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Remarks on "Zero Pronominals":
In Defense of Hasegawa (1984/85)*

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My analysis of "Zero Pronominals" in Japanese proposed in Hasegawa (1984/85) has received several criticisms since its (informal) distribution. In this paper, I would like to respond to some of them, attempting to defend the basic ideas of my original proposal. It seems that a careful examination of the alleged counter-examples and problems, as well as constructions relevant to them, suggests, contrary to the criticisms, that they be incorporated into the proposed system without abandoning its basic assumptions, in particular, the spirit of the functional determination approach to empty categories (ECs) proposed in Chomsky (1981, 1982). What follows will address some issues that have not been extensively discussed before; e.g., 'What kind of "ungrammaticality" does the violation of the Condition C of Binding Theory give rise to in Japanese, when the binder is a name?; Should the lack of "reconstruction" effects really be taken as an indication of the non-existence of 'movement'?; What is the nature of a null OP?; What interpretation do we obtain on a 'pronominal' when it is bound by a quantificational expression such as 'only X'?, etc.

I will first briefly summarize my proposal presented in Hasegawa (1984/85), which can be considered as an extension of Huang's (1982, 1984) analysis of ECs, though the direction I have pushed it in is not necessarily the one Huang would like to pursue. Then, I will consider some of the criticisms that have been made against it.

1. A Summary of Hasegawa (1984/85)

In analyzing ECs in Japanese, I have assumed the functional determination approach presented in Chomsky (1981, 1982) and Huang (1982, 1984). In this framework, the identity of ECs is determined by a set of well-formedness conditions for ECs, which are derived as a theorem from independently motivated principles and subtheories. The well-formedness conditions may be informally stated as (1).

- (1) a. An EC is a pronominal iff it is free or locally A-bound by an antecedent with an independent theta-role.
- b. An EC is an anaphor iff it is locally A-bound by an antecedent that lacks an independent theta-role.
- c. An EC is a variable iff it is locally A'-bound and is in A-position.

Pronominal ECs are further restricted in that PRO must be ungoverned and PRO must be properly identified, obeying a condition approximately like (2).

- (2) An EC is a non-anaphoric pronominal iff it is locally governed (and identified) by AGR.

Condition (2), thus, requires PRO to be allowed only in languages that have a "rich" agreement system. Japanese, without a visible agreement system, by definition, cannot have PRO. However, it is well-known that this language exhibits "governed pronominals" as defined in (3).

- (3) a. Mary-ga e hometa.
-NOM praised
'Mary praised you/him/them/...'
- b. Johni-ga [ei Mary-o nagutta to] itta.
-NOM hit that said
'Johni said that hei hit Mary.'
- c. Johni-ga [Mary-ga ei naguru mae-ni] naiteita.
before was-crying
'Johni was crying before Mary hit himi.'

According to (1a), the above occurrences of ECs are determined to be "pronominal," since they occur in governed positions, being free or A-bound by the matrix subject, which indicates that they are PRO. Assuming that (2) holds in Japanese, I have argued that the ECs in (3) are not PRO but PRO in (3b) and a variable in (3a) and (3c). Let us see how this is possible.

Following Huang, I have assumed that Japanese allows a topic to be null in phonetic content, which may be interpreted by discourse rules or may be a result of discourse deletion. Thus, the EC in (3a) is analyzed as a variable bound by a null OP that is coindexed with a (null) topic as shown in (4) below:

- (4) [[Topic ϕ_i] [[Mary-ga ei hometa] [comp OP_i]]]

Similarly, the EC in (3c) is analyzed as a variable bound by a null OP that stays in the adjunct COMP, which is bound by the subject. This is illustrated in (5):

- (5) Johni-ga [[[Mary-ga ti naguru] [comp OP_i]] mae-ni] naiteita.

In other words, my claim is that the EC in (3c) is of the same type as the one in (6a) in English, whose S-structure representation is (6b) according to Chomsky (1982).

(6) a. John bought a book_i to read _{ei}.

b. John bought a book_i [OP_i [PRO to read _{ei}]]

As for an EC that serves as the subject of a tensed clause, I have claimed that it can be either a PRO or a variable bound by an operator in COMP, arguing that INFL in Japanese only optionally governs the subject. Thus, the EC in (3b) is PRO that is bound by a matrix argument as in ordinary PRO binding cases.

(7) John_i-ga [[PRO_i Mary-o nagutta] to] itta.

By analyzing ECs in A-position either as variables (ECs in object position are necessarily variables, since they are always governed; ECs in subject position may be variables if INFL governs them) or PRO (ECs in subject position if INFL does not govern them), I have claimed that Japanese conforms with the system that incorporates (1) and (2).

This view, coupled with the assumptions stated in (8), which I have argued for in my paper, provides reasonable accounts for the asymmetries previously noted (e.g. Kuroda (1965), Huang (1982, 1984), Hasegawa (1981), etc.) between subject and object and between complements and adjuncts.

(8) a. Movement to COMP obeys Subjacency.

b. The Relative/Topic constructions of Japanese may involve movement to COMP.

c. PRO subject may function as a 'resumptive pronoun.'

d. A null Operator is PRO and cannot be governed, hence, it cannot occur in the COMP of a complement clause, but is allowed in ungoverned COMP such as COMP of an adjunct, a matrix clause, or a relative clause. (cf. Levin 1984)

e. PRO, including null OP, is subject to the Control Rule (a slightly modified version of Manzini (1983)).¹

The first type of asymmetry is observed in (9).

(9) a. John_i-ga [_{ei}/j Mary-o nagutta to] itta.

-NOM -ACC hit that said
'John_i said that he_i/j hit Mary.'

b. John_i-ga [Mary-ga _{er}*i/j nagutta to] itta.
'John_i said that Mary hit him*_i/j.'

In (9a), the EC in the subject position of the complement clause can refer to the subject of the matrix clause, as the index _i indicates. It can also refer to some person identifiable in the discourse, which is indicated by the index _j. In contrast, as

shown in (9b), the EC of the object of the complement clause seems unable to refer to the matrix subject, though it can refer to someone in the discourse. Thus, the asymmetry here is between the subject EC and the object EC. In my analysis, summarized above, this asymmetry is explained as follows. Since (9) involves a complement clause, a null OP that binds an EC cannot stay in the complement COMP but must move to the matrix COMP, which may be coindexed with an empty Topic, which accounts for the availability of the _j reading.

(10) a. (for (9a))

[_{Topic} _{θ_j}] [[John_i-ga [_{ei} Mary-o nagutta] _{comp} _{θ_j} to]] itta [_{comp} OP_j]]

b. (for (9b))

[_{Topic} _{θ_j}] [[John_i-ga [Mary-ga _{ej} nagutta] _{comp} _{θ_j} to]] itta [_{comp} OP_j]]

The _i reading of (9a) has been already explained in (7) above; the matrix subject serves as antecedent for the complement PRO. The unavailability of this reading in (9b) is due to the fact that the object is always governed and cannot be PRO.

The second type of asymmetry is revealed if (9) is compared with (11).

