

Abstract Case and Empty Pronouns

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0. In section 1. we will argue that there do exist empty pronouns in Japanese. In section 2. we will derive a condition on them from a general consideration.

1. Empty Pronouns in Japanese.

1.1. Missing Functions as Empty Pronouns.

In Japanese not only the subject but also the object can be missing, as shown in the following:

- (1) a. John-ga Mary-o aisiteiru
 NOM ACC loves
 "John loves Mary"
 b. \emptyset Mary-o aisiteiru
 " \emptyset loves Mary"
- (2) a. John-ga Mary-o nagutta
 NOM ACC hit
 "John hit Mary"
 b. John-ga \emptyset nagutta
 "John hit \emptyset "

Furthermore, it seems that any other function can be missing. For example, a dative object is missing in (3b), and a subject in NP in (4b).

- (3) a. John-ga Mary-ni kiskusita
 NOM ACC kissed
 "John kissed Mary"
 b. John-ga \emptyset kiskusita
 "John kissed \emptyset "
- (4) a. [John-no hahaoya]-ga Mary-o kiratteiru
 GEN mother NOM ACC hates
 "John's mother hates Mary"

- b. [\emptyset hahaoya]-ga Mary-o kiratteiru
 "[\emptyset mother] hates Mary"

The missing elements doesn't seem really missing in the examples (1)-(4). Our intuition is that there do exist some elements which assume the missing functions and denote some entities whose existence is established in the preceding discourse. The latter behavior is the one that an overt pronoun would show if inserted in the null position. Therefore, it seems to us that it costs the least to assume that an empty pronoun occupies the position that is phonologically null in the examples above.

The empty pronoun can have an antecedent in its sentence as well. Consider the following:

- (5) a. Bill-ga [John-ga Tom-o nagutta]-to itta
 NOM NOM ACC hit COMP said
 "Bill said that John hit Tom"
 b. Bill-ga [John-ga e nagutta]-to itta

The empty pronoun *e* in (5b) can be interpreted as having some discourse antecedent or referring to *Bill*. This is again the property shared with the overt pronoun. A difference between the overt pronoun and the empty one is that the former subserves a 'deictic' use while the latter does not. Another difference is that the empty pronoun, unlike the overt pronouns, can serve as a bound pronoun, as observed in Saito (1985) and others. In this respect the Japanese empty pronoun is similar to the English overt pronoun.

1.2. Resumptive Empty Pronouns.

In this section we will provide further evidence to confirm that there exist empty categories which constitute a subclass of the pronoun. Specifically, we will argue that some empty categories behave as a resumptive pronouns. In section 1.2.1. we will, in essence, reproduce the argument by Saito (1985) and Hoji (1985) that empty pronouns are involved in the topic construction. In section 1.2.2. and 1.2.3. we will argue further that an empty resumptive pronoun can appear in the ECM construction and the relative construction as well.

1.2.1. The Topic Construction.

First consider the following topic construction:

- (6) Mary_i-wa [John-ga e_i aisiteiru]
 TOP NOM loves
 "(As for) Mary, John loves (her)"

Saito (1985) and Hoji (1985) argue that the topic construction involves no movement and that the empty category associated to the topic phrase is an empty pronoun. To support this, they show that there is no subjacency effect observed in the topic construction. consider the following:

- (7) a. Mary_i-wa [Bill-ga [John-ga e_i aisiteiru]-to omotteiru]
 TOP NOM NOM loves COMP thinks
 "(As for) Mary, Bill thinks that John loves (her)"
 b. Mary_i-wa [John-ga [[e_j e_i nagutta]otoko_j]-o ketobasita]
 TOP NOM hit man ACC kicked
 "(As for) Mary, John kicked the man who hit (her)"

The empty category in question appears within the complement of a bridge verb in (7a) and within a complex NP in (7b), making no grammatical difference. The example (7b) is in contrast in grammaticality with the corresponding scrambling construction (8b):

- (8) a. Mary_i-o [Bill-ga [John-ga e_i aisiteiru]-to omotteiru]
 ACC
 "Mary Bill thinks that John loves"
 b. *Mary_i-o [John-ga [[e_j e_i nagutta]otoko_j]-o ketobasita]
 ACC
 "Mary John kicked the man who hit"

The ungrammaticality of the example (8) is attributed to the subjacency violation on the Saito's (1985) assumption that a scrambling is derived by syntactic movement.

Hoji (1985) further argues that the contrastive *wa*-phrase, unlike the topic *wa*-phrase, is subject to syntactic movement. As expected, we can

observe subjacency effects in the case of the contrastive *wa*:

- (9) a. Mary_i-wa [Bill-ga [John-ga e_i aisiteiru]-to omotteiru]
 CNTR
 "Mary (as opposed to ...), Bill thinks that John loves"
 b. *Mary_i-wa [John-ga [[e_j e_i nagutta]otoko_j]-o ketobasita]
 CNTR
 "Mary (as opposed to ...), John kicked the man who hit"

It seems reasonable from the observations above to assume that while the scrambled phrase and the contrastive phrase are preposed by movement, the topic phrase is base-generated in the sentence-initial phrase and associated with an empty pronoun serving as a resumptive pronouns. Hoji further assumes that the topic phrase is adjoined to S' whereas the contrastive phrase is adjoined to S (S'=CP and S=IP, adopting Chomsky's (1986b) system of phrase structure). As for the scrambled phrase, he assumes with Saito (1985) that it is adjoined to IP as well as VP. We will henceforth follow these assumptions, although it seems that our discussion below will not be seriously affected exactly in whatever position the topic phrase turns out to be generated.

