

# Relativization in Japanese and the Nature of Resumption\*

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## Abstract

*This paper claims that a gap in Japanese relativization and topicalization is a trace of movement in some environments, and an empty pronominal in other environments. Taking reconstruction effects as evidence of movement, I adopt a movement analysis of relativization and topicalization. The examination of relativization and two types of topicalization shows a correlation among island-insensitivity, the occurrence of resumptive pronouns, and the absence in a dislocated element of a particle associated with the original position. Based on this correlation, I claim that Japanese resumptive pronouns are introduced in the PF component in order to repair a stranded particle. Given this analysis, the distribution of resumptive pronouns and island-insensitivity in certain environments in Japanese, as well as the difference in the behavior of resumptive pronouns between Japanese and English, are accounted for.*

*Keywords: relativization, topicalization, resumption, particles, island-sensitivity*

## 1. Introduction

In both Japanese and English, a gap is found in relative clauses and topic constructions, as exemplified in (1) and (2).

- (1) a. the book<sub>i</sub> [that John bought  $e_i$ ]  
b. This book<sub>i</sub>, I really like  $e_i$
- (2) a. [Taro-ga  $e_i$  katta] hon<sub>i</sub>  
Taro-Nom bought book  
'the book that Taro bought'
- b. Sono hon<sub>i</sub>-wa [Taro-ga  $e_i$  katta]  
the book-Top Taro-Nom bought  
'The book, Taro bought'

It has been assumed that relativization and topicalization in English involve movement because of island-sensitivity of the dependency between a dislocated element (a relative head

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and a topic) and a gap, and because of the presence of reconstruction effects.

- (3) a. \*The hat<sub>i</sub> which I believed [<sub>DP</sub> the claim [<sub>CP</sub> that Otto was wearing *e*]] was red  
b. The hat<sub>i</sub> which I believed that Otto was wearing *e*<sub>i</sub> was red
- (4) a. \*This hat<sub>i</sub>, I believed [<sub>DP</sub> the claim [<sub>CP</sub> that Otto was wearing *e*]]  
b. This hat<sub>i</sub>, I believed that Otto was wearing *e*<sub>i</sub> (Kuno 1973:238, 239)
- (5) a. the picture of himself<sub>i</sub> that Bill<sub>i</sub> took *e*  
b. Pictures of himself<sub>i</sub>, Bill<sub>i</sub> likes *e*
- (6) The headway that we made *e* was satisfactory (Schachter 1973:31)
- (7) No linguist would read the many books [Gina will need *e* for vet school] (need > many)  
(Sauerland 1999)

The examples in (3) and (4) show that the dependency is sensitive to island constraints.<sup>1</sup> The examples in (5) to (7) are ones of anaphor binding, idiom chunks, and scope reconstruction respectively. They show that reconstruction effects are observed and a dislocated element is interpreted in the position of a gap. Based on the presence of reconstruction effects, I assume that the elements that move are both a dislocated element itself and a null operator (the *raising analysis*), following Vergnaud (1974), Kayne (1994), Bianchi (1999), and Bhatt (2002) among others.

In Japanese relative clauses and topic constructions, however, the relatively free availability of an empty pronominal *pro* makes the status of a gap ambiguous. The main goals of this paper are (i) to clarify the status of the gap found in Japanese relativization and topicalization, and (ii) to consider crosslinguistic variation of the nature of resumption.

In what follows, I will classify Japanese topicalization into two subtypes according to the category of a topic, which can be either NP or DP/PP, under the DP structure illustrated in (8).

- (8) [(<sub>PP</sub>) [<sub>DP</sub> ... [<sub>CaseP</sub> ... [<sub>NP</sub> ... N] Case] D] (P)]

As for the compatibility with a Case-particle or a postposition associated with the original position, a Case-particle or a postposition can be attached to a topic.<sup>2</sup> Let us call a topic with a Case-particle or a postposition a *PP topic*, and a topic without one an *NP topic*. A relative head is always NP because no Case-particle or postposition associated with the original position can be attached to it. I assume that the element that moves is NP, the projection under Case, in relativization and NP topicalization, and it is a whole DP or PP in PP topicalization. As we will see in the following sections, the presence or absence in a

<sup>1</sup> The square brackets written in bold indicate islands.

