

## A new form of sideward movement

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### 1 The puzzle: Lack of island effects with multiple clefts

Since Hoji's (1987) important work on Japanese clefts, it has been well known that they show effects of syntactic movement. One such effect is sensitivity to islands. Thus, if there is an island between the focus element and its original position, the sentence is degraded. This is shown in (1b), where the bold-faced phrase is a focus and the underline shows its original position, and they are separated by a complex NP. The sentence in (1b) is degraded, as compared with the fully acceptable sentence in (1a), where there is no island between the focus and its original position.

- (1) a. Ken-ga [Mari-ga     hon-o ageta to] omotteriu no-wa  
Ken-NOM Mari-NOM book-ACC gave C think C-TOP  
**Masao-ni** da.  
Masao-DAT COP  
'It is to Masao that Ken thinks that Mari gave a book.'
- b. ??Ken-ga [Mari-ga     hon-o ageta toyuu uwasa]-o  
Ken-NOM Mari-NOM book-ACC gave C rumor-ACC  
sinziteiru no-wa **Masao-ni** da.  
believe C-TOP Masao-DAT COP  
'It is to Masao that Ken believes the rumor that Mari gave a book.'

In (1) the focus position has one phrase (a single cleft). However, Japanese also allows the focus position of the cleft to have more than one phrase (multiple clefts). Interestingly, multiple clefts behave differently from single clefts with respect to island effects. Compare (1b) with (2).

- (2) a. Ken-ga [Mari-ga ageta toyuu uwasa]-o sinziteiru no-wa  
Ken-NOM Mari-NOM gave C rumor-ACC believe C-TOP  
**Masao-ni hon-o** da.  
Masao-DAT book-ACC COP  
'It is to Masao a book that Ken believes the rumor that Mari gave.'

- b. Ken-ga [Mari-ga ageta toyuu uwasa]-o sinziteiru no-wa  
 Ken-NOM Mari-NOM gave C rumor-ACC believe C-TOP  
**hon-o Masao-ni** da.  
 book-ACC Masao-DAT COP  
 ‘It is a book to Masao that Ken believes the rumor that Mari gave.’

The examples in (2) are fairly acceptable, in contrast to the example in (1b).

We see the same effects with adjunct islands. The example in (3) is degraded, as expected, but those in (4) improve significantly.

- (3) ?\*Ken-ga [Mari-ga hon-o watasu maeni] kaetta no-wa **Masao-ni**  
 Ken-NOM Mari-NOM book-ACC hand before left C-TOP Masao-DAT  
 da.  
 COP  
 ‘It is to Masao that Ken left before Mari handed a book.’
- (4) a. Ken-ga [Mari-ga watasu maeni] kaetta no-wa **Masao-ni**  
 Ken-NOM Mari-NOM hand before left C-TOP Masao-DAT  
**hon-o** da.  
 book-ACC COP  
 ‘It is to Masao a book that Ken left before Mari handed.’
- b. Ken-ga [Mari-ga watasu maeni] kaetta no-wa **hon-o**  
 Ken-NOM Mari-NOM hand before left C-TOP book-ACC  
**Masao-ni** da.  
 Masao-DAT COP  
 ‘It is a book to Masao that Ken left before Mari handed.’

These facts show that multiple clefts, unlike single clefts, do not show island effects. This property of Japanese multiple clefts has been unnoticed and none of the previous analyses can account for it. There are two major approaches to Japanese multiple clefts. One approach claims that multiple clefts involve multiple movement (Cho et al. 2010, Hiraiwa & Ishihara 2012). Thus, in this approach the example in (2a), for instance, involves two movements, movement of one object and movement of the other object. It is mysterious, however, that whereas movement of a single element shows island effects, movement of multiple elements does not.

The other approach argues that what moves to the focus position of multiple clefts is actually a single constituent (Koizumi 2000, Kuwabara 1996, Takano 2002). There are two varieties of this approach. Koizumi (2000) and Kuwabara (1996) propose that what appears in the focus position is a verb phrase (or a higher projection) out of which the verb has raised. In this analysis, what undergoes move-

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ment is a verb phrase, but movement of verb phrases is known to show island effects:

- (5) John said he'd win the race and...  
a. ??win the race I believed the claim that he did.  
b. ?\*win the race he went to London after he did. (Roberts 1990)

Thus, this analysis cannot capture the lack of island effects with multiple clefts.

The other variety of the single constituent approach to multiple clefts has been proposed by Takano (2002). Takano claims that what occurs in the focus position is a constituent made up of the focus elements themselves. Specifically, Takano proposes that the focus position in (2a) has a constituent formed in the course of the derivation by adjoining one object to the other. Takano calls such unusual constituents “surprising constituents” and claims that surprising constituents, just like standard constituents, undergo movement in multiple clefts. If so, however, there is no reason to believe that surprising constituents behave differently from standard constituents in terms of the effects of movement.<sup>1</sup>

Thus, the existing analyses cannot explain why multiple clefts, unlike single clefts, do not show island effects.