Further evidence is provided by Hoji (1985) to support the assumption that the topic phrase is base-generated while the contrastive phrase is subject to movement. Consider the following:

- (10) a. *[[e_i e_j nagutta] hito_i]-wa [daremo_j-ga e_i uttaeta]
 hit person TOP everyone-NOM sued
 "As for [the person who e_i hit e_j]_i, everyone_j sued e_i"
 b. [[e_i e_j nagutta] hito_i]-wa [daremo_j-ga e_i uttaeta]
 CNTR
 "[The person who e_i hit e_j]_i (as opposed to ...), everyone
 sued e_i"

The empty category e_j, which we assume to be an empty pronoun, resists the bound pronoun reading in the topic construction, but not in the contrastive construction.

- c. *John-ga [[e_i sensei]_J-o [daremo_i-ga e_j sittositeiru]]
 ACC
 -to omotteiru

As expected, the ECM construction reveals neither the sujacency effect nor the reconstruction effect, just as not the scrambling construction but the topic construction.

We would like to introduce two more syntactic tests to arrive at the same point. The first has to do with pronominal coreference. Consider the following:

- (18) a. [John_i-no hahaoya]_J-ga kare_i-o aisiteiru
 GEN mother NOM he-ACC loves
 "John's_i mother loves him_i."
 b. *[John_i-no hahaoya]_J-o [kare_i-ga e_j aisiteiru]
 ACC NOM
 "[John's_i mother]_J he_i loves e_j"

The example (18b) is an instance of 'crossover', concerning which Saito (1985) states as follows:

- (19) When a pronoun c-commands its antecedent at D-structure but this c-command relation does not obtain at S-structure due to movement to an A'-position, the sentence is grammatical only if the antecedent is embedded 'deeply enough' in the moves phrase.

In (18b) the pronoun *kare* c-commands its antecedent *John* at D-structure but not at S-structure, whereas *kare* does not c-command *John* throughout in (18a). Next observe the following:

- (20) a. *John-ga [[Mary_i-no sensei]_J-ni [kanozyo_i-ga e_j
 NOM GEN teacher DAT she-NOM
 sittositeiru]]-to omotteiru
 is-jealous COMP thinks
 "John thinks that [Mary's_i teacher]_J she_i is jealous of e_j"

- b. John-ga [[Mary_i-no sensei]_j-wa [kanozyo_i-ga e_j
TOP
sittositeiru]]-to omotteiru
- c. John-ga [[Mary_i-no sensei]_j-o [kanozyo_i-ga e_j
ACC
sittositeiru]]-to omotteiru

The paradigm seen in (20) again support our assumption that the exceptionally Case-marked phrase is, like the topic phrase, base-generated in its S-structure position, whereas the scrambled phrase has passed through movement.

The second test has to do with quantifier scope. Consider the following:

- (21) a. dareka-ga daremo-o nagutta
someone-NOM everyone-ACC hit
"Someone hit everyone"
- b. dareka_i-o [daremo-ga e_i nagutta]
someone-ACC everyone-NOM hit
"Someone_i everyone hit e_i"

Kuroda (1970) observes that the scope relation of the two quantifier phrases is unambiguous in (21a) while it is ambiguous in (21b). That is, in (21a) the scope of *dareka* (*someone*) is wider than the one of *daremo* (*everyone*), while both *dareka* and *daremo* can have the wide scope with respect to each other in (21b). Kuroda reduces this observation to the following generalization:

- (22) If a predicate corresponds to a sentence frame with the 'preferred' word order, the semantic order of quantifiers is given by their linear order. If a predicate corresponds to a sentence frame with 'inverted word order, the semantic order of quantifiers is ambiguous.

We can restate (22) as (23) within the current framework:

- (15) Bill-ga [Mary_i-o [John-ga e_i horeteiru]]-to omotteiru
 NOM ACC NOM is-in-love COMP thinks
 "Bill thinks of Mary_i that John is in love with e_i"
- (25) ...[VP [CP NP_i-o [CP ... e_i ...]] omow] ...

If we assume, essentially following Chomsky (1977) and Koster (1978), that the topic phrase is dominated a category larger than CP, which we tentatively call TP, then the example (15) has the following structure:

- (26) ...[VP [TP NP_i-o [CP ... e_i ...]] omow] ...

We might be able to assume further that TP is the maximal projection of 'topicalizer', an empty zero-level category which takes CP as complement and NP as specifier in the sense of Chomsky (1986b). Both in (25) and in (26) the topic NP is licensed by predication, having CP as its predicate.

Another possibility is to regard the ECM construction under consideration as a 'small clause' construction. Takezawa (1987) observes that *omow* can take a small clause complement:

- (27) John-ga [[Mary-no yokogao]-o [totemo utukusiku]] omotta
 NOM GEN profile ACC very beautiful thought
 "John thought Mary's profile very beautiful"

Schematically, a small clause construction has the following structure, unless it contains a covert INFL:

- (28) ...[VP [e' NP_i-o [e ...]] omow] ...

Here e' is a category of the same type as e, although it should be a 'larger' projection in the sense that e functions as the head of e'. The NP functions as the specifier of e, and e not only behave as the predicate of the NP but also assigns a *Th*-role to it. If e = CP, we will have an ECM construction such as (15). In this case we have to consider CP to *Th*-mark the exceptionally Case-marked NP, assuming that a category which can function as a predicate is a potential *Th*-marker.

