MOVEMENT IN GAPPING CONSTRUCTIONS

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Keywords: gapping, remnant movement, minimalist approach

1. Introduction

It has been argued that the derivation of Gapping constructions such as (1) involves movement as illustrated in (2):

(1) John will see Mary and Bill Lucy.
(2) a. John will see Mary and Bill [[will see tLucy] Lucy]
    b. John will see Mary and Bill [[Ø] Lucy]

For details, see Abe and Hoshi (1997) and references therein.¹ In (2a), the remnant Lucy in the second conjunct has undergone movement. In (2b), the string will see is elided, forming a Gapping sentence. Under the movement analysis, movement creates a configuration necessary for ellipsis. If the movement operation takes place in overt syntax, the configuration licensing ellipsis is formed prior to LF/PF split. Ellipsis is then considered to be a PF deletion operation. If this analysis is correct, we do not have to assume LF copying theory of ellipsis. For related discussion, see Lasnik (1999).²

One of the most important questions in respect to the movement analysis is the nature of remnant movement. Jayaseelan (1990) pro-

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* I am indebted to two anonymous EL reviewers for their helpful comments and suggestions. I am also grateful to Chris Tancredi for some of the crucial example sentences in this paper.

¹ Abe and Hoshi (1997) try to extend their analysis of Gapping to Gapping-like examples in Japanese. See Nakamura (1999) for arguments against their analysis.

² Abe and Hoshi (1997) argue that movement in both conjuncts of Gapping constructions can take place either in overt syntax or in LF. See Lasnik (1999) for the view that movement creating a configuration for ellipsis must be overt.
poses that rightward movement is involved in English Gapping constructions. Consider the following examples:

(3) a. John thinks that Bill will see Susan, and Harry thinks that Bill will see Mary.
   b. *John thinks that Bill will see Susan, and Harry 0 Mary.
      (0 = thinks that Bill will see)

Under the rightward movement analysis, the remnant Mary in (3b) undergoes movement crossing a tensed clause in the course of derivation:

(4) ... and Harry [thinks [that [Bill will see tMary]]] Mary

The deviancy found in (3b) is then attributed to the Right Roof Constraint that excludes rightward movement across a tensed clause.

As it has been pointed out, the analysis of (3b) based on the rightward movement of the remnant is not persuasive. It has been observed that an intervening pronoun alleviates the severe violation of the clausemate condition on Gapping:

(5) ?John thinks that he will see Susan and Harry 0 Mary.
      (0 = thinks that he will see)

For examples, see Pesetsky (1982) and Nishigauchi (1998). The alleviation does not hold for overt rightward movement:

(6) *John thought that he would see t until yesterday [the man that I had been telling you about].

Furthermore, as is observed in Nakamura (1996), (3b) is perfectly acceptable when Bill is not a focus:

(7) A: Who thinks that Bill will see whom?
    B: John thinks that Bill will see Susan, and Harry Mary.

These phenomena thus provide evidence against the rightward movement analysis of English Gapping, and furthermore, assert that remnant movement can be long-distance in principle. For further discussion, see Nakamura (1996).³

³ Jayaseelan (1990) and Abe and Hoshi (1997) argue that English Gapping and overt rightward movement have similar properties, observing the following examples:

(i) a.*John talked about Bill and Mary Susan.
   b. *John built the house with a hammer and Mary the garage with a saw.

However, it has been pointed out in the literature that judgments vary in respect of
The question that now we face is what motivates remnant movement in Gapping constructions. In the next section, I will attempt to demonstrate how the minimalist assumptions advocated in Chomsky (1998, 1999) provide a clue as to how to handle the question.

2. Mechanics of Optional Movement

In respect of Object Shift (OS) constructions, Chomsky (1999) argues that the semantic interpretation of the shifted object (new information, specificity/definiteness, focus, and so forth) is assigned to the peripheral configuration universally, and that the assignment of the interpretive complex (INT) is probably a subcase of a more general principle governing peripheral non-theta (EPP) positions including SPEC-T. Consider the following configuration of OS:4

\[(8) \quad [C [\text{SPEC} \ T \ldots [\text{OB} \ [\text{SUBJ} \ v^* \ [\text{VP} \ V \ldots \ t_{\text{OB}}]]]]]
\]

Chomsky (1999) assumes that optional operations can apply only if they have an effect on outcome. In (8), \(v^*\) is assigned an EPP-feature that permits the object raising. In the EPP position, the object (OB) has the “surface” interpretation INT. For detailed discussion, see Chomsky (1999).

Consider now the derivation of (1). Suppose that, at some point in the derivation of the second conjunct, \(C_{HL}\) has constructed the following:

\[(9) \quad [H \ldots [v^* \text{Bill} \ v^* \ [\text{VP} \ V \text{Lucy}]]]\]

Suppose further that the head H may be assigned an EPP-feature, the deletability of V-P strings in examples such as (ia). See Sag (1976) and Nakamura (1996). For the fact in (ib), note that similar phenomena have been observed in Right Node Raising cases (see Hankamer (1971)) or Topicalization cases (see Lasnik and Saito (1992)). It seems then that the deviancy in (ib) should be accounted for by a more general principle governing peripheral positions, though I do not have any explicit explanation at this point.