<sup>2</sup> The only Case-particle that can be attached to a topic is *-ni* (Dative). The other Case-particles *-ga* (Nominative), *-no* (Genitive), and *-o* (Accusative) are incompatible with a topic.

dislocated element of a Case-particle or a postposition associated with the original position plays a crucial role in the syntactic properties of these three constructions.

In section 2, I will examine the properties of Japanese relativization and topicalization, using three kinds of syntactic behavior as diagnostics. In section 3, I will pursue the possibility that movement of a dislocated element is involved, taking the presence of reconstruction effects as evidence of movement. Under the movement analysis, the correlation among the syntactic properties that I show in section 2 is accounted for. I claim that a gap is a trace of movement in some environments and that it is an empty resumptive pronoun that is introduced in the PF component in other environments. In section 4, I will consider a crosslinguistic aspect of the nature of resumption. In this paper, I will take up resumptive pronouns in Japanese and English for analysis, and show that English resumptive pronouns are base-generated in the original position, not introduced in the PF component as in Japanese.

## 2. Properties of Relativization and Topicalization in Japanese

In this section, I will show what properties relative clauses and two types of topic constructions in Japanese have with respect to three syntactic behaviors: island-sensitivity, the occurrence of a resumptive pronoun, and the presence of reconstruction effects. These three syntactic behaviors are used as diagnostics to determine whether these constructions are derived by movement of a dislocated element or not. If movement is involved, the results are expected to show island-sensitivity, impossibility of an overt resumptive pronoun, and the presence of reconstruction effects. Now, let us examine them one by one.

### 2.1. Island-sensitivity

First, consider whether relativization and topicalization are sensitive to island constraints or not.<sup>3</sup>

- (9) a. [John-ga [DP [CP e<sub>j</sub> {??e<sub>i</sub>/sore<sub>i</sub>-o} katta] hito<sub>j</sub>-ni] aitagatteiru] hon<sub>i</sub>  
 John-Nom it-Acc bought man-Dat want-to-meet book  
 ‘the book that John wants to meet the man that bought it’
- b. [[DP [CP e<sub>i</sub> e<sub>j</sub> kawaigatteita] inu<sub>j</sub>-ga] sinda] syoonen<sub>i</sub>  
 was-fond-of dog-Nom died boy  
 ‘the boy that the dog that he was fond of died’

<sup>3</sup> The occurrence of a resumptive pronoun in the matrix clause is rather marginal. To avoid the marginality, I use examples where a resumptive pronoun is placed inside the embedded clause.

- (10) a. Ano hon<sub>i</sub>-wa John-ga [DP [CP e<sub>j</sub> {??e<sub>i</sub> / sore<sub>i</sub>-o} katta] hito<sub>j</sub>-ni aitagatteiru  
 that book-Top John-Nom it-Acc bought man-Dat want-to-meet  
 rasii  
 seem  
 ‘That book, it seems that John wants to meet the man that bought it’
- b. Sono syoonen<sub>i</sub>-wa [DP [CP e<sub>i</sub> e<sub>j</sub> kawaigatteita] inu<sub>j</sub>-ga] sinda  
 that boy-Top was-fond-of dog-Nom died  
 ‘That boy, the dog that he was fond of died’
- (11) a. \*Pekin-ni<sub>i</sub>-wa [John-ga [DP [CP e<sub>j</sub> e<sub>i</sub> itta koto-ga aru] hito<sub>j</sub>-o] mituketa rasii  
 Beijing-to-Top John-Nom went fact-Nom exist man-Acc found seem  
 ‘To Beijing, it seems that John found a man that has been there’
- b. \*Hanako-ni<sub>i</sub>-wa [John-ga [DP [CP Taro-ga e<sub>i</sub> e<sub>j</sub> okutta] tegami<sub>j</sub>-o] mituketa rasii  
 Hanako-Dat-Top John-Nom Taro-Nom sent letter-Acc found seem  
 ‘As for Hanako, it seems that John found a letter that Taro sent to her’

The examples in (9), (10) and (11) are ones of relativization, NP topicalization, and PP topicalization respectively. As the data show, relativization and NP topicalization are not subject to island constraints, while PP topicalization is.<sup>4</sup>

## 2.2. Occurrence of Overt Resumptive Pronouns

Second, let me examine whether a gap can alternate with an overt resumptive pronoun in each construction.