Compare the following with (15):

- (29) Bill-ga [Mary_i-o [kanoz_{yo}_i-wa [John-ga e_i horeteiru]]]-to
 she-TOP
 omotteiru
 "Bill thinks of Mary_i that as for her_i, John is in love with
 e_i"

The example (29) indicates that an exceptionally Case-marked category can appear in a higher position than the topic position. This seems difficult to account for under the first approach. Under the small clause approach, on the contrary, we can account for this fact by assuming that @ in (28) corresponds to TP (or CP, following Hoji (1985)) in (29), which is the predicate of and assigns a *Th*-role to the exceptionally Case-marked NP. It does not seem unreasonable to assume that @ in (28) can be any category, so far as it can be a predicate with capacity of *Th*-marking.

There arises a question whether or not *omow* (*think*) allows an 'S'-deletion' type of complement as well such as the English example (30):

- (30) John considers [_{IP} Mary [_{I'} to [be a fool]]]

Consider the following:

- (31) a. John-ga [Mary-ga baka-da]-to omotteiru
 NOM NOM fool-is COMP thinks
 "John thinks that Mary is a fool"
 b. John-ga [Mary-o baka-da]-to omotteiru
 ACC
 "John thinks Mary to be a fool"

It might be that (31b) has the structure (32b) in addition to (32a), if tensed INFL does not obligatorily assign nominative Case in Japanese, as has often been suggested in the literature:

- (32) a. ... [_{CP} NP_i-o [_{CP} [_{IP} e_i I']]]-to ...
 b. ... [_{IP} NP-o I']]-to ...

Here we are tentatively assuming that *to* is a particle attached to categories of a clausal type, including IP, CP, and TP, as suggested before. The structure in (32a) is of the small clause type just discussed. The construction (32b) has the same structure as the English example (30). However, we will directly argue that *omow* does not take IP complement.

Let us begin by showing that although it has been generally assumed that the crossover effect of quantifier scope is restricted to A'-movement, it is observed in the case of A-movement as well (see also Oka (1988, to appear)). First consider the following:

- (33) a. Bill-ga Mary-ni John-o shoukaisi-ta
 NOM DAT ACC introduced
 "Bill introduced John to Mary"
 b. John-ga Mary-ni shoukais-are-ta
 NOM DAT was-introduced
 "John was introduced to Mary"

If we follow Oka's (1988, to appear) assumption that a passive construction such as (33a) is derived by A-movement, the examples in (33) are represented at S-structure as follows:

- (34) a. [_{IP} Bill-ga [_{I'} [_{VP} Mary-ni [_{V'} John-o V]] I]]
 b. [_{IP} John_i-ga [_{I'} [[_{VP} Mary-ni [_{V'} e_i V]] rare] I]]

What is important here is the relative positions of *John* and *Mary*: In (34a) *John* has not been moved from the position c-commanded by *Mary*, whereas in (34b) *John* has passed through A-movement to c-command *Mary* at S-structure.

Observe the following:

- (38) John-ga dareka-o daremo-ni shoukais-are-sase-ta
 NOM someone-ACC everyone-DAT caused-to-be-introduced
 "John caused someone to be introduced to everyone"

This example produces the scope ambiguity in question. These observations reasonably lead us to conclude that *omow*, unlike the causative verb, cannot have a S'-deletion type complement, although it takes a small clause type complement, as already argued.

There is an alternative analysis of the small clause construction, which we have been ignoring so far. Williams (1980, 1983) argues that a small clause is not really a syntactic constituent. Rather, the subject of a small clause is an argument of the 'ECM' verb, whereas the remainder of the small clause is licensed by being the predicate of its subject in a certain configuration. A piece of evidence for the non-constituency of the small clause comes from the consideration of quantifier scope. Consider the following:

- (39) a. Mary-ga [John-dake-ga kakkoi]-to omotta
 NOM only NOM is-stylish COMP thought
 "Mary thought that only John was stylish"
 b. Mary-ga [John-dake-o kakkoi]-to omotta
 ACC
 "Mary thought of only John that he was stylish"
 c. Mary-ga [John-dake-o kakkoyoku] omotta
 ACC stylish
 "Mary thought only John stylish"

While the quantifier phrase *John-dake* (*only John*) takes the complement clause as its scope in (39a), it takes the matrix clause as its scope in (39b, c). The example (39b, c) are in contrast in this respect with an S'-deletion type ECM construction such as follows:

- (40) John-ga [Mary-dake-o hatarak]-ase-ta
 only ACC work caused
 "John caused only Mary to work"

- (42) a. Mary_i-o [Bill-ga [John-ga e_i nagutta]-to omotteiru]
 ACC
 "Mary Bill thinks that John hit"
 b. ?Mary_i-o [Bill-ga [John-ga e_i nagutta]-kadouka shitteiru]
 "Mary Bill knows whether or not John hit"
 c. *Mary_i-o [Bill-ga [John-ga e_i nagutta]-node okotteiru]
 "Mary Bill is angry because John hit"
 d. *Mary_i-o [John-ga [[e_j e_i nagutta]otoko_j]-o ketobasita]
 "Mary Bill kicked the man who hit"

The paradigm in (42) is just as we expect, assuming that the scrambling obeys the subjacency condition. The immunity of the relative construction from the subjacency condition suggests that the construction can be, at least, derived in some other device than syntactic movement. There are two possibilities: one is to make use of empty pronouns as resumptive pronouns, and the other, which we have been ignoring, is to make resort to LF-movement on the assumption that the subjacency condition does not work in LF. We will directly argue against the latter possibility.

