Problems and An Alternative

3.1. Problems of Previous Analyses

Jhang, S-E and Yang, S-B(1998) takes the following examples which cannot be explained by (17a), (17b) and (17c).

- (18) a. To Bill it was that I gave the book.
 b. The person to whom it was that the book was sent died.
 (Pinkham and Hankamer, 1975: 82)

- (19) a. Who was it a picture of that John hung in his bathroom?
 b. Of whom was it a picture that John hung in his bathroom?
 c. To whom was it that you gave the book?
 (Delahunty 1982: 160)

In (18a) and (18b) 'To Bill' and 'The person to whom', the cleft constituents cyclically move to the front of the main clause via COMP of the cleft clause. Accordingly, the four analyses of (17) cannot also explain the cleft constituents of (18a) and (18b).

(19a), (19b), and (19c) cannot also be explained by (17a), (17b), and (17c), like (18a,b).

However, CPSA of (17d) can give an explanatory adequacy over the previous analyses.

- (20) a. [_{FP} To Bill_i [_{IP} it [_{VP} was [_{CP} t_i" [_C that [_{FP} t_i' [_{IP} ...t_i ...]]]]]]]]]
 b. [_{FP} Who_i [_F was [_{IP} it [_{CP} t_i" [_C that [_{FP} t_i' [_{IP} ... t_i ...]]]]]]]]]]

(20a) is the structure of (18a), and (20b) is that of (19a) from the viewpoint of CPSA. In (20a) the cleft constituent, 'To Bill' is moved from Spec of FP to Spec of CP in the cleft clause, and is cyclically moved to Spec of FP of the main clause. 'Who', the cleft constituent of (20b) is also moved from Spec of FP to Spec of CP in the cleft clause, and is cyclically moved to Spec of FP of the main clause.

However, there is an example which cannot be explained by CPSA:

- (21) a. It is John to whom Mary spoke.
 b. It is John whom Mary spoke to.

(21a) is also a well-formed sentence like (21b), but (21a) cannot be analyzed well by CPSA of (17d). That is because Spec of CP is not an appropriate site which

can contain the cleft constituent, ‘John’ and the preposition, ‘to’ closely related to ‘whom’ together.

CPSA cannot also explain the following examples consistently.

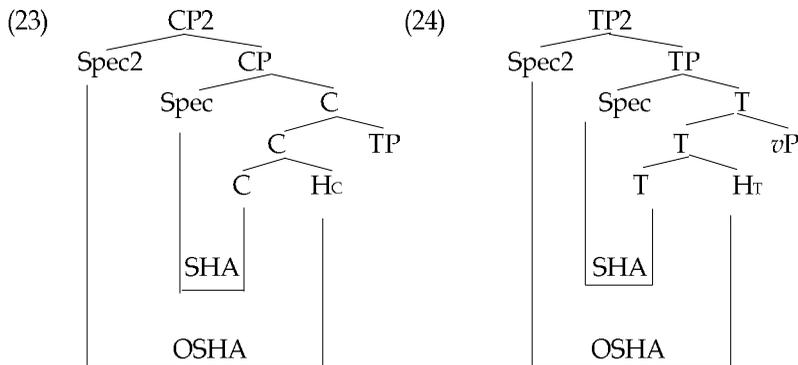
- (22) a. This is the boy of whom we spoke yesterday.
- b. The house in which he lives is very large.

In (22a,b) Spec of CP is not a suitable site which can contain the antecedents (the boy, the house) and the prepositions (of, in) closely related to relatives (whom, which) together.

3.2. An Alternative

Park(1996) proposes that if necessary, functional categories (CP, TP) can have another agreement-relation called OSHA between Outer Specs(Spec2 CP, Spec2 TP) and another head (Hc, Hr) which is Chomsky-adjoined to head (C, T) of functional categories.

We will take (23) and (24) as an operational framework for our investigation. (23) shows the SHA and OSHA of the functional category CP, and (24) represents the SHA and OSHA of the functional category TP.