- (12) [Mary-ga [{e<sub>i</sub> / ?kare<sub>i</sub>-no / ?soitu<sub>i</sub>-no / sono hito<sub>i</sub>-no} imooto]-ga tensai da to]  
 Mary-Nom his-Gen the-guy-Gen the man-Gen sister-Nom genius be Comp  
 omotteiru] otoko<sub>i</sub>  
 think man  
 ‘the man that Mary thinks that his sister is a genius’

<sup>4</sup> In (9a) with a gap in the original position and (10a), the output is rather marginal. When a gap occurs in the subject position of a relative clause contained by a complex DP which functions as a subject of the matrix sentence, the output is fully acceptable (Hasegawa’s generalization; see Hasegawa 1984.). The marginality in (9a) and (10a) follows from the fact that they do not satisfy Hasegawa’s generalization.

- (13) [Sono otoko<sub>i</sub>-wa] [Mary-ga [{e<sub>i</sub> / ?kare<sub>i</sub>-no / ?soitu<sub>i</sub>-no / sono hito<sub>i</sub>-no} imooto-ga  
 the man-Top Mary-Nom his-Gen the-guy-Gen the man-Gen sister-Nom  
 tensai da to] omotteiru]  
 genius be Comp think  
 ‘The man, Mary thinks that his sister is genius’
- (14) ?\*[Sono tosi-ni<sub>i</sub>-wa] [Mary-ga [John-ga {soko-ni<sub>i</sub> / sono basyo-ni<sub>i</sub>} itta  
 the city-to-Top Mary-Nom John-Nom that-place-to that place-to went  
 koto-ga aru to] omotteiru]  
 fact-Nom exist Comp think  
 ‘To the city, Mary thinks that John has been’

In English, a resumptive pronoun is usually found in environments where a dependency crosses an island boundary or the resumptive pronoun is in the deeply embedded position. In Japanese relativization and NP topicalization, however, a resumptive pronoun is found even when there is no intervening island in the dependency. In PP topicalization, a resumptive pronoun is not allowed to occur, as the ungrammaticality of (14) shows. Note that a resumptive pronoun is not allowed even in the island context in PP topicalization.

- (15) ?\*[Sono tosi-ni<sub>i</sub>-wa] [Mary-ga [DP [CP e<sub>j</sub> soko-ni<sub>i</sub> itta koto-ga aru] hito<sub>j</sub>-o]  
 the city-to-Top Mary-Nom that-place-to went fact-Nom exist man-Acc  
 sitteiru]  
 know  
 ‘To the city, Mary knows the man that has been there’

### 2.3. Reconstruction Effects

In this subsection, I will consider whether reconstruction effects are observed or not in Japanese relativization and topicalization. First, consider the cases of relativization.

- (16) a. \*[John<sub>i</sub>-ga e<sub>j</sub> taipusita] [zibun<sub>i</sub>-no ronbun]<sub>j</sub>  
 John-Nom typed self-Gen paper  
 ‘the paper of himself that John typed’ (Murasugi 2000a:217)
- b. [John<sub>i</sub>-ga e<sub>j</sub> taipusita] [zibun-zisin<sub>i</sub>-no ronbun]<sub>j</sub>  
 John-Nom typed self-self-Gen paper
- c. [John<sub>i</sub>-ga e<sub>j</sub> taipusita] [kare-zisin<sub>i</sub>-no ronbun]<sub>j</sub>  
 John-Nom typed he-self-Gen paper  
 ‘the paper of himself that John typed’ (Ishii 1991:27 with slight modification)

Hoji (1985) points out that relativization shows no reconstruction effect, based on the impossibility of binding of the anaphor *zibun* “self” in an example such as (16a). However, as the grammaticality of (16b) and (16c) indicates, reconstruction effects are observed when *zibun* is replaced with other anaphors such as *zibun-zisin* “self-self” or *kare-zisin* “himself”. Furthermore, data of variable binding also show that relativization induces reconstruction effects.<sup>5</sup>

- (17) [Daremo<sub>i</sub>-ga John-ni e<sub>j</sub> misetagatteiru] [{*pro*<sub>i</sub> / sono hito<sub>i</sub>-no} neko-no syasin]<sub>j</sub>  
 everyone-Nom John-Dat want-to-show the man-Gen cat-Gen picture  
 ‘the picture of his<sub>i</sub> cat that everyone<sub>i</sub> wants to show to John’

I conclude that relativization induces reconstruction effects. Then, how about the cases of topicalization? Consider the following examples.