4 Object shift refers to the movement of a direct object to a VP-external position. An Icelandic example is given in (i):

\[(i) \quad \text{margir} \ \text{stúdentar} \ \text{låsu} \ \text{bókina} \ [\text{VP ekki} \ [\text{VP} \ \text{fåsu} \ t_{\text{bókina}}]]
\]

many students read book-the not

‘Many students did not read the book.’
allowing/requiring the remnant movement of Bill and Lucy:5,6

(10) [Bill [Lucy [H ... [v*p tBill v* [vp V tLucy]]]]]

The intermediate steps of the remnant movement have been ignored in this example. In the peripheral positions, the remnants are assigned their surface semantic interpretations (contrastive focus, pair-list interpretation, and the like).7 In the phonological component, the contrastive elements Bill and Lucy have their phonological interpretation. The unstressed string (will see) is deleted in a form of PF deletion phenomena.

Under the present analysis, the right conjunct of the long-distance remnant movement case in (7) is assigned the following structure:

(11) ... and [Harry [Mary [H ... tHarry thinks that Bill will see tMary]]]

The remnants Harry and Mary receive their phonological interpretation in the phonological component, and the rest of the conjunct undergoes PF-deletion operation.

3. Remaining Issues

I have argued that the minimalist assumptions on optional rules provide a clue to account for remnant movement involved in the derivation of Gapping constructions. On the analogy of OS, I have proposed

5 Note that Pesetsky's (1982) leftward movement analysis is quite different from the analysis of this paper, especially assuming LF-movement and LF-copying.
6 I assume that the EPP requirement can be satisfied by any categorial feature. For this view, see Jang (1997), among others. Thus, PP, for example, can be a remnant in the second conjunct.
7 As an anonymous reviewer points out, Gapping cannot take out the verb and direct object, stranding the PP complement:

( i ) *Harry gave a cadillac to Seymour, and Albert to Thomas.

See Hankamer (1971) and Larson (1990) for the fact.

Notice, however, that examples such as (i) get much better in the following context:

( ii ) A: Who gave a cadillac to whom?
B: Harry gave a cadillac to Seymour, and Albert to Thomas.

I am grateful to Chris Tancredi for informing me of this fact.

7 See Kuno (1976). Also see Nishigauchi (1998) for the relevance of the pair-list interpretation to Gapping.
that remnant movement is caused by a head that has been assigned an EPP property and that the newly created EPP positions are assigned the surface semantic interpretation of the remnants in Gapping constructions. In the course of discussion, I have put aside the question of what is the relevant head. Suppose that the head is T. If this is correct, the right conjunct of (1) is assigned the following structure:

(12) \[ [\text{TP Bill} [\text{Lucy} [\text{T} \text{...} [\text{vP tBill v* [VP see tLucy]]}]]] \]

Here, I ignore head raising operations. I suppose further that the EPP-property of T allowing/requiring remnant movement is assigned to the peripheral position of the conjunct, probably as a form of P-features of peripheral system argued in Chomsky (1998). The conjecture that T is assigned the EPP property receives some support from the fact that the domain of Gapping is TP:

(13) a. It is hard to believe that Jack hates swimming and (*that) Fred fishing.

b. For Jack to hate swimming and (*for) Fred fishing would be a tremendous surprise.

See Jackendoff (1977) for the data. If an overt complementizer appears as in the ungrammatical cases in (13), the positions of the remnants are no longer peripheral in the domain of Gapping.

I have also put aside the question of why (3b) is ungrammatical. While a full explanation is beyond the scope of this paper, a conjecture is in order. I have assumed that remnant movement can be long-distance. It seems then that the intervention of an overt subject (except pronouns) blocks remnant movement of the object. Notice here that intermediate subjects cannot be a remnant of Gapping:

(14) a. *This doctor thinks that I should buy tunafish, and that doctor salmon.

b. *This doctor thinks that tunafish will harm me, and that doctor salmon.

See Pesetsky (1982) for the data. My speculation is that, by being an intermediate subject, salmon in (14b) averts the pair-list interpretation, causing the deviancy found in (14b). The correlation between Gapping constructions and multiple wh constructions observed by Pesetsky (1982) provides support for this speculation:

(15) a. Who knows that you eat what.

b. *Who know that what makes you sick.

Multiple wh questions such as (15a) are possible only when a pair-list interpretation is available. See Nishigauchi (1998) for a related discus-
sion. For the resistance to the pair-list interpretation, suppose that intermediate subjects are inactivated (in the sense of Chomsky (1999)), so that Agree does not hold between H (a head responsible for remnant movement in Gapping constructions) and elements in intermediate subject positions. If so, it is conceivable that an intervention effect arises when H matches an inactive element (an intermediate subject), barring Agree holding H and the object (Mary in (3b)). The question, then, to be considered is; what inactivates intermediate subjects? I will not explore this issue at this time, and I leave it for future research.

4. Summary

In this paper I have posed a new analysis of remnant movement in English Gapping constructions. I have also made some speculations concerning the direction which future research might take, in the hope that many questions left unanswered will eventually fall into place.

REFERENCES


8 Note that pronouns do not cause the intervention effect, as can be seen in (5) and (14a).
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