To examine whether LF-movement can play a role in the relative construction, we are able to set a stage where no empty category can act as a resumptive pronoun. Chao and Sells (1983) observe that an English resumptive pronoun cannot have a bound pronoun reading:

- (43) a. I'd like to meet [the linguist_i [that Mary couldn't
 remember if she had seen him_i before]]
 b. *I'd like to meet [every linguist_i [that Mary couldn't
 remember if she had seen him_i before]]

Saito (1985) accounts for this observation by proposing the condition (13):

- (13) An NP with the feature [+pronominal] cannot have a quantified NP in A'-position as its antecedent

He argues that in (43b) not the relative head alone but the whole complex NP containing it is quantifier raised in LF, giving the following LF

subjacency effect. The fact that we can see the paradigm of (42) in (45) shows the relative construction can involve syntactic movement (presumably, empty operator movement) as well.

We have argued that there exist empty pronouns in Japanese. In the next section we will derive a condition on the empty pronoun.

2. A Condition on the Empty Pronoun in Japanese.

2.1. The assignment of agreement features.

It is well known that there are 'null subject' languages, languages where the subject of a tensed clause can be missing. In a language with a rich inflectional system, such as Italian, the subject can be missing, whereas it cannot in a language such as English. The missing subject is considered to be an empty category which is called *pro*. We might assume as follows (see Taraldsen (1978), Chomsky (1981,1982)):

(46) *Pro* must be identified by INFL with overt agreement features

Agreement features include person, number, gender and Case. It is not unreasonable to assume that empty pronouns in Japanese are instances of *pro*. If so, the condition (46) should not be applicable since Japanese reveals no overt agreement. Furthermore, the position where *pro* can appear is, as has been seen, not restricted to the subject position in Japanese. We might instead impose the following condition on *pro* in Japanese:

(47) *Pro* must be identified by a category which Case-marks it

We would like to consider for a while how (46) and (47) could be derived in a unified way.

First suppose that every nominal element contains agreement features. Let us further assume as follows:

(48) At D-structure *pro* is a complex of the agreement features with unspecified values

That is, we regard *pro* as a category base-generated with agreement

features alone. Next suppose as follows:

- (49) A category containing a feature whose value is unspecified is invisible at LF

To be interpreted at LF *pro* must have its agreement features assigned a specific value under the condition (49). How are the features assigned a value? As for the feature of Case, we assume that Case-assignment entails value assignment of the Case feature. We might be able to reduce Chomsky's (1986a) Case visibility condition to the more general condition (49) by assuming that the value of the Case feature is necessarily unspecified at D-structure.⁴ The immunity of PRO from the Case visibility condition is accounted for if PRO lacks the Case feature itself or contains the Case feature with a specified value at D-structure. It is possible to discuss the other agreement features along the same line. Suppose that the checking of agreement is done by the feature assignment. INFL assigns feature F with value V to a category C. If C inherently contains F with a value different from V, a conflict occurs, ruling out the construction. If C contains F with an unspecified value, the value assignment is done without a conflict.

Let us suppose that *pro* appears in the object position in English or Italian, for example. *Pro* is assigned Case by a lexical head, and therefore the value of the Case feature is specified. However, the other features remains with unspecified values, since a lexical head has no agreement feature to assign (but see Jaeggli (1986)). Consequently, *pro* is uninterpretable at LF under the condition (49), ultimately leading to a violation of a principle, if any, that forces *pro* to be interpreted in some way at LF. Next suppose that *pro* appears in the subject position of a tensed finite clause. As for the Case feature, its value is specified by nominative Case-assignment. What differentiate Italian from English is the assignment of other features. A possibility is that the assignment of the features other than Case is applied in syntax in Italian, while it is applied in PF in English. If so, at LF *pro* in Italian has its features with fully specified values, whereas *pro* in English contains features with unspecified values. We might be able to reduce the difference concerning the level of the feature assignment to the one concerning the

level of V-raising in the sense of Chomsky (1986b), assuming that INFL can assign the relevant features only through assistance of verbal features, which are acquired by amalgamation with a verb as a consequence of V-raising. Thus, in Italian V-raising applies in syntax while it applies in PF in English, a reminiscence of 'rule R' proposed in Chomsky (1981).

Turning to Japanese, let us suppose that the agreement features other than the Case feature do not exist in the first place in the grammar of Japanese, a language which has no overt marker of the features other than Case. Then *pro* in Japanese contains only the Case feature with an unspecified value. Therefore, Case-assignment is sufficient to make *pro* visible at LF. Thus, we have achieved the effect of (47) that *pro* must be in a Case-marked position. Note that the differentiation of the Case-feature from the other agreement features could be considered to be not unreasonable, if we assume the Case visibility condition to be an independent one, rejecting the suggestion above that it might be reduced to the more general condition (49).

We have proposed a possibility to derive language-specific conditions (46) and (47) from general considerations (48) and (49) and properties of particular languages. In the following subsections we will examine the consequences of adopting the condition (47), which we believe is, at least, descriptively adequate for Japanese, whatever it is ultimately reduced to.

2.2. Abstract Case.

2.2.1. The Case visibility condition and Inherent Case-marking.

To begin with, let us introduce the Case visibility condition (50) proposed in Chomsky (1986a):

- (50) A CHAIN is Case-marked if it contains exactly one Case-marked position; a position in a Case-marked CHAIN is visible for *Th*-marking

In Oka (1986a, b), where the properties of categorial selection are reduced to the properties of semantic selection and Case-marking, it was argued that (50) does not see the categorial features of elements in a CHAIN. Therefore, any argument must be associated with *Th*-role and hence

associated with Case under (50), whether it is NP or any one of other categories, including CP, PP, IP, AP, etc. Thus, a CP or PP complement of a verb is assigned inherent Case by the verb, assuming that any lexical category is a potential inherent Case-marker. Concerning inherent Case-marking, the following condition was proposed:

- (51) Inherent Case α is linked with *Th*-role β in the lexical representation if and only if α is assigned to a category which is a member of the chain associated with β

Thus, an English verb, say, *introduce* assigns inherent dative Case to a PP, for example, if and only if the verb assigns the PP a *Th*-role linked with dative Case in the lexical representation of the verb.