(11) a. John_i-ga [_{ei}/*j Mary-o naguru mae-ni] naiteita.

'John_i was crying before he_i/*j hit Mary.'
before was crying

b. John_i-ga [Mary-ga _{ei}/*j naguru mae-ni] naiteita.
'John_i was crying before Mary hit him_i/*j.'

Sentences (11a and 11b) differ from those in (9) in that the latter involve complements, while the former involve adjuncts. The EC in an adjunct, regardless of whether it serves as subject or object, can refer to the matrix subject but not to someone in the discourse. In other words, unlike the case of complements, there is no subject/object asymmetry, with respect to the possibility of the matrix subject serving as an antecedent for the EC in an adjunct. Furthermore, (9) and (11) differ in whether a discourse identifiable NP can be an antecedent; it can in (9), but it cannot in (11). The assumption (8d) plays a crucial role in describing this asymmetry. As explicitly shown in (5) (for (3b)) above, the COMP of an adjunct is ungoverned and a null OP stays there, seeking an antecedent in the matrix clause. Thus, regardless of whether an EC is a subject or an object of an adjunct, it ends up finding a referent in a matrix clause. Since an adjunct forms an island for syntactic movement, OP in an adjunct COMP cannot move further up to the matrix COMP, which explains why the _j reading is unavailable in (11).

The third type of asymmetry is seen in (12), where two gaps are observed in a relative clause.

- (12) John₁-ga[_{ei}/?_u _{ej}/?_i aishitei-na]onna₂-to kekkon shita.
 -NOM love-neg woman-with married
 'John₁ married to a woman₂ who (he₁) doesn't love.'

Since both the subject and the object are empty, either one could have been relativized. If so, we expect that (12) is ambiguous between the following two readings: "John is married to a woman who he does not love," or "John is married to a woman who does not love him." However, as the English gloss indicates, it only means the former. That is, in (12), the subject *ej* is to be identified as pronominal while the object *ej* is a variable bound by the relative head. This fact directly follows from my proposal. The subject EC is a PRO that is bound by a matrix constituent and the object EC is bound by an OP in the relative clause which is coindexed with the head noun.

Besides the above asymmetries, which were first noted by Kuroda (1965), I consider, following Huang (1982, 1984), that the subject/object asymmetries observed in the relative clause structure below are also relevant to the phenomena of ECs.

- (13) a. [[_{ei} _{ej} katteita] inu-ga shinde shimatta] kodomo_i
 kept dog-NOM die-PERF child
 'the child who the dog which (he) kept died'
 b. *?[[_{ei} _{ej} katteita] kodomo_i-ga shinde shimatta] inu_j
 'the dog which the child who kept (it) died'

- (14) a. sono hito_i-wa [_{ei} _{ej} kiteiru]fuku_j-ga yogoreteiru]
 that person-TOP wear clothes-NOM dirty
 'As for the person, the clothes that (he) is wearing are dirty.'

- b. *?sono fuku_j-wa [Mary-ga[_{ei} _{ej} kiteita]hito_i-o shiteiru]
 -ACC know
 'As for the clothes, Mary knows the person that was wearing (them).'

The asymmetries presented in (13) and (14) involve subadjacency violations. It has been noted, for example, in Kuno (1973), Inoue (1976), Kornfilt, Kuno, and Sezer (1980), etc. that Japanese does not observe island conditions such as the complex NP constraint. Typical examples that support this claim are (13a) and (14a) (which are due to Kuno 1973) where the subject gap in a deeply embedded relative clause refers to the head of the higher relative clause (in (13a)) or the topic phrase (in (14a)) and the object gap refers to the head of the (lower) relative clause. As seen from the unacceptability of (13b) and (14b), this coreference relation cannot be reversed. This fact too follows from my analysis. As noted in (12), if two ECs are seen in one sentence, the one serving as a subject is PRO and the

other is a variable, which is the only configuration allowed at S-structure. The variable status of the subject in (13) and (14) comes from the assumption (8c); i.e., PRO in Japanese can be allowed to be bound by a base-generated OP in COMP, functioning as a resumptive pronoun, which gives rise to the structures equivalent to subadjacency violations.²

2. Alleged Problems with the Proposed Analysis

The criticisms that have most often been raised against my (and Huang's) analysis of ECs in Japanese (and Chinese) is that the asymmetries presented in (9), (11), (12), (13), and (14) above are not real and do not represent core syntactic phenomena about ECs in these languages (cf. Hoji 1985, Nakamura 1986, Xu 1986, etc.). The assumption that underlies such a criticism is that Japanese exhibits pure pronominal ECs, namely PRO [+pronominal, -anaphor], in spite of the fact that this language does not have any AGR element that identifies PRO. The well-formedness condition (2) is considered to have no bearing on the distribution of ECs.³ It seems to me to be an empirical question whether (2) should be maintained. It is easy to say that the EC in (3c) above, for example, is PRO. But then, there is no principled reason why the EC in (6a) in English is not considered to be PRO, but rather a variable bound by an OP, or why (2) holds in many languages but not in Japanese and Chinese. I would like to maintain that both occurrences of ECs are variables as the well-formedness conditions (1) and (2) indicate and to see how far my analysis presented in Section 1 can be pushed.

The major points that I can extract from the claim that there are no 'grammatical' asymmetries found in the examples of (9), (11)-(14) are:

- (i) The *i* reading of (9b) is available, though its reading may be weaker than the *j* reading. However, this 'weakness' does not seem to be due to the Condition C of Binding Theory, because other 'strong crossover' cases (or ordinary Condition C violations) cause much stronger 'ungrammaticalness.' (Cf. Hoji 1985).

- (ii) The subject/object asymmetry in (13) and (14) is not a real grammatical contrast.

- (iii) The Topic/Relative construction does not exhibit 'reconstruction' effects, which are typically seen in the constructions that involve A'-movement.

Both (ii) and (iii) are presented to argue that the Topic/Relative construction does not involve movement, but mere coindexation between PRO and a topic phrase/relative head. (Cf. Hoji 1985)

A somewhat different criticism has been made by Saito (p.c.):

- (iv) If null OP is responsible for licensing objective ECs in Japanese, why doesn't English exhibit the same objective ECs as freely as Japanese?

And finally, Hoji (1985) argues:

- (v) An EC in Japanese behaves both like a referential pronominal and bound variable when its binder is a quantifier expression such as *Y dake* 'only X,' which is claimed to be a characteristic of pure pronominals [+pronominal, -anaphor]. Hence, ECs are to be analyzed as *PIG*.

In the following, I will take up these points one by one.

2.1. Condition C Effects

Recall my account of the subject/object contrast in (9) with respect to the *i* reading. (9) is repeated here for convenience:

- (9) a. John_i-ga [_E/j Mary-o nagutta to] itta.
-NOM -ACC hit that said
'John_i said that he_i/j hit Mary.'

- b. John_i-ga [Mary-ga e?*/j nagutta to] itta.
'John_i said that Mary hit him?*/j.'