Since SHA is an obligatory rule, while OSHA is an optional rule, another heads (Hc, Hr) are base-generated, if necessary. And then they are Chomsky-adjoined to

C or T. After that, they have an agreement-relation with Outer Specifiers [Spec2 CP] or [Spec2 TP]. [Spec2 CP] provides the landing site of cleft constituents.

Before we show the strong points of OSHA analysis, we can compare OSHA analysis with CPSA as follows:

(25) a. CPSA Analysis

[IP it be [CP XP_i [c that [FP t_i' [IP ... t_i ...]]]]

b. OSHA Analysis

[TP it be [CP₂ XP_i [CP [c that [TP₂ t_i' [TP ... t_i ...]]]]

We can find that the functional category FP of (25a) is added newly between CP and IP so that it can contain cleft constituents and prepositions together; (25b) can contain cleft constituents and prepositions together through OSHA analysis without establishing another functional category FP.

Now we will see the process how (25a) deals with (26a,b), in comparison with (25b).

(26) a. It is Jack to whom Judy spoke.

b. It is the bed in which Jack used to sleep.

If we apply CPSA analysis on (26a) and (26b), we can get (27a) and (27b); if OSHA analysis is applied on (26a) and (26b), we can get (28a,b).

(27) a. [IP it is [CP Jack_i to_j [C whom [FP t_i' t_j' [IP ... t_j t_i...]]]]]]

b. [IP it is [CP the bed_i in_j [C which [FP t_i' t_j' [IP ... t_j t_i...]]]]]]

(28) a. [TP it is [CP₂ Jack_i [CP to_j [C whom [TP₂ t_i' [TP ...t_j t_i]]]]]]]

b. [TP it is [CP₂ the bed_i [CP in_j [C which [TP₂ t_i' [TP ...t_j t_i]]]]]]]

In (27a) and (27b), the cleft constituents (Jack, the bed) and the prepositions (to, in) are both moved from IP to FP, and then moved from FP to CP cyclically under CPSA analysis. OSHA analysis based upon Split Projection doesn't need a new functional category, FP. In (28a) and (28b), the cleft constituents (Jack, the bed) are moved from TP₂

to CP₂, and the prepositions (to, in) are moved from TP to CP respectively under OSHA analysis.

The following examples can show the clear difference between CPSA and OSHA.

(29) a. To Bill it was that I gave the book.

(Pinkham and Hankamer, 1975: 82)

b. Who was it a picture of that John hung in his bathroom?

(Delahunty, 1982: 160)

We can analyze (29a,b) through the structures of (30a,b) under CPSA and (29a,b) can be analyzed into the structures of (31a,b) under OSHA.

(30) a. [_{FP} To Bill_i [_{IP} it [_{VP} was [_{CP} t_i'' [_C that [_{FP} t_i' [_{IP} .. t_i ..]]]]]]]]

b. [_{FP} Who_i [_F was [_{IP} it [_{CP} t_i'' [_C that [_{FP} t_i' [_{IP} .. t_i ..]]]]]]]]

(31) a. [_{TP2} To Bill_i [_{TP} it was [_{CP2} t_i'' [_{CP} [_C that [_{TP2} t_i' [_{TP} ..t_i ..]]]]]]]]

b. [_{CP} Who_i [_C was [_{TP} it [_{CP} t_i' [_C that [_{TP} ..t_i ..]]]]]]

We can find that while CPSA in (30) needs another functional category, FP between CP and IP, OSHA in (31) doesn't need a new category, FP. The cleft constituent, 'To Bill' in (31a) is moved from TP₂ in the cleft clause to TP₂ in the main clause via CP₂ consistently. In (31b) the cleft constituent, 'who' is moved from CP in the cleft clause to CP in the main clause, starting at TP in the cleft clause uniformly.

4. Conclusion

So far we researched the previous studies on *It*-cleft sentences in English. We also could classify them into two types about cleft constituents: the base-generation types and the movement types. We came to know that CPSA, one of the movement types of cleft constituents has the most explanatory adequacy among

them. However, I tried to show that we can explain linguistic phenomena more consistently than CP5A, if we accept the OSHA analysis on the *It*-cleft sentences.

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