## 2 Surprising constituents formed by sideward movement

I will propose a new analysis of multiple clefts that accounts for the lack of island effects. To do so, I will first adopt an analysis of single clefts proposed originally by Hasegawa (1997) and developed by Hiraiwa & Ishihara (2012). This analysis connects the single cleft sentence in (6) with the noncleft sentence in (7).

- (6) Ken-ga hon-o ageta no-wa **Mari-ni** da.  
Ken-NOM book-ACC gave C-TOP Mari-DAT COP  
'It is Mari that Ken gave a book to.'
- (7) Ken-ga Mari-ni hon-o ageta no da.  
Ken-NOM Mari-DAT book-ACC gave C COP  
'It is that Ken gave a book to Mari.'

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<sup>1</sup> Agbayani et al. (2015) propose that multiple scrambling in Japanese occurs in the phonological component. One consequence of this analysis is that it accounts for the lack of island effects with multiple scrambling. However, their analysis is crucially based on the claim that multiple scrambling does not affect semantic interpretation. Thus, their analysis of multiple scrambling cannot be extended to the issue here since multiple clefts, being a focus construction, do have interpretive effects.

Specifically, this analysis derives (6) from the base form of (7) in the following way (the material surrounded by angled brackets indicates unpronounced copies):

- (8)
- a. Ken-ga Mari-ni hon-o ageta no da → focus movement of *Mari-ni*
  - b. **Mari-ni** [<sub>X</sub> Ken-ga ⟨Mari-ni⟩ hon-o ageta no] da → topicalization of X
  - c. [<sub>X</sub> Ken-ga ⟨Mari-ni⟩ hon-o ageta no-wa] [**Mari-ni** ⟨X⟩ da]

The surface form of (8c) corresponds to the cleft sentence in (6). The details of the structure of the cleft in this analysis do not concern us (see the above-cited references for possible structures). Crucial for our present purposes is step (8b), where *Mari-ni* moves to the focus position, which I assume to be SpecC<sub>Foc</sub>. This movement is sensitive to syntactic islands and if it crosses an island, the cleft sentence is degraded.

How do multiple clefts arise? Here I pursue Takano's (2002) idea that multiple elements in the focus position form a single constituent made up of those elements (a surprising constituent), but implement it in a different way. I propose that surprising constituents are formed by sideward movement (Hornstein 2001, Nunes 2004). Hornstein (2001) analyzes the relation between the matrix subject and the underlined position of the adjunct clause in (9) in terms of sideward movement, as shown in (10).

- (9) John heard Mary [without \_\_ entering the room].
- (10)
- a. [heard Mary]  
[without John entering the room]  
→ Merger of *John* and the matrix clause (sideward movement of *John*)
  - b. [John heard Mary]  
[without ⟨John⟩ entering the room]  
→ Merger of the adjunct clause and the matrix clause
  - c. [[John heard Mary] [without ⟨John⟩ entering the room]]  
→ Derivation proceeds to construct the rest of the matrix clause

Sideward movement, like standard movement, is carried out by Merge. However, unlike standard movement, which involves internal Merge (IM), sideward movement involves external Merge (EM). EM is merger of two independent syntactic objects (SOs), whereas IM is merger of two SOs one of which comes from inside the other. Now notice that sideward movement is merger of two SOs one of which comes from inside another SO. Thus, in (10) merger of *John* with the matrix clause, forming (10b), is an instance of sideward movement and is carried out by EM. *John*

moves from the adjunct clause to the matrix clause that exists independently of the adjunct clause.

Recall that sideward movement involves EM merging two SOs one of which comes from inside another SO. Suppose we generalize this property so that EM can merge two SOs *both of which* come from inside another SO. This is a new form of sideward movement and I propose that this form of sideward movement derives surprising constituents. To see how this proposal works, consider (11).

- (11) Ken-ga ageta no-wa hon-o Mari-ni da.  
 Ken-NOM gave C-TOP book-ACC Mari-DAT COP  
 ‘It is a book to Mari that Ken gave.’