According to my account, the *i* reading obtains in (9a) because the subject EC can be PRO, but this reading is not available in (9b), because it must be a variable bound by an OP in matrix COMP, as shown in (10b) of Section 1. That is, the unavailability of the *i* reading is due to the Condition C of Binding Theory, which states that an R-expression must be free. Hence, the structure (15), is to be ruled out just like (16) is in English.

- (15) [_{Topic}θ_i][John_i-ga Mary-ga e_i nagutta]COMP_i to][itta]COMP_{OP}

- (16) *Who_i does he_i think [_i that] Mary likes _i]

The point often raised as a criticism of my account of the data (9) is that the *i* reading in (9b), though it is harder to obtain than the *j* reading, does not constitute such total ungrammaticality as is exhibited in (16). Furthermore, Hoji (1985) raises the question of why the following sentences regarded as typical Condition C violation cases are far worse than the *i* reading of (9b).

- (17) a. *Karei-ga [_s'[s John_i-ga Mary-o butta]to] omotta.
he-NOM -NOM -ACC hit COMP thought
'He_i thought that John_i hit Mary.'
(Hoji's (5a), p. 380)

- b. *e_i(-ga) [_s'[s John_i-ga Mary-o butta]to] omotta
-NOM -NOM -ACC hit COMP thought
'He_i thought that John_i hit Mary.'
(Hoji's (6a), p. 380)

- c. *Karei-ga [_s'[s Mary-ga John_i-o butta]to] omotta.
he-NOM -NOM -ACC hit COMP thought
'He_i thought that Mary hit John_i.'

Though I would like to maintain that the contrast in (9b) between the *i* reading and the *j* reading is real and must be accounted for, I accept the basic facts presented above, namely, the Condition C violation in (9b)(=(15)) is weaker than (16) or (17).⁴ There are important issues to be considered before determining whether the contrast seen in (9b) is a real one; i.e., whether Condition C effects hold universally and/or irrespective of types of binders; what kind of structure does Condition C really rule out in Japanese? I will show below that Condition C violations do not provide the same kind of 'ungrammaticality' effects but differ depending on what type of NP the binder is. In (16) and (17), an R-expression is bound by a pronoun, while the binder is a name in (9b)(=(14)). Furthermore, the examples in (18) shows if a name is bound by a name, no obvious Condition C effect is observed.⁵

- (18) a. John_i-ga [_s'[s John_i-ga Mary-o butta]to] omotteiru.
he-NOM -NOM -ACC hit COMP think
'John_i thinks that John_i hit Mary.'

- c. John_i-ga [_s'[s Mary-ga John_i-o butta]to] omotteiru.
he-NOM -NOM -ACC hit COMP think
'John_i thinks that Mary hit John_i.'

Let us see whether the same holds when a bindee is the other type of R-expression, namely, a variable. It has been claimed (originally by Saito (1985) and has been widely assumed since) that Scrambling is an instance of Move Alpha, which adjoins a constituent to an S-node. The question relevant to us is how strong Condition C effects are in the Scrambling instances.

- (19) ?*John_i-o [_s John_i-ga [_s'[s Mary-ga _i butta]to] omotteiru]
(19) obtains from (18c) by applying Scrambling to the object NP John_i-o and moving it to the front of the matrix sentence. The structural configuration is almost identical to (15). (19) is quite parallel to (15) if it involves a real lexical topic, namely (20).

- (20) ?*[John_i-wa][John_i-ga [_s'[s Mary-ga _i butta]to] omotteiru]

It seems to me that the oddity or 'ungrammaticality' of the examples (19) and (20) are quite parallel, as my analysis predicts. The above discussion thus indicates that the criticism

of my analysis in terms of 'the lack of Condition C effects' can be turned around to show that it in fact is a most natural consequence, since in Japanese, Condition C effects are not observed if both binder and bindee are names, and its effects seem weak even if the bindee is a variable.⁵

2.2 Movement and the Topic/Relative Construction

My analysis of zero-pronominals assumes that movement is involved in the Topic/Relative construction. This assumption is particularly important in accounting for the subject/object asymmetries observed in (12)-(14) in Section 1, which are repeated here:

- (12) John₁-ga[_{ei}/??_i _{ej}/??_i aishitei-na]hito-to kekkon shita.
-NOM love-NEG person-with married
'John₁ married to a person_j who (he_i) doesn't love.'
- (13) a. [[_{ei} _{ej} katteita]inu_j-ga shinde shimatta] kodomo_i
kept dog-NOM die-PERF child
'the child who the dog which (he) kept died'
b. *?[[_{ej} _{ei} katteita]kodomo_i-ga shinde shimatta] inu_j
'the dog which the child who kept (it) died'
- (14) a. sono hito_i-wa [_{ei} _{ej} kiteiru]fuku_j-ga yogoreteiru]
that person-TOP wear clothes-NOM dirty
'As for that person, the clothes that (he) is wearing are dirty.'
b. *?sono fuku_j-wa [Mary-ga [_{ei} _{ej} kiteita]hito_i-o shiteiru]
-ACC know
'As for the clothes, Mary knows the person that was wearing (them).'

This movement analysis for the above data has encountered two kinds of criticisms: (i) the Topic/Relative construction in Japanese does not involve movement, because it behaves differently from Scrambling, which has been assumed to involve A'-movement in syntax?; (ii) the contrast I claim exists in (12)-(14) is not real.

2.2.1 Reconstruction Effects

Hoji (1985) notes that Scrambling exhibits 'reconstruction effects,' while Topic/Relative structures do not. The contrast he presents is something like the one in (21).

- (21) a. John₁-ga [jibun_i-no ronbun]-o taipu shita.
-NOM self-GEN paper -ACC type did
'John typed his paper.'

- b. [jibun_i-no ronbun]-o John₁-ga _{tj} taipu shita.
c. *[jibun_i-no ronbun]_j-wa John₁-ga _{ej} taipu shita.
d. *[John₁-ga _{ej} taipu shita][jibun_i-no ronbun]_j

The anaphor *jibun* in (21a) is bound by the subject that c-commands it. Even if the object that includes the anaphor is scrambled to the position that the subject no longer binds, the antecedent-anaphor relation still holds as in (21b), as if the anaphor had stayed in the original object position. This antecedent-anaphor relation is broken if an anaphor is in a topic phrase (as in (21c)) or in a relative head (as in (21d)). This contrast between the scrambling case and the topic/relative case can be immediately captured, Hoji argues, if the former involves movement, while the latter does not. His arguments rely on the fact that in English (and other languages) A'-movement typically induces 'reconstruction effects.' Observe (22). (Cf. Higgins 1976, van Riemsdijk and Williams 1982, Bars 1984, etc.)