2.2.2. Arguments and Adjuncts.

Now we have an apparatus to distinguish between arguments and adjuncts. Let us consider the following examples:

- (52) a. kin-medaru-ga sono-kuni-kara de-ta
 gold-medal-NOM that-country-from has-come-out
 "A gold medal has come out from that country (A gold medal has been won by that country)"
- b. John-ga sono-mura-kara ki-ta
 NOM that-village-from has-come
 "John has come from that village"

At first glance, we do not know whether *NP-kara* is an argument *Th*-marked by the verb or an adjunct modifying it.⁵ Suppose that in (52a) *der* (*come out*) *Th*-marks *NP-kara* while *kur* (*come*) does not in (52b). Then *der*, unlike *kur*, assigns *NP-kara* a particular inherent Case. As for *kara*, it is of no importance whether it is a case particle or a postposition under Oka's (1986a, b) approach above mentioned.

Given the condition (47), it is expected that *der* permits *pro* while *kur* does not. This prediction is borne out:^{6,7}

- (53) a. sono-kuni_i-wa [kin-medaru-ga e_i deta]
 TOP
 "As for that country, a gold medal has come out"
- b. Bill-ga [sono-kuni_i-o [kin-medaru-ga e_i deta]-to
 NOM ACC COMP
 omotteiru
 thinks
 "Bill thinks of that country that a gold medal has come out"
- c. [kin-medal-ga e_i deta] kuni_i
 "the country that a gold medal has come out"
- (54) a. *sono-mura_i-wa [John-ga e_i kita]
 TOP
 "As for that village, John has come"
- b. *Bill-ga [sono-mura_i-o [John-ga e_i kita]]-to omotteiru
 NOM ACC COMP think
 "Bill thinks of that village that John has come"
- c. [John-ga e_i kita] mura_i
 "the village that John has come"

The fact that the topic construction and the ECM construction are acceptable in (53) while they are not in (54) indicates that the empty category *e_i* can be *pro* in (53), but not in (54). As for the relative construction, the possibility to use syntactic movement to derive it makes it unclear whether *pro* is allowed to occur or not. However, consider the following:

- (55) a. [Bill-ga [kin-medal-ga e_i deta]-to omotteiru] kuni_i
 NOM COMP thinks
 "the country that Bill thinks a gold medal has come out"
- b. [Bill-ga [[e_j e_i deta] medaru_j]-o kazoeteiru] kuni_i
 NOM medal ACC is-counting
 "the country that Bill is counting the medals that has come"
- (56) a. [Bill-ga [John-ga e_i kita]-to omotteiru] mura_i
 NOM COMP thinks
 "the village that Bill thinks that John has come"

- "What John Caused Mary to walk is the beach"
- c. [John-ga e_i hamabe-o arukaseta]-no-wa Mary_i-o da
 "What John caused to walk the beach is Mary"
- (59) a. *John-ga Mary-o sono-hon-o yom-ase-ta
 NOM ACC that-book-ACC read-CAUSE-PAST
 "John caused Mary to read that book"
- b. *[John-ga Mary-o e_i yomaseta]-no-wa hon_i-o da
 "What John caused Mary to read is a book"
- c. *[John-ga e_i hon-o yomaseta]-no-wa Mary_i-o da
 "What John caused to read a book is Mary"

Although the acceptability of (58a) varies from speaker to speaker, (58a, b) seems to be fully acceptable to every speaker. The contrast between (58) and (59) suggests that the Case assigned by *aruk* (*walk*) is different from the one assigned by *yomu* (*read*).

To account for the contrast in question, let us assume that the *o*-causative construction has the following structure:

- (60) [_{IP} John [_{I'} [_{VP} [_{IP} Mary [_{I'} [_{VP} NP V] I]] sase] ta]]

As argued in section 1.2.2., the causative verb *sase* takes IP as its complement to give an *o*-causative construction. We assume that the INFL of the complement IP has no features and hence serves as just a 'place-holder'. The internal verb is V-raised to *sase* through the covert INFL, giving an amalgamated verb *V-sase* (, which is successively V-raised to the matrix INFL). The two instances of the feature assigning structural Case, [-N] if we follow Chomsky (1981) and others, are fused to one inside the amalgamated verb *V-sase*. Consequently, *V-sase* can assign just one instance of structural Case. In (60) Mary have to be assigned Case since it is an argument, and the Case can be assigned to it is only the Case exceptionally assigned by *V-sase*. If *V-sase* assigns structural Case to *Mary*, the NP in the embedded VP cannot be assigned structural Case. Note that inherent Case is different from structural Case in that the former is, by virtue of the condition (51), assigned to a category only as an inseparable appendix to a particular *Th*-role, while the latter is assigned independently of *Th*-marking in a certain

not seem to be inferior to the condition (47), at least, in the empirical coverage, however it could be reduced to more general considerations. In the next subsection we will suggest that the condition (47) is superior even descriptively.

2.2.3. Case-marked nonarguments.

In this subsection we will see possible cases where a nonargument is Case-marked. Needless to say, it is impossible to distinguish between arguments and nonarguments independently of a specific theory, or analysis. Furthermore, the derivation of the constructions discussed here could not be considered beyond controversy at present and, what is worse, could not be expected to be shortly brought to a peaceful settlement. In these considerations the larger half of our argumentations here hold only within our own framework, a framework developed in Oka (1987, 1988, to appear).