- (18) {Zibun<sub>i</sub> / kare-zisin<sub>i</sub>}-nituiteno hon-wa [Taro<sub>i</sub>-ga e suteta]  
 self he-self-about book-Top Taro-Nom threw-away  
 ‘The book about himself, Taro threw it away’ (Hoji 1985:133, Ishii 1991:32)

- (19) a. [{*pro*<sub>i</sub> / sono hito<sub>i</sub>-no} neko-no syasin-wa]<sub>j</sub> [daremo<sub>i</sub>-ga John-ni e<sub>j</sub>  
 the man-Gen cat-Gen picture-Top everyone-Nom John-Dat  
 misetagatteiru]  
 want-to-show  
 ‘The picture of his<sub>i</sub> cat, everyone<sub>i</sub> wants to show it to John’

- b. [{*pro*<sub>i</sub> / sono hito<sub>i</sub>-no} neko-ni-wa]<sub>j</sub> [daremo<sub>i</sub>-ga e<sub>j</sub> esa-o ataeta]  
 the man-Gen cat-Dat-Top everyone-Nom food-Acc gave  
 ‘His<sub>i</sub> cat, everyone<sub>i</sub> fed him/her’

(18) is an example of anaphor binding and (19) is an example of variable binding. In each case, the output is grammatical. Thus, reconstruction effects are observed in topicalization, too.<sup>6</sup>

Before concluding this subsection, it is worth noting that reconstruction effects are observed even in island contexts. The following are data of relativization and NP

<sup>5</sup> It has been noted that Japanese pronouns *kare* “he” and *kanozuyo* “she” cannot be construed as bound variables. However, an empty pronominal *pro*, a demonstrative NP *sono hito* “the man”, and an epithet *soitu* “the guy” can be used as a bound variable. (See Hoji 1991 among others.)

<sup>6</sup> The examples in (18) and (19) are grammatical only under the contrastive reading (the rough meaning of which is “as for ... and not anything else” or “as for ... at least”) of a topic. When the topic has a thematic reading (the rough meaning of which is “as for ...”), reconstruction effects are absent. I will put this issue aside and I will continue the discussion under the assumption that topicalization induces reconstruction effects.

topicalization with a gap inside an island.<sup>7</sup>

- (20) [Mary-ga [<sub>DP</sub> [<sub>CP</sub> daremo<sub>i</sub>-ga John-ni e<sub>j</sub> miseta to-<sub>iu</sub>] uwasa-o] kiita]  
 Mary-Nom everyone-Nom John-Dat showed Comp rumor-Acc heard  
 [{*pro*<sub>i</sub> / sono hito<sub>i</sub>-no} neko-no syasin]<sub>j</sub>  
 the man-Gen cat-Gen picture  
 ‘The picture of his<sub>i</sub> dog that Mary heard the rumor that everyone<sub>i</sub> wants to show it to John’
- (21) {*pro*<sub>i</sub> / sono hito<sub>i</sub>-no} neko-no syasin<sub>j</sub>-wa [Mary-ga [<sub>DP</sub> [<sub>CP</sub> daremo<sub>i</sub>-ga John-ni e<sub>j</sub>  
 the man-Gen cat-Gen picture-Top Mary-Nom everyone-Nom John-Dat  
 miseta to-<sub>iu</sub>] uwasa-o] kiita]  
 showed Comp rumor-Acc heard  
 ‘The picture of his<sub>i</sub> dog, Mary heard the rumor that everyone<sub>i</sub> wants to show it to John’

#### 2.4. Discussion

In this subsection, I will discuss how relative clauses and topic constructions are analyzed, based on the properties that we have seen in the preceding subsections.

First, we find a correlation between island-sensitivity and the occurrence of an overt resumptive pronoun. In environments where a resumptive pronoun occurs instead of a gap, the dependency between the dislocated element and its original position can cross an island boundary. I will discuss this issue in section 3.2. Further, a Case-particle or a postposition associated with the original position is not attached to a dislocated element when the dependency is not sensitive to island constraints and an overt resumptive pronoun occurs in the position of a gap. (See examples (12) to (14).) The table in (22) illustrates the correlation among these properties.