- (22) a. Which picture of himself_i does John₁ like _{ej}?
b. the picture of himself_i which John₁ likes _e
c. It is a picture of himself_i that John₁ likes _e
d. This picture of himself_i, John₁ really likes _e
- (22) contrasts with (23), where no obvious wh-movement is involved and no 'reconstruction effects' are observed.
- (23) a. *As for this picture of himself_i, John₁ really likes it.
b. *Speaking of this picture of himself_i,
John₁ really likes _e

Hoji claims that the contrast between (21b) and (21c,d) in Japanese is like the one between (22) and (23) in English; that is, the Topic/Relative construction in Japanese is just like the 'as for' construction in English. From this, he further assumes that gaps in the Topic/Relative construction are P_{FG} that are simply referring to topic phrases or relative heads.

It seems to me too hasty to make this claim merely from the non-existence of reconstruction effects in the Topic/Relative construction in Japanese. As Bars (1984) notes and as can be easily seen from (22), A'-chains that exhibit reconstruction effects are not formed by movement alone. In (22), except in the case of wh-question (13a), the anaphor bound by the subject John cannot be bound even if 'movement' of an operator is reconstructed or undone; that is, a phrase that involves an anaphor is 'base-generated' in the position that the antecedent cannot bind. Thus, in order to account for the phenomena of

'reconstruction,' it is necessary to say not only that it involves A'-movement, but also that the A'-chain created by movement is 'connected' to a topic, relative head, focus, etc. (Bars 1984). This means that we can still maintain that movement is involved in the Topic/Relative construction, if an A'-chain created by movement and a base-generated lexical 'head' are, for some reason, not connected. This may still sound ad hoc; however, even in English, a distinction must be made between 'connectable' A'-chains and 'unconnectable' A'-chains. For example, it has been noted that 'reconstruction effects' do not obtain in 'non-restrictive' relatives.

- (24) *Mary tore up those pictures of himself_i,
which John_i really hates _e.

The contrast between (22) and (24) is suggestive when we consider Japanese relative clauses. As has often been noted, there is no obvious syntactic distinction between restrictive and non-restrictive relatives in Japanese. (Cf. Kuno 1973, Inoue 1976, Fukui 1986)

- (25) a. Mary-ga [sono hon-o katta] hito-o sagashiteiru.
-NOM the book-ACC bought person-ACC look for
'Mary is looking for a person who bought the book.'
b. Mary-wa [sono hon-o katta] John-o sagashiteiru.
'Mary is looking for John, who bought the book.'
c. Mary-wa [sono hon-o katta] John-no ototo-o sagashiteiru.
'Mary is looking for John's brother, who bought the book.'
d. Mary-wa [sono hon-o katta] sono hito-o sagashiteiru.
'Mary is looking for that person, who bought the book.'

Example (25a) may be taken as an instance of 'restrictive' relatives, to the extent that the relative clause restricts a possible range of people who Mary is looking for. On the other hand, (25b), (25c) and (25d) are all taken as 'non-restrictive,' since the set of people who Mary is looking for does not change irrespective of the presence of the relative clause.⁸ Though there is no clear syntactic distinction between restrictive and non-restrictive relative clauses in Japanese, I would like to assume that a relative clause whose head noun is 'definite' or 'restricted by a genitive phrase or determiner' is a 'non-restrictive' relative clause and the one whose head is an indefinite bare noun is either restrictive or non-restrictive. Given this, the fact that (21c) does not show 'reconstruction' effects immediately follows. The relative clause whose head NP is modified by the genitive NP, namely *jibun-no*, is a non-restrictive clause, and naturally cannot be included in a 'connective' or 'reconstructable' chain. Thus, whether a relative head in Japanese behaves like the one in English must be tested with examples in which *jibun* is the sole relative head. This, however, is hard to test, because the counterpart in English is also 'funny,' in the sense that a reflexive alone does not seem

able to serve as a head of a relative that has to assume an argument of a higher clause.

- (26) a. *Mary-ga [John_i-ga _e hihan shita] jibun_i-o omoidashta.
-NOM -NOM criticized self-ACC remembered
'Mary remembered himself that John criticized.'

- b. *Mary remembered himself_i that John_i criticized _e_i.

As for the Topic construction, I cannot provide the same kind of explanation for the ungrammaticality of (21c), since it seems that a reflexive alone can constitute a topic phrase in English, while this is not allowed in Japanese.

- (27) a. *jibun_i-wa John_i-ga _e hihan shita.
self-TOP -NOM criticized
'Himself, John criticized.'

- b. Himself_i, John_i criticized _e_i.

I do not have a non-ad hoc explanation for why topic phrases in Japanese cannot be part of a 'connective' or 'reconstruction' chain, while those in English can. However, my claim that the existence or non-existence of reconstruction effects must be separated out from the issue of whether syntactic A'-movement is involved can be maintained, when the facts concerning the Cleft construction are taken into consideration. As Hoji (1987) notes, there seem to be two types of clefts in Japanese; those in which a focus phrase can be part of a 'reconstruction' chain, and those where it cannot. Observe the following.

- (28) a. [John_i-ga _e taipu shita]no-wa [jibun_i no ronbun]_i da.
-NOM type did NOM-TOP self-GEN paper COP
'It was his_i paper that John_i typed.'
b. ?*[John_i-ga _e taipu shita] no-ga
-NOM type did NOM-TOP
[jibun_i no ronbun]_i da(tta).
self-GEN paper COP
'It was his_i paper that John_i typed.'

Unlike Scrambling, it is evident that the focus phrase of the cleft construction is not directly created by movement. As seen in (11), when the comment clause is headed by *no wa* it involves movement and *no ga* does not, it is anyway necessary to state what is part of a 'reconstruction' chain in the Cleft construction.^{9,10}

2.2.2. Asymmetries in the Topic/Relative Construction

My claim concerning the ECs in the Topic/Relative construction is that if both subject and object are ECs, the object EC refers to the head of the relative, and the subject is

pronominal, which may refer to a matrix constituent or a higher relative head or a topic phrase. This has been illustrated in the examples in (12)-(14) above. Contrary to my claim, however, it has often been said that an object EC can be pronominal while a subject EC refers to a relative head. According to this claim, the examples in (29) are to be ambiguous with respect to which EC refers to the head of the relative, and those in (30) are to be grammatical.

- (29) a. [e_i / e_j / naguttal] hito_j-ga John_i-o uttaeta.
hit person-NOM -ACC sued
'The person who (he) hit sued John.'
'The person who hit (him) sued John.'

- b. John_i-wa [e_i / e_j / uragitta]onna_i-ga jisatu-o kuwadateta
-TOP betrayed woman-NOM suicide-ACC attempted
'John, the woman who (he) betrayed attempted to commit suicide.'
'John, the woman who betrayed (him) attempted to commit suicide.'

- (30) a. sono honu-wa [e_i e_j kaita] sakka_i-ga jisatu shita.
the book-TOP wrote writer-NOM commit suicide
'The book, the writer who wrote (it) committed suicide.'

- b. [e_i e_j hitome mita] otoko_i-ga sono e_j-o katta.
one glance saw man-NOM the picture-ACC bought
'The man who glanced at (it) bought the picture.'