To begin with, note that it is generally assumed that in Italian, for example, *pro* functions as an expletive element which is linked to an argument in a *Th*-position. This is direct evidence against a condition on *pro* in terms of argumenthood. We can also find an instance of expletive *pro* in Japanese. Consider the following ergative construction:

- (62) John-ni nihongo-ga wakaru
 DAT Japanese-NOM understands
 "John understands Japanese"

It is argued in Oka (1987, 1988, to appear) that the example (62) has the following structure:

- (63) [IP e_i [I· [VP John-ni [v· nihongo_i-ga wakaru]] I]]

Here e_i is *pro*, which creates an expletive-argument pair in the sense of Chomsky (1986a) by linking to *NP-ga* in VP. So far as our analysis is supported, we can maintain that the condition (47) is descriptively more adequate a condition requiring that *pro* must be an argument.

Let us next consider an instance of the multipul subject

constructions in (64):

- (64) sono-kagami-ga [futotta-onnanoko-ga yasete mieru]
 that-mirror-NOM fat-girl-NOM slender looks
 "It is (in) that mirror that a fat girl looks slender"

In Oka (1987, to appear) it is argued that the outer nominative NP was generated as an adjunct in VP and has passed through movement into the SPEC position of IP. It is cannot be an argument, since it is not a member of a *Th*-chain. However, it is assigned nominative Case by INFL, assuming that it is visible at S-structure, since it, unlike a VP adjunct for example, occupies a position licensed by the X-bar theory. Under these assumptions, we can decide which is descriptively adequate, the condition (47) or the condition in terms of the argument-nonargument distinction. Observe the following:

- (65) a. sono-kagami_i-wa [John-ga [[e_i [e_j yasete mieta]
 that-mirror-TOP NOM slender looked
 onnanoko_j]-to kekkonsita]
 girl with got-married
 "As for that mirror, John got married with the girl who
 looked slender"
- b. John-ga [sono-kagami_i-o [Mary-ga [e_i [onnanoko-ga
 NOM that-mirror-ACC NOM girl-NOM
 yasete mieru]]-noni okotteiru]
 slender looks though is-angry
 "John thinks of that mirror that though a girl looks slender
 Mary is angry"
- c. [John-ga [[e_i [onnanoko-ga yasete mieru]]-toyuu
 NOM COMP
 uwasa]-o hiteisita] kagami_i
 rumor ACC denied mirror
 "the mirror that John denied the rumor that a girl looks
 slender"

All of the examples in (65) show that *e_i* can be *pro*, supporting our

position that the occurrence of *pro* is conditioned in terms of Case-marking rather than argumenthood.

Now let us turn to the topic position. If we identify this position as the SPEC position of the maximal proposition of the topicalizer, one of the possibilities suggested before, then it is not unreasonable to assume that it can be Case-marked by the topicalizer, just as the subject position can be Case-marked by INFL. However, it seems difficult to decide whether the topic position is Case-marked or not, since an occurrence of *pro* in the commenting clause makes it obscure whether *pro* can appear in the topic position. We can, nevertheless, find a gapless topic construction, which we have been ignoring:

- (66) Reagan-wa [Nancy-ga byouki-da]
 TOP NOM illness-COPULA(is)
 "As for Reagan, Nancy is ill in bed"

The topic phrase requires neither a trace nor an empty, or overt, resumptive pronoun in its commenting clause, so long as the predication between them is maintained in some way.¹¹ The same is true of the ECM construction and the relative construction (see note 2):

- (67) a. John-ga [Reagan-o [Nancy-ga byouki-da]]-to omotta
 NOM ACC COMP thought
 "John thought of Reagan that Nancy was ill in bed"
 b. [Nancy-ga byouki-no] Reagan
 NOMINALIZER(is)
 "Reagan that Nancy is ill"

Interestingly, a gapless topic construction has no corresponding multiple subject construction:

- (68) *Reagan-ga [Nancy-ga byouki-da]
 NOM
 "It is Reagan that Nancy is ill in bed"

We might be able to account for the ungrammaticality of (68) by assuming

(71)??John-ga [[Reagan-ga [Nancy-ga byoukida]]-toyuu uwasa]-o
 NOM

hiteisita

"John denied the rumor that it is Reagan that Nancy is ill in bed"

The contrast between (68) and (71) might be due to the fact that the outer subject is forced to be interpreted as a focus, as has been pointed out in the literature.

In any case, we could not seem to disregard the acceptability difference between the example (70b) on the one hand and (65c) and (70a). If this difference is a real one, we are led to conclude that the topic position is not a Case-marked position. In other words the topic marker *wa* is not a realization of abstract Case but a postposition or a morphological case realization, contrasting with the nominative marker *ga*, which is really a realization of structural Case assigned by INFL.

Interestingly, we have another derivation for the sentence corresponding to (70a), where the underlying form corresponds to the following ECM construction:

(72) John-ga [Reagan-o [Nancy-ga byoukida]]-to omotteiru
 NOM ACC NOM is-ill COMP thinks

"John thinks of Reagan that Nancy is ill in bed"

The position of *Reagan* in (72) is exceptionally Case-marked by *omou* (*think*). We suggested in section 1.2.2. two possibility concerning the internal structure of the ECM complement: one is that it is a small clause and the other is that it has the structure of the topic construction, namely the structure of TP or the adjunction structure of CP. If the former is the case, the condition (47) in terms of Case and the condition in terms of argumenthood both predict that *pro* can replace *Reagan* in (72), since the subject of small clause is exceptionally Case-marked and Th-marked by its predicate. If the latter is the case, our condition makes the same prediction while the condition in terms of argument hood predicts that *pro* cannot appear in the position under consideration. That is, if *pro* actually appear, then we are justified on

the assumption that the ECM complement has the structure of the topic construction. To decide which is right, let us now consider the following pair:

- (73) a. [Mary-ga [[e_j [Nancy-ga byoukida]]-to omotteiru]
 NOM
 hito_j]-o sagasiteiru] Reagan_i
 person ACC is-seeking-for
 "Reagan that Mary is seeking for the person who thinks that
 Nancy is ill in bed"
- b. [Mary-ga [[[e_j [Nancy-ga byoukida]]-toyuu uwasa]-o
 NOM NOM is-ill COMP rumor ACC
 hiteisita] hito_j]-o sagasiteiru] Reagan_i
 denied person ACC is-looking-for
 "Reagan that Mary is seeking for the person who denied the
 rumor that Nancy is ill in bed"

If we are right, it is expected that (73a) is acceptable while (73b) is no more acceptable than (70b). Unfortunately, or fortunately, our intuition fails here.

Lastly let us consider a problem with our position the occurrence of *pro* is conditioned in terms of Case rather than argumenthood. It has to do with genitive Case assigned in the prenominal position. Suppose that genitive Case is an instance of abstract Case assigned by some zero-level category, then we should expect under the condition (47) that *pro* can appear in the prenominal position, whether it is an argument or not. Consider the following pair:

- (74) a. [John-no musuko]-ga byouki-da
 GEN son NOM illness-COPULA(is)
 "John's son is ill in bed"
- b. [chuugoku-(kara)-no kyaku]-ga byouki-da
 China-(from)-GEN visitor NOM
 "a visitor from China is ill in bed"

Suppose that in (74b) *John* is an argument Th-marked by the kinship word

musuko (son) while in (74b) *chuugoku* (China) is a nonargument modifying *kyaku* (visitor). Then the condition on *pro* in terms of argumenthood, unlike our condition (47), predicts that *John* in (74a) can be replaced by *pro* while *chuugoku* in (74b) cannot. This prediction is borne out:

- (75) a. John_i-wa [[e_i musuko]-ga byouki-da]
 TOP
 "As for John, a son is ill in bed"
- b. Bill-ga [John_i-o [[e_i musuko]-ga byouki-da]]-to
 NOM ACC COMP
 omotteiru
 thinks
 "Bill thinks of John that a son is ill in bed"
- c. [[e_i musuko]-ga byouki-no] John_i
 GEN(is)
 "John, who a son is ill in bed"
- (76) a. *chuugoku_i-wa [[e_i kyaku]-ga byouki-da
 "As for China, a visitor is ill in bed"
- b. *Bill-ga [chuugoku_i-o [[e_i kyaku]-ga byouki-da]]-to
 omotteiru
 "Bill thinks of China that a visitor is ill in bed"
- c. *[[e_i kyaku]-ga byouki-no] chuugoku_i
 "China, which a visitor is ill in bed"

Unless we can rule out (76) independently, our position is weakened, although not falsified in a strict sense. Our hypothetical opponent also have a task to do, since the extraction from NP also display an argument/nonargument asymmetry:

- (78) a. John_i-wa [[e_i musuko]-ga byouki-da]
 CNTR
 "John (as opposed to ...), a son is ill in bed"
- b. *chuugoku_i-wa [[e_i kyaku]-ga byouki-da
 "China (as opposed to ...), a visitor is ill in bed"

(79) a. John_i-ga [[e_i musuko]-ga byouki-da]
 NOM

"It is John that a son is ill in bed"

b. *chuugoku_i-ga [[e_i kyaku]-ga byouki-da

"It is China that a visitor is ill in bed"

In (78) the empty category in NP is not *pro* but a trace of the contrastive phrase, as already argued. As for the multipul subject construction of a type as seen in (79), it is argued in Oka (1987, to appear) that its derivation involves movement out of NP to the SPEC of IP. So long as our oponent can explain the asymmetry found in (78) and (79), he cannot claim strongly for his justis. If it is the case that (77) and (78)-(79) is accounted for by a single condition to the effect that a prenominal position should not be occupied by an empty nonargument, then neither of the two competing approach is rated higher than the other.

To conclude, we would like to emphasize that the condition (47) along with the condition (46) could be reduced to the more general considerations (48) and (49), while the condition in terms fo argumenthood rather than Case, keeps it being a mistery how it is related to the condition (46). This is our decided advantage from the viewpoint of explanatory adequacy. Under our approach a child learns in what position his language allows *pro* to appear from the richness or absense of overt agreement features.

NOTES

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¹ Notice that the ni-causative construction behaves differntly from theo-causative constructions. Consider the following:

- (i) John-ga Mary-dake-ni hatarak-ase-ta
 only DAT caused-to-work
 "John caused (allowed) only Mary to work"

In (i) *Mary-dake* can take only the matrix clause as its scope. This suggests that *NP-ni* is not in the position of *NP-o*, which is further supported by the following example:

- (ii) John-ga dareka-ni daremo-ni shoukais-are-sase-ta
 NOM someone-DAT everyone-DAT caused-to-be-introduced
 "John caused (allowed) someone to be introduced to everyone"

The scope relation between *dareka* and *daremo* is not ambiguous, the former assigned the wider scope. These facts follow directly if we assume that *NP-ni* is an argument of the causative verb, a reasonable assumption since it is generally held that dative Case is, unlike accusative Case, not assigned exceptionally. The *ni*-causative construction presumably has an object control structure. As for the *o*-causative construction, we further discuss its structure in section 2.2.1.