(22) Properties of Japanese relativization and topicalization

	Relativization	Topicalization	
		NP	PP
(a) Island-sensitivity	no	no	yes
(b) Occurrence of an overt resumptive pronoun	yes	yes	no
(c) Presence of a Case-particle or a postposition in a dislocated element	no	no	yes

<sup>7</sup> The example (21) is allowed only when the topic is construed as a contrastive topic, as with the examples in (18) and (19).

These correlations also hold of the case of scrambling. Scrambling forces a dislocated element to appear with a Case-particle or a postposition attached to it. If the correlation in (22) is real, the expectation in the case of scrambling is that no resumptive pronouns are allowed and the dependency is sensitive to island constraints. In fact, it is the case, as Saito (1985) argues.

(23) a. \*John<sub>i</sub>-o [Bill-ga [Mary-ga {kare<sub>i</sub>-o / soitu<sub>i</sub>-o / sono hito<sub>i</sub>-o} kiratteiru  
 John-Acc Bill-Nom Mary-Nom he-Acc the-guy-Acc the man-Acc dislike  
 to] omoikondeiru rasio]  
 Comp be-convinced seem

‘It seems that Bill is convinced that Mary dislikes John’

b. \*Tokyo-ni<sub>i</sub> [John-ga [raigetū {soko-ni<sub>i</sub> / sono basyo-ni<sub>i</sub>} ikoo to]  
 Tokyo-to John-Nom next-month that-place-to that place-to go Comp  
 omotteiru rasio]  
 think seem

‘It seems that John is thinking of going to Tokyo next month’

(Saito 1985:311, 312 with slight modification)

(24) a. ?\*Ano honi-o [John-ga [DP [CP e<sub>j</sub> e<sub>i</sub> katta] hito<sub>j</sub>-o] sagasite-iru rasio]  
 that book-Acc John-Nom bought man-Acc looking-for seem

‘It seems that John is looking for the person who bought that book’

(Saito 1985:246)

b. ?\*Hanako-ni<sub>i</sub> [John-ga [DP [CP Taro-ga e<sub>j</sub> okutta] tegami<sub>j</sub>-o] mituketa rasio]  
 Hanako-Dat John-Nom Taro-Nom sent letter-Acc found seem

‘It seems that John found a letter that Taro sent to Hanako’

The examples in (23) show that no resumptive pronoun is allowed in the case of scrambling, and the one in (24) shows that the dependency is sensitive to island constraints there.

Second, no correlation is observed between the presence of reconstruction effects and the properties in (22). If a dislocated element is base-generated in a higher surface position when an overt resumptive pronoun occurs, no reconstruction effects are expected since there is no material for reconstruction (a copy of a dislocated element) in the original position. However, as the data of relativization, for example, indicate, this is not the case. Furthermore, reconstruction effects are observed even when there is an intervening island in the dependency. (See (20) and (21).) Thus, I claim that movement is involved in the derivation of relativization and topicalization regardless of the presence of an intervening island in the dependency between a dislocated element and a gap.

At this point, I will briefly refer to the previous analyses on Japanese relativization and topicalization. There are three kinds of analysis proposed for Japanese relativization and topicalization. The first is the *base-generation analysis*, according to which relative clauses



and topic constructions are always derived by base-generating a dislocated element and the gap found in the original position is an empty pronominal *pro*. Such an analysis has been proposed by Perlmutter (1972), Kuno (1973), Murasugi (1991, 2000a, 2000b), and Fukui and Takano (2000) among others. This type of analysis relies on the relatively free availability of empty pronominals in Japanese. The second type, the *movement analysis*, assumes that relative clauses and topic constructions are always derived by movement regardless of the presence of an intervening island. Such an analysis is argued for by Kuroda (1986) and Sakai (1994). Third, Ishii (1991) argues that resumptive pronouns (whether overt or covert) occur only when movement is blocked, i.e. when there is an intervening island in the dependency. I will call this type the *mixed analysis*.

As for the base-generation analysis, it cannot explain why reconstruction effects are present in relativization and topicalization in the absence of materials for reconstruction. Also, the presence of reconstruction effects even in island environments becomes problematic for the mixed analysis. I will take the presence of reconstruction effects as evidence of movement and pursue the possibility that a movement of a dislocated element is involved in relativization and topicalization, though the movement analysis faces the problem of the alternation between a gap and an overt resumptive pronoun.