If these sentences are accepted as grammatical, it can be said that an EC, regardless of its position, is a pure pronominal, which freely corefers to an NP, as proponents of the analysis of ECs as PRO argue is the case. I have been considering the contrast in (12)-(14) to be real and I myself find these examples (in which the subject EC is bound by a relative head) less acceptable than those in which the object EC is bound by a relative head, though I admit that some of these 'supposed-to-be-ungrammatical' sentences do not sound too bad. In what follows, I would like to explore a possible scenario for this fact.¹¹

A direction I am going to suggest is what Chomsky (1986) presents in analyzing parasitic gaps in English. In Hasegawa (1984/85), I have adopted Chomsky's (1982) analysis for parasitic gaps, in which a pronominal (PRO) generated in D-structure is converted to a variable in S-structure due to the presence of a syntactically created operator that locally binds it. In Chomsky (1986), this analysis is abandoned due to the fact that a parasitic gap itself observes subadjacency.¹²

- (31) a. Which article did John file t before reading e

- b. *Which article did John file t
before meeting the man who wrote e

To account for this difference, Chomsky argues that a parasitic gap is created by a syntactic movement of a null operator and the operator is coindexed with the lexical operator that c-commands it. What distinguishes (31a) from (31b) is a condition on this coindexing operation (chain composition): chains to be composed must be subjacent to each other (cannot cross more than one barrier). Thus, (31b) is allowed because the null OP, which is in the COMP of an adjunct, is subjacent to the matrix COMP, while (26b) must be ruled out because the null OP is too far away to be composed with the matrix lexical OP.

With respect to parasitic gaps in a subject relative clause, Chomsky observes the contrast in (32).

- (32) a. He is a man that[everyone who[gives presents to e]]likes t

- b. *This is a book that[any man to whom[we'll give e]]will like t

That is, a parasitic gap is allowed in a relative clause if what is relativized is a subject, and it is not allowed if a non-subject is relativized in the relative clause. Chomsky explains this asymmetry by saying that a relative pronoun in the subject may not have moved to COMP yet at S-structure, so that the COMP of the relative clause can be occupied by a null OP that creates a parasitic gap. For the sake of proper interpretation, however, the relative pronoun must move to COMP in LF. Chomsky assumes that a null OP that is in COMP in S-structure moves to the specifier position of the entire NP, vacating the COMP, which becomes available for the subject to move into in LF. This kind of derivation is not allowed if the head of a relative refers to a non-subject, because if it does not move in S-structure, letting a null OP move to the COMP first, it never appears in the COMP position in PF.

This derivation is a departure from a traditional view of forming relative clauses where the gap that the head of a relative refers to is the extraction site in S-structure. Let us assume, as a null hypothesis, that the same kind of derivation is available in Japanese. That is, what moved in syntax does not necessarily correspond to what resides in COMP in LF, as long as the derivation is properly checked at each level. As I have mentioned in Section 1, if more than one EC appears in a relative clause, the subject EC must be PRO and the object EC must be a variable, which is the 'only permissible representation in S-structure'. So, the unmarked case is that the object is bound by a relative head and the subject refers to something else. Suppose, as in the case of (32a), that a mismatch is allowed to occur between the head of a relative and what moves into COMP at the level of S-structure, as long as they match in LF. Then, the OP that binds the object gap vacates the COMP and the OP that binds the subject later moves into the COMP that has just been vacated. No obvious problem arises thus far, because the subject EC can be a variable anyhow in LF, if the binder is in A'-position. The difference between Japanese and English is parametrized with respect to the circumstances in which this type

of derivation is possible. In English, it is allowed only if the OP that has moved to COMP in S-structure and to the specifier position in LF binds a parasitic gap; i.e., when the OP is subject to 'chain composition.' In Japanese, on the other hand, it occurs more freely (especially for those who accept (29) and (30)), yet is a very marked operation (for those including myself who detect subject/object asymmetries). Thus in Japanese, the moved OP can be bound by a base-generated OP (as in (29b) and (30a), as well as in (13a) and (14a)) or can refer to a matrix constituent (as in (29a) and (30b)).¹³

2.3. The distribution of Null Operators

Saito (p.c.) has raised a rather different kind of question concerning my analysis of ECs: why does Japanese allow null OPs much more freely than English; in particular, why do adjuncts in Japanese freely exhibit ECs, which refer to matrix constituents, while those in English do not. Notice that (33) is allowed in Japanese, while its English counter-part with an EC (34a) is ungrammatical.

(33) John-ga [Mary-ga ei yomu mae-ni] sono hono-o sutete shimatta.

-NOM -NOM read before the book-ACC three away
'John threw away the book before Mary read (it).'

(34) a. *John threw away the book before Mary read ei.

b. John threw away the book before Mary read it.

This difference can be captured, if it is assumed that the EC in the adjunct in (33) is a pure pronominal just like it in English: (34b). Since I do not adopt such an explanation, I would like to look for some other explanation for this difference between English and Japanese.

Let us first see exactly where a null OP is allowed in English. Its occurrences are restricted, and I think the following are the only cases of the adjuncts in which a null OP is assumed to be involved.¹⁴

(35) in a purpose or rational clause

John bought a book [to read ei].

(36) in a tough construction

This book is difficult [to read ei].

(37) in a 'complement' of 'too-adjective'

Mary is too pretty [to look at ei].

(38) in a parasitic gap construction

a. What did Mary file [without reading ei]?

b. Which book did John throw away [before reading ei]?

The first three constructions involve infinitival clauses in which an EC occurs, and the occurrence of such clauses is closely tied with the type of the main clause construction. Furthermore, what the antecedent of an EC in an adjunct is (i.e., a null OP) is basically determined by the structure it occurs in. That is, in (35) (the purpose or rational clause) and (37) (the complement of too-adjective), a null OP refers to a theme argument of the matrix clause. And in the 'tough' construction in (36), the (theta-bar) subject serves as antecedent of the null OP. Thus, the antecedent of a null OP in these constructions, as well as the occurrence of these infinitival adjuncts, is essentially controlled by certain thematic relations. It seems that, perhaps due to some functional reasons, languages prohibit bare infinitivals, whose functions are not immediately clear without information from matrix clauses, from being freely generated.

There are adjuncts whose occurrences are freer and do not have to be licensed by matrix clauses. They are 'temporal,' 'reason,' 'conditional' clauses, and, not surprisingly, they are all accompanied by prepositions and/or nouns that specify their functions (and they are often tensed clauses). In my system, the presence of such prepositions and tense features plays a significant role in determining whether the COMP is available for a null OP to appear. A null OP is licensed only in the COMP of an infinitival that is not governed (which I have assumed in my paper following Levin's (1984) study). Thus, it is not surprising to find (34a) ungrammatical, because the adjunct is headed by a preposition *before*, and a null OP is not allowed to occur there.

This immediately gives rise to another question: why does the parasitic gap case (38) seem to allow a null OP, which is bound by a lexical OP in the matrix clause? Following the above reasoning, the COMP of an adjunct that typically involves a parasitic gap seems to be governed due to the presence of a preposition such as *without*, *before*, etc. If it is governed, a null OP, i.e. PRO, should not be allowed; however, there is nothing in principle that rules out the possibility of null OP being PRO, as long as it can be properly identified. Recall the system that is assumed here. Due to the well-formedness condition on the occurrence of PRO (namely, (2) in Section 1, which is reproduced as (39) here), PRO cannot be freely generated.