² Whether the small clause is a constituent or not, the subject of the small clause is in predication with the remainder in it. However, consider again an ECM construction such as (15), reproduced as (i) below:

- (i) Bill-ga [Mary_i-o [John-ga e_i horeteiru]]-to omotteiru
 NOM ACC NOM is-in-love COMP thinks
 "Bill thinks of Mary_i that John is in love with e_i"

We have been assuming so far that the clause following the accusative NP functions as the predicate of the NP. Although this assumption is not unreasonable, there seems to be nothing to force it on us. If what follows the accusative NP is an AP, for example, predication is obligatory since an AP can function as nothing other than a predicate. However, a clause can be an argument as well as a predicate. Therefore, it might be possible that in (i), as suggested by its English translation suggests, *omow* Th-marks both the accusative NP and the following clause, although in

section 2.2.3. we will observe an example where the predication seems obligatory.

³ The example (41d) seems to sound odd to some speakers in the intended reading. We might be able to attribute the oddness to an 'crossover' effect. We can dissolve the crossing to give (i):

(i) [Bill-ga [[e_i e_j nagutta] otoko_j]-o ketobasita] onna_i

The example (i) does not seem to sound odd to any speaker. Note that the grammaticality of (i) is enough for our present purpose.

⁴ The definition of the Case visibility condition is given below in (50)

⁵ In Japanese the extraction from islands cannot be considered to be an effective test for adjunctness, since an adjunct which has a particle or postposition displays no ECP effect, perhaps by virtue of P-stranding, and reconstruction in the case of syntactic movement, at LF.

⁶ The observations (54a, c) are due to Kuno (1973).

⁷ The tense marker *ta* is ambiguous in that it is interpretable as the marker of the past tense or the one of the present perfect. If '*de-ta*' in (53) is interpreted as referring to the past event irrelevant to the present, where it is translated into '*came*' rather than '*has come*', then the example (53b) sounds odd to us. This might be attributed to the selectional properties of *omow*: it selects a 'stative', rather than 'eventive', proposition when it induces the exceptional Case-marking. The English verb *consider* seems to have the same property. Consider the following:

- (i) a. John considered Mary to have come to the party
b. John considered Mary to come to the party

(ia) is good, the complement proposition describing a present state. (ib) seems to sound odd, since its complement is usually interpreted as referring to a future event irrelevant to the present situation. The sentence becomes more acceptable if its complement is interpreted as describing a plan or expectation at present, a habit, or any other stative situation.

⁸ Alternatively, we might say that an adjunct is invisible at S-structure, since it is certainly subject to syntactic movement. The assumption made by Lasnik and Saito (1984) and Chomsky (1986b) that an adjunct is γ -marked not at S-structure but at LF follows from our assumption. At the same time, however, the γ -marking by an adjunct becomes impossible at S-structure. This is serious problem, particularly in the case of the subject extraction. We might be able to overcome this difficulty by reducing proper government to lexical government. Another way to exclude adjuncts from Case-marking is to impose a condition that Case-marking requires coindexation, which guarantees that only objects and subjects can be Case-marked, if we assume that *Th*-marking and SPEC-head agreement entail index-sharing.

⁹ Poser (1981) also distinguishes the Case assigned by a verb such as *aruk* from other instances of accusative Case and call it 'oblique accusative case'. Note also that we could find another instance of inherent accusative Case on an experiencer NP of psychological verb in Japanese and other languages (see Besten (1985), Belletti and Rizzi (1986) and Oka (1988, to appear) among others).

¹⁰ The example of (61a) is due to Poser (1981).

¹¹ It seems that the predication is pragmatically constrained: the object referred to by the topic phrase must have in its commenting clause a phrase whose referent is believed to be in a close enough relation with it. Thus, the sentence (66) is good since everyone knows that the President and Nancy are a couple, while a sentence such as *Reagan-wa Madonna-ga byouki da* (As for Reagan, Madonna is ill in bed) sounds strange unless we believe that the President have some relation with Madonna, a famous singer.

¹² The gapless topic construction also seems to be different in that the former is subject to a semantic condition which the latter does not obey. Consider the following unacceptable example:

- (i) *Reagan-wa [Nancy-ga bizin-da]
 TOP NOM beauty-COPULA(is)
 "As for Reagan, Nancy is beautiful"

The grammatical difference between (i) and (66) might be attributed to the

difference in the nature of the predicator in the commenting clause. It has been pointed out in the literature that the same contrast is found in other constructions not only in Japanese but also in English:

- (ii) a. onna-ga byouki-da
 woman-NOM is-ill
 "A woman is ill in bed"
 b. *onna-ga bizen-da
 is-beautiful
 "A woman is beautiful"
- (iii) a. A man is angry
 b. *A man is handsome
- (iv) a. There is a man angry
 b. *There is a man handsome

The differences observed above are, as often argued, accounted for by distinguishing between the stage level and object level predicate to use the terminology of Carlson (1980).

¹³ We cannot have a topic construction embedded in a relative clause, whether it is a gapless one or not:

- (i) a. Mary_i-wa [John-ga e_i sono-hon-o ageta]
 TOP NOM that-book-ACC gave
 "As for Mary, John gave that book (to her)"
 b. *[Mary_i-wa [John-ga e_i e_j ageta]] hon_j
 book
 "the book that as for Mary, John gave"
- (ii) a. Reagan-wa [Nancy-ga Madonna-o butta]
 TOP NOM ACC hit
 "As for Reagan, Nancy hit Madonna"
 b. *[Reagan-wa [Nancy-ga e_i butta]] kashu_i
 singer
 "the singer that as for Reagan, Nancy hit"

This immediately follows on the assumption a topic construction is larger than IP. The fact that a topic construction can be embedded in a verb/noun complement provide no problem, if *to/toiu* is not a

complementizer but a particle attached to any category of a clausal type, as suggested before.

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