### **3. The Role of Resumptive Pronouns in Relativization and Topicalization**

This section explores how the properties discussed in the previous section are derived. Particularly, I will discuss how the contrasts between relativization or NP topicalization and PP topicalization in terms of island-sensitivity, the occurrence of an overt resumptive pronoun, and the presence of a Case-particle or a postposition in a dislocated element are accounted for.

#### *3.1. PF Resumptive Pronouns*

First, let me concentrate on the lack of correlation between the occurrence of an overt resumptive pronoun and the presence of reconstruction effects. The absence of correlation between them suggests that the presence of an overt resumptive pronoun does not affect the computation in the LF component, because reconstruction effects are assumed to result from deletion in the LF component of the higher copies in a chain formed by movement under the copy and deletion theory of movement (Chomsky 1993).

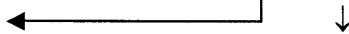
What does the presence of reconstruction effects with a resumptive pronoun suggest? Suppose that a resumptive pronoun is introduced in the overt syntax (in the computation before Spell-Out), presumably base-generated in this case because introducing a resumptive pronoun in the course of derivation violates the inclusiveness condition (Chomsky 1995b). Then the presence of reconstruction effects is unexpected because there is no material for

reconstruction left in the original position. However, the fact is that reconstruction effects are observed even in the presence of a resumptive pronoun. This leads me to assume that resumptive pronouns found in Japanese relativization and topicalization are introduced in the PF component, not in the overt syntax. If a resumptive pronoun is introduced in the PF component, it is natural that it does not affect the computation in the LF component (such as reconstruction effects).<sup>8</sup>

To support this idea, consider the correlation between (22b) and (22c). When a Case-particle or a postposition is attached to a dislocated element (PP topicalization), the moved element is a whole PP or DP (under the DP structure illustrated in (5)) and no Case-particle or postposition is stranded. On the other hand, when a Case-particle or a postposition is not attached to a dislocated element (relativization and NP topicalization), the element that moves is NP, with a Case-particle or a postposition stranded in the original position. I argue that Japanese Case-particles and postpositions become illegitimate PF objects if they are stranded, since they have an affixal nature. In order to repair the illegitimate PF object, a minimal copy of the moved NP (which I claim is a resumptive pronoun) is spelled out instead.<sup>9, 10, 11</sup> This is illustrated in (25).

(25) a. relativization / NP topicalization

... [DP ... [CaseP ... [NP ... N] Case] D] ...



a stranded particle (an illegitimate PF object)

b. PP topicalization

... [(PP) ... [DP ... [CaseP ... [NP ... N] Case] D] (P)] ...



The argument along this line is supported when we consider the phenomenon called *do*-support in English. In order to support stranded Tense, *do* is inserted. Though the strategy

<sup>8</sup> Following Chomsky (1995b), I assume that the condition of inclusiveness holds of the computation from a numeration to the C-I interface.

<sup>9</sup> For the possibility of spelling out a minimal copy, see Grohmann (2000).

<sup>10</sup> When the lowest copy is spelled out as an empty pronominal *pro*, it is as if a Case-particle or a postposition had disappeared. Since a Case-particle or a postposition is not overtly realized with an empty pronominal, an operation that replaces an overt Case-particle or a postposition with a covert one may be available in the module of Morphology. Thus, a gap in relativization and NP topicalization is an empty pronominal *pro*, with a particle dropped because of the nature of *pro*.

<sup>11</sup> Note that not only a resumptive pronoun but also a resumptive *epithet* (such as *soitu* “the guy”) can be used to repair the illegitimate PF objects. If the proposal that a resumptive pronoun is introduced in the PF component is on the right track, there arises a problem of whether it is possible that a resumptive epithet is also introduced there because an epithet is assumed to have some semantic content.

is different between the two phenomena, the phenomenon of English *do*-support serves as supporting evidence that a stranded particle must be repaired in PF.

In this way, the presence of a correlation between (22b) and (22c) and the absence of a correlation between (22b) and reconstruction effects follow from the proposal that resumptive pronouns are introduced in the PF component.