(7) An EC is a non-anaphoric pronominal if it is locally governed (and identified) by AGR.

The licensing condition requires the presence of an identifier. In ordinary PRO drop languages, AGR serves as an identifier. Let

us assume that the crucial property of an identifier (AGR being one kind) is its identity as a nominal element in A'-position that contains a feature complex. Then, a lexical OP in COMP seems to be well qualified to be an identifier. If we further assume that the mechanism of 'chain composition' between an A-chain created by a movement of a lexical OP and the one created by a movement of, a null OP, as part of the licensing condition for *pro* in COMP; then, all the asymmetries observed in (35)-(38) and between Japanese and English follow quite naturally.

As the contrast between (34b) and (38b) shows, an EC is not allowed in an adjunct unless a main clause contains an A'-chain. If a head of an A'-chain in an adjunct is *pro*, this immediately follows. Without a proper identifier, namely, an A'-position operator, *pro* is not licensed in a governed COMP.¹⁵

Japanese differs from English in that many of adverbial adjuncts are headed by nouns such as *mae ni* 'before', *ato de* 'after', etc., and a null OP is relatively freely allowed to stay in the COMP of such adjuncts, being coreferential with items in their subjacent domain.¹⁶ Thus, the difference between Japanese and English, which seems otherwise hard to capture, is, in fact, explicable in my proposal. The difference is that Japanese happens to allow more instances of ungoverned COMPs due to a variety of adjunct constructions which make use of head nouns.¹⁷

2.4. Bound Pronominal

The last case I would like to consider is how zero-pronouns are construed when the antecedent of an EC is a quantifier expression, such as *Y-dake* 'only X.'

(40) a. Only John thinks that he will win.

b. John-dake-ga [_E katsu to] omotteiru.
-only-NOM win that thinks
'Only John thinks (he) will win.'

It has been noted, for example in Partee (1975), that *he* in (40a) is ambiguous; (i) *he* may be construed as a variable bound by *only John*, or (ii) it may be merely coreferential with *John*.¹⁸ Thus, under the reading (i), there is no person, except *John*, who is confident enough to think that he himself will win, and *John*'s winning may be a popular belief even among the contestants. Under the reading (ii), on the other hand, there may be many people who are confident and each of them believes he/she will win, and there is nobody except *John* himself who thinks that *John* will win. Hoji says that the EC in (40b) in Japanese exhibits the same ambiguity as *he* in (40a). Considering this property of ambiguous readings as characteristic to pure pronominals, he claims that the EC in (9b) is *pro*.

Contrary to Hoji's claim, I think that (40b) does not exactly have the readings specified in (i) and (ii). To clarify my intuition, let us compare (40b) with (41a) and (41b), where the embedded subject is occupied by a lexical item.

(41) a. John dake-ga [_{self} jibun-ga katsu to] omotteiru.

'Only John thinks 'self' will win.'

b. John dake-ga [_{he} kare-ga katsu to] omotteiru.

'Only John thinks 'he' will win.'

As discussed in Saito and Hoji (1983), the overt pronominal, *kare* 'he', cannot function as a bound variable, due to which (41b) is not ambiguous and only has the reading (ii) mentioned above. *Jibun* 'self', on the other hand, functioning only as a bound pronominal, gives rise to the reading (i) and this is the only reading available in (41a). Thus, in Japanese, the readings detected in (40a) in English are represented by different sentences if lexical NPs are used. If a non-lexical NP (=EC) is used as in (40b), Hoji claims that the EC functions exactly like *he* in (40a) and (40b) is ambiguous between the readings (41a) and (41b). However, it seems to me that (40b) has the reading that is somewhat between these two readings or, for that matter, the combination of both. What I obtain in (40b) is the following: *John* is the only one who is confident and thinks he himself will win (thus far this is the same as (i)) but at the same time there is no one else who thinks *John* will win (which is the assumption in (ii) but not in (i)). That is, the reading I obtain in (40b) is something like (42).

(42) [Only x: x is John] (x thinks x will win &
~[3y: y = person] (y thinks x will win))

If this is the case, the empty pronominal bound by the subject quantifier is not a simple pronominal in the sense of English, but rather something special. I find a similar situation to exist in 'control' cases.

(43) a. Only John tried to come.

b. Only John promised to come.

These sentences do not seem to allow the existence of someone other than *John* who tried or promised so that *John*'s coming is realized. I admit the judgment is quite subtle; however, if my intuition is correct, my claim that the subject EC in (40b) is *PRO* rather than a pure pronominal *pro* is supported and strengthened.

Another difference between English pronominals and Japanese ECs or between ECs and overt pronominals/anaphors in Japanese is seen with respect to the object position. Consider the following examples:

(44) a. Only John thinks that Mary hit him.

- b. John dake-ga [Mary-ga e nagutta to] omotteiru.
 only-NOM -NOM hit that thinks
 'Only John thinks that Mary hit (him).'

(45) a. John dake-ga [Mary-ga jibun-o nagutta to] omotteiru.
 'Only John thinks that Mary hit 'self'.'

- b. John dake-ga [Mary-ga kare-o nagutta to] omotteiru.
 'Only John thinks that Mary hit 'him'.'

The English example (44a) seems to be ambiguous in essentially the same way as (40a), though without some stress on either *John* or *him* it may be a little harder to obtain the bound reading (i) with a possibility that there may be people other than *John* who think *Mary* hit *John*. The readings in (45) also mirror the ones in (41) in Japanese, that is, (45a) has only the bound reading and (45b) has only the referential reading. What about (44b)? As I mentioned earlier (Section 2.1) the reading of (44b) where the EC is coreferential with (or bound by) the subject is hard to obtain, but may be allowed if we assume that Condition C effects, when a binder is a name, are weak in Japanese. In this rather weak reading, in which the EC refers to the matrix subject, however, it is not ambiguous between (45a) and (45b). This is predictable, since (40b) is not ambiguous. But, what is interesting in (44b) is that it is unambiguous in a way different from (40b). The only possible reading that I can obtain is a 'referential' one, namely, the reading given in (45b): no one except *John* thinks that *Mary* hit *him*, and there may be others each of whom may think that *Mary* hit *him*. The unavailability of the 'bound' reading in (44b) is a mystery, if the object EC is a pure pronominal, which can be bound if the binder is a quantifier, just like the English case in (45a). In my analysis (given in Hasegawa (1984/85) and in Section 2.1 above), the reading in which the object EC refers to (or is bound by) the matrix subject comes from the accidental coreference between the topic and the matrix subject. Namely, (44b) is represented as in (46).