This cleft sentence has *hon-o* ‘book-ACC’ and *Mari-ni* ‘Mari-DAT’ in the focus position. Under my proposal, the two elements form a constituent and this constituent is created by the new form of sideward movement in the following way:

- (12) a. [ $\alpha$  book-ACC Mari-DAT gave]  
 → Merger (EM) of *book-ACC* and *Mari-DAT*, forming {*book-ACC*, *Mari-DAT*} outside  $\alpha$   
 b. [ $\alpha$  ⟨book-ACC⟩ ⟨Mari-DAT⟩ gave]  
 {book-ACC, Mari-DAT}  
 → construction of the structure up to FP  
 c. [<sub>FP</sub> [Ken-NOM [ $\alpha$  ⟨book-ACC⟩ ⟨Mari-DAT⟩ gave] C] C<sub>Foc</sub>]  
 {book-ACC, Mari-DAT}  
 → Merger (EM) of {*book-ACC*, *Mari-DAT*} and FP  
 d. [{**book-ACC**, **Mari-DAT**} [<sub>FP</sub> [Ken-NOM [ $\alpha$  ⟨book-ACC⟩ ⟨Mari-DAT⟩ gave] C] C<sub>Foc</sub>]]

In (12a)  $\alpha$  corresponds to a verb phrase. Now Merge applies to *book-ACC* and *Mari-DAT*. This means that Merge takes the two elements and combines them into the single constituent {*book-ACC*, *Mari-DAT*}. Crucially this new constituent is formed outside  $\alpha$ , leaving copies of *book-ACC* and *Mari-DAT* inside  $\alpha$  (if {*book-ACC*, *Mari-DAT*} were formed inside  $\alpha$ , the result would violate the No-Tampering Condition proposed by Chomsky (2008)). As a result, in (12b) {*book-ACC*, *Mari-DAT*} exists independently of  $\alpha$  in the workspace. The constituent {*book-ACC*, *Mari-DAT*} eventually merges with FP, giving rise to (12d), where {*book-ACC*, *Mari-DAT*} appears in SpecC<sub>Foc</sub> and receives focus interpretation.

### 3 Getting around islands

Now we are in a position to solve the puzzle under consideration, namely, the lack of island effects with multiple clefts. The derivation of the multiple cleft shown in (12) corresponds to focus movement in the single cleft shown in (8b). In both cases, the focus elements end up appearing in  $\text{SpecC}_{\text{Foc}}$ . However, there is a crucial difference between the two regarding how they reach there. In the case of the single cleft, the focus element moves to  $\text{SpecC}_{\text{Foc}}$  by means of IM (standard movement). In contrast, in the case of the multiple cleft, the single constituent made up of the multiple elements reaches  $\text{SpecC}_{\text{Foc}}$  by way of EM (sideward movement).

This derivational property allows multiple clefts to evade islands. Let us consider (13), which shows a partial derivation of (2a).

- (13) a.  $[\text{FP Ken-NOM} [\text{CNP Mari-NOM} \langle \text{Masao-DAT} \rangle \langle \text{book-ACC} \rangle \text{gave C rumor-ACC}] \dots \text{C}_{\text{Foc}}]$   
 $\{\text{Masao-DAT, book-ACC}\}$   
 $\rightarrow$  Merger of  $\{\text{Masao-DAT, book-ACC}\}$  and FP
- b.  $[\{\text{Masao-DAT, book-ACC}\} [\text{FP} \dots [\text{CNP} \dots \langle \text{Masao-DAT} \rangle \langle \text{book-ACC} \rangle \dots] \dots \text{C}_{\text{Foc}}]]$

(13a) results from applying Merge to *Masao-DAT* and *book-ACC*, forming  $\{\text{Masao-DAT, book-ACC}\}$  independent of FP. Then (13b) results after Merge applies to  $\{\text{Masao-DAT, book-ACC}\}$  and FP. Note that in this derivation, neither *Masao-DAT* nor *book-ACC* crosses the Complex NP (CNP). They are originally contained in the CNP, but they undergo sideward movement, as a result of which they become a structure independent of the CNP in (13a). When they merge with FP in (13b), they are no longer contained in the CNP. The situation is parallel to that in (10), where *John* is originally contained in the adjunct and undergoes sideward movement, ending up in a position of the matrix clause that is no longer contained in the adjunct. The sentence in (9), even though the surface position of *John* and its original position in the adjunct clause are separated by the adjunct island, does not show island effects because of this derivation involving sideward movement. Island effects are induced by IM. However, sideward movement is carried out by EM. Due to this property, sideward movement has the effect of getting around islands. In the analysis proposed here, multiple clefts are formed by a new type of sideward movement carried out by EM, and therefore do not show island effects.

### 4 Conclusion

Multiple clefts in Japanese, unlike single clefts, have the curious property of not showing island effects. I have shown that this property falls into place if multiple

clefts are derived by a new form of sideward movement. Given that the lack of island effects is left unaccounted for and remains mysterious under the previous approaches, the new form of sideward movement proposed here deserves pursuing seriously.

## References

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