### 3.2. *Island-insensitivity and Resumptive Pronouns*

If all instances of relativization and topicalization are derived by movement of a dislocated element, why do relativization and NP topicalization not obey island constraints? In other words, why is only PP topicalization subject to them? The answer lies in the correlation between properties (22a) and (22b): when a resumptive pronoun occurs, the dependency can cross an island boundary. I have concluded that a resumptive pronoun is introduced in the PF component. The correlation between island-insensitivity and the occurrence of resumptive pronouns suggests that island constraints (or the Subjacency condition) only work in the PF component. The idea that the Subjacency condition is a condition in the PF component has been proposed by Kasai and Takahashi (2001) and Merchant (2001), though they have proposed it on different grounds. According to Kasai and Takahashi, island constraints are locality conditions imposed on PF representations, not constraints on overt movement, and the PF Subjacency condition is reduced to a locality condition on the copy deletion in the PF component.

The correlation between properties (22a) and (22b) follows from the assumption of PF Subjacency. In the case of PP topicalization, the moved element is a whole PP or DP. Since deleting lower copies does not produce illegitimate PF objects (stranded Case-particles or postpositions), the lowest copy in the original position must be deleted. PP topicalization is subject to island constraints because deletion of the lowest copy inside an island is involved in the PF component and the PF Subjacency condition works there. On the other hand, in relativization and NP topicalization, the PF Subjacency condition does not work since the lowest copy inside an island is spelled out as a resumptive pronoun in order to remedy the otherwise illegitimate PF object and no operation of deleting the lowest copy inside an island is involved. Island-insensitivity of relativization and NP topicalization follows.<sup>12</sup>

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<sup>12</sup> The unavailability of resumptive pronouns in PP topicalization with an island context (an example of which is given in (15)) shows that a resumptive pronoun cannot be introduced just to repair the violation of island constraints. Even in an island environment, what is crucial for introducing a resumptive pronoun is the presence of a Case-particle or a postposition stranded in the original position. If we adopt the PF Subjacency approach, the presence of a stranded particle seems to be irrelevant because the deletion of the copies inside an island is impossible in the first place. But the presence of reconstruction effects in the island context (illustrated in (20) and (21)) suggests that a dislocated element is derived by movement as it is so in the non-island context, not by base-generation

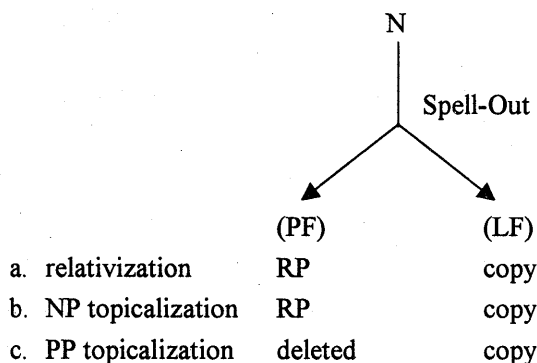
### 3.3. Summary

I have proposed that resumptive pronouns found in Japanese relativization and topicalization are introduced in the PF component in order to repair otherwise illegitimate PF objects, namely a Case-particle or a postposition stranded in the original position. The property of island-insensitivity in relativization and NP topicalization follows from the availability of a resumptive pronoun under the assumption that island constraints are conditions imposed on PF representations.

Since resumptive pronouns in Japanese are introduced in the PF component, they do not affect the computation in the LF component. Movement of a dislocated element occurs regardless of the presence of a resumptive pronoun. Thus, reconstruction effects are observed even when a resumptive pronoun occurs.

The following figure illustrates what the element is that fills the position of a gap at the PF and LF interfaces for each of the three constructions under discussion. (RP in the following figure stands for a resumptive pronoun.)

(26) The element that fills the position of a gap at PF and LF interfaces



In this way, the nature of relativization and topicalization with respect to resumption and island-sensitivity is explained under the analysis based on movement. As for the nature of a gap, it is an empty pronominal *pro* in relativization and NP topicalization, and it is a trace left by movement of a topic in PP topicalization.