(46) [Topic *Mary*]_i [OP_i] [John dake-ga [*Mary*-ga *ti* nagutta] *ti* to] omotta]
 :where Topic = John

The EC in the object of the complement clause is a variable bound by the OP that is connected to the null Topic. Thus, the referent of the empty pronominal in the object position is realized through the null Topic, not the matrix subject. Thus, in my analysis, the non-existence of the boundreading and the difference between (40b) and (44b) is predicted.

The differences that I am discussing are, admittedly, rather subtle. However, I have found an interesting distinction between PRO subjects and OPs (PRO in COMP) in terms of how they are interpreted. The readings in question are, the 'bound' reading

mentioned in (i), the 'referential' reading mentioned as (ii), and the mixture of bound and referential readings represented as (42). The fact seems to be as follows: a PRO subject exhibits only the third reading (42) and an OP allows both the first (i) and the second (ii). Observe the following sentences:

(47) a. *John* dake-ga [*ei* *ti* tsukutta] hikooki-o kowashita.
 only-NOM made airplane-ACC broke
 'Only John broke airplanes that (he) made.'

b. *John* dake-ga [*ti* *ei* oshieta] sensei-o saketeiru.
 taught teacher-ACC avoid
 'Only John avoids teachers that taught (him).'

c. *John* dake-ga [*ei* kekkon suru mae-ni] yooroppa-o ryokoo shita.
 marry before Europe-ACC traveled
 'Only John traveled in Europe before (he) got married.'

d. *John* dake-ga [Mary-ga *ei* naguru mae-ni] nakidashita.
 hit before cry-started
 'Only John started crying before Mary hit (him).'

e. *John* dake-o [Mary-ga [Bill-ga *ei* au mae-ni] *ti* yonda.
 'Only John, Mary called before Bill met (him).'
 meet before called

In (47), only (47a) involves PRO in A-position, and the rest involve PRO in A'-position. (Let us assume the analysis I gave in Section 2.2.2. for (47b), where an OP that binds the object EC moves up to the SPEC of the NP and the COMP is vacated for the subject to move in, in LF.) In (47a), suppose the following situation. *John*, *Mary*, *Sue*, etc. have made several paper airplanes and each person wanted to destroy the other's airplane(s) but not his/her own. (47a) describes the result. It seems to me that *John* was the only one who could defend his airplanes and nobody could succeed in destroying *John*'s but (accidentally or otherwise) *John* ends up destroying (some of) his own. As for the others, each of them did not destroy his/her own airplanes but might have destroyed others', excluding *John*'s. Specifically, I cannot picture the situation in which *John* destroyed his airplanes and others could destroy *John*'s, while nobody, except *John*, destroyed his/her own airplane (bound reading in the sense of (i)); or the situation in which *John* is the only one who destroyed his airplanes (referential reading in the sense of (ii)).

On the other hand, (47b) seems to be taken as ambiguous between the following two situations. (i) *John* is the only one who avoids the teachers who taught him before. But *John*'s classmates, parents, etc. do not avoid them and his sisters, friends, who did not learn from the same teachers as *John* did do not avoid their former teachers, either (bound reading). (ii) *John* is the only one who avoids his teachers but others do not avoid them, though there may be someone, say his girlfriend, who

did not share any class with John, may avoid her own teachers (referential reading).

(47c) is similar to (47b). I can picture the following two situations. (i) Among John's friends who are all married by now, John was the only one who went to Europe before his own marriage, though there may be someone who went to Europe before John's marriage but after his/her own marriage -- since this person must have gotten married before John did (bound reading). (ii) There may be several people including John who went to Europe, but it was only John who went there before his marriage and others went there after John's marriage, though it may be before their own marriages (referential reading).

In (47d), we detect situations similar to (47c). Suppose several people started crying at some point or the other. What is at issue is whether it was before John's turn or his/her own turn of being beaten by Mary.

(47e), which is taken from Hoji (1985), is an instance of a parasitic gap. As Hoji notes, this sentence is ambiguous between the above bound and referential readings. Suppose that several people were scheduled to meet Bill and they were expecting a call from Mary. It was only John who talked with Mary before meeting with Bill, and each of the others received a call from Mary after meeting with Bill, which does not exclude the possibility that John's meeting with Bill had taken place before Mary called them, as long as they each had a meeting with Bill earlier than Mary's call (bound reading). The situation implied in the referential reading is as follows. The person Mary called before John met Bill was John, though her call to someone, say Sue, might have been placed before her meeting with Bill.

I do not know exactly how the difference between A-position PRO and A'-position PRO, namely OP, must be captured; however, it is not surprising to find a difference depending on where the bindee is, in A-position or in A'-position. My hunch is that similar ambiguities result in the case of parasitic gaps in English. Consider (48):

(48) a. Only John, Bill gave a picture of e to t.

b. Only Mary, John visited t, before calling e.

c. Only John, everyone who met e admires t.

(48a), which is discussed in Hoji (1985), is claimed to be unambiguous and has only the bound reading. This fact seems to be correct, and, incidentally, it is not clear whether this example is a case of 'parasitic gap,' since there is no obvious way for a parasitic gap to be bound by an independent null OP.

(48b) bears the point that I would like to check; is it ambiguous in the following two ways?: (i) John always gives a call first when he visits someone. But when he visited Mary, he

did it the other way around; i.e., he visited her first and he gave her a call later. In this situation, there may be other people who John visited before he called Mary (but they received a call from John before his visit). (ii) John visited several people including Mary but he visited Mary before he called her and his visits to the others took place after he called Mary, though John might have given a call to those he had visited after his visits.

I have failed to obtain solid judgments on these examples; however, it seems that (48b) and (48c) are not ambiguous in a way that the Japanese examples (47b)-(47e) are. If this is true, the difference may lie in the difference discussed above. That is, parasitic gaps in English are created by PROs in A'-position, which must be bound by an A'-operator, hence, it is not allowed to pick up its reference from X of the quantifier phrase only X. In Japanese, on the other hand, parasitic gaps are created by PRO, which is allowed to corefer and can pick up their reference even from a non-quantifier argument; hence, it is allowed to pick up its antecedent both from the entire quantifier expression, X-take, or from the referential expression, X of X-take.

NOTES

* This is basically the same as the version that was distributed before the workshop on Japanese Syntax on Empty Categories. I would like to thank Wako Tawa and Mineharu Nakayama, the organizers of the workshop and the editors of the proceedings, for inviting me to the workshop (and for being extremely patient). I have benefited from discussions with various people, in particular, Hajime Hoji and Mamoru Saito. I have received many invaluable comments and suggestions from Jim Huang, the commentator of my paper, and the participants of the workshop, which, to my regret, I could not incorporate into the present paper.

1. In my paper, I have argued that both PRO in A-position and PRO in A'-position (i.e., null OP) obey the same Control Rule, namely (i).

(i) An anaphor without a governing category is bound in its domain-governing category. (Manzini 1983, p.424, p.432)

(ii) Beta is a domain-governing category of Alpha if and only if

a. Beta is the minimal category with a subject containing the c-domain of Alpha and

b. Beta contains a subject accessible to Alpha.

However, it may be necessary to adopt (iii) for OP (or it could be for all PRO's), in order to allow the OP in (iv) to be able to take the object NP as its referent.