## 4. Crosslinguistic Variation – Japanese and English

I have claimed that a resumptive pronoun in Japanese is introduced in the PF component,

of that element and a resumptive pronoun. When a dependency crosses an island boundary, a particle that is not contained in a chain may play some role in the component of Morphology for introducing a resumptive pronoun.

not in the overt syntax. Resumptive pronouns are found in English as well as in Japanese, the difference being that the positions where English resumptive pronouns appear are more restricted; they usually appear inside an island or in a deeply embedded position. Now a question arises: Is an English resumptive pronoun also introduced in the PF component? If it is, then it is expected that the presence of a resumptive pronoun does not affect the interpretation, which is a matter of the computation in the LF component. However, this is not the case, as Chao and Sells (1983) and Sells (1984) point out. According to them, a resumptive pronoun cannot take a quantificational element as the antecedent, examples of which are illustrated in (27).<sup>13</sup>

- (27) a. I'd like to meet the linguist that Mary couldn't remember if she had seen *t* / **him** before.  
 b. I'd like to meet **every** linguist that Mary couldn't remember if she had seen *t* before.  
 c. \*I'd like to meet **every** linguist that Mary couldn't remember if she had seen **him** before. (Chao and Sells 1983:49)

Why does an English resumptive pronoun affect the interpretation? In English, there is no affixal Case-particle. A resumptive pronoun cannot be introduced in the PF component in the same way as in Japanese because there is no illegitimate object in the PF component. Since a resumptive pronoun cannot be introduced in the PF component, the lowest copy must be deleted for pronunciation. However, the lowest copy cannot be deleted because of the existence of an intervening island, which causes the violation of the principle of Full Interpretation (Chomsky 1986) at the PF interface, and the derivation crashes there. Since there is no way to remedy the violation of island constraints, a derivation that involves movement of a relative head is impossible in the island context. The remaining possibility is that a relative head is base-generated in the higher surface position and a pronoun coindexed with the relative head is also base-generated in the position inside an island in a relative clause. The pronoun is base-generated in the position where a relative head should originally be, just to remedy the violation of island constraints. Chao and Sells (1983) argue that a pronoun that occurs just to remedy the violation of island constraints, which they call an *intrusive pronoun*, cannot function as a bound variable. The impossibility of the use of a bound variable may cause the ungrammaticality in (27c).

The discussion above shows that resumptive pronouns in English and Japanese have different reasons for being introduced. Japanese resumptive pronouns are introduced in the PF

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<sup>13</sup> The examples in (27a) with a trace and (27b) are not ungrammatical even though they involve an extraction of a relative head out of an island. This may be because the island inside a relative clause is a weak island. As I have shown in (3), an extraction out of a strong island (in this case, a complex NP) causes ungrammaticality.

component in order to remedy an illegitimate PF object (a stranded affixal particle), which consequently remedies the violation of island constraints. On the other hand, since English lacks an affixal Case-particle and consequently no stranded affixal particle exists in the PF component, there is no way to introduce a resumptive pronoun there. Thus, English resumptive pronouns are base-generated in the overt syntax in order to remedy the violation of island constraints at PF. I claim that the difference of the nature of resumptive pronouns in these two languages is reduced to the presence of stranded affixal particle in the PF component; such a particle is present in Japanese, while it is absent in English.

## 5. Conclusion

In this paper, I have discussed how relative clauses and topic constructions in Japanese are derived. I have adopted a movement analysis, taking the presence of reconstruction effects in both non-island contexts and island contexts as evidence that movement of a dislocated element is involved in all instances of relativization and topicalization in Japanese.

Under the movement analysis, the correlation among the properties of Japanese relativization and topicalization (summarized in (22)) are explained. I have proposed that resumptive pronouns in Japanese are introduced derivationally in the PF component, which consequently remedies the violation of island constraints. The reason for introducing a resumptive pronoun in the PF component is to repair an illegitimate PF object, namely a stranded affixal particle.

Since English lacks such an affixal particle and no illegitimate PF object is present in the PF component, resumptive pronouns in English are base-generated in the overt syntax. Thus, English resumptive pronouns affect the interpretation.

Based on the data of Japanese and English, I have claimed that a PF-introduced resumptive pronoun is available only when there is an illegitimate object at the PF interface and otherwise a resumptive pronoun is base-generated in the overt syntax. Though I have concentrated only on the data of Japanese and English in this paper, considering the data of other languages that make use of resumptive pronouns (such as Celtic and Semitic languages) will make the nature of resumption clearer. I will leave this issue for future research.

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