(iii) An anaphor without a governing category finds its antecedent in its domain-governing category.

(iv) John-ga [[Mary-ga t_i yomu]OP_i]mae-ni[sono hon_i-o suteta.
-NOM read before the book-ACC discarded
'John threw away the book, before Mary read (it).'

2. If PRO stays as PRO in LF, it seems to violate a popularly adopted (but not too well-founded) condition on variables that a variable must be Case-marked (or in a Case-marked position). I have assumed in my paper that the optional government of INFL applies prior to LF and INFL invariably governs the subject position in LF.

3. Among those who take such a position, Hoji (1985), for example, seems to maintain (1), which I will consider as a representative and the following discussion is mainly concerned with this view. On the other hand, Xu (1986) considers ECs in A-position in Chinese to be Free Empty Categories, which constitute an entirely new type of EC, disregarding both of the well-formedness conditions (1) and (2). Thus, according to Xu, ECs can assume any type of NP; anaphor, pronominal, or variable; depending on the environment in which they occur. Huang (1987) presents criticisms against this view, which criticism I find quite convincing, and I will not discuss it in this paper.

4. Kurata (p.c.) has observed that the subject/object asymmetry becomes clearer if the embedded sentence involves a stative predicate that marks the object with nominative ga.

(i) a. John_i-ga [e_i/j Mary-ga nagureru/suki-da to] itta.
-NOM hit-can like that said
'John_i said that he_i/j can hit Mary/he_i/j likes Mary.'
b. John_i-ga [Mary-ga e_i/j nagureru/suki-da to] itta.
'John_i said that Mary can hit him_i/j/Mary likes him_i/j.'

I do not know why 'stativity' or the difference in Case makes the subject/object contrast sharper.

5. This fact is not peculiar to Japanese. Iasnik (1986 USC class lectures) has reported that Condition C effects in Thai and Vietnamese are different from those in English. Observe the following.

(i) a. John likes John. (OK in Thai and * in Vietnamese)
b. John thinks that John will win. (OK in Thai and Vietnamese)
c. He likes John. (* in both languages)

d. He thinks that John will win. (* in both languages)

(e. John likes him. (*in both languages) ---
Condition B violation)

It seems that Japanese patterns like Thai. What we obtain from the data in (i), (4) and (5) is that Condition C, perhaps universally, rules out the case where a pronoun binds a name.

6. When the bindee is a variable, a binder can be either a lexical pronoun or a name, since replacing the subject of (6) and (7) with a pronoun, *kare* 'he,' does not make the sentences any better or worse.

(i) ?*John_i-o [s_ikare_i-ga[s_i'[sMary-ga t_i butta]to]omotteiru]
(ii) ?*[John_i-wa][kare_i-ga [s_i'[sMary-ga t_i butta]to]omotteiru]

Thus what the Condition C really rules out is the case where a pronoun binds a name, as mentioned in fn. 5 above.

7. Differences between Scrambling and Topic/Relative with respect to subadjacency effects are discussed in Saito (1985). I will not discuss them here, but for further discussion see Hasegawa (1984/85, Section 5) and Huang (1984, 1987).

8. (25c) may be considered as a restrictive relative clause, however, I would like to take the position that it is derived from (i), where the genitive NP precedes the relative clause which is a restrictive relative clause.

(i) Mary-wa [NPJohn-no [s_isono hon-o katta] ototoo]-o sagashiteiru.
9. Hoji (p.c.), in fact, claims that the *no wa* cleft involves A'-movement and the *no ga* cleft does not. Cf. Hoji (1987).

10. It has often been assumed that the cleft sentences with *no wa* is a 'topicalized' counterpart of the *no ga* version. However, the contrast (28) indicates that the fact is not that simple. There are other differences between the two. First, the focus phrase with *no wa* can be a PP while that with *no ga* can only be an NP.

(i) a. John-ga kita no wa Tokyo-kara da.
-NOM came Nom TOP -from COP
'It was from Tokyo that John came.'
b. *John-ga kita no ga Tokyo-kara da.

Second, the focus of the *no ga* cleft cannot be a quantifier, such as A or B, while no such restriction is observed in the *no wa* cleft.

- (ii) a. John-ga katta no wa hon ka pen da.
 -NOM bought Nom-TOP book or pen COP
 'It was a book or pen that John bought.'

b. *John-ga katta no g_a hon ka pen da.

The contrast here and the one in (28) is less clear if the no g_a cleft is embedded, which cannot be replaced by the no wa cleft. A more extensive study is needed to identify the real source of this contrast. (Cf. Hoji 1987)

11. The following has not been well-worked out yet and the analysis I will present remains rather speculative.

12. The subadjacency effect on parasitic gaps is not too strong in Japanese as the following examples illustrate:

- (i) a. nani-o John-ga[Mary-ga ei yomu mae-ni]t_isutete shimatta no.
 what-ACC -NOM -NOM read before threw away Q
 'What did John throw away before Mary read (it)?'
 b. ?nani-o John-ga [ei kaite]hitoi-ni au mae-ni]
 what-ACC -NOM -NOM wrote person-DAT meet before
 t_i sutete shimatta no.
 Q
 'What did John throw away before Mary met the man who wrote (it)?'

Yoshimura (1985), however, claims (ib) is ungrammatical.

13. See the following Section 2.3. for the relevant discussion.

14. See Levin (1984) for an argument for the existence of a null OP in COMP of infinitival relatives.

15. The governed status of COMP of an adjunct seems to have something to do with the following contrast.

- (i) a. Which street_i did you walk along t_i, thinking about it_i.
 b. *Which street_i did you walk along t_i, thinking about ei.
 c. Which street_i did you walk along t_i, without thinking about ei.

I do not have an explanation for the ungrammaticality of (ib), the COMP of the adjunct of which seems to be ungoverned and thus involves PRO, as in the case of Japanese. That is, I do not know why a null OP that binds a parasitic gap cannot be PRO in English. I know of no account why bare gerunds cannot contain a parasitic gap, either.

16. The assumption I am employing here (as well as in Hasegawa 1984/85) is that a nominal head of an adjunct does not govern the sentence that precedes it. Furthermore, tense does not

affect the government status of COMP in Japanese, while it does in English (cf. Levin 1984).

17. One may think English should allow empty pronominals in the following contexts where adjuncts are headed by a noun.

- (i) We'll bring the typewriter by the time you need *(it).

I will bring the typewriter in case you need *(it).

All these adjuncts that are headed by head nouns are 'tensed' clauses and I assume, following Levin (1984), that COMP of a tensed clause is governed. Thus a null OP(=PRO) is not allowed there. These adjuncts do not allow parasitic gaps, either, which is due to the fact that the null OP in the adjunct is too far away from the real operator, because of the presence of the NP boundary.

- (ii) *Which typewriter_i did John bring t_i by the time you needed ei.

*Which typewriter_i shall I bring t_i in case you need ei.

18. The third reading, which we will ignore here is that he refers to someone in a given discourse, say Bill.

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